AN EXAMINATION OF MOTIVATIONAL INFLUENCES ON PROFESSIONAL CHOICE, PERCEIVED PREPAREDNESS, AND RETENTION OF ALTERNATIVELY CERTIFIED TEACHERS OF CAREER, TECHNICAL, AND AGRICULTURE EDUCATION IN NORTHEAST GEORGIA

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An Examination of Motivational Influences on Professional Choice, Perceived Preparedness, and Retention

of Alternatively Certified Teachers of Career, Technical, and Agriculture Education in Northeast Georgia

Dissertation Title (Must be typed)

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AN EXAMINATION OF MOTIVATIONAL INFLUENCES ON PROFESSIONAL CHOICE, PERCEIVED PREPAREDNESS, AND RETENTION OF ALTERNATIVELY CERTIFIED TEACHERS OF CAREER, TECHNICAL, AND AGRICULTURE EDUCATION IN NORTHEAST GEORGIA

Dissertation

Submitted in partial fulfillment of the requirements for the degree of Doctor of Education in the Carter and Moyers School of Education at Lincoln Memorial University

by

Jonathan H. Stribling

June 24, 2021
Dedication

I dedicate this work to my wife Jessica and my children, Parker and Kite. Jessica’s perennial support and encouragement led me to pursue my doctorate, and Parker and Kite were motivating factors to finish. Parker and Kite, I will always treasure the memories of us all laboring at the “table of pain” doing our schoolwork together. Working alongside the two of you made the tough times bearable.

I am also fortunate to have parents who have always supported my educational and professional pursuits. Mom and Dad, thank you for the encouragement and generosity from my initial undergraduate degree all the way through to my doctorate.
Acknowledgments

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Abstract

Alternative routes to teacher certification have been utilized as a way to address the Career, Technical, and Agricultural Education teacher shortage, and this abbreviated path to a teaching career has attracted current educators from the industries for which they are trained. Career, Technical, and Agricultural Education teachers who have entered the teaching profession after prior industry experience intentionally chose, and continue to choose, to teach. There is a gap in the extant literature as to why. In this qualitative interpretive study, I examined the motivational influences on professional choice, perceived level of preparedness, and retention of alternatively certified teachers of Career, Technical, and Agricultural Education in northeastern Georgia. Thirteen participants from seven school districts in northeast Georgia provided insight related to why they choose to teach, how prepared they felt at the end of their alternative certification programs, and factors that affected their retention. The alternatively certified Career, Technical, and Agricultural Education teachers initially felt unprepared to teach in the school setting, but maintained a loyalty to their industries and chose to teach to train a future workforce and ultimately grow their profession. Understanding why alternatively certified CTAE teachers choose to teach, their perceptions of their preparedness, and the factors that affected their retention may lead to attracting and retaining more quality CTAE teachers.
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Chapter I: Introduction

Career, Technical, and Agriculture Education (CTAE) classes have provided middle and high school students with real-world, pragmatic learning opportunities by combining academic and technical experiences (Bowen et al., 2019; Park & Johnson, 2019). CTAE classes served a vital role in economic development by training the future workforce in technical skill areas (Hodes & Kelley, 2017; Mathers, 2019). The CTAE program in the state of Georgia was administered by the Georgia Department of Education (GADOE) (n.d.a). CTAE teachers provided instruction in 17 career pathways such as Architecture and Construction, Health Sciences, and Marketing (GADOE, n.d.b).

The CTAE program has suffered from the teacher shortage that plagued the nation (Bowen et al., 2019; Park & Johnson, 2019). Lack of post-secondary preparation programs for CTAE teacher training contributed to the shortage of teachers (Smalley & Sands, 2018). Alternative certification programs have been implemented across the United States to efficiently transition qualified and skilled workers into effective classroom teachers (Bowen et al., 2019; Toralba et al., 2018). In Georgia, the alternative route to CTAE teacher certification was the Georgia Teacher Academy for Preparation and Pedagogy (GaTAPP) program (Georgia Professional Standards Commission [GaPSC], 2020).

CTAE programs have also faced the unique challenge of recruiting prospective teachers away from profitable jobs in their respective industries (Bowen et al., 2019). Identifying factors that have motivated second-career teachers to enter and stay in the profession was key to improving and sustaining quality CTAE programs. Positive student outcomes such as student achievement
and skill attainment have been directly related to teacher retention (Holmes et al., 2019). Intrinsic, extrinsic, and altruistic motivations contributed to a teacher’s perceived job satisfaction and, ultimately, their career choice (Chiong et al., 2017; Park & Johnson, 2019; Reaves & Cozzens, 2018). Prospective and current CTAE teachers’ perceptions of school culture, such as feeling safe, and school leadership, such as feeling supported, have also influenced educators’ career paths (Chiong et al., 2017; Reaves & Cozzens, 2018). A prospective CTAE teacher’s perception of school culture and the work environment may have influenced his decision to join and, ultimately, stay in education.

**Statement of the Problem**

CTAE programming has been influenced by the needs of the workforce (Pearson et al., 2013) and has existed since the beginning of the 20th century (Wilkin & Nwoke, 2011). Pearson et al. (2013) pointed out CTAE programs rely on teachers to remain educated on current trends and technology within the industries for which they are training the future workforce. Previous researchers have concluded the main purpose of CTAE is to provide students with the knowledge and skills to become successfully employed in those industries (Bowen et al., 2019; Park & Johnson, 2019; Roberts & Ball, 2009). Researchers agreed for CTAE courses to be effective, CTAE teachers must be able to make relevant connections between course objectives, curriculum standards, and real-life situations (Bowen & Shume, 2018; Bowling & Ball, 2018; Gill, 2019; Park & Johnson, 2019). The knowledge and skills provided by CTAE courses focused on entry-level skills, which students could build upon later in life after entering the workforce (Backes & Burns, 2008; Bowen et al., 2019; Lundry et al.,
Researchers have concluded CTAE programs assisted students in discovering their career paths through pragmatic learning opportunities in the classroom (Lundry et al., 2015; Stephens, 2015). School systems need successful CTAE programs to provide these learning opportunities for students, but recruiting and retaining quality CTAE teachers has proven challenging for school districts (Gunther, 2019; Holmes et al., 2019).

Alternative certification routes have been developed and implemented into common practice to address the CTAE teacher shortage (Bowen, 2013; Bowen et al., 2019; Stephens, 2015; Toralba et al., 2018). Researchers have agreed hiring technically skilled CTAE teachers with industry experience equates to pragmatic, relevant learning opportunities for students (Backes & Burns, 2008; Bowen, 2013; Bowen & Shume, 2018; Bowen et al., 2019; Hoepfl, 2001). Existing studies addressed the benefits and drawbacks of alternative routes to teacher certification (Bowen et al., 2019; Bowling & Ball, 2018; Jacques & Potemski, 2014; Stephens, 2015; Townsend & Bates, 2007), teacher motivation (Arslan, 2017; Deci & Ryan, 1985; Dinsdale, 2017; Fernando & Chowdhury, 2015; Gur-Erdogan & Yurtkulu, 2017; Skaalvik & Skaalvik, 2017), and teacher retention and attrition (Bastian & Marks, 2017; Berliner, 2013; Holmes et al., 2019; Judge & Kammeyer-Mueller, 2012; Judge et al., 2017). Facilitating routes to certification for second-career CTAE teachers and identifying what motivates them to stay in the profession will contribute to a sustainable teacher-pipeline for CTAE.

Previous researchers largely ignored the binary (work in the industry for which they are trained or teach) choice of occupation CTAE teachers must make and their motivations for choosing a career in education rather than remaining in
industry. CTAE teachers have continuously been industry-trained professionals and have possessed a skillset useful and valued outside the educational setting (Stephens, 2015). The purpose of this qualitative interpretive study was to examine the motivational influences on professional choice, perceived level of preparedness, and retention of alternatively certified teachers of CTAE in northeastern Georgia.

**Research Questions**

Research questions served as a guide for the research and reflected the factors to be studied (Merriam & Tisdell, 2016). I relied on research questions to guide the study and determine how I collected data.

**Research Question 1**

How do alternatively certified Career, Technical, and Agricultural Education teachers describe their motivational influences for choosing to teach in rural northeastern Georgia instead of work in their respective industries for which they are trained?

**Research Question 2**

What are alternatively certified Career, Technical, and Agricultural Education teachers’ perceptions of their preparedness for classroom teaching in rural northeastern Georgia?

**Research Question 3**

How do alternatively certified Career, Technical, and Agricultural Education teachers describe the influences that contribute to their retention as teachers in rural northeastern Georgia?
The theoretical framework for my study was Wigfield and Eccles’s (2000) expectancy-value theory of achievement. The expectancy-value theory provided an explanation of achievement-related choices focusing on the career decisions and factors that supported or detracted from the choices made (Smalley & Sands, 2018). The theory examined considerations such as individuals, events, and experiences that could lead a person to a CTAE teaching career (Smalley & Sands, 2018). An individual’s choice, persistence, and performance could be explained by their beliefs about how well they performed on an activity and the extent to which they valued an activity (Wigfield & Eccles, 2000).

The expectancy-value theory of achievement focused on an individual’s perception, interpretation of an experience, and professional goals (Wigfield & Eccles, 2000). An individual’s decision-making process has been influenced by the individual’s assumption about their ability to perform a task. Wigfield and Eccles explained an individual’s decision was influenced by their belief and behaviors, differential aptitudes, and achievement related experiences. As an interpretation was made by an individual about an experience, that interpretation influenced the individual’s goals and motivation (Wigfield & Eccles, 2000). Positive perceptions of abilities to complete a task led to setting task-related goals and increased task-related motivation. The goals and motivation then influenced the expectation of success, achievement, and task value (Wigfield & Eccles, 2000). Wigfield and Eccles defined task value as an individual’s perception of the interest, usefulness, importance, and cost of a task. The expectations of success and task value were influenced by cultural influences and previous experiences.
The expectancy-value theory of achievement explained how experiences an individual may have had, such as enjoying a CTAE course in high school, positive experiences working with an influential teacher or mentor, previous work experiences, or other factors may have contributed to an individual’s motivation to choose to become a CTAE teacher rather than remain employed in an industrial profession.

**Significance of the Study**

The purpose of this qualitative interpretive study was to examine the motivational influences on professional choice, perceived level of preparedness, and retention of alternatively certified teachers of CTAE in northeastern Georgia. Researchers have previously explored factors that influence teacher motivation (Arslan, 2017; Deci & Ryan, 1985; Dinsdale, 2017; Fernando & Chowdhury, 2015; Gur-Erdogan & Yurtkulu, 2017; Skaalvik & Skaalvik, 2017). My research addressed a gap in the extant literature, as previous studies have largely failed to address the binary choice of occupation alternatively licensed CTAE teachers must make, their motivations for choosing a career in education, their perceived level of preparedness, and their retention.

When I conducted research for this study, there were limited data available concerning why CTAE teachers chose to teach instead of work in the respective industries for which they were trained. I anticipated adding to the research and literature addressing CTAE and, specifically, research regarding the motivational influences of the alternatively certified CTAE teacher. I had further anticipated aiding educational leaders in the hiring, recruitment, and retention of CTAE teachers through identifying the factors that led industry trained
individuals to choose to teach. My research may be used by school district human resource officials, CTAE directors, and principals to develop strategies related to marketing and attracting CTAE teachers. Additionally, my research may lead to school districts intentionally incorporating specific professional learning opportunities for CTAE teachers that may contribute to enhanced recruitment and retention.

**Description of the Terms**

Creswell and Creswell (2018) recommended defining a term if there was any likelihood that readers would not know its meaning. I included terms in this section that required clarification and defined the meaning as I intended the term to be used within the parameters of this study.

*Alternative Teacher Certification*

Bowling and Ball (2018) defined alternative teacher certification as teacher preparation via entering the profession through means other than a traditional educator preparation program. The GaTAPP was the alternative teacher licensure program for Georgia educators who had not pursued education through traditional teacher certification routes.

*Career, Technical, and Agricultural Education*

Park and Johnson (2019) defined CTAE as the practice of teaching specific skills to students in middle schools, high schools, and post-secondary institutions. The GADOE (n.d.) described CTAE as preparing approximately 600,000 Georgia middle and high school students for college, a career, apprenticeships, or the military. Georgia CTAE pathway course offerings leveraged partnerships with industry and higher education to ensure students
gained the skillsets necessary to thrive in the future workforce (GADOE, n.d.).

Georgia CTAE offered students more than 130 career pathways within 17 Career Clusters at the time of this study (GADOE, n.d.).

**Georgia Profession Standards Commission**

The GaPSC (n.d.) was the governing body that assumed the responsibility of teacher preparation, certification, and professional conduct of the certified personnel employed in Georgia public schools.

**Georgia Teacher Academy for Preparation and Pedagogy**

GaTAPP was a job-embedded alternative pathway to teacher certification in Georgia designed for individuals who had not completed a traditional teacher certification program or held a professional teaching certificate and aspired to transition into a teaching career from another profession (GaPSC, n.d.).

**Motivational Influences**

Researchers have defined motivation as a goal-directed and internal force that activates, energizes, directs, and sustains behavior (Moreno, 2010; Ormrod, 2006; Ryan & Deci, 2000). For the purpose of this study, motivational influences were more specifically defined as the identified reasons an alternatively certified CTAE teacher chooses to teach instead of work in the industry for which they were trained.

**Perceived Preparedness**

For the purpose of this study, perceived preparedness was a self-rating of a teacher’s preparedness, not a rating of their actual ability or performance (Bowen et al., 2019). Specifically, in this study, I examined the CTAE teachers’ perceived
levels of preparedness in the areas of classroom management and utilization of varied instructional strategies.

**Retention**

For the purpose of this study, retention was defined as teachers returning to the same teaching assignment in the same school.

**Organization of the Study**

An introduction defining CTAE and the challenges of hiring qualified, effective CTAE teachers were themes incorporated in Chapter I of my study. In addition, the problem to be explored, the purpose of my research, and research questions that ensured focus and guidance to the research and were also stated in Chapter I. The significance of the study including the purpose statement, and a description of terms concluded Chapter I. An in-depth review of literature highlighting teacher certification and perceived preparedness, teacher motivation, and teacher retention comprised Chapter II. The methodology of my study detailing the research design, participants, data collection, trustworthiness, limitations and delimitations, and assumptions and biases was established in Chapter III. Analyses and results of my research were revealed in Chapter IV. Conclusions, recommendations, and implications for practice for future research related to possible professional development opportunities for CTAE teachers, and the hiring and retention of CTAE teachers were suggested in Chapter V. The following review of literature is a summation of pertinent, previous research that was directly related to the purpose of my study (Roberts & Hyatt, 2019).
Chapter II: Review of the Literature

The purpose of this qualitative interpretive study was to examine the motivational influences on professional choice, perceived level of preparedness, and retention of alternatively certified teachers of CTAE in northeastern Georgia. To fully understand the rationale behind the conclusions and recommendations made in this study, I needed to understand the relevance and purpose of CTAE programming in public education. In addition, understanding exactly how CTAE teachers may have transitioned from working in industry to a career in public education will add context for the reader.

I began this literature review by first presenting the reader with an overview of the research related to the teacher shortage that has been a consistent issue in the United States since the Great Depression, and specifically the shortage of CTAE teachers. Next, I discussed the routes aspiring teachers pursued to obtain teacher certification. Specifically, I delved into alternative routes to teacher certification and fully explained the process in Georgia. I reported previous research findings that addressed alternatively certified teachers’ perceived levels of preparedness. I also included a review of research focused on teacher motivation, teacher retention, and teacher attrition. I summarized each of these factors and showed the relevance of each to CTAE. This chapter concluded with a brief summary that outlined the need for this study and guided the reader to the next chapter.

**The Teacher Shortage**

There was a teacher shortage in the United States resulting in a need for qualified teachers to fill vacancies in all areas of education (Bowen et al., 2019;
Donitsa-Schmidt & Zuzovsky, 2014; Flynt & Morton, 2009; National Research Council, 2010). Behrstock-Sherratt (2016) pointed out school staffing difficulties have existed since the Great Depression ended in the 1930s. Certain subject areas, such as math and science, have experienced shortages since the 1950s, and special education has had perennial shortages since the 1960s (Ingersoll & Perda, 2010). As a result, there was a body of academic research on teacher shortages that provided a framework for understanding the issue.

A teacher shortage was defined as an insufficient production of new teachers, given the size of student enrollments and teacher retirements within school districts (Sutcher et al., 2019). In this narrow definition, a teacher shortage is only measured by teacher production in relation to teacher demand due to student populations and teacher attrition; however, researchers indicated the teacher shortage issue is more complex and driven by additional factors (Bowen et al., 2019; Donitsa-Schmidt & Zuzovsky, 2014; Sutcher et al., 2019).

Donitsa-Schmidt and Zuzovsky (2014) defined the factors that have contributed to teacher shortages at both the macro and micro level. The macro level factors occurred at the national, state, and district levels (Donitsa-Schmidt & Zuzovsky, 2014). Macro level factors that contributed to teacher shortages included growing populations in schools, immigration, policy, prestige of the profession, incentives tied to merit, certification programs, number of newly certified individuals, and individuals leaving the teaching profession (Donitsa-Schmidt & Zuzovsky, 2014). Viewing the teacher shortage issue as stemming from macro level factors resulted in systemic actions aimed at addressing teacher supply, such as national policies to attract talented candidates,
the creations of alternative certification routes, recruitment of teachers from overseas, and offering monetary incentives such as signing bonuses (Bowen et al., 2019; Donitsa-Schmidt & Zuzovsky, 2014). All of these actions were intended to attract and retain teachers in education.

According to Donitsa-Schmidt and Zuzovsky (2014), the micro level factors that contributed to teacher shortages in education occurred at the community or individual school level and may have included aging of the neighborhood, prestige of the school, teacher burnout, lack of administrative support, and lack of professional development activities. Viewing the teacher shortage as stemming from micro level factors led principals to act within the parameters of their schools and school district to recruit and retain qualified teachers (Ingersoll & Perda, 2010). Ingersoll and Perda (2010) referred to these actions as ad hoc solutions to school needs. These solutions included using substitute teachers, increasing teaching loads, hiring teachers under provisional conditions, increasing class size, or canceling subject offerings altogether (Donitsa-Schmidt & Zuzovsky, 2014; Ingersoll, 1999; Ingersoll & Perda, 2010).

Researchers suggested the teacher shortage issue was derived from a combination of macro and micro level factors (King Rice et al., 2009; Sutcher et al., 2019). King Rice et al. (2009) created a framework that included three levels: the state, the district, and the school level. Four common problems were identified on each level: the supply of qualified teachers, the recruitment of teachers to districts where they are needed most, distributing teachers in an efficient and equitable way, and retaining quality teachers (King Rice et al., 2009). Four broad, and sometimes overlapping, solutions for each of these
problems have been identified within the literature and included: easing certification avenues into the profession, offering economic and other motivating incentives, improving hiring strategies, and increasing teacher retention through improved professional development and improved working conditions (Berry, 2004; Bowen et al., 2019; Bowling & Ball, 2018; Gray & Tai, 2015; King Rice et al., 2009; Omar et al., 2017).

Career, Technical, and Agriculture Education

The shortage of CTAE teachers has been addressed through an increased focus on alternative certification routes, teacher motivation, and teacher retention in school districts across the nation (Bowen et al., 2019; Stephens, 2015). CTAE has been defined as the practice of teaching specific career skills to students in middle schools, high schools, and post-secondary institutions (Park & Johnson, 2019). Park and Johnson asserted CTAE prepares youth and adults for a wide range of early careers and advanced educational opportunities. Similar to other content areas and certification areas, the CTAE field has been impacted by the teacher shortage, but CTAE also faced the additional challenge of recruiting teachers away from profitable occupations in their respective industries (Bowen et al., 2019). The CTAE program in the state of Georgia falls under the GADOE and CTAE teachers deliver instruction in 17 career pathways:

- Agriculture, Food and Natural Resources;
- Architecture and Construction;
- Arts, Audio/Video Technology and Communication;
- Business Management and Administration;
• Education and Training;
• Energy;
• Finance;
• Government and Public Administration;
• Health Sciences;
• Hospitality and Tourism;
• Human Services;
• Information Technology;
• Law, Public Safety, and Security;
• Manufacturing;
• Marketing;
• Science, Technology, Engineering and Mathematics; and
• Transportation, Distribution and Logistics (GADOE, n.d.b).

CTAE instructors have been members of the faculties in public high and middle schools throughout the state of Georgia (GADOE, n.d.a). I sought to examine why CTAE teachers in northeastern Georgia’s rural school districts chose to teach rather than work in their respective industries, which could enable school leaders to more effectively recruit and retain CTAE teachers. Teacher certification, motivation, and retention are addressed in this review of the literature to gain insight into why CTAE teachers chose to teach.

Teacher Certification

There is a continued, national conversation about a middle and high school teacher shortage and the lack of qualified teachers in the classroom (Bowen et al.,
This teacher shortage has led to teachers being placed in classrooms who may not be considered highly qualified as defined by the No Child Left Behind Act of 2001 (NCLB) (Darling-Hammond et al., 2005). The NCLB required that by the end of the 2005-2006 school year, all classes in core academic subjects (i.e., English, reading or language arts, mathematics, science, foreign languages, civics and government, economics, arts, history, and geography) be taught by highly qualified teachers (Karelitz et al., 2011). While NCLB allowed states to set their own requirements for meeting the highly qualified threshold, the legislation specified teachers must meet the following criteria:

1. Have a bachelor’s degree;

2. Be certified/licensed to teach in the state or participate in an alternative route to certification; and

3. Demonstrate a high level of competency in their subject matter by passing a state test in each subject they teach or successfully completing at least an undergraduate major in each subject they teach. Veteran teachers may demonstrate a high level of competency though completion of a professional development plan (Karelitz et al., 2011).

NCLB has since been succeeded by the Every Student Succeeds Act (2015), and the qualifications for teacher preparedness became determined by individual states. The routes to certification for secondary teachers were traditional or alternative certification pathways (Bowen et al., 2019). Proponents of both traditional and alternative certification pathways have argued each pathway produces educators with different expertise and skill sets (Bowen, 2013; Feiman-Nemser, 1989; Stoddart & Flodon, 1995). Flower et al. (2017) suggested
traditional certification pathways produce teachers who are more adept in the fields of classroom management and creating productive learning environments than those teachers coming from a nontraditional pathway. In contrast, other researchers have argued any deficits alternatively certified teachers may have in the areas of classroom management or pedagogy can be mitigated by the knowledge and skills gained from actual work experience (Bowen et al., 2019; Bowling & Ball, 2018).

**Traditional Certification**

The common route taken by secondary educators earning their certification was through a traditional teacher certification program (Bowen et al., 2019). The traditional teacher certification route included earning certification by completing a teacher preparation program at a four-year college or university (Bowen et al., 2019; Bowling & Ball, 2018; Bradshaw & Hawk, 1996). Bowen et al. (2019) suggested earning certification in the traditional manner affords the prospective teacher the opportunities to gain content knowledge as well as pedagogical knowledge via classroom instruction and field experience. Teacher certification requirements varied among post-secondary institutions and states in regard to required coursework, related field experiences, and time spent student teaching (Townsend & Bates, 2007). College freshmen who intended to pursue teaching as a career generally pursued certification through traditional teacher certification routes (Bowen et al., 2019; Jacques & Potemski, 2014).

Jacques and Potemski (2014) found all states have traditional certification requirements for CTAE teacher candidates who have gone through a teacher preparation program or have a bachelor’s degree in combination with work
experience or content knowledge. The traditional certification route for CTAE
teachers in some states required content knowledge be demonstrated through a
degree concentration, or candidates may have passed one or more standardized
assessments to achieve certification (Jacques & Potemski, 2014). Some states also
implemented specialized teacher preparation programs that included
endorsements in CTAE areas, allowing existing teachers of core subjects to easily
become certified to teach in CTAE fields (Jacques & Potemski, 2014).

**Alternative Certification**

Although initially developed to provide school districts with a means to
quickly fill teacher vacancies only in an emergency situation, alternative routes to
certification have been used more frequently for filling teaching positions
(Bowen, 2013; Toralba et al., 2018). Bowling and Ball (2018) found establishing
a normed description for alternatively certified teachers difficult due to there
being over 130 different kinds of alternative certification pathways across the
United States. Alternative certification programs were designed to prepare
individuals to take their knowledge and experience from industry and apply it in a
way that relates to students in a classroom (Bowen et al., 2019). An alternative
certification program may have been a shorter and less costly route for individuals
with prior industry experience to achieve teacher certification (Bowen et al.,
2019). Bowen et al. (2019) asserted the structure and content of these programs
differ based on content area and state. Most alternatively certified CTAE teachers
possessed post-secondary academic credentials and extensive service records in
their previous industry careers (Stephens, 2015). The number of years of industry
experience may have been equated to schooling experience, resulting in some
alternatively certified teachers not exceeding education levels beyond an associate’s degree (Bowen et al., 2019). Bowen et al. (2019) and Stephens (2015) concurred that alternative certification routes are a more efficient means to teacher certification than traditional certification routes for second career CTAE teachers.

**Teacher Certification in Georgia**

The GaPSC (n.d.) was the governing body that assumed the full responsibility of teacher preparation, certification, and professional conduct of the certified personnel employed in Georgia public schools. The GaPSC’s certification regulations and procedures were established to evaluate the credentials of prospective teachers and ensure they meet specified preparation standards and requirements. The GaPSC’s specific responsibilities related to teacher certification include the following:

- Simplifying and making more efficient the process of certifying educational personnel in Georgia;

- Attracting the highest possible number of qualified personnel to become educators in Georgia;

- Promoting the hiring of qualified educators from other states to work in Georgia schools; and

- Improving the level of preparation of educators, both pre-service and in-service, by requiring, for purposes of certification those essential skills and the knowledge needed to deliver effective education (GaPSC, n.d.).
Prospective CTAE teachers in Georgia pursued alternative certification through the GaPSC’s GaTAPP program (GaPSC, 2020). The GaTAPP program was administered through the 16 Regional Educational Service Agencies (RESA) strategically located throughout the state of Georgia (GADOE, n.d.c; GaPSC, n.d.). RESAs did not provide collegiate education degrees but were classified as Educator Preparation Providers (EPPs) by the GaPSC and, therefore, may administer the GaTAPP program (GaPSC, 2020). According to the GaPSC (2020), the GaTAPP program was designed for individuals who have not completed a traditional teacher education program or held a professional teaching certificate and aspire to transition into teaching from another profession. All GaTAPP candidates must have met the following requirements:

- Candidates must have had a major or its equivalent in the teaching field or a passing score on the Georgia Assessment for the Certification of Educators.
- Candidates were employed by an accredited public, private, or charter school and are accepted into a GaPSC approved Educator Preparation Program.
- Candidates held a Georgia Provisional Certificate or Permit.
- Candidates have had intense and on-going coaching and support throughout the program (GaPSC, 2020.; Pioneer RESA, n.d.).

Pioneer RESA (n.d.) was an EPP and served 15 school districts in northeast Georgia. Pioneer RESA described the GaTAPP program as a non-traditional educator preparation program leading to a clear, renewable certificate for general and special education teachers or a technical specialist.
certificate for the CTAE teacher (Pioneer RESA, n.d.). The GaTAPP was a job-embedded clinical practice that allowed candidates to complete the alternative certification path requirements while employed by a school (GaPSC, 2020). The GaTAPP program was based on 24 teaching competencies (see Appendix A) (GaPSC, 2020).

Candidates must have provided evidence of the knowledge, skills, and dispositions required in the 24 teaching competencies to complete the program. Such evidence was presented by the candidate’s school-based administrator to the GaPSC in the form of GaPSC approved EPP’s supervision and assessment of candidate performance (GaPSC, 2020). EPPs then coordinated the results of their supervision and state-approved assessments with observations and assessments made by leaders and mentors working in the candidate’s school (GaPSC, 2020). The school-based leaders and mentors assigned to observe, assess, and support the teacher candidate are known as the Candidate Support Team (CST) (GaPSC, 2020). The EPP and CST collaboratively used this performance data to make informed decisions regarding continuous improvement of candidate performance, program effectiveness, and provider effectiveness of the GaTAPP program (GaPSC, 2020). According to the GaPSC (n.d.), the alternative route to certification through the GaTAPP program took from 1-3 years to complete based on individualized performance assessment data (GaPSC, 2020). Successful completion of the GaTAPP program resulted in the GaPSC issuing the educator a Georgia professional teaching certificate (GaPSC, 2020; Pioneer RESA, n.d.).
Attributes of Alternatively Certified Teachers

Darling-Hammond et al. (2005) found alternatively certified teachers, through practical industry work experiences, have gained knowledge about the course content that is more in-depth than content knowledge gained in a traditional teacher education program. Through corporate work experience, an alternatively licensed teacher has learned more authentic applications of the content and can provide students a relevant and rich educational experience that includes current, real-world applications of the material taught (Bowen & Shume, 2018; Darling-Hammond et al., 2005). Researchers revealed students taught by alternatively certified teachers achieved mastery of the content just as well, and in some cases better than students taught by traditionally certified teachers (Bowen, 2013; Gimbert et al., 2005; Jacob, 2007; Tournaki et al., 2009).

Traditional versus Alternative Certification; Perceived Level of Preparedness

Second-career CTAE teachers, such as those who complete the GaTAPP program, entered teaching positions with years of authentic work experience (Bowen et al., 2019). Gray and Taie (2015) acknowledged concern regarding teacher attrition and whether these alternatively certified educators were truly prepared. Curry et al. (2016) suggested the nature of training new teachers receive before entering the profession may influence their level of preparation and ultimately their commitment to the profession. In a national study of new k-12 public educators, 90% of the teachers who entered education as a profession via a traditional certification route were found to still be teaching their second year and 84% by their fifth year (Gray & Taie, 2015). Likewise, 90.1% percent of alternatively certified teachers were also teaching their second year, however, in
contrast to their traditionally certified colleagues, 79.2% of alternatively certified teachers were still teaching by their fifth year (Gray & Taie, 2015). With 4.8% more teachers who entered the profession via a traditional teacher certification route still teaching their fifth year compared to teachers who entered the profession via an alternative certification route (Gray & Taie, 2015), school officials need to acknowledge preparation could be considered a contributing factor to attrition (Curry et al., 2016).

Another concern centered around alternatively certified teachers’ lack of understanding regarding the pedagogical theories and practices that would be emphasized in a traditional teacher education program (Bowen et al., 2019; Bowling & Ball, 2018, Darling-Hammond et al., 2005; Gray & Taie, 2015). “The content and substance of new teachers’ preparation matters—especially the pedagogical preparation teachers acquired. Those with more pedagogy were far less likely to leave teaching after their first year on the job” (Ingersoll et al., 2014a, p. 29). Bowen (2013) suggested this lack of pedagogical training may contribute to the teacher not creating or implementing effective lesson plans and fully meeting the educational needs of the student, which resulted in lower student achievement.

A study conducted by Darling-Hammond et al. (2002) found perceived teacher preparedness was higher among traditionally certified teachers than alternatively certified teachers. Research conducted by Kee (2012) on first year teacher backgrounds and feelings of preparedness supported Darling-Hammond et al. (2002) who concluded traditionally certified teachers did feel more prepared to enter the classroom setting and deliver instruction than those teachers coming
from an alternative certification program. Yet, recent research by Bowen et al. (2019) indicated there was no statistically significant difference in the perceived overall preparedness of alternatively certified teachers and traditionally certified teachers. Bowen et al. (2019), however, did find one area that proved to be an exception: Traditionally certified teachers did feel more prepared in the area of student behavior management than alternatively certified teachers. In addition to the lack of perceived preparedness in the area of behavior management, Stephens (2015) found although most alternatively certified teachers felt confident in their abilities to share occupational knowledge and skills, they struggled to create authentic assessment strategies including designing engaging student projects, and implementing and assessing practical laboratory experiences.

Every student deserves an effective, engaging teacher, regardless of the route to certification. Researchers revealed, overall, it is difficult to determine differences in teacher effectiveness between traditionally and alternatively certified teachers (Bowen, 2013; Bowling & Ball, 2018; Bradshaw & Hawk, 1996; Darling-Hammond et al., 2005; Hoepfl, 2001; Litowitz, 1998; Reese, 2010; Sindelar et al., 2004; Stoddart & Floden, 1995). Wilkin and Nwoke (2011) declared the teaching profession must rise to the challenge of attracting and certifying teachers in the midst of a shortage, including qualified CTAE teachers. The researchers stated there was a need to provide “highly qualified and highly competent CTE teachers who are able to prepare students to be successful in their careers and in their lives” (Wilkin & Nwoke, 2011, p. 2).
Teacher Motivation

Researchers have defined motivation as a goal-directed and internal force that activates, energizes, directs, and sustains behavior (Moreno, 2010; Ormrod, 2006; Ryan & Deci, 2000). The expectancy-value theory served as the theoretical framework for this study and examined factors that might motivate a person to choose to be a CTAE teacher (Wigfield & Eccles, 2000); however, Maslow’s (1954) needs theory initially addressed questions related to motivation and whether people’s career choices may meet their individual needs. Maslow (1954) suggested people were motivated by unmet, lower-level needs that include physiological needs, safety, and love. Glasser (1998) termed the lower-level needs as survival, love and belonging, power, freedom, and fun. Despite the terminology differences, researchers agreed lower-level needs must be met before higher-level needs like esteem and self-actualization can be satisfied (Arslan, 2017; Glasser, 1998; Maslow, 1954). Researchers have concurred: self-actualization is the ultimate need (Arslan, 2017; Maslow 1954). “Self-actualization is understood as an effort to develop a level to which one aspires” (Gur-Erdogan & Yurtkulu, 2017, p. 1). For example, honors students were more likely to perform at higher levels in school. Maslow’s (1954) needs theory potentially influenced career choice through anticipated job satisfaction and ultimately anticipated self-actualization through a chosen occupation. Research in education has shown the absence of three higher-order needs: self-esteem, autonomy, and self-actualization are related to low motivation in teachers (Arslan, 2017; Carver & Sergiovanni, 1971; Frances & Lebras, 1982; Sweeney, 1981). Wigfield and Eccles’s (2000) expectancy-value theory added to Maslow’s (1954) research,
suggesting individuals’ influences, events, and experiences, may have contributed to a person choosing a certain career such as a CTAE teacher.

Previous studies have identified teacher satisfaction factors and categorized them as content or context (Skaalvik & Skaalvik, 2017; Wright & Custer, 1998). Content factors were related to the teaching process itself and included aspects such as job pressure and school climate (Skaalvik & Skaalvik, 2017). Context factors related to the job situation and included school policy, salary, and relationships with co-workers (Wright & Custer, 1998). The content factors corresponded to esteem and self-actualization, which were at the top of Maslow’s hierarchy (Maslow, 1954; Wright & Custer, 1998). Although Maslow (1954) rejected the theory that motivation could be accomplished by fulfilling a need, some research has shown satisfying self-actualization needs increases motivation (Arslan, 2017; Heneman et al., 1980). CTAE faculty progressed through the stages of Maslow’s hierarchy as they developed teaching and research skills, pursued tenure, and then made meaningful contributions to the field (Kroth, 2007).

Arslan (2017) explained giving teachers autonomy allows them to make choices in their curriculum and mode of delivery. Supporting the autonomy of teachers enhanced their internal motivation, creativity, and confidence (Arslan, 2017). Researchers supported the idea that as CTAE teachers develop autonomy, and possibly experience some degree of self-actualization throughout their career, they may be more likely to remain a CTAE teacher (Deci & Ryan, 1985;
Fernando & Chowdhury, 2015). Deci and Ryan (1985) argued a world with no competition among people, no goals set by leaders, no arbitrary timelines for completion of work, and no coercive consequences would result in people’s motivation being driven by internal sources resulting in greater competence and autonomy. This greater competence and autonomy would ultimately lead to greater satisfaction (Landrum et al., 2017). Likewise, if a potential CTAE teacher experienced autonomy, or possibly self-actualization, in their respective industry, that individual may be motivated to remain in the industry and never teach (Deci & Ryan, 1985; Fernando & Chowdhury, 2015; Landrum et al., 2017). Continued development and sustainment of a CTAE teacher workforce was dependent on CTAE teachers satisfying their craving for self-actualization (Deci & Ryan, 1985; Landrum et al., 2017).

**The Relationship Among Intrinsic, Extrinsic, and Altruistic Motives**

Studies have concluded basic human needs are satisfied by intrinsic motivation and higher-level needs may be satisfied by extrinsic motivation (Reaves & Cozzens, 2018; Wankat & Oreovicz, 1993). Ryan and Deci (2000) defined intrinsic motivation as doing something because it is inherently interesting and enjoyable. The researchers also defined extrinsic motivation as doing something because it leads to a separable outcome (Ryan & Deci, 2000). For example, people may have equated extrinsic motivational factors like position, rank, or salary with self-esteem (Landrum et al., 2017). Extrinsic motivations have been proven to prevent dissatisfaction (Park & Johnson, 2019). Actions rewarded with material incentives, such as money, resulted in individuals returning to engage in the activity (Deci & Ryan, 1985; Landrum et al., 2017).
Those individuals whose career choices were driven by extrinsic motives were satisfied with different career choices than those with intrinsic motives (Reaves & Cozzens, 2018; Wankat & Oreovicz, 1993). Often, the two groups chose different careers, as they were motivated differently (Reaves & Cozzens, 2018; Wankat & Oreovicz, 1993). Teachers likely have chosen to teach and continue in education because of a combination of extrinsic, intrinsic, and altruistic motives (Skaalvik & Skaalvik, 2017; Seng Yong, 1995).

Intrinsic motivation may be defined for teachers as finding the process of teaching their subject enjoyable (Chiong et al., 2017). Self-reports of motivation were more reliable than observations of time spent on an activity, but most research projects have measured intrinsic motivation by observing frequency and duration of time spent on the target activity (Deci & Ryan, 1985; Mintrop & Ordenes, 2017). Research has supported the argument that teachers enter the profession to help young people and not to satisfy their own needs (Bergsma & Chu, 1981; Mintrop & Ordenes, 2017; Skaalvik & Skaalvik, 2017). Teachers with over 10 years of experience were quick to point out intrinsic factors also motivated them to stay in the profession (Chiong et al., 2017).

Brown (1992) and Chiong et al. (2017) concurred altruistic motivation is selfless motivation pursued solely for the benefit of others. Chiong et al. (2017) found that teachers who were altruistically motivated found teaching to be socially meaningful. Brown’s (1992) research on practicing teachers revealed the two main altruistic reasons for choosing to teach were the desire to work with young people and the desire to contribute to society. Researchers have connected intrinsic and altruistic motivations since love of children and a subject (intrinsic
motivations) can logically lead to a desire for students to develop academically and personally (altruistic motivations) (Chiong et al., 2017).

Backes and Burns (2008) found 31% of new CTAE teachers attending pre-service professional learning were intrinsically motivated and enter the profession from industry because of a religious or secular calling. This supported the claim that human behavior originates from internal sources and is not controlled by systematic environmental variables (Arslan, 2017; Deci & Ryan, 1985). These new CTAE teachers reported the desire to impact students and schools in a meaningful and perhaps a spiritual level (Backes & Burns, 2008). Teachers who felt called to teach focused heavily on the well-being of their students (Bullough & Hall-Kenyon, 2012). They had a profound service ethic that extended beyond teaching and entered the realm of parenting, nurturing, and caring for others (Bullough & Hall-Kenyon, 2012). Feeling called may have equated to teachers being motivated by influencing their students’ lives beyond the classroom (Backes & Burns, 2008). Backes and Burns (2008) explained this using the example of a teacher serving as an advisor to a CTAE Career Technical Student Organization such as FFA (Backes & Burns, 2008).

Heinz (2015) found material benefits such as job security, working hours, holidays, and salary were relatively unimportant reasons for choosing teaching compared with intrinsic and altruistic motivations. Chiong et al. (2017) concurred, finding extrinsic factors were somewhat meaningful but subordinate to intrinsic, altruistic, and professional factors; however, the literature revealed CTAE teachers do respond to extrinsic motivations (Backes & Burns, 2008; Omar et al., 2017). Backes and Burns (2008) found 30% of all teachers, including CTAE
teachers, were extrinsically motivated to enter teaching as a second career because they assumed they would work fewer hours. The new teachers found the opposite to be true. Not only did the new teachers spend hours outside of class developing lesson plans and becoming organized, they were often assigned the most difficult and challenging students their colleagues did not want to teach (Backes & Burns, 2008). In contrast, Biggs and Richwine (2020) argued that teachers do spend more time away from the workplace than those working in other industries. Winter, fall, and spring breaks, plus guaranteed holidays, did amount to days off that far outpace those of beginning employees in other occupations (Biggs & Richwine, 2020). Backes and Burns (2008) advised that it is imperative that administrators preserve this motivator by not overloading teachers with extra responsibilities that take away from their personal lives to the extent they would have been better off if they had remained in their respective industries.

Salary, teacher workload, and teacher evaluation procedures were other extrinsic factors found to motivate CTAE teachers (Omar et al., 2017). These extrinsic factors were motivating because they were predetermined, predictable, and changed little across school districts (Turner, 2017). Backes and Burns (2008) reported 28% of CTAE teachers in their study were motivated to become second-career teachers primarily because of pay and benefits. Interestingly, some of the participants even crossed out pay on the survey instrument and circled the word benefits (Backes & Burns, 2008). The participants may have realized experienced teachers may earn a larger compensation premium from the accrual of pension and benefits than from salary (McGee & Winters, 2017). Kroth (2007) termed the belief employees have about how much an organization values them as
perceived organizational support. Research indicated teaching provides security of tenure, steady income, clear professional standards, and meaningful long-term service opportunities often lacking in other industries (Miguel, 2019). Intrinsic and altruistic reasons alone were not enough to generate motivation to join the teaching profession; extrinsic motivations were found to be increasingly important (Chiong et al., 2017). CTAE faculty were more motivated working in school systems that paid teachers equitably and fairly, evaluated them fairly, provided teaching support, and recognition for exceptional work (Kroth, 2007).

The Role of School Culture in Motivation

Chiong et al. (2017) referred to school culture as the broad, intangible ethos of the school. The way people think, how they act, how they dress, what they talk about or consider taboo, and whether they seek out colleagues or isolate themselves all contributed to the culture of a school (Deal & Peterson, 2016). A positive school culture has resulted in motivated employees who were described as engaged, energetic, proactive, and effective (Park & Johnson, 2019). Research has suggested positive school climate is associated with stronger academic performance, higher graduation rates, decreased incidences of violence, and increased teacher motivation (Reaves & Cozzens, 2018). Previous studies also proposed a positive school climate makes a school a more appealing, satisfying, and meaningful environment in which both adults and youth care to spend a large amount of their time (Deal & Peterson, 2016; Reaves & Cozzens, 2018; Smith et al., 2014).

Reaves and Cozzens (2018) found a connection between teachers’ perceptions of elements of a safe and supportive school climate and motivation.
Teachers who felt safe and supported had higher intrinsic motivation and self-efficacy compared to those who did not (Reaves & Cozzens, 2018). Feeling safe and supported was not always a given. Omar et al. (2017) found second career CTAE teachers entering the teaching profession from industry often assumed the school environment would have inherently provided job stability and a comfortable work environment. Many second career CTAE teachers in Omar et al.’s (2017) study found themselves demotivated and struggling to integrate into the school environment and, as a result, they felt uncertain as to whether to remain in the teaching profession. These findings supported other research suggesting clear expectations and parameters from administrators to teachers have a substantial impact on a teacher’s intrinsic motivation (Reaves & Cozzens, 2018; Skaalvik & Skaalvik, 2017).

**The Principal’s Influence on School Culture**

Principals, as executive leaders in schools, have continually played a vital role in school culture (Dinsdale, 2017). Every school has a culture and Barth (2002) found the tone of school leadership helped determine whether the culture is toxic, indifferent, or focused on growth. Principals are largely responsible for hiring and retaining CTAE teachers, and CTAE departments can be large and have an impact on school culture (Bartholomew et al., 2018). Six areas have been found to greatly influence the culture and success of a school based on the decisions made by the principal: collaboration, development of staff, provision of resources, the transparency of their vision, management of workplace stress, and their own professional development (Dinsdale, 2017).
Collaboration among staff in a school was found to be a major determinant of school culture. High levels of collaboration among faculty tended to promote higher academic standards in a school (Bettini et al., 2016). Many principals have incorporated professional learning communities (PLCs) in their schools to promote collaboration and the sharing of ideas (DuFour & Mattos, 2013). Dinsdale (2017) concluded teachers are more likely to improve their efficacy when they work with others who teach the same subject. Principals were found to implement PLCs for CTAE teachers entering the profession through alternative certification routes to support those who may have lower levels of preparation and effectiveness than traditionally prepared CTAE teachers (Bartholomew et al., 2018). Principals often appointed lead teachers, assistant principals, or CTAE directors who were experienced in professional learning and curriculum to facilitate PLCs for CTAE teachers (Bartholomew et al., 2018; Edwards-Groves et al., 2016). Edwards-Groves et al. (2016) found these lead teachers, assistant principals, and CTAE directors could more effectively lead the PLCs than the principal due to their immersion in the professional learning and teaching practices of the school.

Principals who fostered the professional development of their entire faculty, including CTAE teachers, led schools with positive cultures (Dinsdale, 2017). By contrast, principals who did not promote the development of faculty and left faculty members responsible for their own development contributed to a negative culture in their schools (Du Plessis et al., 2015). Zulkifli et al. (2018) explained that CTAE teachers must fulfill the expectation of providing 21st century technical training, emphasizing the constant need for relevant professional
learning and development. Professional learning inspired CTAE teachers as well as deepened their expertise (Zulkifli et al., 2018). A culture of professional development, recognition of good work, and showing an appreciation for work-life balance promoted a sense of trust and team leading to all employees, including CTAE teachers, feeling valued and wanting to be a part (Stickle & Scott, 2016).

Principals created positive school culture when teachers felt they were provided the necessary resources to effectively teach their students (Dinsdale, 2017). Instructional resources influenced how teachers created and presented their lessons, the scope of instruction, and how teachers assessed their students’ learning (Bettini et al., 2016). Available instructional resources such as books, supplies, technology, and curriculum supports all directly influenced the quality of a classroom instruction and student achievement (Dinsdale, 2017). CTAE programs were vehicles for hands-on, engaging instructional content that worked to prepare students for industry-based settings (Anderson & Anderson, 2018). Access to appropriate resources for CTAE programs, such as available tools and equipment, has proven influential in determining the quality of such coursework (Anderson & Anderson, 2018). Bettini et al. (2016) concluded teachers who had ready access to quality curriculum resources experienced high levels of success compared to teachers who did not have access to quality instructional materials. Teachers with quality instructional resources better managed their classrooms and taught students the content when compared to teachers without quality resources (Du Plessis et al., 2015). Teachers without quality resources lacked confidence and felt alienated, leading to decreased motivation. (Du Plessis et al., 2015).
School stakeholders, including parents, students, and faculty members, were motivated when the principal’s vision was clearly communicated and understood (Dinsdale, 2017). Park and Johnson (2019) found the principal’s vision for their school’s CTAE program centered around ensuring strategies are implemented to satisfy and engage teachers as practical ways to enhance teacher retention. Specifically, the principal envisioned administrators recognizing teachers’ contributions, providing professional development opportunities, and promoting challenging responsibilities and autonomy within the classroom (Park & Johnson, 2019). A principal influenced culture of transparency and openness was found to foster community relationships that proved beneficial in difficult times (Schwartz, 2014). Westerberg (2016) found principals contributed to a positive culture by communicating non-negotiable standards to students, parents, and community. A short list of non-negotiable standards reduced unpredictability and improved relationships and trust (Westerberg, 2016).

Dinsdale (2017) found the stress felt by teachers to have a negative impact on the culture of schools. Stress for CTAE teachers has been linked to the expectation of integrating intellectually challenging projects and real-world problems into lesson plans and lessons to produce a future workforce that is coachable and can adapt to the rapid pace of change in a global economy (Zulkifli et al., 2018). In addition to these instructional pressures, CTAE teachers reported being stressed because of the negative influences their work brought to their families (Claflin et al., 2019). These negative influences may have included society’s perceived expectation that teachers are responsible for parenting their students, and teachers feeling an obligation to assume a parental role (Claflin
Job related stress has proven to be an influential factor in CTAE teacher attrition (Claflin et al., 2019). Stickle and Scott (2016) suggested principals need to understand stress and the consequences of stress to avoid the negative effects of workplace stress on school culture. One of the most effective ways to combat stress in a school was implementing stress intervention procedures and providing resources that encouraged teachers to deal with their stress in a healthy way (Dinsdale, 2017). It was imperative that principals knew how to interact with others and how personal interactions and behaviors caused or reduced stress for individuals within their schools (Stickle & Scott, 2016).

Addressing faculty concerns in a sincere and timely manner alleviated faculty stress in schools (Du Plessis et al., 2015). Teachers were also more motivated and had less stress when principals provided a comfortable classroom with reasonable noise and temperature levels (Stickle & Scott, 2016).

Principals also contributed to a positive culture by engaging in their own professional development (Dinsdale, 2017). The quality of a school’s leadership has been directly linked to student achievement (Miller et al., 2016). Schwartz (2014) found one of the most important forms of professional development for a principal was a learning community that supported school principals. Learning communities comprised of school leaders supported principals by empowering them to seek feedback, share ideas, and receive support when needed (Schwartz, 2014).

CTAE programs have been required by the federal Carl D. Perkins Career and Technical Education Act to have advisory committees (Biggerstaff, 2016). These advisory committees consisted of industry and organizational partners and
provided guidance on current industry practices, mentorship for students and staff, and program donations (Biggerstaff, 2016). Principals have served in active roles on advisory committees not only providing guidance to CTAE programs but also gaining insight into current business and industry trends and acquiring professional knowledge themselves (Biggerstaff, 2016). Principals who participated in professional development expressed they were better able to negotiate complex change and experienced greater confidence in instructional leadership (Miller et al., 2016).

**Teacher Retention**

National, state, and local educational agencies have identified teacher retention as an issue of continuous importance and concern (Holmes et al., 2019). “Pervasive neglect of the nation’s best teachers is a disgrace that derails school improvement efforts and robs millions of students of a potentially life changing education” (Jacob et al., 2012, p. 4). Because schools may not be positioned to directly influence the broad social-cultural context of the communities they serve, focusing on recruiting and retaining teachers has been of great importance to schools (Gunther, 2019). Holmes et al. (2019) suggested although teacher recruitment is acknowledged as an issue for school districts, teacher retention poses an even greater threat to education and positive student outcomes. Inept school leadership and ineffective policies that were the root causes for teachers leaving were sustained barriers to quality education (Holmes et al., 2019).

Job satisfaction was one of the most studied topics in organizational psychology because of its positive impact on job performance and retention (Judge et al., 2017). Judge and Kammeyer-Mueller (2012) described job
satisfaction as how an individual evaluates their present job conditions. Multiple studies concluded job satisfaction was a factor in whether or not a teacher chose to remain in the profession (Bastian & Marks, 2017; Gill, 2019; Holmes et al., 2019). Researchers have concluded one solution to address the imbalance of the supply and demand of teachers would be to increase the job satisfaction of teachers, therefore increasing retention (Cochran-Smith, 2004; Holmes et al., 2019).

Researchers conducted studies delving into the supply and demand and teacher retention issues concerning CTAE teachers in schools (Bartley & Sneed, 2004; Bowen et al., 2019; Tripp, 2006). Park and Johnson (2019) confirmed that a deficiency of CTAE teachers will negatively influence the workforce needs of the various industries for which these teachers prepare students. Park and Johnson found a positive correlation between job satisfaction and work engagement of CTAE teachers and a negative correlation between job satisfaction and turnover intention of CTAE teachers. Engaged CTAE teachers are described as energetic, proactive in producing quality work, and able to effectively handle difficult job situations (Park & Johnson, 2019). Engaged CTAE teachers who perceived their job to be satisfying were easier to retain and less likely to leave the profession (Bowen et al., 2019; Park & Johnson, 2019).

**Teacher Attrition**

Public school teachers who voluntarily leave the profession do so for a variety of reasons. Factors cited by teachers exiting the profession include the following:
• personal life reasons, including pregnancy and childcare,
• pursuit of a position other than that of a k-12 teacher,
• dissatisfaction with school assessment and the effects of accountability measures on their teaching curriculum,
• dissatisfaction with the school’s administration,
• dissatisfaction with teaching as a career,
• the need for a higher salary,
• lack of influence over school policy and practices, and
• lack of autonomy over the classroom (Chiong et al., 2017; Dinsdale, 2017; Omar et al., 2017; Podolsk et al., 2019).

Borich (2014) argued teachers transition into the profession through three stages: survival, mastery, and impact. New teachers often find themselves at the survival stage, where their teaching concerns focus more on their own well-being rather than the actual task of teaching students (Borich, 2014). The mastery stage focuses on how best to deliver instruction, and the impact stage is solely focused on how to increase student understanding and learning (Borich, 2014). Gill (2019) asserted without strategies to successfully transition teachers into the teaching occupation, too many new hires never exit the survival stage and quit in their first or second year. Smalley and Sands (2018) concluded new teachers may feel isolated and may quit when they are immersed in a culture that undermines or is neutral to their needs and interest, and failed to promote professional growth. Park and Johnson (2019) found a positive school culture increased work engagement resulting in increased retention.
Evidence has demonstrated attrition is higher for those who enter the teaching profession feeling unprepared as compared to those who described themselves as comprehensively prepared (Podolsky et al., 2019). First-year teachers who felt they were well prepared for teaching were more likely to plan to stay in the profession than those who felt poorly prepared (DeAngelis et al., 2013). Tangible evidence of preparation is certification. Research indicated there was no difference in attrition rates for teachers who pursued traditional or alternative certification routes (Haj-Broussard et al., 2016). According to the National Center for Education Statistics, 30% of uncertified teachers leave the profession within five years, compared to 15% of certified teachers (Gray & Taie, 2015).

The quality of teacher preparation mattered as well. Self-efficacy was increased in prospective teachers through a strong teacher preparation program (Darling-Hammond et al., 2002; DeAngelas et al., 2013). Self-efficacy was identified as a key factor related to the likelihood teachers will remain in the teaching profession (Darling-Hammond et al., 2002; DeAngelas et al., 2013). Ingersoll et al. (2014b) concluded new teachers who had a semester or more of student teaching prior to employment were more than three times less likely to leave the teaching profession than those who had no student teaching experience. In addition, beginning teachers who had received comprehensive preparation that included observing practicing teachers; student teaching one semester and receiving feedback; taking courses in teaching methods and learning theory; and selecting instructional materials were two and one-half times less likely to leave
teaching after one year in comparison to teachers with little or no pedagogical training (Podolsky et al., 2019).

Bowling and Ball (2018) acknowledged teacher preparation has an impact on CTAE teacher attrition. Traditionally, the majority of CTAE programs utilized four-year baccalaureate programs to fulfill most teaching positions (Bowen et al., 2019). Some programs within CTAE, such as trade and industry and health occupations, have used alternative certification programs with an emphasis on previous work experience to fill teaching vacancies (Bowling & Ball, 2018). CTAE teachers, no matter their prior preparation, consistently acknowledged attaining job satisfaction, having a sense of accomplishment, fostering positive relationships with students and co-workers, and pleasant working conditions as key motivators for staying on the job and remaining engaged in the teaching profession (Bowling & Ball, 2018).

**Timing of Hiring**

The hiring of teachers after the school year has started has been found to negatively influence teacher recruitment, retention, and student achievement (Podolsky et al., 2019). Papay and Kraft (2016) found, varying by year and geographic location, between 11% and 30% of new teachers are hired after the school year has started. Teachers hired after the school year had started were generally less effective and were more likely to leave the profession than new teachers hired at other times of the year (Papay & Kraft, 2016). Teachers hired under these circumstances had less time to plan their curriculum, develop engaging lessons, and understand district and school procedures (Podolsky et al., 2019). Teachers who obtained a new teaching position after school was in session
had to balance all of these activities and teach class, putting them at risk of becoming overwhelmed with the workload due to lack of time to acclimate to their new school and prepare (Papay & Kraft, 2016).

Bartholomew et al. (2018) reported principals frequently hired CTAE teachers after the school year had started due to teacher attrition. CTAE teacher attrition may have been unique in education in that it is linked to the movement of CTAE teachers between the industries they represent and the field of education (Bowen et al., 2019; Bowling & Ball, 2018). The CTAE teacher shortage necessitated principals be flexible and open to hiring teachers from alternative certification routes (Bartholomew et al., 2018; Bowen et al., 2019; Stephens, 2015). Bartholomew et al. (2018) suggested principals need to be prepared to hire CTAE teachers at non-traditional times, and professional development activities should be readily available to support new hires.

Hiring teachers after the school year began, although risky, proved to be unavoidable due to structural or procedural barriers within school districts (Podolsky et al., 2019). The late adoption of school budgets as a result of slow-moving state and local budgets has been one such barrier (Papay & Kraft, 2016). Another barrier has been the inability to accurately predict student enrollment (Podolsky et al., 2019). A third barrier has resulted from collective bargaining agreements that may have delayed new hires until districts had completed the transfers of senior teachers with more tenure (Liu & Johnson, 2006).
Teacher Salary and Other Compensation

Teachers have been more motivated by the desire to do good than some other professionals; however, altruism alone has not been enough to attract talented candidates to the profession and keep them in the classroom (Podolsky et al., 2019). The extent to which teachers chose to enter and ultimately stay in the teaching profession has been highly influenced by better and higher paying job opportunities (Podolsky et al., 2019). Teachers’ salaries have affected the supply of teachers in terms of quality and quantity of individuals preparing to be teachers (Grissom et al., 2015).

Salaries also influenced teacher retention (Grissom et al., 2015). Teachers were less likely to stay in the profession when they worked in districts with lower wages (Grissom et al., 2015). Research revealed beginning teachers whose first-year salary was $40,000 or more were more likely to stay in the profession than those beginning teachers earning less than $40,000 (Gray & Taie, 2015). Podolsky et al. (2019) also supported this claim, finding that of public school teachers who left the profession and said they would consider returning, 67% rated an increase in salary as extremely or very important to their decision to return.

Despite the evidence that salaries influence the quality of prospective teachers attracted to the profession and their desire to stay in the profession, literature revealed teachers’ salaries are not competitive in many labor markets (Baker et al., 2018). Researchers found beginning teachers nationally earned about 20% less than individuals with college degrees in other fields, and this wage gap can widen to 30% by mid-career (Baker et al., 2018). Allegretto and Mishel
(2016) found the difference between teachers’ salaries and those with comparable college degrees has grown over time. In 1994, public school teachers’ earnings (including salary, health benefits, and pension) were similar to those of other workers with a college degree, after adjusting for the shorter work year in teaching. By 2015, teachers earned 11% less in total compensation (Allegretto & Mishel, 2016).

Teachers were burdened with college debt incurred while undergoing their teacher preparation programs (Staklis & Henke, 2013). The more college debt that potential teacher candidates incurred, the less likely they were to choose to remain in the limited income field of teaching (Podolsky et al., 2019). Studies of loan forgiveness programs have found teachers who received loan forgiveness, which increased their overall compensation, were more likely to remain in the profession (Feng & Sass, 2015).

**Induction and Support for New Teachers**

A review of the literature revealed sufficient teacher preparation, training, and purposeful professional development included induction activities and increased teacher retention (Podolsky et al., 2019; Solomonson et al., 2018). Bastian and Marks (2017) found the first few years of a teacher’s career to be developmental as effective teachers transitioned from preparation to practice. New teachers morphed into highly competent instructors or regressed to ineffective teachers depending on support (Bastian & Marks, 2017). Lack of adequate support for induction teachers resulted in them leaving the profession (Bastian & Marks, 2017; Podolsky et al., 2019).
Induction activities for new teachers included orientation sessions, retreats and seminars for novice teachers, coaching and feedback from experienced teachers, the opportunity for novice teachers to observe expert teachers, extra classroom assistance, reduced workloads, and mentoring (Ingersoll & Strong, 2011). Teachers in a comprehensive induction program who received supports such as these were found to be two times more likely to remain in the teaching profession than those new teachers who lacked these supports (Ingersoll & Smith, 2004). Bartholomew et al. (2018) found induction programs designed specifically for CTAE teachers especially helpful. New CTAE teachers encountered challenges unique to CTAE, such as lack of pragmatic teaching strategies, managing the lab space, maintaining inventory and supplies, and collaborating with other teachers (Bartholomew et al., 2018). The goals of induction programs varied but generally focused on the improvement and retention of novice teachers with the ultimate goal of improving student outcomes (Podolsky et al., 2019). Researchers have concluded induction programs that were designed well and addressed the needs of beginning teachers resulted in accelerated professional growth, improved student learning, and increased retention of new teachers (Bastian & Marks, 2017; Ingersoll & Smith, 2004; Ingersoll & Strong, 2011).

**Working Conditions**

Researchers have reported 55% of a teacher’s decision to leave the profession is attributed, at least in part, to frustration with one or more variables related to their working conditions (Solomonson et al., 2018). The success of retaining teachers by raising salaries, along with providing effective preparation, and induction has shown to be enhanced when teachers worked in collaborative
and supportive environments (Podolsky et al., 2019). Four factors that consistently proved to be important in creating optimal teaching and learning conditions for teachers and most highly correlated to their decision to remain in a given school were:

1. school leadership and administrative support;
2. opportunities for professional collaboration and shared decision-making;
3. high-stakes accountability systems; and
4. resources for teaching and learning (Podolsky et al., 2019).

As evidenced above, teachers cited the number one reason for leaving the profession was related to frustrations with school leadership (Podolsky et al., 2019; Solomonson et al., 2018). Specifically, lack of administrative support has been found to be a common reason teachers choose to leave the profession (Lemons et al., 2015). Inversely, those teachers who felt they had overwhelming support from their administrators, as well as other stakeholders like parents and community, tend to stay in the profession (Clark et al., 2014). School administrators must ensure strategies are in place to satisfy and engage CTAE teachers as practical ways to increase retention (Bartholomew et al., 2018; Park & Johnson, 2019). Specifically, administrators should recognize teachers’ contributions, provide development opportunities, and promote challenging responsibilities and autonomy in the classroom (Park & Johnson, 2019).

Another aspect of the work environment that has been found to have a profound effect of teacher retention is excessive teaching load coupled with additional responsibilities beyond the school day (Solomonson et al., 2018).
Skaalvik and Skaalvik (2017) found work overload was the strongest predictor of emotional exhaustion in teachers. “When teachers assume too much responsibility for activities beyond classroom instruction, there is the potential for negative impact on their commitment to remain in the profession” (Crutchfield et al., 2013, p. 10). Specifically, research has shown CTAE teachers work well beyond the 40 hour workweek and the additional hours they work contributed to their decisions to leave the profession (Hainline et al., 2015; Solomonson et al., 2018). School officials have recognized the amount of additional expectations assigned beyond the scope of a regular school day is directly related to retaining quality teachers (Lemons et al., 2015). This study examined the motivational influences on professional choice, perceived level of preparedness, and retention of alternatively certified teachers of CTAE in northeastern Georgia.

**Summary of Review of the Literature**

Teacher certification, motivation, and teacher retention were contributing and relevant factors related to determining why CTAE teachers choose to teach in their respective fields (Bowen et al., 2019; Omar et al., 2017; Skaalvik & Skaalvik, 2017). Research results varied in comparing the preparedness and effectiveness of traditionally and alternatively certified teachers (Bowen et al., 2019; Bowling & Ball, 2018; Flower et al., 2017). Proponents of each route to certification argued their preference with fidelity based on evidence. This review explored the positive attributes and drawbacks to both routes to certification. CTAE teachers were found to be both intrinsically and extrinsically motivated (Chiong et al., 2017; Landrum et al., 2017; Park & Johnson, 2019; Reeves & Cozzens, 2018). The extent to which the act of, and fulfillment from, teaching
students largely determined the individual’s tenure in the profession (Arslan, 2017). Teacher retention was critical as the nation faced a shortage of CTAE teachers (Bowen et al., 2019; Stephens, 2015). Teacher induction programs that support new teachers and other satisfying experiences on the job may aid in retaining quality CTAE teachers (Bastion & Marks, 2017; Podolsky et al., 2019; Solomonson et al., 2018). Identifying why alternatively certified CTAE teachers chose to teach in their respective fields instead of working in industry, their perceived preparedness, and factors associated with their retention may better enable schools systems to recruit and retain quality CTAE teachers. The research design and methodology used in conducting this study will be explained in Chapter III.
Chapter III: Methodology

Hodes and Kelley (2017) confirmed the importance of CTAE teachers, finding CTAE in American middle and high schools addressed a growing skills gap in the United States. There is a shortage of CTAE teachers; therefore, policymakers and stakeholders in the field of education have implemented alternative routes to certification and investigated the motivational influences of teachers and teacher retention in hopes of addressing the shortfall (Bowen et al., 2019; Stephens, 2015). Park and Johnson (2019) conducted a quantitative study in which they examined CTAE teachers and the relationships between their job satisfaction, work engagement, and turnover intention. The researchers concluded work engagement was significantly and positively associated with job satisfaction, and as job satisfaction and work engagement increased, intent to leave the profession decreased (Park & Johnson, 2019). My study addressed the gap in extant research as prior studies have failed to specifically examine the motivational influences on professional choice, perceived level of preparedness, and retention of alternatively licensed teachers of CTAE in rural northeastern Georgia.

Research Design

Creswell and Creswell (2018) defined qualitative research “as an approach for exploring and understanding the meaning individual or groups ascribe to a social or human problem” (p. 4). According to Merriam and Tisdell (2016), the origins of qualitative research can be traced back to anthropology, sociology, and various applied fields of study such as journalism, education, social work, medicine, and law. Qualitative research, as a viable research
methodology, was studied extensively in the 1960s and 1970s and was established as an acceptable research methodology in the latter part of the twentieth century (Merriam & Tisdell, 2016).

I chose a qualitative interpretive research design for this study. According to Merriam and Tisdell (2016), qualitative interpretive research was the most common type of qualitative research. Researchers have explained qualitative interpretive studies assumed reality was socially constructed and there can be multiple interpretations of a single event (Merriam & Tisdell, 2016). Creswell (2014) explained the participants in a qualitative interpretive study developed multiple, varied, subjective meanings of their experiences. Qualitative interpretive researchers were tasked with constructing knowledge, not finding it (Merriam & Tisdell, 2016). I gathered data attempting to uncover the essence of participants’ lived experiences (Seidman, 2013). I conducted interviews of alternatively certified CTAE teachers in northeastern Georgia attempting to examine their motivational influences on professional choice, perceived level of preparedness, and factors associated with their retention.

**Role of the Researcher**

I acted alone in this study as the primary instrument for data collection and analysis (Merriam & Tisdell, 2016). I carefully scripted each interview question in the interview protocol to ensure the interview questions addressed the research questions. I utilized purposeful, criterion-based sampling first deciding what attributes of participants were crucial to my study, and then I found people who met that criteria (Merriam & Tisdell, 2016). Specifically, I selected participants who were alternatively certified CTAE teachers currently teaching in the Pioneer
RESA service area of northeastern Georgia. This study was conducted in the midst of the global COVID-19 pandemic. COVID-19 was a dangerous and contagious disease caused by the SARS-CoV-2 virus discovered in Wuhan, China in December 2019 (Centers for Disease Control and Prevention, 2021). All efforts were made to minimize exposure of participants and myself to COVID-19. I conducted all the interviews individually and utilized the Zoom platform so the participants and I were not together and there was no exposure. I analyzed all data collected.

I maintained ethical standards throughout the study. I developed trust with the research participants, promoted the integrity of my research, and guarded against misconduct and impropriety that might have reflected on their organizations or institutions through following a scripted interview protocol and maintaining confidentiality (Israel & Hay, 2006). Following the guidance of Creswell (2012), my research was honestly reported, shared with participants, not previously published, and not influenced by personal interest. I provided accurate and honest reporting throughout the study. Through a process Creswell and Creswell (2018) refer to as member checking, participants were invited to review the data that captured their individual experiences to ensure accuracy and meaning (Creswell & Creswell, 2018). My purpose for the study was to examine the motivational influences on professional choice, perceived level of preparedness, and retention of alternatively certified teachers of CTAE in northeastern Georgia. I implemented reflexivity through engaging in open discussions with participants about possible assumptions, biases, and dispositions throughout the study (Merriam & Tisdell, 2016). Confidentiality was maintained
throughout data collection, and sensitive information was secured ensuring privacy and protection of both data and participants.

I am a former CTAE teacher and CTAE director in northeast Georgia. I received a Bachelor’s of Science in Agriculture with a Major in Landscape and Grounds Management from the University of Georgia in 1998 and graduated with no intention of teaching. I worked in the landscape industry for three years before returning to the University of Georgia to get a Master’s of Agricultural Extension Degree with plans of becoming an Agricultural Extension Agent. The University of Georgia imposed a hiring freeze in extension offices and my advisor suggested I consider teaching Agriculture Education because the route to certification was expedited due to my extensive prior related coursework. To become certified, I only had to take a couple of pedagogy classes and student-teach. After becoming certified, I taught Agriculture Education for eight years, was a district CTAE director for seven years, and served four years as high school principal.

Consequently, the inspiration for this study came from the experiences that led to me entering teaching as a profession, my experiences as a CTAE teacher and CTAE administrator, and my experience as principal, thus creating potential bias in the expectations of the study’s outcomes. I have a passion for CTAE and the role schools play in communities’ workforce development pipelines and economic develop plans. My personal affiliation and passion for the subject matter are identified as potential sources of bias in the study. I stifled any preconceived notions for bias and removed the expectation of finding evidence of biased ideas to maintain trustworthiness of data collection, data analysis, and data
reporting by seeking opinions of alternatively certified CTAE teachers in multiple school systems and with varied backgrounds and experiences (Flyvbjerg, 2006).

**Participants in the Study**

Researchers reported using purposeful sampling in qualitative studies to gain insight or perspectives from specific individuals or to learn about a specific phenomenon (Creswell, 2012; Merriam & Tisdell, 2016). According to Merriam and Tisdell (2016), “Purposeful sampling [was] based on the assumption that the investigator want[ed] to discover, understand, and gain insight and therefore must select a sample from which the most can be learned” (p. 96). LeCompte and Schensul (2010) used the term *criterion-based selection* to describe the process researchers must navigate to determine what selection criteria are essential in choosing the people or sites to be studied. I developed the following criteria for including participants in this study: the participant was an alternatively certified CTAE teacher in the state of Georgia, and the participant currently worked as a CTAE teacher in a high school in the Pioneer RESA service area in northeastern Georgia. Pioneer RESA (n.d.) was one of 16 Regional Education Service Agencies in Georgia and served 15 school districts in the northeast corner of the state.

I was interested in the motivational influences on professional choice, perceived preparedness, and retention of alternatively licensed CTAE teachers in the Pioneer RESA service area in rural northeastern Georgia; therefore, I determined it was fitting to ask CTAE teachers about these subjects directly. Merriam and Tisdell (2016) described criterion-based selection as deciding what attributes of the sample are crucial to the study and then finding people who meet
that criteria. The participants in my study were all alternatively certified high school CTAE teachers currently teaching in the Pioneer RESA service area in northeastern Georgia.

According to Merriam and Tisdell (2016), “Snowball, chain, or network sampling is perhaps the most common form of purposeful sampling” (p. 98). I used snowball sampling to recruit potential participants for the study. I initially chose three alternatively certified CTAE teachers who met the criteria for the study. The three initial participants were all teachers who met the required criteria for my study and who I knew as professional peers from my prior experience as a CTAE teacher, CTAE director, and principal in northeastern Georgia. Merriam and Tisdell (2016) suggested the snowball sampling technique included the initial participants recommending others who may meet the required criteria for the study. Following Merriam and Tisdell’s (2016) guidance, the three initial participants then recommended other CTAE teachers who might be interested in participating. As interviews were conducted with each CTAE teacher, I asked for further recommendations for potential participants. Each participant interviewed was able to self-select for the study creating a more random selection of participants, thus adding to the trustworthiness of the study (Merriam & Tisdell, 2016).

I used snowball sampling to obtain the participants ($n = 13$) for this study from the population of CTAE teachers in northeastern Georgia. Pioneer RESA serves 15 school districts in northeast Georgia and the participants in this study all belonged to school districts in the Pioneer RESA service area (Pioneer RESA, n.d.). All of the school districts in the Pioneer RESA service area only have one
high school with the exception of one school district (Pioneer RESA, n.d.).

Having only one high school in a district promoted collaboration and networking among CTAE teachers across districts. For example, a district employed one automotive teacher at the high school and the nearest automotive teacher to collaborate with was at the high school in the neighboring district. These previously formed networks facilitated the use of snowball sampling.

**Data Collection**

Prior to data collection, I submitted a request for the approval of this study to the university’s Institutional Review Board (IRB). After approval from the IRB, I sent a CTAE teacher permission request letter (see Appendix B) to three high school CTAE teachers who met the criteria for my study. I also sent an informed consent email message to each participant (see Appendix C). I collected the consent forms from each CTAE teacher via email, printed them, and stored them in a locked filing cabinet in my home office. I am the only one who had access to this filing cabinet. At the conclusion of the initial interviews, I asked each participant for recommendations of other alternatively certified, high school CTAE teachers who might be interested in participating in the study. I contacted the new participants via email and phone. Each new participant was asked to sign an informed consent form, which was collected and filed in the lock filing cabinet previously mentioned.

**Instrument**

I developed an interview protocol with eight questions (see Appendix D) because Merriam and Tisdell (2016) suggested fewer, more open-ended questions yield descriptive data and even stories about the phenomenon being studied.
Having fewer questions allowed me to really listen to what the participants had to share, ask clarifying questions, and gather rich information (Merriam & Tisdell, 2016). The same interview protocol was utilized throughout data collection.

**Pilot Testing**

Pilot testing was necessary to establish whether the interview protocol would provide data that would inform the research questions (Roberts & Hyatt, 2019). Completing a pilot test of the interview protocol also allowed me to determine if the participants in the study would be able to complete the interview and if they would understand the questions (Creswell, 2012). In addition, piloting the interview protocol ensured my level of proficiency with the technology utilized. I invited three alternatively certified CTAE teachers who worked in my district to pilot the interview protocol. The teachers who participated in the pilot were experienced and had gained my respect as competent instructors through prior work experiences. The alternatively certified CTAE teachers who participated in the pilot were not included in the study. I conducted pilot interviews via Zoom utilizing the interview protocol with each individual and gave instructions for providing feedback. There was no feedback suggesting changes to the protocol.

**Interviewing**

According to Merriam and Tisdell (2016), interviewing is the most common form of data collection, and often the only source of data collection in qualitative studies. Interviewing may be the most beneficial and efficient form of data collection when the phenomenon of interest cannot be directly observed (Creswell, 2012; Merriam & Tisdell, 2016). I used semi-structured interviews to
collect data about the motivational influences on the professional choice, perceived preparedness, and retention of alternatively certified CTAE teachers in northeast Georgia because it was impossible to observe the participants’ feelings and interpretations of their motivational influences, perceived preparedness, and retention. Creswell (2014) stated, “One-on-one interviews are ideal for interviewing participants who are not hesitant to speak, who are articulate, and who can share ideas comfortably” (p. 218). I felt alternatively certified, high school CTAE teachers met Creswell’s (2014) description of ideal interview candidates. I chose to interview alternatively certified CTAE teachers because they could describe personal accounts of motivational influences, perceived preparedness, and retention. I chose a semi-structured interview format to gain answers to specific questions but still allow flexibility in the interview to delve more deeply as issues and information emerged (Merriam & Tisdell, 2016).

I conducted each interview synchronously using the Zoom platform. This study was conducted in 2021 during the COVID-19 pandemic and I interviewed participants via Zoom to avoid exposure to, or transmission of, the virus. I also recorded each interview using a digital audio recorder. All interviews were conducted with me in my home office and the participants in other locations. Prior to each interview, I assigned a code for each participant based on district and participant number (e.g., SD1T1). This code was used throughout the study to reference participant responses in lieu of the interviewee’s name to ensure confidentiality. No personal, identifying information was collected or recorded. Interviews were conducted over a four-week period in March 2021. I had 16 potential participants as a result of snowball sampling, but stopped collecting data.
after 13 due to reaching the point of saturation. Merriam and Tisdell (2016) suggested the point of saturation was reached and data collection ended when the researcher continued to interview and began to realize they were hearing the same things they heard earlier and no new information was forthcoming.

**Methods of Analysis**

I manually typed the transcriptions because the number of interviews was relatively small and the process of transcribing the participant responses allowed me to become familiar with the data (Merriam & Tisdell, 2016). When the transcriptions were complete, I began the member checking process to enhance the credibility of the data collected (Creswell & Creswell, 2018; Merriam & Tisdell, 2016). For member checking, I offered to email a copy of the individual transcriptions to the participants and sent a copy to those who requested it so they could review them for accuracy and make any suggestions. Creswell and Creswell (2018) suggested participant feedback regarding how I interpreted the data collected from the participant’s reality and meanings ensured the truth value of the data.

After the transcripts were reviewed by the participants, I coded and analyzed the data. Previous researchers have described various methods of coding qualitative data (Creswell, 2014; Creswell & Creswell, 2018; Merriam & Tisdell, 2016). I chose to apply Creswell’s (2014) coding process, which included the following steps: (a) organize and prepare the data for analysis; (b) read through all the data (i.e. transcripts); (c) begin open coding by choosing one transcript and read through it a second time assigning codes to important phrases or segments of text; (d) make a list of the codes rendered form the first document, group similar
or redundant codes; (e) apply the new list of axial codes to the remaining documents in the data set, highlight specific quotes that support each code; and (f) reduce the list of codes to five to seven themes that can be supported with rich description from the data. After I analyzed and coded the data and identified themes, I reported all findings using quotes from participants to support each theme.

Detailed description was an integral part of reporting my qualitative research findings (Creswell & Creswell, 2018; Merriam & Tisdell, 2016). Merriam and Tisdell (2016) described the product of qualitative research as richly descriptive. Words, rather than numbers, were used to report what I learned about the phenomenon studied (Merriam & Tisdell, 2016). Descriptions of context, the participants involved, and items of interest were included (Merriam & Tisdell, 2016). I attempted to include as much detail as possible in my findings to allow the reader to feel immersed in the experiences described by the participants (Creswell, 2012). As each theme developed, I combined participants’ quotes and specific pieces of data to illustrate how participants experienced certain situations or how they perceived phenomena (Creswell, 2012; Merriam & Tisdell, 2016).

Trustworthiness

Previous researchers have established when examining validity and reliability in qualitative research, trustworthiness is more meaningful than replicability (Creswell, 2014; Merriam & Tisdell, 2016). Creswell and Creswell (2018) offered various strategies such as member checking, triangulation, rich, thick descriptions, and reflexivity to increase the trustworthiness of a study. Merriam and Tisdell (2016) suggested triangulation was the primary strategy for
ensuring validity of a qualitative study. I interviewed 13 alternatively certified CTAE teachers from seven school districts across the Pioneer RESA service area in northeastern Georgia. Through this process, triangulation of data was achieved through comparing and cross-checking data ensuring the themes occurred across all data sources (Merriam & Tisdell, 2016).

I was able to select participants through the use of snowball sampling. Although I purposely chose the three initial participants, I relied on referrals from participants for the majority of alternatively certified CTAE teachers who were interviewed. Having participants select prospective interviewees allowed me to remove potential bias in the selection process and increased the trustworthiness of the sample selection (Merriam & Tisdell, 2016).

Creswell and Creswell (2018) stated member checking was a common strategy for ensuring internal validity or credibility. Merriam and Tisdell (2016) described member checking as soliciting feedback on preliminary or emerging data from some of the participants interviewed. I utilized this strategy by inviting participants to review their interview transcripts. Participants were able to recognize their own experiences in the data and provided feedback for clarity (Merriam & Tisdell, 2016). I used feedback from the participants who chose to review my analysis of their interview transcripts to clarify data so the data accurately reflected their perspectives and experiences, striving to ensure consistency between the data collected and the results (Merriam & Tisdell, 2016).

Limitations and Delimitations

Creswell (2014) described limitations as potential weaknesses or problems with a study as identified by the researcher. The limitations associated with
qualitative studies were often related to validity and reliability (Simon & Goes, 2013). Wiersma (2000) found qualitative research occurred in the natural setting and was difficult to replicate. Simon and Goes (2013) explained when a researcher selected certain methodologies and designs, for example a qualitative interpretive study, the researcher must accept inherent limitations and the fact that they have little control over them.

Utilizing snowball sampling in my study resulted in limitations in the number of participants in the study. Although I asked all participants to recommend new, potential participants, not all did, and not all potential participants recommended were interviewed. I was unable to contact some of the recommended participants and some elected not to participate. These factors potentially limited the number of participants in the study.

I collected data in the spring of 2021 in the midst of the COVID-19 pandemic. Person-to-person interviews were not conducted due to the possible transmission of, or exposure to, COVID-19. This limited my interaction with participants to synchronous interviews conducted on the Zoom platform over the computer. Conducting the interviews in this manner limited my participants to only those who had access to the required technology and the knowledge of how to use it (Merriam & Tisdell, 2016). Merriam and Tisdell stated other limitations stemming from utilizing online platforms for interviews include possible failing of technology and the unlikely but possible compromising of confidentiality.

Simon and Goes (2013) described delimitations as those characteristics that arose from limitations in the scope of the study by the conscious exclusionary and inclusionary decisions made during the development of the study plan.
Delimitations resulted from specific decisions and choices made by the researcher (Simon & Goes, 2013). I chose to investigate the motivational influences on professional choice, perceived preparedness, and retention of alternatively certified CTAE teachers in northeast Georgia. The specific criteria of requiring participants to be alternatively certified CTAE teachers and teach in the Pioneer RESA service area of northeast Georgia limited the scope of the study and, therefore, were delimitations.

The use of snowball sampling was a conscious choice and, therefore, also a delimitation of the study. This purposeful sampling technique added randomness to the sample and was appropriate to this study due to the existing networks of CTAE teachers. Snowball sampling did yield participants who provided data that informed the research questions. I was not interested in the replicability of my study, but I was interested in gaining understanding of the meanings and experiences of participants (Merriam & Tisdell, 2016). I sought to learn what motivated alternatively certified CTAE teachers in northeast Georgia to choose to teach, how they perceived their preparedness, and factors that affected their retention. I chose to use only alternatively certified, high school CTAE teachers who were currently teaching in the Pioneer RESA service area of northeastern Georgia in my study. I excluded retirees or those who had exited the profession. I felt active CTAE teachers were the most direct source of information to answer the research questions for the current study. Despite the limitations and delimitations of the study, I was able to provide relevant data, analysis, and conclusions that addressed a gap in the literature and examined the motivational influences on professional choice, perceived preparedness, and retention of
alternatively certified teachers of CTAE in the Pioneer RESA service area of northeastern Georgia.

**Assumptions of the Study**

Simon and Goes (2013) described assumptions as beliefs about a proposed study that were necessary to conduct the research but may not be able to be proven. I identified two major assumptions in the current study. First, it was assumed the participants in my study were truthful in their responses to interview questions. I assured participants their identity would be confidential and the data gathered would be properly secured in an effort to support this assumption. I have no reason to believe any of the participants in the study were not truthful.

Second, I assumed the CTAE teachers participating actually felt like they had a choice to teach, as opposed to being thrust into teaching out of necessity. For example, if a participant was working in industry and lost their job due to economic decline, the only other viable employment opportunity may have been teaching. This assumption could impact the data collected and ultimately the conclusions of the study. Educating initial participants on the purpose of my study and then utilizing the potential participants they recommended through snowball sampling were efforts to control for this assumption.

**Summary of Methodology**

Merriam and Tisdell (2016) stated a qualitative research design focused “on discovery, insight, and understanding from the perspective of those being studied offers the greatest promise of making a difference in people’s lives” (p. 1). Criterion-based purposeful sampling of participants and utilization of snowball sampling ensured poignant data collection that addressed the research
questions of my study. The data were analyzed and coded using qualitative research techniques grounded in literature. Limitations, delimitations, and assumptions were all disclosed, and mitigation attempts for each were outlined in Chapter III. Trustworthiness was of perennial importance and strived for at each step in the research process of this study. The methodology was based on prior research and the themes that emerged through my analysis yielded valuable results that were discussed in Chapter IV. Conclusions were presented in Chapter V.
Chapter IV: Analyses and Results

I conducted this study to examine the motivational influences on professional choice, perceived level of preparedness, and retention of alternatively certified teachers of CTAE in northeastern Georgia. Due to lack of research in extant literature regarding the binary choice of occupation alternatively certified CTAE teachers must make, their perceived level of preparedness, and the factors that affected their retention, I hoped to fill the gaps in the literature regarding this topic. I relied on referrals from each participant to gain access to additional possible participants using snowball sampling, which according to Merriam and Tisdell (2016), was perhaps the most common form of purposeful sampling. I anticipated reaching a point of saturation after completing 12-15 interviews and met the point of saturation after completing 13 interviews. Just as Merriam and Tisdell (2016) described reaching the point of saturation in data collection, after 13 interviews I found most of the responses to questions in the interview protocol were similar and no new information or insights were being provided.

I reached out to the three initial participants on March 6, 2021; the day after the university’s IRB approved my study. The three initial participants in this first round of interviews represented three different school districts and yielded eight recommendations for additional interviews. Five of the eight recommendations elected to participate in my study and made up the second round of interviews. Those five participants represented two additional school districts and ultimately yielded nine additional recommendations of potential interviewees. Seven individuals indicated their willingness to participate in the third round of interviews in my study; however, after interviewing five additional
participants representing two additional school districts, I had reached the point of saturation. The last interview was completed and transcribed on March 30, 2021.

**Data Analysis**

I analyzed the participants’ responses to the interview protocol for a period of seven days beginning March 31, 2021. The purpose of the first question in the interview protocol was to build rapport with the participant and learn how long they had been a CTAE teacher and document their specific teaching field. I crafted the remaining seven interview questions in the protocol to gather information that would directly address the research questions. I also asked additional, probing questions to clarify information.

The number of years the 13 participants worked as alternatively certified high school CTAE teachers ranged from 2-40 years with an average of 12.9 years of CTAE teaching experience. The CTAE teachers interviewed represented the following fields: Automotive Technology, Agriculture Education, Culinary Arts, Engineering, Construction, Cosmetology, Welding, Broadcast Video Technology, and Business Education. Further, the alternatively certified teachers who participated in this study represented seven school districts in the Pioneer RESA service area of northeastern Georgia. When asked what they believed to be the most rewarding aspect of being a CTAE teacher, all participants consistently alluded to seeing students get it, and five of the 13 more specifically referenced seeing the light bulb come on. All 13 participants also indicated the students most influenced their decision to continue teaching. The CTAE teachers in the current study consistently exhibited a student-centered focus as to why they teach.
I analyzed the CTAE teachers’ interview responses by applying Creswell’s (2014) six-step coding process. After carefully reading all the transcripts, I randomly chose one, read through all the responses, and applied open coding by assigning codes to important phrases and segments of text. I then made a list of the open codes and grouped similar and redundant codes to render a smaller list of axial codes. Using the axial codes, I then read each transcript highlighting specific quotes that supported each code. After all transcripts were coded, I reduced the list of codes to themes. The purpose of this study was to examine the motivational influences on professional choice, perceived level of preparedness, and retention of alternatively certified teachers of CTAE in northeastern Georgia. The data that addressed the first of three research questions provided by the 13 participants were discussed in the following section.

**Research Questions**

**Research Question 1**

How do alternatively certified Career, Technical, and Agricultural Education teachers describe their motivational influences for choosing to teach in rural northeastern Georgia instead of work in their respective industries for which they are trained?

Research Question 1 was addressed by three questions in the interview protocol: What factors influenced your decision to become a CTAE teacher?; What do you find to be the most rewarding aspects of being a CTAE teacher?; and What would you say most influences your decision to be a CTAE teacher rather than work in the industry for which you are trained? I analyzed the data by
applying open codes and axial codes to render two themes related to research question 1 (see Figure 1).

**Figure 1**

*Data Sorted in Levels of Coding Describing Why CTAE Teachers Choose to Teach*

<table>
<thead>
<tr>
<th>Open Codes</th>
<th>Axial Codes</th>
<th>Themes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benefits of teaching</td>
<td>Teachers value workforce preparedness</td>
<td>Growing the profession</td>
</tr>
<tr>
<td>Background in field</td>
<td>Teachers are driven by industry workforce need</td>
<td>Inspiring students through pragmatic experiences</td>
</tr>
<tr>
<td>Fulfills a need</td>
<td>Teachers perceive students enjoy hands-on experiences</td>
<td></td>
</tr>
<tr>
<td>Hands-on Work-type classroom setting</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Applicable</td>
<td>Teachers value inspiring students</td>
<td></td>
</tr>
<tr>
<td>Seeing students get it</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inspiring students</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teaching is same as training</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Students gain experience</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Growing the profession.** I derived the theme *growing the profession* from analyzing axial codes stemming from open codes. Analyzing open codes revealed the axial code: alternatively certified CTAE teachers value workforce preparedness. When participants were asked to describe what experiences influenced them to pursue a career teaching CTAE, all participants expressed a desire to equip the future workforce in their field. Automotive Technology teacher SD1T1 stated the following:
I started being a mentor at the dealership. We had a student who would go to school for 4 hours and come to work and I would teach him how to do things in the real world. That was an important part of my job and it was really, really fun.

Similarly, Culinary Arts teacher SD3T1 shared the following perspective:

I choose to be a CTAE teacher instead of actually working in the culinary field because, working in the culinary field, I’ve seen so many people who don’t know how to do certain things. They don’t know the importance of the simplest things like washing your hands and what certain things in the kitchen are called, and how to do basic standards.

When pressed about what their respective industry expected of high school graduates, two CTAE teachers referenced safety as it related to workforce preparedness. Welding teacher SD4T3 stated, “My industry contacts want a student coming out of here that respects the equipment we use and how dangerous it can be. They say if I can give them that, it decreases their training time and helps them out.” Automotive Technology teacher SD4T2 echoed those thoughts saying, “The dealerships tell me they want students who respect safety. We need interns who are serious about shop safety.” All 13 participants concurred providing their respective industries with well-prepared students was of utmost importance.

The second axial code leading to the theme growing the profession was CTAE teachers were driven by industry workforce needs. All participants felt connected to their industry and dutiful to supply a prepared workforce.

Automotive Technology teacher SD4T2 struggled to find employees in his
industry position stating, “After the economy collapsed, I started my own business and I realized there is a huge shortage. It was hard for me to find employees. Part of my role now as a teacher, I recruit for the industry.” Welding teacher SD4T3 shared a similar perspective and stated:

There is a shortage of welders and I feel that. I know it is a great profession. And so coming to be a CTAE welding teacher, I can groom and teach these kids how to do these things so when they get out into the real world they can actually do these things and not create problems in the workplace environment.

Broadcast Video Production teacher SD5T1 confirmed the previous sentiment saying, “The movie industry is booming in Georgia. Just in the last three years, I have made so many connections that are asking me to get them students. They just need people to train and I see that as my job.” Cosmetology teacher SD4T1 reported the following:

A student who starts with me as a freshman can have their license to practice in Georgia when they graduate as a high school senior. I want that for them so they can get a great job, and I know salons are hiring.

All of the participants in my study referenced the importance securing a future workforce and, according to 12 out of 13 participants, hands-on, pragmatic learning experiences were what sparked initial interest in the various CTAE fields from students.

**Inspiring students through pragmatic experiences.** I derived the theme inspiring students through pragmatic experiences from axial codes stemming from open codes. In response to being asked about the most rewarding aspects of
being a CTAE teacher, 12 of the 13 alternatively certified teachers interviewed communicated how much they and their students enjoyed the hands-on nature of CTAE instruction. Agriculture Education teacher SD1T2 stated the following:

I like what these kids have. It’s applicable, its hands-on, and it’s a real field. There are jobs out there for kids with a CTAE background. It’s not a lofty idea. You get an individual [who] has goals and is looking to be gainfully employed and if you have CTAE experience, it will pay off. Like I say, it’s applicable and you can see a future in that. It’s hands-on, which a lot of young people, they are all about that. They like the hands-on thing. It’s not so much theory. It’s actual work type settings and areas.

Construction teacher SD3T2 also perceived the experiential learning and projects in his class excited students explaining:

I think students enjoy my class. They come to class on time and ready to work. Students can do more than they think they can and it is great to see them work with their own two hands and produce a quality project.

Cosmetology teacher SD4T1 agreed students enjoy the hands-on learning and stated the following:

I enjoy teaching cosmetology because it is 99% hands-on. We start with some bookwork, but most of the learning occurs in the lab. We start out working on mannequins and the students learn the basics. This is where they get hooked and realize they like it. By the time they are in the third level course, the lab transitions into a working salon with outside customers. The students are doing full cuts and colors. I enjoy seeing the progression in the kids and love teaching them the skills.
Engineering teacher SD5T2 echoed the importance of pragmatic learning and stated:

The CTAE lends itself really well to project teaching. It’s novel, it’s genuine for students. They really believe it has value for them. It is something they can use in the real world. And as a student, those were the things I really enjoyed. Where you learn stuff to help you get to an end goal instead of just learning random pieces. Kids are learning stuff and producing a product they can be proud of.

The same teacher went on to describe the gentle, productive struggle some students experience along the pragmatic path to inspiration and expressed the following sentiments:

In Engineering Technology working on robots, students would struggle day after day getting a little frustrated with their robots in terms of running a program, but then the day it actually did exactly what they were hoping it would do, they would yell out and have the library wondering if everything was all right in your classroom because they had been so successful. Those are great days.

After asking a clarifying question, SD5T2 laughed explaining, “The students would get really excited and the library was my neighbor, just through the wall.”

Alternatively certified CTAE teachers described their motivational influences for choosing to teach in rural northeastern Georgia in terms of securing the future of the career field taught, and what motivates them intrinsically to choose to teach. In terms of their career fields, *growing the profession* emerged as a theme as all 13 participants in my study expressed being motivated by the
importance of securing and training a future workforce for their respective fields. In terms of what intrinsically motivated the teachers, *inspiring students through pragmatic experiences* impassioned CTAE teachers. Twelve out of 13 participants specifically conveyed the hands-on learning experiences that were unique to the CTAE classroom motivated them to choose to teach.

**Research Question 2**

What are alternatively certified Career, Technical, and Agricultural Education teachers’ perceptions of their preparedness for classroom teaching in rural northeastern Georgia?

Research Question 2 was addressed by three questions in the interview protocol: How would you describe your level of preparedness for teaching when you entered the teaching profession?; What aspects of being a CTAE teacher do you feel like you were well prepared for when you completed your alternative route to teacher certification?; and What aspects of being a CTAE teacher do you feel like you were ill prepared for when you completed your alternative route to teacher certification (see Figure 2)?
Figure 2

Data Sorted in Levels of Coding for Describing CTAE Teachers’ Perceptions of Their Preparedness to Teach in Northeast Georgia

<table>
<thead>
<tr>
<th>Open Codes</th>
<th>Axial Codes</th>
<th>Themes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experience from industry</td>
<td>Industry experience is valuable</td>
<td>Masters of technical</td>
</tr>
<tr>
<td>Technical knowledge</td>
<td></td>
<td>knowledge</td>
</tr>
<tr>
<td>Trained employees</td>
<td>Content mastered through experience</td>
<td>Unprepared for the school</td>
</tr>
<tr>
<td>Managed employees</td>
<td></td>
<td>setting</td>
</tr>
<tr>
<td>Prepared to teach content</td>
<td>Managing people prepped for teaching</td>
<td></td>
</tr>
<tr>
<td>Did Not know 504s, IEPs</td>
<td>Work in industry was specialized</td>
<td></td>
</tr>
<tr>
<td>Not a broad knowledge</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Did not understand school</td>
<td></td>
<td></td>
</tr>
<tr>
<td>terms</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Did not know correct</td>
<td>Ill prepared for unique</td>
<td></td>
</tr>
<tr>
<td>pacing of instruction</td>
<td>school intricacies</td>
<td></td>
</tr>
<tr>
<td>Not comfortable with</td>
<td>Unprepared for instructional</td>
<td></td>
</tr>
<tr>
<td>assessment</td>
<td>delivery of curriculum</td>
<td></td>
</tr>
</tbody>
</table>

**Masters of technical knowledge.** I derived the theme *masters of technical knowledge* through application of Creswell’s (2014) coding process. All 13 of the participants in my study were alternatively certified CTAE teachers who had previously worked in industry. All of the participants referenced their experience in industry during the data collection process. In the process of arriving at the theme *masters of technical knowledge*, I derived the axial code content mastered
through experience. When asked what aspects of being a CTAE teacher they were well prepared for when they completed their alternative route to teacher certification, all participants communicated they were proficient in the technical knowledge gained from their industry experience. All participants clearly felt like they knew the content. Culinary Arts teacher SD3T1 stated, “I knew from working in restaurants how to work in the kitchen and the proper techniques you use to provide restaurant grade food.” A Business teacher in another school district, SD7T1, concurred stating, “Content was a strong suit of mine. I knew what I was teaching. I really focused on the content and delivering it to students.” A former greenhouse manager and current Agriculture Education teacher SD6T1 said, “I felt pretty prepared when I started teaching. I felt like I had the content knowledge but, looking back on it, I was not well prepared to stand in front of 30 teenagers.” When asked the same question about the aspects of being a CTAE teacher (i.e., felt prepared upon completion of his alternative route to teacher certification), another Agriculture Education teacher SD1T2 supported this argument saying:

I was prepared for the [agriculture] part. I knew from growing up and working about farming and I knew the ins and outs of what I was teaching. I always had cows and animals on the farm, and I knew those were important to my students. I could help them with all that stuff.

Four participants mentioned their experience training other employees when explaining what aspects of CTAE teaching for which they felt well prepared upon completing their alternative route to teacher certification. Training employees as part of their former jobs contributed to these teachers’ feelings of
preparedness for the classroom and supported the theme *masters of technical knowledge*. Culinary teacher SD2T1 confirmed training contributed to her feeling prepared:

> Having a background in culinary arts, teaching culinary classes to chefs, and training all helped me feel more prepared when I started. Training is teaching someone a skill and to teach it you have to know it. Teaching is like training because it is training the children to become chefs or cooks in the field.

Automotive Technology Teacher SD4T2 also perceived his training background enhanced his content knowledge and stated the following:

> It was a different situation because I was teaching one-on-one at the dealership, and my third day of being a teacher in school, I was standing in front of a classroom full of students. The training helped because it made me an expert and prepared me to transfer my knowledge to the students. I also knew how to manage employees, and managing students is kind of the same.

Ultimately, all 13 participants referenced their technical knowledge coming from their previous work experience in industry. Engineering teacher SD5T2 said, “I knew the content from working. I was prepared for that aspect of teaching.” Broadcast Video Technology teacher SD5T1 concurred stating, “I was up on the technical knowledge, the cameras, editing software, and those things.” Construction teacher SD3T2 proclaimed, “I knew construction. I was making a living at it.” Just as clearly as the participants communicated they felt prepared as *masters of technical knowledge* upon completion of their alternative route to
teacher certification, they expressed their staunch feelings of being unprepared regarding the intricacies of teaching in a school.

**Unprepared for the school setting.** The final theme discovered relating to alternatively certified CTAE teachers’ perceptions of their preparedness for classroom teaching in rural northeastern Georgia was the teachers felt *unprepared for the school setting.* All 13 participants spoke about the intricacies and uniqueness of working in the school setting when asked about the aspects of teaching CTAE they felt ill prepared for upon completing their alternative certification program. The participants expressed feeling unprepared for effectively addressing different aspects of instruction such as lesson planning, pacing, strategies, and assessment. The uniqueness of the school setting, which was referenced by all 13 participants, was expressed in general terms outlining the differences in the workplace and school, such as dealing with parents and how schools address struggling learners compared to how the workplace may address a struggling employee.

Eight of 13 participants mentioned not feeling prepared for the task of assessment and assigning a grade to student work. Eleven out of 13 participants mentioned feeling unprepared for, or unfamiliar with, school specific acronyms and vocabulary. Ten of the 13 participants mentioned not feeling completely comfortable working with special needs students. Specifically, five teachers referenced 504 plans that stemmed from the Rehabilitation Act and ensured that a qualified child with a disability has equal access to education. An Engineering teacher, SD5T2, stated the following:
My certification program didn’t teach us much about 504s and some of the other acronyms specific to school. We didn’t go into depth about any of that. We touched on classroom management, but you can’t really teach that. We did not learn about how a school operated and every school is different. It is hard to learn unless you are in that situation. To things like 504s, to things like CTAE clubs and things like that. I learned those after I started teaching.

Ten out of 13 CTAE teachers interviewed specifically mentioned Individualized Education plans (IEPs) as something they felt unprepared to address. IEPs are legal documents that state mandated accommodations that must be provided to students receiving special education services. Welding teacher SD4T3 quickly reminded me, “There are no IEPs in the real world. I definitely learned about those, and how important it is that they be followed. I was not prepared for that. That was new.” In a follow-up question to Business teacher SD7T1 asking about the big differences between school and industry, the teacher stated the following:

Teaching school is very different. When I worked in the real world, people either cut it or they didn’t. If they didn’t, we replaced them. In school, lots of students have plans like IEPs, and we make accommodations and set it up so all students can make it. It is pass/fail, but it is really not. All students need to pass, and if they don’t it’s my responsibility, my problem. That’s a big difference I learned after I started teaching.
Five of 13 participants mentioned understanding and following curriculum as a struggle for the alternatively certified teachers coming from industry. A Construction teacher, SD3T2, said plainly:

Well, I could have been more prepared for curriculum and all of that. I was just given a piece of paper and told these are your standards and teach it. So it took me a little bit to learn what Georgia wanted me to teach so that would have helped a lot.

Engineering teacher SD2T2 concurred with SD3T2:

I struggled early on because I was a specialist. I knew my field of engineering, but the high school curriculum, especially the intro courses, are so broad. Curriculum was what I felt I just had to get in there and learn it.

Seven of the 13 alternatively certified CTAE teachers interviewed felt unprepared to convey the connection between their curriculum and their students’ future career options. CTAE was unique in that the curriculum could lead directly to a career. The content learned were skills that have value well beyond the classroom. Agriculture Education teacher SD1T2 initially felt ill prepared to convey that sentiment to his students, sharing the following perspective:

I didn’t really understand how to teach students to get the big picture. Probably getting students to home in on, you know, I’m actually going to have to do this one day. Working with kids since they have been little tikes, school has always been classroom experiences pretty much. For me, the challenge was getting them to figure out once you get all this knowledge and education, you are going to have to go out into the field
and put it to work. Sometimes, I found it a little difficult to get students to see that picture, that hey, this is something you are actually going to do. You had better get an understanding of this stuff because this is going to be you one day. That was a big challenge.

Culinary teacher SD3T1 also struggled getting students to recognize the value of the class beyond the school setting. SD3T1 explained how she had the freedom to rearrange some of her curriculum:

The first year I taught, I delivered the curriculum in exactly the sequence it was given to me. I went to my CTAE Director and asked if I had any flexibility, and he said I did, so I rearranged some things. I, of course, left safety first and did a good job teaching that, but I didn’t want to teach careers immediately. I wanted to get students into the kitchen faster to hook them. I changed some other aspects of the curriculum so they made more sense to me. I added a unit on culinary careers at the end of the last culinary course. You can better choose or appreciate a possible career path after you have some skills. The students get the same standards; it just makes more logical sense to me.

In addition to curriculum, the teachers had to learn about grading, pacing, and other intricacies of instruction. Business teacher SD7T1 provided the following perspective:

The other big thing you don’t know is pacing. How much can you expect a kid to take on board, knowledge, and how much can you expect them to really get done in a set amount of time? I think a lot of that just comes
with experience. How to deliver assignments where the kids do not get overwhelmed. Where they can be challenged, but still have success.

Similarly, Engineering teacher SD5T2 said, “I had to learn how much to give the students at once. At first, I gave them way too much. I learned to deliver content in small chunks.”

Culinary Arts teacher SD2T1 struggled mightily with grading:

I was not really prepared for putting down a defined grade for what they do because we have to grade based on a standard. Knowing that with the variety of students I have, and their learning capabilities and disabilities, in some aspects, it’s hard to kind of put a grade. Then when you see the effort, like they are really, really trying but they’re just not making it. It’s kind of hard just putting that grade because they all deserve a fantastic grade, but we have to go with that specific whether they are meeting the standard and criteria.

I asked follow-up questions of the teachers regarding professional learning opportunities in areas they felt ill prepared for as they entered teaching.

Automotive Technology teacher SD1T1 stated, “I had some good mentorship at the school that really got me going. We had some good professional development and that helped me a lot too.” Cosmetology teacher SD4T1 was more specific explaining, “I participated in professional learning with all the other teachers. It probably helped me more. I was coming from working and the other teachers in the room had been to college to teach.” Agriculture Education teacher SD6T1 sounded relieved stating:
Professional learning in my first school saved me. I came into teaching loving agriculture, and I knew I liked kids, but I didn’t know much about school. We had a good principal and assistant principal who made sure we knew the important stuff like IEPs and how to work with students who didn’t speak English well. The chair of the special education department taught us about accommodations and special education students.

When alternatively certified CTAE teachers’ described their perceptions of their preparedness for classroom teaching in rural northeastern Georgia, they clearly felt comfortable with their technical knowledge but not prepared to teach in the school setting. Their previous work experiences honed their technical skills, but their alternative certification preparation failed to address some of the complexities of working in a public school. My next examination was of research question three and the perceived factors that contributed to CTAE teacher retention.

**Research Question 3**

How do alternatively certified Career, Technical, and Agricultural Education teachers describe the influences that contribute to their retention as teachers in rural northeastern Georgia?

Research Question 3 was addressed by one questions in the interview protocol: What experience or influences contribute to your decision to continue teaching? (See Figure 3).
Figure 3

Data Sorted in Levels of Coding for How CTAE Teachers Describe the Influences that Contribute to Their Retention

<table>
<thead>
<tr>
<th>Open Codes</th>
<th>Axial Codes</th>
<th>Themes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salary and benefits</td>
<td>Teaching provides competitive salary and benefits</td>
<td>Values working with students</td>
</tr>
<tr>
<td>Love of the job</td>
<td>Teachers value working with students</td>
<td></td>
</tr>
<tr>
<td>Love working with students</td>
<td></td>
<td></td>
</tr>
<tr>
<td>More fun than industry</td>
<td>Teachers feel connected to their industry</td>
<td></td>
</tr>
<tr>
<td>Relationships with students</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teaching a career</td>
<td>Teachers value support</td>
<td></td>
</tr>
<tr>
<td>Administrative support</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Feeling Valuable</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Values working with students.** I derived the theme *values working with students* from first analyzing open codes and then more focused axial codes. From interviewing the 13 participants in this study, it was evident that having the opportunity to work with students contributed greatly to alternatively certified CTAE teachers choosing to continue to teach. All 13 participants in my study spoke with passion and enthusiasm as they described how their students influenced their choice to continue teaching CTAE. Agriculture Education Teacher SD6T1 exemplified the thoughts of others in the study:

I really enjoy my students and feel like I make a difference to them. They come to school and do all the other subjects, but CTAE is different. Because we work side-by-side, I get to know them better and have a
relationship with them. The students are great and my job is more fun than working in the real world.

Construction teacher SD3T2 boldly stated the following:

I love my job! I love my students! I love coming to work every day and making a difference in the lives of students. There are days when I think it might be better to move on. After a day or two, I realize that I can’t leave now. Those students need me as much as I need them.

Similarly, Engineering teacher SD2T2 supported the theme:

I try to bring value to the students, to the school, and to know that you can get in an environment where you are supported and make a difference.

Both in the way the class is run and the opportunities I can provide. I am provided the support I need to grow my program, hook kids and show them that they are not just trying to get a grade for an assignment, but show them a career and that they can apply this in so many ways in life.

The thing that keeps you going is knowing that I am in a program that is supported, and administrators see value in what I am providing to students . . . providing more opportunities for students.

Broadcast Video Technology teacher SD5T1 shared a similar perspective:

One-hundred percent, it’s the value I get from knowing I am impacting students’ lives. You know when you have those relationships and you interact with them and start to hear conversations among themselves about the class itself and what they are doing with that and how they are using what they learned outside of class. It is about getting up every day and genuinely enjoying what you do.
More specifically, three participants valued educating students about careers. Engineering teacher SD5T2 said, “And I love to see them start to research careers, whether it’s in engineering or something else, but giving them something to build on to be diversified in life.” Welding teacher SD4T3 enthusiastically stated, “I love working with the students and supporting them. When you teach a skill, a career, like welding, you never know the impact I may have.” Agriculture Education teacher SD1T2 provided the following perspective:

For me and why I keep doing this, it’s all about the students. Working side by side with them on their class projects and in [Future Farmers of America] is the best and I know it’s important. Agriculture is huge in Georgia and there are always jobs to fill. I have a lot of former students [who] went into [agriculture].

The CTAE teachers in my study were unanimous in their responses when asked what experience or influences contribute to their decisions to continue teaching. All 13 participants stated they chose to continue in their profession due to their perceptions of their impact on their students. It was obvious from the CTAE teachers’ zeal in their responses that they choose to work in education over industry for the opportunity to have a positive influence on their students.

**Summary of Results**

I used qualitative research processes to analyze interview data and answer the three research questions in my study. The analysis led to open codes, axial codes, and ultimately themes I derived from the data. These data represented the perceptions provided by 13 alternatively certified CTAE teachers who were currently teaching in northeastern Georgia.
An examination of the data collected from Research Question 1 revealed the themes *growing the profession* and *inspiring students through pragmatic experiences*. Alternatively certified teachers in northeastern Georgia have been intentional in their choice to teach. The teachers valued their respective industries and were motivated by preparing the future workforce and inspiring students through hands-on, project-based classroom experiences.

Analysis of the participants’ who answered Research Question 2 exposed the themes *masters of technical knowledge* and *unprepared for the school setting*. The participants felt confident in their technical skills due to their work experiences; however, the participants felt ill prepared for the unique challenges and intricacies of working in a school setting after completing their alternative preparation programs for teacher certification.

The CTAE teachers’ enthusiasm and passion for students were evident after analyzing their responses to Research Question 3. The theme *values working with students* was prevalent throughout data collection and analysis. All 13 alternatively certified CTAE teachers in my study chose to remain in the teaching profession because they valued working with their students and recognized the potential the teachers’ influence may have on their students’ futures. Conclusions and recommendations of this study were presented in Chapter V.
Chapter V: Conclusions and Recommendations

CTAE provided students with educational opportunities that focus on technical skill attainment through pragmatic teaching strategies (Bowen et al., 2019; Park & Johnson, 2019). There was a lack of research surrounding CTAE teachers, and I attempted to fill a gap in the extant literature and provide insights into the motivational influences on professional choice, perceived level of preparedness, and retention of alternatively certified teachers of CTAE in northeastern Georgia. I only interviewed high school CTAE teachers in rural northeastern Georgia and, therefore, generalizations from my study were limited to CTAE teachers in high schools in rural areas of Georgia. Further, I was unable to include substantiation from extant literature for some of the conclusions drawn from my study due to the lack of extant research regarding CTAE teachers’ motivational choices, perceived preparedness, and retention. In those cases, the conclusions and evidence from this study must speak for itself until future research either corroborates or refutes it. The findings from this study highlighted alternatively certified CTAE teachers’ motivations and perceptions and filled a gap in the literature on these topics.

Implications for Practice

Bowen et al. reported in 2019 that there was a CTAE teacher shortage in the United States that had existed since 2001. This study contributed to research that influenced ways and means to mitigate the teacher shortage through examining the motivational influences on professional choice, perceived level of preparedness, and retention of alternatively certified teachers of CTAE in northeastern Georgia. Identification of specific motivational factors and
perceptions surrounding CTAE teacher preparedness and retention allows for the recommendation of specific actions to educational leaders.

The conclusions drawn from my study should prove useful to school district human resources officials and building-level leaders as they develop procedures related to hiring CTAE teachers. Interviews of alternatively certified CTAE teacher candidates should be individualized, knowing the teachers valued and retained a fondness for the industries for which they were trained. Human resources officials should better recruit teachers from industry into teaching by conducting research on the industry of the prospective teacher prior to interviewing and demonstrating an appreciation and knowledge of the industry to the candidate when interviewing. Modifying the interview to include conversations about the opportunity to grow their profession and train the future workforce would further entice potential CTAE teachers.

Implementing targeted professional learning opportunities for newly hired CTAE teachers has benefitted the teachers and the school districts they served (Bartholomew et al., 2018). Professional learning activities specifically designed for CTAE teachers were rarely implemented, but when offered would include topics such as pragmatic teaching strategies, managing lab space, and maintaining inventory and supplies (Bartholomew et al., 2018). School districts would find it beneficial to consider the background of new teachers when developing induction programs.

School districts should consider separate induction programs for traditional and alternatively certified new teachers. Induction programs specifically for alternatively certified teachers should include basic professional
and procedural content that may be more familiar to teachers coming from traditional teacher certification programs. For example, explaining the acronyms unique to the teaching profession would be a valuable professional learning activity for newly hired, alternatively certified CTAE teachers. Components of classroom instruction such as pacing, following a prescribed curriculum, and assessing students’ work may be familiar to traditionally trained teachers; however, these elements of instruction should be included in professional development activities designed to acclimate industrial professionals to the school setting. In addition, professional learning specifically tailored to address the specific, individualized plans school districts administer for students, such as IEPs and 504 plans, provided during the alternatively certified teachers’ induction process would add to the effectiveness of the teacher.

The addition of a mentoring program specifically designed for alternatively certified CTAE teachers would provide an additional level of support for those coming from industry. A challenge with instituting such a program has been that often a district only employs one teacher in a CTAE subject area. For example, a district may only have one Automotive Technology teacher. This challenge has been mitigated by the technical proficiency teachers gained during the COVID-19 pandemic on online meeting platforms such as Zoom. A singleton CTAE teacher who does not have a colleague in their district teaching the same subject could now easily have a mentor in another district and meet with them regularly online.

Alternatively certified CTAE teachers should be granted autonomy to customize their programs and curriculum to best address the needs of industries
and adequately serve their students. Granting autonomy to CTAE teachers would enhance internal motivation, creativity, and confidence (Arslan, 2017). Alternatively certified CTAE teachers were proficient in their technical knowledge and skills, and working alongside students motivated them to continue teaching. School leaders should consider providing purposeful professional development where needed (e.g., in the areas unique to school operation), and autonomy where warranted (e.g., in the teaching of technical skills). Purposeful professional development included as part of teacher induction activities would increase teacher retention (Podolsky et al., 2019; Solomonson et al., 2018), and therefore, would contribute to addressing the CTAE teacher shortage.

**Recommendations for Further Research**

In the current study, I utilized a qualitative interpretive research design and reported data collected from interviewing 13 participants working in seven school districts. A similar study utilizing a quantitative research design, or a qualitative research design that collected data via a questionnaire from a larger number of participants working in districts across Georgia, the southeast, or another part of the country would yield results that would support these findings. More robust, generalizable results would garner more attention from state departments of education resulting in more uniform, targeted resources and supports for alternatively certified CTAE teachers.

The participants in my study represented seven school districts in rural, northeastern Georgia. I did not address CTAE teachers in non-rural settings. Future research may be conducted similar to this study with non-rural CTAE teachers as a focus. CTAE teachers in larger school districts may have access to
different resources and may have different motivations for choosing to teach, different perceptions of their preparedness when they entered the teaching profession, and different perspectives regarding influential factors for retention. Comparing similar studies conducted in urban or suburban areas to my study would reveal strategies and ideas that contribute to the recruitment, hiring, and retention of alternatively certified CTAE teachers in various school contexts.

The current study reveals the need for future research on targeted professional development for alternatively certified CTAE teachers. Future researchers who focus on skills and knowledge to be enhanced (e.g., vocabulary unique to education, aspects of instruction such as pacing and assessment, implementation and delivery of individualized plans such as IEPs and 504s) would enable the development of targeted professional learning exercises and tools. The administration of targeted professional learning exercises and tools should result in more effective alternatively certified teachers, particularly in the early stages of their CTAE careers.

The role school leaders and other school personnel play in alternatively certified CTAE teachers’ motivations to continue to teach warrants more research. CTAE teachers work within a dynamic environment with many actors. Principals, assistant principals, CTAE directors, guidance counselors, and school finance specialists impact the climate and work environment for CTAE teachers. Data collected in the current study implied perceived support is important to alternatively certified CTAE teachers. Studies investigating what alternatively certified CTAE teachers perceive as adequate administrative support in the areas of budgets, resources, facilities, and professional learning may prove valuable in
the development of recruitment and retention strategies. Additional studies that reveal alternatively certified CTAE teachers’ perceptions of their contributions to school climate and student achievement may also inform school administrators of additional recruitment and retention strategies.

Conclusions of the Study

CTAE teachers felt connected to the industries they represented and maintained an expertise in the technical skills derived from work experience prior to their teaching career. This conclusion supported Wigfield and Eccles’s (2000) expectancy-value theory of achievement. The expectancy-value theory of achievement focused on an individual’s perception, interpretation of an experience, and professional goals (Wigfield & Eccles, 2000). Alternatively certified CTAE teachers who participated in this study chose to teach due to their perceptions of the value of their industry to society and the economy, and their desire to perpetuate the profession through training the future workforce. The participants’ choice to teach was also aligned with their perceptions of their heightened proficiency in technical skills. Wigfield and Eccles (2000) explained a core component of the expectancy-value theory of achievement was positive perceptions of the ability to complete a task leading to increased task-related motivation, or in this case, the CTAE teacher’s motivation to teach.

Alternatively certified CTAE teachers valued the industries they represented in their schools. These teachers participated in alternative certification programs that prepared them to take the knowledge and experiences gained from industry and apply it in the school setting (Bowen et al., 2019). Alternatively certified CTAE teachers did not abandon their fondness for their technical fields
when they entered the teaching profession. The industry professionals who choose to become alternatively certified CTAE teachers valued training while working in industry. The participants equated training to teaching and have devoted their careers to teaching technical skills to students.

An overwhelming majority of alternatively certified CTAE teachers who participated in my study perceived pragmatic learning environments to be effective. Research revealed alternatively certified CTAE teachers often did not have bachelor’s degrees (Bowen et al., 2019; Stephens, 2015) but rather chose an occupation dependent on technical skills and talents. Their motivation to teach was directly related to their ability to work alongside students and, drawing on their industry experience, provide rich, real world applications of technical knowledge (Bowen & Shume, 2018; Darling-Hammond et al., 2005).

Although alternatively certified CTAE teachers were proficient in their technical skills, they perceived themselves unprepared for working in the school environment when exiting their alternative certification programs. Alternatively certified CTAE teachers perceived they were ill prepared for the unique intricacies of working in a school, such as administering IEPs and 504 plans. Previous researchers concluded it was difficult to determine differences in teacher effectiveness between traditionally and alternatively certified teachers (Bowen, 2013; Bowling & Ball, 2018; Bradshaw & Hawk, 1996; Darling Hammond et al., 2005; Fieman-Nemser, 1989; Hoepfl, 2001; Litowitz, 1998; Reese, 2010; Sindelar et al., 2004; Stoddart & Floden, 1995).

The differences in traditionally and alternatively certified CTAE teachers may not lie in what is readily observed in the classroom but rather the basic
knowledge of how a school operates and the details surrounding the
administration of mandated, individualized programs to relatively small
populations of students. Alternatively certified CTAE teachers continue to teach
because they value the working relationships they have with the students they
serve. This conclusion directly aligns with previous research finding that
motivation was a goal-directed, internal force that activates, energizes, directs,
and sustains behavior (Moreno, 2010; Ormrod, 2006; Ryan & Deci, 2000). I
concur with Holmes et al. (2019) in their assertion that teacher retention is of
continuous importance and concern. Administrative support may come in the
form of encouragement, autonomy, and resources allocated to sustain and enhance
a program. Alternatively certified CTAE teachers were more likely to continue to
teach if they perceive adequate administrative support.

CTAE teachers are providing career exploration opportunities and
pragmatic training to the future workforce of America. Accomplished industry
professionals who choose to teach and remain in education bring an acute
knowledge and skillset unmatched by those who have never practiced the craft
they teach. Recruiting and retaining CTAE professionals in teaching will continue
to be a challenge, but students, and ultimately communities, are the beneficiaries
of these efforts.
References


*Qualitative Inquiry, 12*(2), 219-245.


Gill, M. (2019). What do new technology and engineering teachers need to know? 

*Technology and Engineering Teacher, 78*(7), 14-18


Appendix A

GaTAPP Teaching Competencies
Planning and Preparation

1. The teacher demonstrated solid knowledge of content structure of the discipline, of connections and prerequisite relationships, of content-related pedagogy and of connections with technology.

2. The teacher demonstrated a working knowledge of age-group characteristics, of different students’ approaches to learning, of students’ skills and knowledge levels and language proficiency, of students’ interests and cultural heritage, and of students’ special needs.

3. The teacher demonstrated an appreciation of the diversity of the students, the staff, and the community and capitalizes on the richness of that diversity.

4. The teacher selected instructional goals that are valuable, sequential, clear, aligned with state and national standards, suitable for diverse students, and balanced among types of learning.

5. The teacher actively sought and utilized varied instructional materials and community resources, including technology, to extend content knowledge, pedagogy, and student learning.

6. The teacher’s instructional plans were coherent and structured in that learning activities (i.e., learning units and lessons), resources, groupings, and time allocations are varied and suitable to the developmental level of the students, to individual students, and to the instructional goals.

7. The teacher utilized varied assessment methods, including those through technology, that are congruent with the instructional goals for student
learning and students’ understanding of the criteria and standards and the teacher designs and utilizes formative results to plan for and differentiate instruction.

The Classroom Environment

8. Teacher/student interactions and student/student interactions were friendly, warm, caring, polite, respectful, and developmentally and culturally appropriate.

9. The teacher established a culture of learning where students are committed to the value of the subject accept the teacher’s high expectations and take pride in quality of work and conduct.

10. The teacher effectively managed instructional groups, transitions, materials, supplies, non-instructional duties, and supervision of volunteers and paraprofessionals.

11. The teacher made standards of conduct clear, was consistently alerted to student behavior, and responded appropriately, respectfully, and successfully to student behavior.

12. The teacher arranged the classroom and organized physical space materials skillfully, resourcefully, and with safety and accessibility components in place.

Instruction

13. The teacher’s expectations for student learning and classroom procedures were clearly articulated in directions, and both oral language and written language were communicated clearly and accurately modeling standard grammar.
14. The teacher’s questions and discussion techniques were of high quality and engaged all students.

15. The teacher utilized engaging and varied representations of content, instructional strategies, assessment techniques, activities, assignments, technology, grouping configurations, materials and resources, structure and pacing.

16. The teacher developed relevant assessment criteria, monitored student learning, and gave meaningful and timely feedback to students and teaches students to self-assess and monitor their own progress.

17. The teacher demonstrated flexibility and responsiveness by adjusting lessons, responding to students’ needs, and being persistent in searches for varied approaches for students who have difficulty learning.

18. The teacher accurately assessed lessons’ effectiveness and demonstrated an understanding of how to modify subsequent lessons.

**Professional Responsibilities**

19. The teacher maintained accurate, complete records of student assignments and learning of non-instructional activities.

20. The teacher frequently and successfully provided instructional information and student progress information to parents and engaged families in the instructional non-traditional preparation path.

21. The teacher was supportive of and cooperative with colleagues, was involved in a culture of professional inquiry, and made substantial contributions to school and district projects.
22. The teacher actively sought professional development to enhance content, pedagogical skills and dispositions, accepts feedback from colleagues, and actively assists other educators.

23. The teacher demonstrated integrity and ethical conduct. The teacher proactively served all students, challenges negative attitudes, takes a leadership role in high quality decision making, and understood and actively participated in the school’s School Improvement process (GaPSC, 2020)
Appendix B

CTAE Teacher Permission Request Letter
Dear CTAE Teacher,

My name is Jonathan Stribling, and I am a candidate for Doctor of Education in Instructional Leadership at Lincoln Memorial University. I have received permission from Lincoln Memorial University to conduct interviews as part of my research on the motivations, perceived levels of preparedness, and factors that contribute to retention of CTAE teachers. I am inviting you to participate in this research study. You have been selected because you are a current, alternatively certified CTAE teacher in the Pioneer RESA service area in northeastern Georgia. As a CTAE teacher, you serve an important role in workforce development in your community. By participating in this study, you will be providing important information regarding why CTAE teachers choose to teach instead of work in the industries for which they are trained and the perceived level of preparedness of alternatively certified CTAE teachers. Your willingness to participate in this study will in no way affect your relationship with the researcher or Lincoln Memorial University. If you are interested in participating in the study, please email me at jonathan.stribling@lmunet.edu.

Your participation in this process is completely voluntary. The interview will last approximately 20 minutes and will be conducted via Zoom at your convenience. At any time, you may choose not to respond or to discontinue your participation. Responses will be recorded and transcribed, and you will be given the opportunity to review the transcripts to check for accuracy and make needed changes. As the study progresses, you may be asked to provide additional input regarding the analysis of data from your interview. All data, including interview recordings and transcripts, will be kept confidential to safeguard your privacy and protect you from potential harm.

Thank you for considering this request. If you have any questions about this study, please contact me by email at jonathan.stribling@lmunet.edu, or by calling XXX (cell). You may also contact Dr. Joshua Tipton, dissertation chair, by email at joshua.tipton@lmunet.edu, or by calling XXX. In addition, if you have any questions about the rights and welfare of research participants please contact the Chair of the Lincoln Memorial University Institutional Review Board, Dr. Kay Paris at (423)869-6323 or kay.paris@lmunet.edu.

Sincerely,

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Appendix C

Informed Consent Email Message
Dear CTAE Teacher’s Name,

My name is Jonathan Stribling, and I am conducting a study about what motivates alternatively CTAE teachers to choose teach, their perceived levels of preparedness, and the factors that influence their retention. You will find an informed consent document attached to this email. It provides further information and a space for your signature. I am asking that, if you are willing to participate, you read and sign the consent form. You may scan the signed document and email it back to me. If you prefer to mail the document, you may send it to:

Jonathan Stribling  
349 Pinecrest Rd.  
Sautee Nacoochee GA 30571

If you wish, I can send you a stamped, self-addressed envelope in which to return the signed informed consent form.

I will be back in touch with you to determine a date and time for the interview should you decide to participate. I you have any questions or need further assistance, please feel free to contact me at this email address or by phone at (706) 968-8742.

Regards,  
Jonathan Stribling
Appendix D

Interview Protocol
The Career, Technical and Agricultural Education (CTAE) field has not been immune to the teacher shortage issue facing Georgia and the nation. Identifying why alternatively certified CTAE teachers choose to teach instead of work in their respective industries and identifying their perceived levels of preparedness will allow schools to better recruit and retain CTAE teachers. In order to better understand why alternatively certified CTAE teachers choose to teach and their perceived levels of preparedness, I am gathering data that might indicate to school leaders what motivates CTAE teachers, how teachers perceive their preparedness, and therefore result in focused hiring practices and professional development in schools to promote CTAE teacher recruitment and retention. As an alternatively certified CTAE teacher, you have first-hand knowledge of why CTAE teachers may choose to teach instead of work in industry and knowledge regarding your perceived level of preparedness, which makes you a valuable source of data.

Your responses and your identity will remain confidential.

You will be provided a printed copy of the transcript of this interview to provide you with the opportunity to check for accuracy and correct any information.

You may end the interview at any time. Just tell me you want to stop.

Do you understand everything so far?

Do you have any questions?

May we begin?

Participant (P): Participant Affirmation(s)

1. What is your specific CTAE teaching field and how long have you been a CTAE teacher?

2. What factors influenced your decision to become a CTAE teacher? (RQ1)
3. How would you describe your level of preparedness for teaching when you entered the teaching profession? (RQ2)

4. What aspects of being a CTAE teacher do you feel like you were well prepared for when you completed your alternative route to teacher certification? (RQ2)

5. What aspects of being a CTAE teacher do you feel like you were ill prepared for when you completed your alternative route to teacher certification? (RQ2)

6. What do you find to be the most rewarding aspects of being a CTAE teacher? (RQ1)

7. What experience or influences contribute to your decision to continue teaching? (RQ3)

8. What would you say most influences your decision to be a CTAE teacher rather than work in the industry for which you are trained? (RQ1)