Effectiveness of the Provisional Teaching License Route in Virginia for Preparing Business and Information Technology and Marketing Education Teachers

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ABSTRACT

The goal of this research was to assess the Virginia three-year provisional teaching license preparation path for earning a teaching license with an endorsement in Business and Information Technology (BIT) and Marketing Education (MKED). The study examined BIT and MKED teacher preparedness as it relates to core teaching and program management competencies for CTE educators who enrolled and completed Virginia's three-year teacher provisional licensure route to determine the effectiveness of the routes themselves. The research studied how the participants teacher preparation path impacted teachers' preparedness and how the elements of the provisional path contributed to the teacher's confidence in teaching. The study had one main research question and two sub-questions. The first sub-question emerged into five themes. They include lack of support system, struggle to implement essential teaching competencies, struggle to implement essential program management competencies, taking coursework while teaching does not work, and slight improvement by third year, but still a struggle. The second sub-question emerged into three themes. They include the need for effective support system, need for increased funding for teacher pay and required college courses, and need for focused training on specific CTE competencies. Three key conclusions from the study were BIT and MKED teachers need specific preparation training focused on core CTE teaching and program management competencies prior to entering the classroom, need a student teaching and/or co-teaching experience prior to entering the classroom by themselves, and need effective and active mentoring as well as administrative feedback and support during the entire three-year provisional licensure process.

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GENERAL AUDIENCE ABSTRACT

The study examined BIT and MKED teacher preparedness as it relates to core teaching and program management competencies for CTE educators who enrolled and completed Virginia's three-year teacher provisional licensure route to determine the effectiveness of the routes themselves. A qualitative research design was used for this study to determine the factors that affect the first year and third year provisionally licensed BIT and MKED teacher competency obtainment in the state of Virginia. A pre-survey of essential core teaching and program management competencies was given to create awareness of the interview topic to the interviewees. This survey was followed by an in-depth interview to gather rich data relating to the obtainment of core competencies. Three key conclusions from the study were BIT and MKED teachers need specific preparation training focused on core CTE teaching and program management competencies prior to entering the classroom, need a student teaching and/or co-teaching experience prior to entering the classroom by themselves, and need effective and active mentoring as well as administrative feedback and support during the entire three-year provisional licensure process. The results of the research may help improve the provisionally licensed teacher path route for prepare beginning BIT and MKED teachers in Virginia. The research will add to the literature by providing (1) information on how to improve provisional-teacher license preparation programs, (2) suggesting methods of training in these programs, and (3) showing the significance of beginning CTE teachers' professional relationships with administrators and mentor teachers. The results of the study could also assist school districts to better allocate resources and staff to effectively help provisionally licensed teachers.

DEDICATION

This work is dedicated to my mother, Carolyn Shumate who is now deceased. My mother supported me through this long and arduous journey earlier in her life. She was the shining light that kept me going and is right beside me celebrating. Her support in her life made this achievement possible. I would also like to dedicate this work to my father David who also provided me unwavering support, advice, and love during his life.

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Chapter 1

Introduction

If teachers are highly trained and qualified, they are equipped with the skills necessary for meeting student needs and are often very effective in doing so. Teaching is not something that is inherent. It is something that must be learned, something that requires knowledge of and skills in fundamental teaching core standards. Unfortunately, over the past twenty years, there has been a steady decline in highly trained and qualified teachers in the U.S. (Hammond, 2000). In Career and Technical Education (CTE), an annual shortage of highly trained and qualified teachers, has become critical (McCandless & Sauer, 2010). In America, provisional licensure routes to teacher certification have grown from eight in 1982 to forty-six in 2003, and forty-eight in 2008 (National Center for Education Information, 2003 & 2010). In 2011 the number of provisional licensure routes to teacher certification increased to 658 (USDOE, 2013). According to Partelow (2019), since 2010 enrollment nationally in teacher education programs has dropped by more than one-third. During this time frame, the decrease in teacher preparation programs has taken place in the context of growing enrollment in other career field undergraduate degree programs nationwide. Approximately 340,000 less students decided to sign up for teacher preparation programs in the 2016-17 academic year the last year for which information was accessible contrasted with the number of students who signed up in 2008-09. Also, there was a 28 percent decrease in the number of students graduating from teacher preparation programs in the same years.

In Virginia, 19 new CTE teachers finished a traditional teacher preparation program in 2018, while 81 new CTE teachers completed a provisional licensure program (United States Department of Education, 2019). Of the 19 new CTE teachers completing a traditional teacher preparation program six were Business and Information Technology (BIT) and Marketing

Education (MKED) teachers. Of the 81 new CTE teachers completing a provisional licensure program, 21 were Business and Information Technology (BIT) and Marketing Education (MKED) teachers. This does not include new CTE teachers who entered classrooms from a Virginia Department of Education (VDOE) emergency waiver request from a local school divisions superintendent due to a lack of any highly qualified applicants. The 19 new CTE teachers completed traditional programs at one of seven colleges or universities in Virginia while the 81 new CTE teachers who entered on a provisional license completed Virginia Department of Education course requirements at one of three institutions of higher education (IHE) or a non-IHE program (United States Department of Education, 2019). This demand for teachers is being created because the supply generated from traditional teacher preparation routes is not being met. According to NCEI (2019), states are developing provisionally licensed teacher programs to help remedy teacher shortages. With the increase in provisionally licensed teachers, there is a greater need for research in this area.

Currently, provisionally licensed CTE teachers in Virginia are issued a three-year license and given a list of course work to complete within the three-year time frame in order to change it to a full ten-year renewable license. They work on completing this list of coursework while actually teaching. They do not student teach like traditionally prepared teachers in Virginia. Instead, they begin teaching with very little, if any, preparation in CTE core teaching standards. Examples of these standards include, but are not limited to, curriculum planning, behavior management, methods in teaching, program management, integrating career and technical student organizations, and utilizing work-based learning (Manley & Zinser, 2012). These core-teaching standards are essential for CTE teachers when stepping into a classroom or laboratory. Without them, they are doomed to fail (Bottoms, Egelson, Sass, & Uhn, J. (2013). Hammond and Carver-Thomas (2017) found provisionally licensed teachers only last

a few years and then quit because they do not have proper preparation and support. Provisionally licensed teachers are 25% more likely to leave the teaching profession. Hammond and Carver-Thomas (2017) indicate additional significant influences on teacher turnover, including an absence of administrative support, employment in districts with lower wages, displeasure with testing and accountability pressures, absence of opportunities for career advancement, and displeasure with the working environment. To decrease teacher turnover, policymakers at the district, state, and federal level should think about improving the important factors linked with turnover: teaching conditions, teacher preparation and support in core standards, and compensation.

Purpose of the Study

The goal of this research was to assess the Virginia three-year provisional teaching license preparation path for earning a teaching license with an endorsement in Business and Information Technology (BIT) and Marketing Education (MKED). The study examined BIT and MKED teacher preparedness as it relates to core teaching and program management competencies for CTE programs to determine the effectiveness of the provisional license preparation path. It also studied how this teacher preparation path impacted teacher retention and how aspects of the provisional path aided the teacher's confidence in teaching. Finally, the researcher examined how beginning BIT and MKED teachers' professional interactions with mentors and administrators affected their perceived job satisfaction, teaching confidence, and effectiveness.

Statement of the Problem

Research is needed to examine the effectiveness of provisional routes for teacher preparedness and obtaining a teaching license in Virginia with an endorsement in Business and Information Technology (BIT) and Marketing Education (MKED). Teacher preparedness is the teacher's ability and knowledge to perform their teaching responsibilities competently based on

how well they are prepared. Ruhland and Bremer (2002) found that CTE educators are a unique group because many of them join the teaching profession via a provisional licensure route after spending years working in their respective industries. Many provisional licensure programs have been created, producing differing levels of self-efficacy among teachers. Some participants of provisional licensure route programs feel extremely self-confident, and others feel incompetent and overwhelmed (Raudenbush, Rowan, & Cheong, 1992). The problem addressed in this study was to determine the effectiveness of Virginia's three-year teacher provisional licensure route for preparing successful BIT and MKED teachers.

Research Questions

The main question the researcher was seeking to answer in this study was:

What is the effectiveness and impact of Virginia's three-year teacher provisional licensure route for Business and Information Technology (BIT) and Marketing Education (MKED) teacher preparedness as related to core teaching and program management competencies?

Sub-questions for the study included:

1. What characterizes the first and third years of teaching for a provisionally-licensed BIT and MKED teachers?
2. As perceived by Virginia BIT and MKED three-year licensed teachers, what needs to be done to improve the Virginia three-year provisional teaching license preparation program?

Significance of the Study

This study focused on the preparedness levels that Business and Information Technology (BIT) and Marketing Education (MKED) provisionally licensed teachers have in CTE core teaching competencies and core program management competencies. The results of the research may help improve the provisionally licensed teacher path route for prepare beginning BIT and MKED teachers in Virginia. The research will add to the literature by providing (1) information on

how to improve provisional-teacher license preparation programs, (2) suggesting methods of training in these programs, and (3) showing the significance of beginning CTE teachers' professional relationships with administrators and mentor teachers. The results of the study could also assist school districts to better allocate resources and staff to effectively help provisionally licensed teachers.

Theoretical Framework

John Dewey is renowned for his part in what is called progressive education (Dewey, 1938). The theoretical framework for this study was based on John Dewey's ideas about what it takes to be an exceptional teacher. He believed that to become an exceptional teacher; one must have knowledge of and skills associated with the concepts being taught. In addition, he felt that having knowledge of and skills associated with pedagogy (the art and science of how to teach) was just as important as content knowledge (Dewey, 1904). If one aspect of his theory is absent, the chance for becoming an excellent teacher is diminished. Dewey indicates that teachers who have both content knowledge/skills and pedagogical knowledge/skills can identify which methods of teaching work in the classroom with students. He also believed that understanding pedagogical theory should go before the application of the theory in a real classroom (Shulman, 1988). A more detailed discussion of the theoretical framework is included in Chapter 2: Review of Literature.

Research Design and Methodology

A qualitative research design was used for this study to determine the factors that affect the first year and third year provisionally licensed BIT and MKED teacher competency obtainment in the state of Virginia. A pre-survey of essential core teaching and program management competencies was given to create awareness of the interview topic to the interviewees. This survey was followed by an in-depth interview to gather rich data relating to the obtainment of core competencies. A rigorous method to analyze the data was conducted to identify codes,

categories, and themes. Both interviews and surveys were used to establish a better understanding of the viewpoint of the participants. Patton observes: "the purpose of interviewing, then, is to allow us to enter the other person's perspective" (Patton, 1987, p. 109). This researcher attempted to comprehend competency level obtainment during the first year and third year of teaching. The structure of the interviews given was a "standardized open-ended format" (Patton, 1987). A qualitative design involves real-life inquiry meaning that it takes place in a real-world environment (Patton, 2015). Participants in this study were interviewed in locations and an environment with which they were comfortable. Minimal manipulation of the study's setting takes place, and the outcomes are not predetermined (Patton, 2015). The design of qualitative research emerges and is flexible as the fieldwork evolves (Merriam & Tisdell, 2016; Patton, 2015). A set of questions was created for this kind of interview and used for all the participants. This format will guarantee that each participant received the same questions with the identical wording. Variation and bias are reduced using a standardized format. A pre-interview online survey was sent to the participants before the interview and used to collect participants' demographic information and create awareness of the interview topic to the interviewees. Participants were selected from three regions in the state of Virginia. All the participants were provisionally licensed and currently teaching BIT and MKED courses. A more detailed discussion of the research design and methodology for this study is discussed in Chapter 3.

Assumptions

The following assumptions were made in this study: Respondents answered truthfully, BIT and MKED will continue to be delivered as part of K-12 educational programming in Virginia, and provisional licensing for teachers in these CTE program areas will continue in Virginia. Anonymity and confidentiality were used to assist in satisfying the first assumption. The respondents were given the option to stop participation at any time during the research.

Limitations

This study had the following limitations.

1. This study is limited to the experiences, expertise, and knowledge of the participants involved.
2. Selected participants know they have been chosen in this study and consequently may or may not be influenced by the fact that they are a part of a study that seeks answers to key questions.
3. A void exists in the current literature regarding the construct of provisionally licensed BIT and MKED teacher preparedness.
4. Environmental variables. A significant role in attrition and preparedness could take place based on the school at which the participant is located. Variables could include availability of mentor teachers, administrator competency in CTE and support, and pay/benefits.
5. The participants will have differing degrees of experience. This could present a threat to internal validity.
6. Multiple-treatment interference could be a threat. It is possible that some participants might have had additional mentoring, teacher training, or courses that are not found in this research. Any of these would be deemed an additional treatment.
7. The participants are non-randomized and consequently will impact internal validity. One participant could be susceptible to having a lower attrition rate than other participants.

Delimitations

The delimitations of this study are as follows:

1. This data gained was exclusively from BIT and MKED teachers and may not transfer to any other population of teachers provisionally licensed.

2. Because this study was focused primarily on BIT and MKED teachers in a variety of geographic areas across Virginia, it could be argued that the findings may not be specific to other geographic parts of Virginia.

Definition of Terms

This study used a range of terms to maximize the success of the outcomes. These terms are defined below.

For the purpose of this study, the following definitions were used:

- Virginia Provisional Teaching License - A three-year nonrenewable license offered in the state of Virginia that is provided for teachers having no official teacher training prior to teaching.
- Career and Technical Education program - a comprehensive competency-based program that develops academic, technical, and workplace skills for immediate employment or future education and career development.
- CTE Core Teaching Competencies- fundamental pedagogical competencies they should know and be able to do to guarantee every PK-12 student reaches the goal of being ready to enter college or the workforce in today's world.
- CTE Core Program Management Competencies- fundamental management competencies they should know and be able to do to guarantee their CTE program is operated properly by required guidelines and standards.
- BIT and MKED Full-time Faculty - Educators whose primary role is classroom instruction and program management with a 10-month or 11-month contract in a Virginia school division.
- Teacher Self-Efficacy- A teacher's own reasoning about their capability to perform the task of teaching and their ability to impact student learning (Bandura, 1997; Younger, 2011).

- Successful/Effective BIT and MKED Teacher**.** Teachers who hold optimistic expectations for student achievement, contribute to students' learning, excel at classroom and program management, and design lessons for student mastery. (Roberts, T. G., & Dyer, J. E., 2004a).
- Traditional-Licensing Route - A path to teaching licensure that includes a bachelor's degree, involvement in a college teacher preparation program, and a student teaching experience. (Darling-Hammond, L, Chung, R., & Frelow, F. (2002).

Acronyms Used

VDOE: Virginia Department of Education

CTE: Career and Technical Education

PBTE: Performance-based teacher education standards. Describing the Center for Vocational Education's work identifying competencies needed by CTE teachers.

BIT Business and Information Technology

MKED Marketing Education

Summary

This chapter of the study provided the following: (1) introduced the purpose, (2) a background of the problem, (3) definition of the study's research questions, (4) an introduction to the research methodology, (5) need for the study, (6) study's theoretical framework, (7) defined the assumptions, delimitations, and limitations of the study, and (h) definition of the appropriate terminology related to the study. The remaining chapters of this document provide (1) a review of the related literature and (2) a detailed description of the research methodology used to conduct the study.

Chapter 2

Literature Review Summary

Chapter 2 summarizes the literature relevant to the study. The first section provides the theoretical framework for the study. The second section provides a brief overview of the CTE programs offered in Virginia High Schools. The third section discusses the decline in the number of CTE teacher education programs. The fourth section discusses growth of provisionally licensed CTE Teachers across the United States. The fifth section discusses the effectiveness of provisionally licensed CTE Teacher. The sixth section discusses the characteristics of effective CTE teachers. Finally, the seventh section is an overview of competencies and training required to be a CTE teacher.

Theoretical Framework

John Dewey was an educational philosopher who had important thoughts on teacher training (Zeichner & Liston, 2014). Dewey's writings on education have been the topic of numerous journals regarding education (Harbour, 2015). People who transition into teaching are entering a new occupation and many are faced with the challenge of learning how to teach. The theoretical framework for the study is based on John Dewey's theory on the connection between the theory and practice in education. Dewey felt that teachers should have knowledge of subject matter and educational pedagogy principals prior to learning the practice of teaching. Dewey's writings are particularly relevant to the challenges facing teachers today (Zeichner & Liston, 2014). Dewey's theory relates well with the process of provisional licensure of CTE teachers in Virginia and the professional development practices they go through to become fully licensed teachers.

The theoretical framework for this study is based on John Dewey's philosophies about what it takes to be an exceptional teacher. In Dewey's 1904 essay, "The Relationship of Theory

and Practice in Education," Dewey articulates his views about teacher training and the appropriate connection between pedagogical methods, subject matter expertise and applied teaching experience in the preparation of teachers. He believed that to become an exceptional teacher, one must have an in-depth understanding of the subject matter being taught and knowledge and skills associated with how to teach, followed by practical teaching experience (Dewey, 1904).

According to Dewey (1904), prospective teachers need to understand how their pedagogical practice in the classroom affects student learning (Dewey, 1904). Dewey also felt that having mastery of content knowledge is a very important concept for a prospective teacher. Both aspects of his theory are significant in that if one is missing the chance of becoming an exceptional teacher is diminished. According to Dewey, teachers who master content knowledge and proper pedagogical techniques can recognize which teaching strategies work with students.

Dewey (1904) defines practical teaching work as "giving teachers in training working command of the necessary tools of their profession, control of the technique of class instruction and management; skill and proficiency in the work of teaching" (p. 249). Practical teaching work gives the student-teacher understanding of the importance of the subject matter as well as the background and process of teaching (Dewey, 1904).

Dewey (1904) indicates beginning teachers placed in a classroom encounter and resolve two interrelated problems which are 1) "mastery of subject matter from the standpoint of its educational value and uses" (p. 253) and 2) "mastery of the technique of class management" (p. 253). According to Dewey, the fledgling teacher cannot give both problems attention at the same time (Dewey, 1904). According to Dewey, the gaining of knowledge and understanding of the pedagogical practice of teaching should come before the application of the theory in an actual classroom (Shulman, 1988). Dewey (1904) believed it is possible for a teacher to learn the

methods of teaching before knowing how to use the methods in a practical classroom. Teachers who face the challenge of leading a class before they become knowledgeable in content and pedagogy develop teaching behaviors that sustain order in the classroom rather than helping and discovering how their students learn (Cochran-Smith & Lytle, 1993). Dewey (1904) believed that aspiring teachers should understand pedagogy and content knowledge prior to practical teaching experience in a real classroom.

Subject matter knowledge is the only qualification required by the Virginia Department of Education (VDOE) to become a provisionally licensed BIT or MKED teacher (Virginia Department of Education, 2017). Dewey's philosophy regarding teacher preparation is important because it does not model the provisional licensure pathway set in place for Virginia BIT and MKED teachers (Dewey, 1904). Prospective teachers in Virginia Public Schools are required to hold a degree in the field taught. Pedagogy knowledge and practical teaching experience is not a necessary requirement for provisionally licensed CTE teachers in Virginia. According to the Virginia Department of Education (2017), provisionally licensed CTE teachers in Virginia are placed in the classroom without first gaining pedagogical knowledge and do not go through a formally supervised student teaching experience as offered in a formal teacher preparation program offered at a college. At best, an outside mentor may be assigned that meets periodically with the provisionally licensed teacher with little or no direct observation occurring. Provisionally licensed teachers in Virginia receive a three-year non-renewable license and are required to take course work and licensure tests as outlined by the Virginia Department of Education licensure office within three years of their teaching starting date in order to obtain the ten-year renewable license. However, new teachers need to be prepared to facilitate learning when they enter the classroom (Hammond, Berry, & Thoreson, 2001). According to Wenglinsky (2002), a link exists between classroom pedagogical practices and

student academic performance. Wenglinsky's indicates the more teachers receive professional development in classroom practices, the more likely they are to implement the pedagogical practice within their classrooms. According to Hammond, Chung, and Frelow (2002), actions being taken to improve teacher preparation programs will continue not to work if states let schools' employee teachers without training.

CTE Programs in Virginia

Career and Technical Education (CTE) programs are divided into seven major areas (Virginia Department of Education, 2020). Table 1 shows identified major CTE areas. Virginia has seven areas in CTE programs that are associated with National Career Clusters and Career pathways. The Virginia CTE programs are as follows; 1) Agricultural Education, 2) Business and Information Technology, 3) Marketing Education, 4) Family and Consumer Sciences, 5) Trade and Industrial Education, 6) Health and Medical Sciences, and 7) Technology Education. Each CTE program area in Virginia has its own CTE teaching license endorsement.

Table 1:
Virginia CTE Program Areas and Examples of Courses

CTE Program Areas	Examples of CTE Courses Within Each Program Area
Agricultural Education	Horticulture Agricultural Mechanics Agribusiness
Business and Information Technology	Accounting Computer Information Systems Business Management Programs

Table 1: (continued)
Virginia CTE Program Areas and Examples of Courses

CTE Program Areas	Examples of CTE Courses Within Each Program Area
Marketing Education	General Merchandising Apparel and Accessories Marketing Financial Services and Marketing Business and Personal Service Marketing
Family and Consumer Sciences Education	Childcare Development Culinary Arts Nutrition and Wellness
Trade and Industrial Education	Auto Mechanics Carpentry Metalworking Graphic Arts Cosmetology Welding Plumbing

Table 1: (continued)
Virginia CTE Program Areas and Examples of Course

CTE Program Areas	Examples of CTE Course Within Each Program Area
Health and Medical Sciences Education	Practical Nursing Registered Nursing Medical and Dental Assistants
Technology Education	Manufacturing materials, processes, and technologies used in construction Communications Engineering related technologies

Note: Virginia Department of Education (2020)

The Decline in the Number of CTE Teacher Education Programs

Research in teacher preparation and effectiveness suggests that formal teacher preparation programs are the most effective source of well-prepared teachers. (Ball & Forzani, 2009; Morgan & Kritsonis, 2008; Ronfeldt, Reininger, & Kwok, 2013; Wilson, 2009). According to Partelow (2019), conventional teacher training curriculum is normally established at a college which can be in the public domain, not-for-profit, or for profit. Teacher preparation programs are often a major integrated into an undergraduate degree or graduate degree. Often teacher preparation programs combine a bachelor and master's degree into five-year program. Teachers who complete a teaching degree program do not usually start teaching unless they have completed all their state licensure requirements.

Traditional teacher preparation programs are declining in enrollment of all program types (Partelow, 2019). The decrease in student enrollment in teacher education curricula fluctuates substantially by state. The decline in student enrollment for teacher preparation programs is not as drastic as in some states. Nine states have witnessed a decrease by 50 percent or more for traditional teacher preparation programs. The nine states are Delaware, 61 percent, Idaho, 55 percent, Illinois, 60, Indiana, 54 percent, Michigan, 67 percent, New Mexico, 54 percent, Oklahoma, 80 percent, Pennsylvania, 62 percent, and Rhode Island, 51 percent. In the states of California, Illinois, Indiana, Michigan, New Jersey, New York, Ohio, Oklahoma, and Pennsylvania the decrease in teacher preparation program students dropped by 10,000 from 2010 to 2018. Several of the states with the biggest decreases have the highest number of citizens in the United States, although Florida and Texas are notably absent from this list.

According to Partelow (2019), since 2010 overall enrollment nationally in teacher training programs has dropped by over one-third; this decrease has happened with growing enrollment in undergraduate degree programs nationally during the same period. This breaks down to roughly 340,000 less students electing to join college teacher preparation programs in the 2016-17 school year, which is the last year for which information is available contrasted to the number of students who sign up in 2008-09. At the same time, a 28-percentage decrease in the number of students finishing teacher preparatory programs in the same year took place. Because a decreasing number of colleges and universities are offering preparatory programs for CTE teachers, many states are turning to a provisional licensure process (Fletcher, et al, 2015).

Partelow (2019) indicates a variant amongst states in the shift in enrollment in teacher training programs. She discovered that dwindling enrollment and completion are not inevitably more severe among understated ethnic and racial groups or in areas and studies that have continued teacher scarcities. According to her, California and Texas have different state policies and

guidelines for how to tackle teacher shortages, indicating a quick expansion of for-profit non college teacher provisional licensure programs. She indicates legislators must consider more state and federal regulation of teacher licensure and further research needs to be done to improve understanding of the decline in enrollment in teacher preparation programs as well as knowledge of the U.S. teacher labor force markets.

Condition of the Teaching Profession

According to Partelow (2019), the condition of the teaching profession is a serious subject for lawmakers and society. Several states have witnessed teacher demonstrations and strikes across the United States in the previous two years. In many states across America, teacher salaries are extremely low, forcing numerous public-school teachers to acquire additional work or seek public aid. Many parents were surveyed in 2018 by Phi Delta Kapa (PDK) International indicating they would not want their kids to become public-school teachers because of low wages, challenging work environment, and a shortage of career advancement opportunities. Partelow (2019) indicates that teacher wages are stagnating, and state investment in education has continued to decline over recent years. However, teachers are being asked to handle a variety of increasing responsibilities. At the same time, registration into teacher preparation curricula is continuing to decline significantly nationally. This decrease has led to talks among policy specialists about how to remedy this problem, and if the decline in enrollment is expected to lead to a nationwide teacher shortage.

Partelow (2019) indicates that employment markets for teachers are local, with nearly all teachers wanting to be employed close to their hometowns. Policymakers need to look at every state and each institute to discover additional trends in teacher education enrollment. When Congress reauthorizes the Higher Education Act (HEA), it should add a reporting requirement so they can better comprehend the causes of decreasing enrollment in teacher preparation programs

and teacher employment markets. Little is known about why college teacher preparation enrollment is continuing to decline and if specific demographic groups of students are staying away from teacher preparation programs. Additional research is needed to see if the decrease is worse in specific subject matter areas, geographical areas, or types of teacher preparation programs. The absence of more comprehensive and specific data inhibits legislators from creating efficient solutions. Often legislators will misplace emphasis on specific facets of the problem that overlooks more important concerns.

Changes to the 1983 Perkins Act

The United States General Accounting Office's (GAO) assessment of the 1984 Perkins Act examined CTE programs in six states. Manley (2010) states, "the goal of the evaluation was to determine if Perkins funding was meeting the two overall objectives, which were to (a) provide quality CTE programs to underserved individuals, and (b) encourage program improvement and modernization" (p. 40-41). They found without any concrete research data that the 1984 Perkins Act most likely created a change in federal support from keeping antiquated CTE curriculum and toward enhancing and improving local programs while expanding the involvement of specific demographic groups. They believed specific school districts were offering Career and Technical Education programs targeted toward specific demographic populations, and progress was justified with the actions required in the legislation. They thought the state efforts to utilize Perkins funds to enhance CTE programs via actions like curriculum development, modernizing, and teacher professional development and were consistent with the act's purpose. They found some Perkins funding processes have a tendency to send funding to wealthy communities and away from impoverished geographic areas. Specifically, CTE students in impoverished neighborhoods in some states are not as likely to be given. Perkins money on a per-capita basis to improve or modernize CTE programs as students outside such geographic areas (U.S. Senate, 1989, pp. 44-47).

According to Manley (2010), the findings of his research indicate that the modifications to the 1984 Perkins Act within the state funding formula and its associated amendments had an adverse effect on secondary CTE in Virginia. He indicates the changes to the 1983 Perkins Act negatively affected CTE teacher education, state CTE research projects, and state ability to provide state localities with practical assistance, professional development and guidance, and expertise. His findings suggest the legislative adjustments adversely changed the way CTE program evaluation happened within the state by reducing the state-level support for developing practices of program assessment. The findings of his study appear to indicate there is an absence of leadership, advancement, and guidance within Virginia's CTE programs.

Inadequate Funding for Teacher Preparation Programs

Manley (2010) suggests Virginia state-level CTE leaders assess the way their current allocation of Perkins funding is allocated and spent and to think about giving some of this money to teacher education programs within the state. Manley's conversations with teacher educators in Virginia suggests no Perkins funding is being distributed to teacher education programs. Current Perkins legislation allows expenditure for teacher education programs, but Virginia CTE's approach toward teacher education is to use provisional licensure as the primary method for CTE teacher licensure. This philosophy has caused a critical scarcity of highly qualified CTE teachers in Virginia. Teacher preparation programs in Virginia have witnessed what insufficient funding can do to their capacity to enroll and educate potential students. The absence of funding at teacher preparation programs has led to a severe drop in employees, which has reduced the ability of CTE teacher education programs to recruit and educate potential teachers. This problem has reduced the number of CTE administrators with a background in CTE. The reduction of Virginia's CTE teacher education programs has pressed local-level CTE administrators into requesting or producing professional development training for their provisionally licensed teachers, as well as

finding ways to educate often non-pedagogically trained professionals they have hired. Career and Technical Education college preparation programs have decreased dramatically since 1990, but these programs house CTE personnel with research abilities that are used by other CTE programs outside of Virginia or our nation's borders. Many of these CTE university professionals could offer local school divisions professional development training if provided with the funding.

Growth of Provisionally Licensed CTE Teachers

Partelow (2019) indicates overall enrollment nationally in teacher preparation programs has dropped by more than one-third since 2010. More alarming is that during this time frame, the decline in teacher preparation programs has occurred in the context of students electing to enter other career field bachelor's degree programs nationwide. In 2016-17, 340,000 less students decided to register to take a teacher preparation program nationwide contrasted with the number of students who enrolled in 2008-09. At the same time, we had a 28 percent drop in the number of students finishing teacher preparation programs. Only 19 CTE teachers in Virginia finished a traditional teacher preparation program in 2018, while 81 new CTE teachers completed a provisional licensure program (United States Department of Education, 2019). The 19 new CTE teachers completed traditional programs at one of seven colleges or universities in Virginia while the 81 new CTE teachers who entered on a provisional license completed a program at one of three institutions of higher education (IHE) or a non-IHE program (United States Department of Education, 2019).

According to Partelow (2019), provisional licensure programs are generally intended to offer individuals who already have an undergraduate degree in a content specific subject a pathway to teacher certification that does not require them to obtain another undergraduate degree. In these programs, individuals start teaching before finishing all their licensure requirements. Provisional licensure programs are often run by a postsecondary institution of higher education. Provisional

licensure programs at times provide a graduate degree upon program completion. Criteria for instance can include specific coursework, duration of time to completion, and training required can differ broadly based on state laws for teacher licensure and the program's design. In Virginia, a provisional license is given to the teacher for three years while they complete reduced requirements from what is required in a comprehensive teacher preparation program (Virginia Department of Education, 2017). The requirements typically involve a certain amount of college-level coursework in the content in which they are teaching. Individuals in this program typically already have the content area coursework completed from earning their undergraduate degrees. They are then required to take five three-credit college-level courses in education.

In 2017, Career and Technical Education placed fourth on the Virginia Department of Education's critical shortage list for teaching areas in Virginia (Virginia Department of Education, 2017). Normally, teachers in Virginia go into the job in one of three main ways. They are either in a teacher education program at the college or university level, career switchers, or those go into teaching using a provisional license (Virginia Advisory Committee on Teacher Shortages, 2017). Individuals entering the traditional teacher preparation path have college level courses and internship experiences with qualified K-12 teachers. At present, this is done in a one-year master's program. But in Virginia, the traditional teacher education pathway poses key obstacles for students. Presently, students wanting to becoming teachers in the traditional teacher pathway must major in a subject specific area in combination with finishing a teacher preparation program, resulting in both heightened expenses and time to conclusion (Virginia Advisory Committee on Teacher Shortages, 2017).

Conditions that Increased Provisional Licensure

The state funding formula change in the 1984 Perkins Act and its accompanying amendments have caused a decline in the operation of CTE teacher educator programs in Virginia

(Manley, 2010). To compound the decline undergraduate majors in teaching were phased out in 1999 and are not currently authorized in Virginia; therefore, for the most part teacher preparation programs offer a five-year program with a master's in teaching required in addition to an undergraduate degree in a subject area. The typical Virginia teacher with a graduate degree starts their teaching career with $50,879 in debt, which is more than the typical Virginia teacher's beginning income of $42,752 for individuals with a graduate degree. However, not all students borrow the complete cost for teacher preparation. A one-year master's degree in teaching can cost upwards of $15,000 in tuition and fees compared to the significantly reduced cost of students taking a provisional licensure approach with a content subject-specific bachelor's degree and learning to teach on the job. According to Debbie Truong (2019), in 2017-2018 school year almost 940 teaching jobs were vacant in Virginia at the start of the academic year, indicating a staffing crisis that has beset classrooms.

Growing National Shortage of CTE Teachers

There is a growing national teacher shortage in Career and Technical Education (CTE), along with the ability to attract and keep talented educators (U.S. Department of Education Office of Postsecondary Education, 2017). The problem with finding and retaining qualified and certified CTE teachers was identified more than ten years ago (Brand, 2008). A recent analysis revealed that smaller, urban, and rural school districts were having difficulties in staffing related to CTE teachers (Krupnick, 2018). According to Advance CTE (n.d.), states that need to attract and retain CTE teachers in rural areas are Hawaii, Kentucky, Louisiana, Mississippi, and New Jersey. Fletcher and Gordon (2017) examined the teacher shortage around the decline in career and technical teacher education programs. They reviewed a previous study conducted 16 years earlier (Bruening, Scanlon, Hodes, Dhital, Shao, & Liu, 2001). Attracting and retaining CTE teachers is a current issue that has been pointed out in added research studies (Bartlett, 2002; Asunda, 2012). A

growing number of CTE educators are coming into a teaching career via provisional licensure programs (Blevins, 2016; Bowling & Ball, 2018; Ruhland & Bremer, 2002).

Ball (2016) indicates a significant number which is symptomatic of the teacher shortage. She states that between 1994 and 2004 in the United States 2.25 million teachers were hired, but during the same time the United States lost 2.7 million teachers (National Association of State Directors of Career and Technical Education Consortium, 2009). Statistics show the teacher shortage is not insulated to specific regions but is across the United States. Vacant teaching jobs result in the employment of emergency teachers, long-term substitutes, expanded class sizes as courses are combined, or complete program closure. According to Ball (2016), it is likely that the shortage crisis has caused a decrease in overall student achievement. Teachers who stay in the teaching are stressed by having to take more pupils, guide untrained teachers, or provide remediation to students in subsequent academic years who did not have a trained teacher in the preceding years.

The Virginia Advisory Committee on Teacher Shortages (2017) indicates Virginia has a critical shortage of highly skilled teachers in numerous school districts. Teacher shortages have occurred for a long time in Virginia, but the issue has become serious in terms of the among of vacant positions. The number of vacant teacher jobs throughout Virginia has increased by 40 percent over the previous ten years from 760 to 1,080 and has attained emergency levels in specific school divisions. School divisions with higher concentrations of impoverishment often have a difficult time filling their teaching vacancies. For example: In 2017, two months before the academic year started, the city of Petersburg had 142 vacant teaching jobs out of a total of 400 amounting to over one-third of their teaching positions. In Virginia, a shortage of teachers is taking place in Career and Technical Education, which has traditionally remained difficult to staff (Virginia Advisory Committee on Teacher Shortages, 2017). The quantity of minority teachers is

not keeping up with the growing diverse student body in Virginia. In Virginia, 79 percent of school teachers are white, with non-white students making up 49 percent of Virginia's student population.

Increase in Provisional Licensure Programs

A declining number of colleges and universities are offering programs for CTE teacher preparation (Fletcher, et al, 2015). Supply and demand affect the lack of highly qualified CTE teachers (Loeb & Myung, 2010; Podgursky & Springer, 2011). Currently, the level of CTE teacher supply cannot meet the current CTE teacher demand (Sutcher et al., 2016). Hard-to-staff schools located in urban and rural areas with a significant percentage of minority school children and pupils from lower socioeconomic backgrounds are impacted (Castro & Bauml, 2009; Guha et al., 2017). Ideally, teacher supply and demand should be equal. Recruitment and retention are used to combat the low supply of CTE teachers (Aragon, 2016; Beteille et al., 2010; Ingersoll & May, 2011; Sutcher et al., 2016). College teacher preparation programs have been the primary way new teachers prepared to enter the profession, but the CTE teacher deficit has forced schools and divisions to use a variety of provisional routes to fill their teaching vacancies (Balter & Duncombe, 2007; Morgan & Kritsonis, 2008).

According to the United States Bureau of Labor Statistics (2018), an anticipated 7,700 new job vacancies are needed to be filled through the year of 2026 for those teaching CTE courses. School districts that employ CTE teachers are searching for ways to fill these positions so students can continue to take CTE courses. Across the United States, there is a movement of teachers in all disciplines, leaving the teaching profession. Some of these reasons have included displeasure with teaching, teacher retirements, and employment opportunity in the private sector of the economy. (Conneely & Uy, 2009; Krupnick, 2018). Recruitment and retention of CTE teachers are affected by these factors. Each state has different requirements for granting a CTE teaching license. Bonsu & Bowman (2013) indicate a CTE teacher can obtain a teaching license through the completion of

a traditional pathway, provisional pathway, or even through work-based learning requirements. The shortage of CTE teachers across the United States has forced states to recruit and retain CTE teachers through a wide range of licensure requirements (Perkins Collaborative Resource Network, n.d.). Across the United States, there is a considerable difference when it comes to describing the background of CTE teachers (Zirkle, Jeffery, & Shrewe, 2019).

According to Ball (2016), one sign of the sizable increase in provisionally licensed educators is witnessed in the substantial rise in the amount of provisional licensure programs. The US Department of Education (USDoE) documented approximately 70 provisional licensure teacher programs in 2011. In 2011 that total teacher licensure programs rose to 658. (USDoE, 2013). In 2013, provisional teacher licensure held a 31% segment of the teacher training programs nationwide (USDoE, 2013). As the requirement for CTE teachers grows it will exceed the supply from traditional teacher preparation programs resulting in the rise in the number of provisional programs.

According to the Virginia Advisory Committee on Teacher Shortages (2017), teacher shortages in Virginia have deteriorated due to decreasing enrollment in teacher preparation programs coupled with high attrition levels amongst current teachers. Numerous reasons exist that account for the diminishing number of teachers who want to join the profession. Attrition factors include expensive and out-of-date pathways into the occupation needing an undergraduate degree, increasingly bad perception of the occupation where teachers do not feel appreciated as in previous generations, bad work environment, and reduced income capacity. Teachers frequently leave their profession because of concerns with over-testing, accountability, stress, stifling of creativity, and discontent with their school administration. The significance of bad school leadership and negative school culture have been recognized in research as a link to dissatisfaction with the teaching profession. The lack of adequate training and preparation to teach can increase the challenges

encountered in the classroom.

Growth of Enrollment in CTE Programs

Increased enrollments nationwide have created new support for CTE programs. In 2006-2007 the USDoE Office of Vocational and Adult Education (OVAE) indicates more than 15 million students were taking CTE classes nationwide (National Association of State Directors of Career and Technical Education Consortium, 2009). Ball (2016) indicates this number has increased to almost 6 million the last seven years. The number of students in CTE programs in the nation has exceeded the amount of CTE teachers coming into teaching through traditional or provisional teacher preparation methods. As a result, school administrators have faced a challenge to meet the increasing need for CTE classes with a reduced quantity of teachers. The amount of CTE teacher preparation programs has dropped approximately 11% in 10 years (National Association of State Directors of Career and Technical Education Consortium, 2009). There were 432 CTE teacher preparation programs in 1990 compared to 385 in 2000 (National Association of State Directors of Career and Technical Education Consortium, 2009). Today the number of CTE teacher preparation programs continue to see a decline in enrollment of quality professionals entering the profession.

Ball (2016) indicates that CTE can generate considerable prospects for students and the economy. The shortage of trained teachers and the dependence on hiring individuals from industry with no pedagogical knowledge will reduce the expansion of first-rate CTE programs. States and school districts are allowing provisionally licensed teachers because of the availability of skilled applicants and high turnover. According to the United States Department of Labor (2015), the demand for high school teachers will increase by 6% or 55,900 jobs from the year 2014 to 2024.

Efforts to Reduce the Teacher Shortage

The Virginia Board of Education (VBOE) has recently recommended and authorized program guidelines to permit the return of education majors in education via the development of a four-year undergraduate major. (Recommended by TDVEP, VDOE 2016 Report). According to the Virginia Advisory Committee on Teacher Shortages (2017), Virginia's teacher shortage has contributing factors other than retirement. The average teacher turnover rate in 2016-2017 across all the Virginia school divisions was exceeding 30 percent. Excessive staff turnover rates undercut the stability of students, resulting in additional inexperienced teachers being employed to replace those departing, and results in added training and productivity costs for schools. Nearly half of the teacher turnover rate nationwide is attributable to teachers quitting the job altogether. Unhappiness with a profession in teaching has been connected to the shortage of sufficient training for the tasks that take place in the classroom. Students have progressively presented a broader and more serious set of challenges across the United States. For instance, the percentage of pupils who speak a language different from English has nearly tripled since 2000, and the number of students living in poverty has risen by two percentage points.

According to the Virginia Advisory Committee on Teacher Shortages (2017), twenty-five percent of teachers that leave the profession attribute their choice most often to worries over standardized high stakes testing and the accountability for the student test results. Twenty-one percent report unhappiness with the school administration, which reinforces the significance of school leadership and culture. Twenty-one percent of teachers reported quitting the teaching profession due mainly to unhappiness with their professions. Institutions of higher education in Virginia are hopeful they can assist in reducing the teacher shortage by proposing undergraduate teaching degree programs to address the shortage of highly qualified CTE teachers in Virginia. The Virginia Department of Education (VDOE) has recently authorized undergraduate teacher

education programs at more than a dozen institutions of higher learning. Their objective is to simplify requirements and reduce the expense of getting into the occupation. In December of 2017, Governor McAuliffe took emergency action to remove barriers to entering teaching, issuing an administrative mandate to get aspiring teachers into classrooms quicker and charting a way for institutions of higher learning to establish undergraduate teaching degrees.

In order to increase the number of highly qualified CTE teachers, Virginia needs a traditional undergraduate teaching degree that starts with interest at the high school level and then includes rigorous college coursework that conveys flawlessly into undergraduate and graduate college programs. A career switcher is an individual with a subject specific undergraduate degree that has a minimum of five-years of work experience that receives a very limited amount of pedagogical training and practicum experience as part of the training to switch over into the teaching profession. This program is more like an introduction to pedagogical principles instead of an in-depth study with an extensive practicum. Individuals may also teach in Virginia when issued a three-year provisional license through the Virginia Department of Education without formal teacher preparation if the local school division employing them recommends them. A provisional license holder has three years where they are required to meet specific guidelines in order to get full certification from the state.

Virginia should be interested in finding a solution to CTE teacher shortages because it is vital for potential economic development and prosperity (Virginia Advisory Committee on Teacher Shortages, 2017). Education and training of Virginia's state workforce are some of the top factor’s companies consider when selecting where to locate or expand. Without excellent CTE teachers Virginians will not be ready to be successful in the labor force or to seek postsecondary educational prospects that are necessary to fill nearly all the positions of the future. Without a prepared labor force, Virginia's capability to retain and attract companies will be compromised.

Effectiveness of Provisionally Licensed CTE Teachers

According to Bowling and Ball (2018), teacher education is facing several challenges. These challenges include funding issues, policy changes, and teacher retention and recruitment. The challenges are at the district, state, national, or school level, and are contributing to persistent teacher shortages. School districts are confronted with the challenge of hiring unqualified people, leaving unoccupied teaching positions open, or reducing positions completely. Many educational professionals often ask if provisional licensure is a solution to CTE teacher shortages or is provisional licensure a problem. Research suggests a shortage of consistency within the existing provisional licensure path and a shortage of constant and positive impact on student results within provisionally licensed CTE teachers. The researchers recommend future study to examine the effects of different licensure pathways on students. Bowling and Ball (2018) indicate teacher certification pathways should be based on research that provides evidence that generates the best learning outcomes for students. They suggested that state staff and teacher educators work together to create statewide licensure requirements for people pursuing provisional paths into the teaching profession.

Self-Efficacy of Provisionally Licensed Teachers

A wide range of perspectives and findings on the impact of teacher licensure as it relates to teacher quality and student outcomes exists. Early research focused on teacher self-efficacy and the differences between teachers from traditional college teacher preparation programs and provisionally licensed teachers. Other research found that there is no difference in self-efficacy between the two groups (Rocca & Washburn, 2006). Recent studies found that educators who come through a teacher preparation program feel better equipped to teach than a provisionally licensed teacher (Duncan, Cannon, & Kitchell, 2013). Other research focused on content and pedagogical knowledge and found that traditional college prepared teachers possessed greater

pedagogical knowledge and gave more authentic assessments while provisionally licensed teachers possessed greater content knowledge and industry experience (Fletcher & Zirkle, 2011; Stephens, 2015). Research by Bartholomew, et al. (2018) found that principals believe provisionally licensed teachers are less prepared than teachers from traditional college preparation programs. Principals are still willing to hire provisionally licensed teachers and work with them if they are not able to hire a traditionally college prepared teacher for a position.

Joerger and Bremer (2001) found the induction period for a new CTE teacher begins during the first year of teaching and can last into the fifth or sixth year. For provisionally licensed CTE teachers, the induction period is compounded because the person comes into the situation with no pedagogical knowledge and skills, as well as not having completed a student teaching internship with an experienced teacher (Virginia Department of Education, 2017). This induction period is a critical time for CTE teachers as they adapt themselves to the new environment of being a professional teacher. Several studies have outlined models to recruit and retain CTE teachers (Harris, Camp, & Atkins, 2003; Ruhland & Bremer, 2002; Wilkin & Nwoke, 2011). According to Bottoms, et al. (2013), a successful framework to attract, train, and retain qualified CTE teachers includes strengthening the relationship among career commitment, competency through teaching, and teacher self-efficacy to increase the likelihood for provisionally licensed CTE teachers to remain in the teaching field. Research indicates that provisionally licensed CTE teachers grapple with pedagogical decisions in contrast to a traditionally licensed CTE teacher (Conneely & Uy, 2009; Ruhland & Bremer, 2003). According to the authors, new CTE teachers should have access to high-quality professional development, strong pedagogical background obtained by taking courses and making connections between academics and CTE through integration. These variables contribute to an induction program that increases the chances CTE teachers remain teaching.

Current Research on Effectiveness

The current research literature is limited regarding the discussion over whether traditionally licensed CTE teachers are more equipped to teach than those who are provisionally licensed. Rocca's and Washburn's (2005) research compared traditionally and provisionally licensed agriculture teachers' perceptions of self-efficacy correlated to teaching and discovered non-distinguishable results between the two groups. Duncan and Ricketts (2008) discovered that traditionally licensed agriculture teachers were substantially more effective than provisionally licensed teachers regarding the constructs of technical content expertise, leadership development activities, and program management. However, no substantial variations were noted between the groups teaching and learning effectiveness perceptions.

Shen (1997) agrees that provisional certification can help alleviate teacher shortages but has concerns about this path to licensure. He concludes that provisional licensure can be helpful in expanding the teaching workforce and easing teacher shortages. However, provisionally licensed teachers seem to have lesser academic credentials than traditionally licensed teachers, and most college graduates are seeking the advantage of provisional licensure programs to avoid the rigor of traditional ones (Shen, 1997). Shen indicates a percentage of provisionally licensed teachers report they do not expect teaching to be their lifetime career, increasing worries about retention. Shen's view regarding a large percentage of provisionally licensed teachers working in inner-city schools raises a question concerning the quality of teaching for economically disadvantaged students.

Darling-Hammond (2000) indicates provisional licensure is adversely correlated with student academic achievement. Darling-Hammond examined fourth and eighth grade reading and math test results across the United States, discovering that states with more restrictive licensing procedures had pupils with greater test scores than did students in states with added provisional licensing practices. Darling-Hammond indicates this is true even after controlling for student

poverty and limited English proficiency status. Career and Technical Education teachers have many years of job experience working as industry professionals in their field of instruction. According to Lynch (1998), the value of job experience in preparing CTE teachers has no significant influence on teaching excellence. Lynch states, "There is no reliable correlation between years of professional experience or scores on occupational competency tests and such variables as teacher qualifications, satisfaction, or effectiveness" (p. 47).

Goldhaber and Brewer (1999) examined data from the National Educational Longitudinal study of 1998 indicating that the educational accomplishment of students is a related function of their teachers' qualifications and discovered no connection to provisional licensure. The study looked at student results in math, science, history, English, writing, and relating it to the teacher's level of education in their subject matter and their type of teacher licensure. When student characteristics are held constant; student achievement is higher when teachers have a bachelor's or master's degree in the content subject, they instruct then have any licensure (provisional or standard) as opposed to no licensure or licensure in a different subject. They indicate there is little proof that provisional licensure policies have an adverse effect on student achievement. They suggest that a small amount of research has been completed regarding whether some aspects of teacher licensure are better than others and if instructors with traditional licenses do better than instructors with provisional licenses, and to what effect licensure has on the quality of persons entering the teaching profession.

Darling−Hammond, Berry, and Thoreson (2001) questioned Goldhaber and Brewer's (1999) results, indicating out that the amount of provisionally licensed teachers in the National Educational Longitudinal study was small and that most had qualifications like traditionally certified teachers. Goldhaber and Brewer (2001) doubted the validity of nearly all of the critiques presented, noting a absence of scientific rigor in much of the research cited by Darling-Hammond,

Berry, and Thoreson. Goldhaber and Brewer also remarked on the shortage of data relating to licensure status to student success. Goldhaber and Brewer mention the broad variation in state teacher licensure guidelines across the United States, noting its potential impact on labor market conditions. Goldhaber and Brewer state, "It is highly likely that in a relatively slack labor market emergency credentialed teachers look quite different from emergency credentialed teachers in a tight labor market such as exists in many states today" (p.85).

Ball (2016) recently reflected on his experience as an educational leader in a district that serves high school students and indicated that just in CTE, in the past few years has he seen 100% of those teachers hired by provisional licensure means. Ball states that typically these instructors are employed because they have a substantial amount of industry experience, which makes them eligible for a provisional license. These teachers have little to no formal teacher training. Ball sees challenges in helping these educators in the first two years of teaching. These challenges involve helping teachers with their ability to relate to students, grasping the philosophy within the school, and coping with the teacher workload. Often members of the district leadership team in their school district had completed formal teacher education programs before being hired and could connect to the aspects of being a first-year teacher. However, it was hard for them to completely comprehend the personal feelings, reflections, and worries of a first year provisionally licensed teacher. Because provisional licensure is a growing concern within CTE, the researcher developed the study to describe the viewpoints of the first-year teaching population. Ball indicates that forty years ago teachers would come into the teaching by completing a college teacher preparation program. The academic community used to be against any path that was not traditional teacher preparation. In the 1990s, initiatives took place that permitting teachers to move into the teaching profession with only an undergraduate degree in their subject area. When these programs were put into effect the rise in provisional licensure programs and paths took place. More schools began

using provisional routes to hire teachers. The growing shortage of teachers coming from traditional routes is seen as increasing provisional pathways of teachers coming into education (Ball, 2016).

Duncan, Cannon, and Kitchel (2013) indicate it is vital that research is done to examine if provisionally licensed CTE teachers are as effective and efficient as teachers who were prepared in traditional teacher preparation programs. They indicate that teaching ability may be linked with a teacher's self-efficacy, such as, their confidence in their capability to proficiently connect in their teaching. The research literature is not conclusive and offers varied conclusions regarding provisionally licensed teachers' perceived competence in teaching CTE (Duncan & Ricketts, 2008; Rocca & Washburn, 2005; Wash, Lovedahl, & Paige, 2000).

Conclusion on Effectiveness

Overall, there seems to be more evidence that teachers who entered the profession through a provisional licensure process are less effective than traditionally college prepared teachers. The provisional licensure pathway is helping provide a partial short-term solution to the lack of teacher supply (Berry, et al., 2008; Henry, Putrell, Bastian, Fortner, Thompson, Campbell, & Patterson, 2014). Traditional CTE education teacher college preparation programs encounter a significant deterrent to enrollment when attracting students because of the significant postsecondary coursework required to be approved for a Virginia teaching license. The Virginia Department of Education (VDOE) has provided a provisional licensure program to attract CTE teachers by removing postsecondary coursework requirements normally required in a traditional college teacher preparation program prior to teaching (Bowling & Ball, 2018). In Virginia, provisionally licensed CTE teachers complete the course work within the first three years of employment while working on the job. The importance of proper training for early-career CTE teachers becomes imperative in light of the increasing number of CTE teachers who are entering the profession through provisional licensure programs (Blevins, 2016; Bowling & Ball, 2018; Ruhland & Bremer,

2002) and because of the decreasing number of colleges and universities that offer teacher preparation programs for CTE (Fletcher, et al, 2015). Provisional licensure programs have provided a degree of help in bringing new teachers into the profession, but they have not provided new teachers the complete knowledge and understanding needed to offer a highly successful CTE program (Hammond, Holtzman, Gatlin, & Heilig, 2005). Addressing the deficiencies in the provisional pathway programs and the missing skills for teachers that enter the profession through these pathways is a necessary task for teacher preparation programs and schools.

According to Solomonson, Korte, Thieman, Retallick, and Keating (2018), teacher attrition is a substantial challenge nationwide and a particular challenge for agriculture education programs. They examined supporting variables related to former Illinois school-based agriculture teachers choosing to leave the teaching profession. They used a four-factor conceptual model as a framework to describe agriculture teacher retention and attrition. The framework incorporated the multivariate constructs of compensation, personal factors, teacher development, and working conditions. Demographic attributes were studied with differences among beginner and experienced teachers and their views of what influenced them to leave teaching. When analyzing salary data, it was obvious school-based agriculture teachers from Illinois can increase their salaries after leaving the teaching profession by 10.1%. However, compensation had the least influence in the model. The researchers' model states personal factors were the most important, followed by teacher development, working conditions, and then compensation. Family or personal reasons were considered a variable outside of the teaching profession's control. However, most of these problems came from the absence of a work and life balance. Moreover, the study found that the absence of self-confidence to teach could be improved through revision of current teacher preparation programs and adding professional development opportunities for pre-service teachers. According to Jones (2020), middle school career and technical education (CTE) teachers are

exceptionally situated to help students while developing foundational skills for success in any career pathway. She suggests the expansion of Perkins V funding to include the middle grades offers opportunities and challenges for those teachers in districts with robust curriculums, as well as for those experimenting in middle grade CTE for the first time. However, the state of Virginia has a shortage of highly qualified CTE teachers and has low enrollment in CTE teacher education programs. The expanding directives of Perkins V funding will necessitate Virginia to adapt legislatively to the CTE teacher shortage.

Suggestions for Improvement

To meet the established requirements, teacher preparation institutions should create on-site and distance courses to prepare potential teachers for all the facets of CTE (Bowling & Ball, 2018). The researchers recommend programs focused on improving the teachers' pedagogical knowledge related to their content expertise and classroom management practices. In addition, CTE teachers need program management competencies that are critical to guarantee their CTE programs are operated properly by required guidelines and standards. However, no specifics were mentioned if provisional licensed CTE teachers should receive training prior to being allowed to enter the classroom. Exclusively, within CTE the researchers say professional development should also focus on creating the needed skills to handle a variety of laboratory situations and their corresponding student organizations. Professional development programs must also concentrate on assimilating provisionally licensed teachers within the current communities of teaching practice. Mentoring plans should also be established to link provisionally licensed teachers with skilled classroom teachers. The authors recommend research to examine the reasons people obtain provisional licensure instead of the traditional college-based path and to find the obstacles to entry into traditional teacher preparation programs.

Camp and Heath-Camp (1991) state: “Organized induction assistance programs can help to make the transition into fulltime teaching less traumatic. They can also help in the retention of promising beginning teachers, many of whom leave teaching in frustration during their first year or so on the job” (p. 30). The authors conclude that “in the final analysis and regardless of the age at which the novice enters teaching, the need for a structured induction assistance program is indicated” (Camp and Heath-Camp, 1991, p. 32). Furthermore, “two significant factors that may contribute to teacher turnover relate to inadequate induction into teaching during the first year of employment and inequity in the compensation of teachers as compared to other college graduates of the same age cohort” (McCaslin & Parks, 2002, p. 88). Camp and Heath-Camp (1991) outlined guidelines for the implementation of an effective teacher induction program. They conducted a comparison of the induction program of traditionally licensed teachers to the needs of provisionally licensed teachers and stressed the need for a different induction process for provisional licensed CTE teachers. According to Camp and Heath-Camp (1991), the induction process for provisionally licensed CTE teachers must be structured so that CTE teachers can maximize the benefits associated with an induction program. Camp and Heath-Camp (1991) indicate the professional development requirements of provisionally licensed CTE teachers are distinct from the needs of their CTE traditionally licensed counterparts. An induction program should be reflective of those needs of the provisionally licensed CTE teachers and intentionally designed to meet them (Camp & Heath-Camp, 1991; Su, Dainty, Sandford, Townsend, & Belcher, 2011).

Characteristics of Effective CTE Teachers

Early Research

Polk (2006) mentions the ten basic characteristics of effective teachers, which include prior noteworthy academic performance, good communication skills, creativity, professionalism,

understanding of pedagogy, full and proper student assessment skills, self-development, lifelong learning, engaging personality, content understanding, and the skill to show students concepts in their content area. In the same study, Polk (2006) states, "it seems that effective teaching is not the innate, inborn skill it was once considered" (p. 28). Understanding how CTE teachers develop characteristics listed by Polk (2006) could help develop training that increases CTE teaching effectiveness and retention. Lynch (1996) discussed ten principles that should serve as a foundation for a high-quality teacher education program for career and technical teachers. Lynch mentions four of these principles: (a) understanding the use of curriculum and instructional techniques, (b) understanding learning concepts and practices that help students, (c) understanding the importance of workforce preparation and development, and (d) understanding how academic, educational and workplace skills relate to the curriculum that needs to be established in a provisional teacher education program.

Wenglinsky (2002) wanted to find the characteristics of effective teachers and analyzed math and science attainment of over 7,100 eighth graders as linked to measures of teaching quality and teacher qualities. In this study, students were influenced by the teacher's professional development coursework and content background. Wenglinky indicates students perform well when teachers offered hands-on learning and concentrated on higher-order thinking skills. According to Goldhaber and Brewer (2000) students with teachers having an undergraduate degree in their content fields with pedagogical knowledge of science or mathematics achieved higher scores on math and science exams than their peers who had teachers who taught math and science without the same undergraduate degree in those content fields. Ross (1992) analyzed connections between student achievement (cognitive skill and knowledge), interactions, and teacher efficacy with appointed mentor teachers. In the study they examined 18 history teachers working with seventh and 8th-grade pupils. Ross (1992) states, “Student achievement was higher in classrooms

of teachers who had more contact with coaches (mentor teachers) and in classrooms of teachers with greater confidence in the effectiveness of education" (p. 51). According to Darling-Hammond and Sykes (2003), numerous attributes like enthusiasm, flexibility, perseverance, and concern for students that are beyond subject matter knowledge, are essential for good teaching.

What CTE Teachers Need to be Effective

According to Bruening, Scanlon, Hodes, Dhital, Shao, and Liu (2001), a sizeable percentage of CTE teacher educators are reaching retirement age and attention must be paid to maintain CTE teacher preparation programs. CTE teacher preparation programs should be modernized and made sustainable. This is complicated by the progressively heavier workload of the CTE teacher educators, contrasted with nationwide averages for other teacher educators. Plans should be put in place to replenish these teacher educators in a more efficient way if a shortage of doctoral-degree professors could hasten the decrease of CTE programs. Growing pressure for well-trained CTE teachers in local school districts requires CTE faculty to want to learn throughout their professions, form collaborations between schools and businesses, and integrate work-based skills into the curriculum to make sure CTE has well-trained professionals. CTE curriculum comes from outside the classroom, and teacher educators need to use the workplace as a source and base for combining academic and workplace skills. Today's CTE teacher educator must build their expertise and know their obligation as an academic scholar in industry and community organizations to guarantee that their curriculum accurately shows the skills necessary for the modern workplace. This implies that teacher educators must occasionally go back to the workplace to obtain fresh understanding and translate this understanding into classroom training. Improved professional development training can be the vital key that allows teacher educators to stay current in their content areas and come to be encouraged to revise their curriculums. Professional development for teacher educators has the ability to be one of the changing influences in CTE

teacher preparation and has been connected to optimistic mindsets of faculty and higher levels of student knowledge (Sparks, 2000).

Increased Self-Efficacy

According to Hoy and Spero (2005), self-efficacy amongst pre-service teachers varies from that of provisionally licensed beginning teachers. Pre-service teachers tend to develop their self-efficacy as they improve through teacher training. Hoy and Spero (2005) indicate that beginning provisionally licensed teachers are confronted with unanticipated challenges that lessen their feelings of effectiveness. Mulholland and Wallace (2001) suggest that the most influential effects on the advancement of teachers' feelings of self-efficacy are centered throughout their student teaching experiences. The majority of CTE educators obtain their teacher training throughout their first year of teaching. Provisionally licensed CTE teachers do not have a supervised student teaching experience and therefore they do not get the same chance to cultivate their teaching effectiveness as do traditionally prepared pre-service teachers (Darling-Hammond et al., 2002; Forsbach-Rothman et al., 2007; NBPTS, 2014). Traditionally prepared teachers appear to exhibit higher levels of self-efficacy (Darling-Hammond et al., 2002; Forsbach-Rothman et al., 2007). It seems important to identify the strengths of traditionally prepared teachers to address the issue of increasing self-efficacy for provisionally licensed CTE teachers. According to Joerger and Bremer (2001), the induction period of a new CTE teacher begins during the first year of teaching and can last through the fifth or sixth year of teaching. During the induction period the CTE teacher is experiencing all the responsibilities, tasks, and routines of a new teacher including expectations and implementing teaching strategies for students. When CTE teachers have higher job self-sufficiency and backing, they are more likely to consider continuing their careers in the field of education. (Ruhland, 2011; Song, Martens, McCharen, & Ausburn, 2011). Increasing the autonomy of new CTE teachers and allowing them the flexibility to create their own classroom of

learning can have positive effects on the retention rates of provisionally licensed CTE teachers.

Content and Pedagogical Training Before Entering the Classroom

According to Younger (2011), state agencies use licensure to help with the career development of CTE faculty needing teaching qualifications. Although most states have secondary teacher licensure requirements for CTE teachers, few states require teacher licensure in post-secondary institutes. Industry knowledge has become a key prerequisite when employing CTE faculty. When hiring technical, health, and trade and industrial teachers' schools have had to use a provisional licensure approach that holds the years of professional knowledge as a teacher preparation requirement (Scott & Sarkees-Wircenski, 2008). CTE teachers in specific disciplines are not always required to have an undergraduate degree. However, the bulk of CTE teachers have at minimum an undergraduate degree in the content area in which they teach as a certification requirement (Scott & Sarkees-Wircenski, 2008).

According to Bruening, Scanlon, and Hodes (2000), as far back as 1998, several articles cite a necessity for additional and better trained teachers in CTE. According to Camp (1998), there was an unmet need for CTE teachers in certain areas. Bruening, Scanlon, and Hodes (2000) indicate there are numerous people in the teaching profession who are worried about the quality of the instruction that future teachers receive. Increasingly the CTE teaching profession is shifting toward the integration of academics, collaborative learning activities, career clusters, and contextualized learning. Provisionally licensed CTE teachers will need content and pedagogical training before entering the classroom.

Knowing Specific Strategies that Help Students Learn

Several frameworks have attempted to answer that question of what distinguishes classrooms in which students learn from those in which they do not by identifying the methods of what skilled educators do (Lampert, 2001; Lemov, 2010). According to Ball and Forzani (2010),

identifying the specific learning strategies that work is fundamental to supporting student learning and is key to creating a successful system for the professional development of educators. Two issues have increased the need for such instruction. First, pupils are required to accomplish ambitious goals that involve creating methodical thinking and problem solving, not merely remembering basic knowledge and processes. Second, the goal is that all students will accomplish these goals. Schools have always taught specific students a more developed and rigorous set of courses. They have typically established separate goals for other groups of students that were not perceived as being able to grasp advanced concepts. CTE educators today are required to help a much greater array of students that can achieve rigorous levels of accomplishment. It is important for CTE teachers to pinpoint the methods that bring about teaching rigorous subject matter to all students. Educators must be able to identify ways that students think about subject matter, including resources they bring in and certain developmental shifts they go through as they develop and learn. Pinpointing a set of effective teaching methods that seeks positive outcomes for all school children is a first phase toward improving CTE teachers that are on provisional licensure because they essentially learn pedagogical concepts while on the job for the first three years. These methods could offer a common basis for CTE teacher education, a shared professional language, and a structure for assessing and improving teaching.

Effective Mentoring

Reese (2010) reviewed the various pathways that states utilize to meet the demand for qualified CTE teachers. Reese indicates that both traditional CTE teacher preparation programs and provisional programs that seek industry career changers can prepare future CTE teachers to the highest quality by using experienced teachers who exhibit excellence as mentors. Mentoring of provisionally licensed CTE teachers has also been shown to be an important component to increase teacher retention (Briggs, 2009; Ruhland, 2001; Wonacott, 2002). Wonacott (2002) defines the

first five to six years of teaching as the formative years for CTE teachers. Wonacott (2002) published a list of recommendations with respect to the continuous mentoring of CTE teachers. His goal was to make sure all CTE teachers successfully complete their formative years of teaching. Some of the recommendations stressed were to emphasize using pedagogy with a mentor, focus on the optimistic aspects of teaching, and to support the new CTE teacher through interaction with the mentor. Briggs (2009) indicates a mentee should work closely with a veteran CTE teacher who teaches within the same content area. According to Ruhland (2001) and Wonacott (2002), the mentoring of a new provisionally licensed CTE teacher is successfully accomplished through the objectives of a licensure program-and can increase the probability that the new CTE teacher will stay in the field of education. Ruhland (2001) indicates that provisionally licensed CTE teachers will often leave within their first few years of teaching because of burnout and stress. Provisionally licensed CTE teachers are often not familiar with their new role and responsibility of being a teacher in addition to completing the requirements for a teaching license (Education Commission of the States, 2013; Ruhland, 2001; Ruhland & Bremer, 2002b; Wonacott, 2002).

Current Research

According to Saini, Sethi, and Chauhan (2019), teaching is a highly complex activity. Teachers can shape a student's career by using a variety of teaching techniques. Besides teaching, there are other qualities of the teacher that can affect the student's academic performance. The common attributes which affect the teacher-student education experience are, accessibility, communication, and expertise of the school teacher regarding the content matter. However, certain teaching behaviors affect students' gains, for example - focusing on class time, student choices, game time for students, and personal adjustment. The student and teacher maintain a close relationship, and this is considered a fundamental element of the teaching-learning process. The teacher selects the subject matter, develops lesson plans, and then incorporates the best suitable

teaching-learning activity in it and presents it to the students. The student's function is to receive the information, memorize, and repeat what has been presented to produce the desired outcome. Academic results of the students not only affect student's academic achievement, but it also reflects the effectiveness of teaching. Students indicate teachers are more effective when they have a high level of self-confidence and respect for students. The level of experience of a teacher was considered the most important factor for effective teaching.

Increased Efficacy

According to Donohoo (2018), when educators share the confidence that their collective measures can positively impact learner outcomes, pupil success improves. According to Bandura (1993), the effects of collective efficacy on pupil achievement are greater than the connection between socioeconomic position and student achievement. It is the "collective self-perception that teachers in a given school make an educational difference to their students over and above the educational impact of their homes and communities" (Tschannen-Moran & Barr 2004, p. 190). Collective teacher efficacy is associated with several productive behaviors. These behaviors included the increased enactment of school improvement approaches and educators taking on leadership roles. With collective teacher efficacy, educators establish high-level expectations and have a solid emphasis on educational interests shaping how they handle their work. Educators also demonstrate more risk-taking, openness to new-found concepts, and an increased feeling of efficacy with parents. The findings indicate when schools have efficacy present, less school children were left out because of problematic conduct. A perception of collective teacher efficacy was linked with dedication to pupils and the education profession. Starting teachers were less likely to quit teaching when working in schools where teachers communicated the awareness that collectively they could conquer challenges and meet pupils' academic needs. In addition to the encouraging behaviors, shared teacher efficacy was also linked with other constructive aspects,

including more work gratification, less anxiety, and work fatigue. Shared efficacy was linked to encouraging attitudes for professional training and encouraging mindsets toward educating students with special education needs. Shared efficacy was discovered to be positively related to students' emotional engagement and adversely linked to performance goal orientations.

According to McCray (2015), the training for skilled labor careers involves both soft-skill and hard skill preparation. Soft skills are employability skills such as attitude, initiative, personal communication, problem-solving, and other characteristics, while hard skills are characteristically tasked specific to career arenas such as electrical, mechanical assembly, welding, and other works-specific areas (Stone et al., 2009). For tradespeople to switch from their industry craft to an education profession, it is rather difficult, because of state prerequisites for Trade and Industrial teacher certification (Zirkle, 2002).

Pannell (2016) indicates that we cannot assume that the self-efficacy of other educators reflects that of any beginning CTE teacher. According to Pannell, there are several things that happen with other educators that might not happen amongst other beginning CTE teachers. CTE educators frequently come into the profession of teaching as a second career, having departed another profession (Ruhland & Bremer, 2002). This is not usually the situation with academic teachers who are not teaching a subject in the direction of any job-related end. The National Research Center for Career and Technical Education (NRCCTE) indicates that retirement, employment actions, personal motives, looking for another profession, meager pay, lack of pupil enthusiasm, insufficient leadership help, problems with student discipline, insufficient time to prepare, and lack of teacher influence and independence are numerous reasons why educators depart the field of teaching (Joerger & Bremer, 2001). These findings are concentrated on educators in general and not just the CTE educator population. Pannell (2016) thinks a beginning CTE teacher's their perceived ability to succeed in the profession they left, combined with the fear

of joining a profession where they are now deemed an expert, are issues that could impact a CTE teacher's self-efficacy.

According to Holzberger, Praetorius, Seidel, and Kunter (2019), teaching effectiveness has frequently been explained from a variable-concentrated viewpoint according to instructional, organizational, and emotional characteristics and their forecast of a student's achievement. The quality of teaching is one of the key factors of pupil learning and advancement (Hattie, 2009). Holzberger, Praetorius, Seidel, and Kunter (2019) find embracing an all-inclusive view of teaching and inquiring whether certain groups of CTE teachers reveal distinct teaching profiles. According to Grossman et al. (2013), the emphasis on teaching quality might be beneficial. They say, "to improve the quality of teaching in ways that have demonstrable effects on students" (p. 465). Holzberger, Praetorius, Seidel, and Kunter (2019) indicate individual-centered methods allow the layout of certain programs to enhance teaching quality. Established qualitative differences would have usually called for professional development training aimed for reducing shortfalls; the found quantitative variations instead indicated that we should focus on low-quality teachers and consider the best ways to assist them.

Effective Support from Administration

According to Fleck, Threeton, and Ewing, (2019), school leadership impacts lives and influences the success of many types of organizations. CTE administration provides school leadership as they manage curriculum, facilities, employees, and pupil services. CTE administrators, directors, and principals who are currently in the field, advocate for the development of their own leadership skills. CTE leadership preparation programs should concentrate on a range of training that involves both the growth of leadership and managing skills. In addition, those providing professional development opportunities for CTE administrators should also concentrate on training that promotes the advancement of leadership abilities. CTE

administrators should have excellent leadership skills and the training for those skills should be executed from a range of viewpoints of teachers, committee members, superintendents, and principals. These leaders are critical participants in CTE and have an influence in a number of ways. CTE administrators work closely with teachers, parents, community members, and local industries as they lead their schools in accomplishing their mission and delivering high-quality education to all the school children.

Increased Effectiveness

According to Fletcher and Djajalaksana (2014), both CTE and academic educators confront significant challenges in the modern classroom environment. Previous research indicates the greatest significant predictor of student's achievement is the effectiveness of the teacher (Auguste, Kihn, & Miller, 2010; Banks, Cochran-Smith, Moll, Richert, Zeichner, LePage, et al., 2005). According to Fletcher and Djajalaksana (2014), family and consumer sciences, as well as health occupation teachers as opposed to business and marketing education teachers, were significantly less likely to use writing and conceptualization projects including concept/mind maps, short papers, original research proposals, literature reviews, minute papers, informal writing, annotated bibliographies, major writing projects, and brainstorming. The question remains as to what makes family and consumer sciences and health occupation teachers use writing and conceptualization projects more than in the business and marketing classes. In business and marketing classrooms, there is a need for students to communicate effectively in writing. Therefore, understanding why family and consumer sciences and health occupation teachers are significantly more likely to integrate writing and conceptualization projects in their courses is critical. According to Fletcher and Djajalaksana (2014), teacher preparation training did not significantly impact the instructional strategies use for provisionally licensed teachers with them using creative and thinking strategies in their classes as well as full group instruction (Rayfield, Croom, Stair, & Murray, 2011).

Conversely, traditionally licensed teachers were most likely to make use of small group instructional strategies, as reported in Rayfield et al.'s (2011) study. This finding was surprising given the outcome of a previous agricultural education research that found noteworthy differences between provisionally and traditionally licensed teachers. The findings raise questions of whether teacher preparation influences the pedagogical approaches to which their teacher candidates implement in their future practice.

Zirkle, Jeffery, and Shrewe (2019) performed a longitudinal study providing a profile of CTE teachers over a 16-year range, including demographic characteristics. The analysis provided which gender (males versus females) entered the teaching program through a summer workshop and the percentage of provisionally licensed teachers who were likely to complete a college undergraduate or graduate degree. Also, the results of the study concluded which school years had the largest reported retention rates as well as the school years in which retention rates were lower. Teacher retention rates related to incoming educational status were also shown. Finally, trend data about the incoming educational background as a function of time was also noted.

Zirkle, Jeffery, and Shrewe (2019) describe three phases of an induction program for provisionally licensed CTE teacher retention used for the conceptual framework for their longitudinal study. In phase one teachers are recruited from business and industry to teach CTE courses, in phase two after a qualified CTE teacher (based upon work experience) has been recruited to teach, that teacher must complete licensure requirements such as university coursework at an approved post-secondary provider of provisional CTE licensure while teaching, in phase three CTE teachers remain in the teaching profession due to retention strategies formulated based on this research. The data suggested that CTE teachers who entered with provisional licensure with a diploma/GED, bachelor's, or master's degree continued their education as CTE teachers. This trend suggests that CTE teachers are taking part in continuing education and

professional development and want to earn college-level degrees. The results of the study coincides with the results from the Asunda study (2012) regarding more male teachers seeking provisional CTE certification over female teachers. Variations took place in CTE teacher retention, and some provisionally licensed teachers entered into new jobs in the education field.

Giving Rigorous and More Meaningful Assignments

According to Bottoms and Winkler (2019), the Southern Regional Education Board (SREB) has followed high school students' experiences and academic accomplishment to gather understandings into what works. They indicate students taking (CTE) courses perform better when they have access to rigorous, powerful, and meaningful assignments that prepare students for work and college. They suggest assignments should be rigorous and have meaningful learning experiences that involve students in a productive battle. Meaningful assignments prompt students to persevere and resolve the problem. Meaningful tasks help both students and teachers create a special attitude about the student's capability to learn. When teachers show students proof of their achievement students make the link between their efforts and learning which motivates them to succeed at greater heights. They recommend school leaders follow nine practical steps to support academic and CTE teachers in designing powerful, project-based assignments. As a preliminary step, they recommend seeking district and school support from a project-based design specialist. The steps are: 1. Developing a project-based learning team approach that includes employers and representatives from post-secondary institutions who support academic and CTE teachers in creating engaging and meaningful assignments; 2. Asking teams to study exemplary project-based assignments. Charging teams with identifying the benefits of such assignments to employers and students; 3. Brainstorming project ideas for each course and select one that meets the criteria that will spark students' imaginations. Developing an engaging project title; 4. Identifying the essential academic, technical, technological, cognitive, and employability skills and standards students must

master to complete the assignment; 5. Developing essential questions that the selected project will answer. Good questions will require background research and be engaging, allowing students to examine new concepts, explore alternatives, and continuously reevaluate their strategies and solutions; 6. Determining the career roles that students must take on to complete the project; 7. Developing a project-based scenario that outlines actions students take to complete standards and complete the project. Determining the type of final presentation students will make; 8. Determining what evidence will be used to establish whether students have successfully completed the assignment. Focusing on the evidence of college and career readiness; 9. Identify the support structure CTE teachers will need to shift their instructional practices to include project-based learning and allow students to take ownership of their assignments. Bottoms and Winkler (2019) indicate meaningful CTE assignments give students the purpose for their studies. For the traditional college-bound students, meaningful assignments allow students to see how their academic knowledge is applied to the real world and provide opportunities to explore their interests and aptitudes in STEM. Powerful assignments enable students in high school to find a purpose and see a connection between their studies and future career goals. Rigorous assignments empower students with a sense of accomplishment that they can achieve and demonstrate for teachers how students do higher-level work that has meaning in their lives.

Assessing the Readiness of CTE Teachers and Giving Feedback

According to Whitley, Park, Warner, and Horne (2019), the edTPA, a validated teacher performance assessment is being used across the United States to assess the readiness of Career and Technical Education (CTE) student teachers for a successful career in as a teacher. The purpose was to get a better understanding of the relationship between edTPA and both Technology and Agricultural Education student teacher's self-efficacy throughout their student teaching. They concluded that feedback given after internal submission caused participants to realize weaknesses

in performance. Therefore, efficacy dropped after feedback was given. Another possibility is the feedback prompted student teachers to make many changes causing burnout that could have occurred around this time. This indicates the importance of considering the feedback process during evaluations. Student teachers should be trained to be accepting of feedback and shown how to utilize feedback on performance assessments properly in their methods courses. Previous researchers also recommend providing pre-service teachers with specific ongoing and informative feedback (Siwatu & Chesnut, 2014). Since student teaching is typically one of the first mastery experiences, a teacher has, provisionally licensed teachers learn on the job while completing course requirements for full licensure should become the focus for future self-efficacy research. The requirements of the education profession boost the need for clear evidence of teacher preparedness and a positive effect on students' learning (AACTE, 2017). Universal standards ensure all CTE teachers entering the classroom meet uniform and robust standards of competence (American Federation of Teachers, 2012). Provisional licensed teachers should be trained to accept and utilize feedback during the three-year provisional licensure process in Virginia.

Allowing CTE Teachers to Have Input into Decisions

According to Bowen, Marx, Williams, and Napoleon (2017), beginning CTE teachers with three or fewer years of experience reported a significantly higher level of school influence than did beginning mathematics teachers. Factors like employment satisfaction, classroom management, and school influence have been connected to teachers leaving the teaching profession. The researchers analyzed several questions from the schools and staffing survey and evaluated the state of how beginning career mathematics, science, and career and technical education (CTE) educators perceived their classroom management and influence on school policy. This survey suggests that CTE educators believe they have additional influence over school policy than mathematics teachers. CTE teachers described having better classroom management and control than both

mathematics and science teachers. Awareness on how CTE educators perceive their impact on school decisions and classroom management and control can help focus on improved employment satisfaction and teacher retention.

Better Recruitment and Retention

In 2020, the unmet demand in CTE teachers has increased, which is causing a skills gap and a $2.5 trillion economic disruption to the U.S. economy (Deloitte, 2018). According to Advance CTE (n.d.), suggestions to improve the recruitment and retention of rural CTE teachers were to allow part-time teaching opportunities while still working in industry, developing career academies with a focus on teaching, increasing teacher pay, and internships to improve professional development. In this study, the variables of job autonomy and support from the school and administration were important to retaining CTE teachers. Additional studies have looked at retention rates, and its impacting factors in the field of CTE (Ruhland, 2001; Ruhland & Bremer, 2002; Song, Martens, McCharen, & Ausburn, 2011; Wonacott, 2002).

Competencies and Training Required to be a CTE Teacher

A growing number of CTE educators are entering the occupation through provisional licensure programs because of the decreasing number of colleges and universities offering teacher preparation programs (Blevins, 2016; Bowling & Ball, 2018; Ruhland & Bremer, 2002). It is important to examine the effectiveness of the provisional licensure process (Fletcher, et al., 2015). Ideally, aspiring teachers should receive a basis in pedagogy, effective instructional practices, classroom management techniques, preparation to work with diverse student populations, practice lesson planning with an effective experienced teacher, and experience teaching in a classroom (Professional Studies Requirements for Prek-12, Special Education, Secondary Grades 6-12, and Adult Education Endorsements, 2018). Career and Technical Education teachers should also have knowledge of CTE core program management competencies. These fundamental management

competencies are what CTE educators should know and be able to do to guarantee their CTE program is operated properly by required guidelines and standards. Ideally, aspiring CTE teachers should receive a basis on how to promote their program, setting up and holding local industry review panels, running a career and technical student organizations (CTSO), and completing required state and federal Carl Perkins reports and records. CTE teachers have management competencies that are unique and essential to the success of CTE programs.

The Need for Professional Development

When provisional licensed CTE teachers enter the teaching profession and lack essential skills, they must equip themselves by learning on the job. Often provisionally licensed CTE teachers reach out to individual CTE teachers, CTE department leads, and CTE administrators for training and advice. Often this CTE specific training will be in addition to typical training new teachers have to work effectively in their school (Zirkle, Fletcher, Sander, & Briggs, 2011). The support for CTE teacher improvement is a critical element in the efforts of schools to support and retain provisionally licensed teachers, as well as improve student outcomes (Davis, 2015).

Given the long history of provisional teacher licensure in CTE, much of the available research on professional development needs for CTE teachers focus on the differences between teachers who went through a traditional college pre-service preparation program and teachers who entered through provisional licensure. Heath-Camp, Camp, Adams-Casums, Talbert, and Barder (1992) assert that teacher development happens in three stages – pre-service, induction, and continuing development. CTE teachers who enter the teaching profession through traditional teacher preparation programs are more likely to start out at a different stage than those who enter through provisional licensure due to their experiences in the pre-service program.

There is a discussion over the most efficient ways to prepare provisional licensed teachers for CTE programs. Studies suggest that educators who are trained through a traditional teacher

preparation route and have an undergraduate degree program focused around how to teach have improved student achievement scores and classroom management skills than those prepared through a provisional licensure route (Allen, 2003; Darling-Hammond, 2000). According to Feistritzer (2011), nearly half of the high school teachers are trained through a provisional licensure process. In 2018, Virginia only had 19% of new CTE teachers in Virginia completing a traditional teacher education program while 81% of new CTE teachers completed a provisional licensure program (United States Department of Education, 2019). Nearly 940 teaching positions went unfilled in Virginia at the beginning of the 2017-2018 school year, reflecting a teacher staffing crisis that has beset classrooms (Truong, 2019).

The amount of provisionally trained teachers in CTE is elevated nationwide because less post-secondary institutions are offering traditional CTE teacher preparation programs (Asunda, 2011). Teaching positions in Trade and Industrial Education, one of the seven CTE program areas only requires a high school diploma or an associate degree and several years of job experience (NBPTS, 2014). For these teachers, administrators verify years of professional experience and allow enrollment in a provisional route to teacher preparation. Most, if not all, other CTE program areas require teachers to have at least an undergraduate degree, whether they are provisionally or traditionally trained.

Specific CTE Teaching and Program Management Competencies

Norton *et al.* (1976) wrote a report based on the Center for Vocational Education's work describing the status of performance based CTE teacher education (PBTE) standards. The report pinpointed competencies needed by CTE teachers through interviews with teachers at different levels, occupational analysis, and a critical incident survey. The study produced 256 competencies grouped into ten categories that preceded to the design of 132 learning modules. The modules were then dispersed through 25 "national PBTE institutes" at leading colleges. According to Manley and

Zinser (2012), the application of the PBTE profile resulted in encouraging results for teachers, CTE teacher-educators, and administrators. A study completed after the completion of the PBTE competencies project found it was successful. The study completed after the PBTE project states, "long-term impact on improving the caliber of vocational education teachers, especially in the areas of instructional planning and student evaluation" (Adams, MacKay &, Patton 1981, p. 42). Manley and Zinser (2012) explored the ERIC electronic database for CTE teacher competencies and discovered research articles from 1977 to 1993 for applying statewide systems in Alabama, Florida Georgia, Indiana, Missouri, Nebraska, North Carolina, Ohio, Pennsylvania, and Virginia. Some states make use of the PBTE competencies as their base system for CTE teacher preparation while others altered it or produced a separate but comparable system.

Variations in Training for Pedagogy and Content Knowledge

According to Ruhland and Bremer (2002), CTE teachers who completed different types of teacher certification programs described variations in the pre-service teacher training areas for pedagogy and content knowledge. Teachers with an undergraduate degree in teaching felt the most prepared in pedagogy, and provisionally licensed teachers felt less prepared in pedagogy. Regarding the understanding of content matter, provisionally licensed CTE teachers felt the most prepared. They suggest no differences were found among the types of certification programs in the area of classroom management abilities and working with special pupil populations. Educators that described utilizing support services measured their teaching experience more optimistically than those who did not. The study listed eight support services that included the use of curriculum and instructional resources, orientation to policies and procedures, paid curriculum development time prior to teaching, and peer support groups.

According to Ruhland and Bremer (2003), CTE teachers vary in age, content knowledge, and pedagogical knowledge. The authors indicate using the same professional development

program for all does not always meet the needs of every individual in this group. They indicate professional development training may be more efficient if consideration is given to the array of problem-solving approaches and styles of teachers. CTE teachers come with a variety of experiences, and not all of them need the same kinds of assistance. The authors indicate a menu of options for professional development should be made available for CTE teachers. They indicate the quality and extent of their pre-service preparation is important, and recently licensed CTE teachers may need ongoing help with classroom management, teaching strategies, and curriculum development. CTE teacher competencies should play a key part in pre-service preparation and continuing professional development of provisionally licensed CTE teachers.

Heath-Camp and Camp (1992) published *A Professional Development Program for Beginning Vocational Teachers*. They suggested induction assistance programs and mentors that work in the program for beginning CTE educators.

1. Must have the flexibility to meet the differing needs of the beginning CTE educator.
2. Understand that mentoring programs alone will not generate positive results in the long run for the beginning CTE educator. A more thorough induction program with which mentoring is required for beginning CTE teachers.
3. Induction programs should address various teacher competencies and be comprehensive. They recommended a content-specific induction program for beginning CTE teachers (Heath-Camp & Camp, 1992).

Ruhland and Bremer's stated in their 2002 publication entitled *Alternative Teacher Certification Procedures and Professional Development Opportunities for Career and Technical Education Teachers*, that additional study is required in to help new provisionally licensed career and technical education teachers. They recommended the need to do the following:

1. Study to investigate the mentor connection and its usefulness to the new CTE teacher.

2. Selection, training, and matching of the mentor with a starting CTE educator.
3. Comparing and contrasting traditional and provisionally licensed secondary academic teachers and CTE teachers to understand their pre-service and in-service professional development needs (Ruhland & Bremer, 2002).

According to Brand (2008), most teacher preparation colleges of education do not offer CTE teacher preparation programs and have little expertise about career pathways career clusters, and performance-based assessments. Brand believes that very few teacher preparation programs concentrate on helping aspiring teachers realize how real-world experience is utilized. She indicates most new teachers emerge from teacher preparation programs ready to teach general education, but few are ready to teach CTE subjects or to assist students on how to use knowledge in a real-world workplace setting. Many college teacher preparation programs do not assist beginning teachers on how to design a quality CTE curriculum. Consequently, schools depend on industry professionals to bring CTE knowledge and skills into the classroom. Brand believes new CTE teachers need professional development focused on how theoretical expertise is applied and utilized in a variety of real-world settings. She indicates CTE teachers should learn how to utilize instruction to augment, improve, and develop academic content when suitable. She recommends a national portable teacher credential supported by the federal government for CTE. According to her, this allows for better movement among states and regions and improve teacher shortages in specific areas.

Research by Bowen, Williams, Napoleon, and Marx (2019) found that technology education teachers from provisional licensure programs feel less prepared to manage student behaviors, including discipline issues than do teachers from a traditional college preparation program. This difference points to a need for training in effective classroom management prior to receiving a Virginia CTE provisional licensure. Provisional licensed teachers who enter the

profession after years in industry are more likely to feel equipped to prepare students for the demands of the workforce than teachers who lack industry experience (Fletcher, 2014; Moore, Green, & Clark, 2015; Ruhland & Bremer, 2003). Given the diverse skillsets required by CTE teachers (Gordon, 2009; Fletcher & Zirkle, 2011; O'Connor, 2012), these differences can be used to develop sets of CTE teacher competencies needed to be successful in the classroom.

CTE teachers need preparation that concentrates on core CTE teaching and management competencies to be successful. It can be argued that training and preparation play a key role in the process of teacher self-improvement. However, the case can be made that the value of training for CTE teachers is more important than it is for non-CTE teachers (Omar, Cole, & Self, 2017). CTE teachers need to have skills that go beyond those possessed by general education teachers of academic courses (Brand, et al., 2013). CTE teachers need pedagogical strategies that: (1) increase student knowledge in both academic and work-related arenas (Mukuni & Price, 2016; Rose, Shumway, Carter, & Brown, 2015; Tenuto, Cannon, & Kitchel, 2013), (2) meet industry standards and improve each student's ability to perform job tasks (Center on Standards & Assessment Implementation, 2019; Golden, 2013), (3) prepare teachers to implement programs related to CTE that include CTSOs, Work-Based Learning opportunities; program course competencies that prepare students to enter the workforce and colleges through a curriculum that is aligned with industry standards (O'Connor, 2012; Xing & Gordon, 2017), and (4) work with diverse student populations (Kerna, 2012; Ruhland & Bremer, 2002). The professional development needs of provisional licensed CTE teachers are not being met with the level used within traditional college CTE teacher preparation programs.

The Need for Modern CTE Teacher and Program Management Competencies

National Board for Professional Teacher Standards (NBPTS, 2014) more commonly referred to as simply National Board Standards, which includes ten standards: (1) knowledge of

students, (2) responding to diversity, (3), knowledge of content, (4) learning environment and instructional practices, (5) assessment, (6) post-secondary readiness, (7) program design and management, (8) partnerships and collaborations, (9) leadership in the profession, and (10) reflective practice. The NBPTS are general and encompass more specific CTE competencies within their broad categories. Other sets of standards identify specialized skills CTE teachers must possess to be effective. The created core standards are crucial for CTE educators. However, current CTE curriculum reaches outside the conventional classroom and incorporates elements like student organizations, advisory panels, and work-based learning. CTE teacher requirements should include program results and the use of specialized competencies.

According to Xing, Shaw, and Gordon (2017), 38 states use the ACTE Quality CTE Program of Study Framework 4.0, which includes knowledge and skills CTE teachers should possess in the areas of curriculum, partnerships, sequencing, instruction, career development, data and program management, administration support, CTSOs, facilities, Work-Based Learning, access and equity, assessment, and legislation. Virginia does not currently use the ACTE Quality CTE Program of Study Framework. According to Fletcher and Zirkle (2011) pedagogical knowledge, content knowledge, professional knowledge, and work experience are necessary for CTE teacher professional development. O'Connor (2012) indicates curriculum design, history and philosophy of CTE, current issues in CTE, classroom safety, course marketing, content knowledge, lab management, advisory committees, articulation to post-secondary education and the workforce, CTSOs, teamwork, classroom management, pedagogy, assessment, Work-Based Learning, and collaborating with employers.

According to Manley and Zinser (2012), none of the current research and guidelines offers a modern list of established CTE teacher competencies that can be used broadly to CTE teacher licensure routes. A standardized essential CTE teacher and program competency lists with

performance based-teacher training education modules were published in 1960 by the Center for Vocational Education & American Association for Vocational Instructional Material. It was titled "*Performance-based teacher education modules***."** The list of 10 categories and full standards can be found in Appendix H. In an article in Education (Al-Saaideh & Tareef, 2011) listed the important issues for improving career and technical teacher-education but did not discuss updating teacher competency training through provisional teacher preparation routes. A national effort should take place to create an updated list of competencies aligned with current research needs for the CTE teaching profession (Lambeth, Joerger, & Elliot, 2018).

Published in 1977 (Norton, 1977) and later updated in 1987 (Norton and Harrington, 1987), the CTE performance-based teacher education (PBTE) profile is segmented into 14 categories. After being published, the competencies developed the basis for many CTE teacher-education institutions' curriculum. The list of 13 categories is provided here, while the full list of standards can be found in Appendix I.

Table 2

CTE Performance-Based Teacher Education Competencies

Categories	Competency Areas
Category A	Program planning, development, and evaluation
Category B	Instructional planning
Category C	Instructional execution
Category D	Instructional evaluation
Category E	Instructional management
Category F	Guidance
Category G	School-community relations
Category H	Career and technical student organization

Table 2 (continued)

CTE Performance-Based Teacher Education Competencies

Categories	Competency Areas
Category I	Professional role and development
Category J	Coordination of cooperative education
Category K	Serving student with special needs
Category L	Assisting students in improving their basic skills
Category M	Teaching adults

Note: Norton, R.E. (1977), *The Development of Competency-Based Instructional Materials for the Preparation of Local Administrators of Secondary and Post-Secondary Vocational Education*, National Center for Research in Vocational Education, Columbus, OH.

To identify the level and understanding of Business and Information Technology (BIT) and Marketing Education (MKED) teacher competency obtainment for provisionally licensed BIT and MKED teachers in Virginia, this study used a pre-online survey and interview form designed from the competency list developed by Manley and Zinser (2012). The Manley and Zinser (2012) list contain 144 teaching competencies with 13 categories of standards and is updated from the CTE competencies published in 1977 (Norton, 1977). This Manley and Zinser list of competencies were selected because of its connection to other lists of CTE teacher competencies and its quality teaching standards for BIT and MKED teachers.

Summary

In consideration of the shortage of qualified CTE teachers and the expected increase in BIT and MKED teaching positions in the future, there is a need to educate future BIT and MKED teachers in content, pedagogical concepts, and program management. More students are taking CTE courses at high schools, which means the high school BIT and MKED teachers will continue

to educate a large portion of these students. Recruiting and issuing a provisional license for BIT and MKED teachers with just industry experience and/or a content degree without pedagogical knowledge is encouraged by a number of states to address critical shortages in BIT and MKED teacher areas; however, many of these individuals initially lack CTE teaching pedagogy and program management skills prior to making the transition to educator. These teachers are faced with learning how to teach on the job; therefore, the review of the literature supports the need to understand the factors affecting the transition to teaching BIT and MKED courses and to identify the content knowledge and teaching skills that are necessary for these instructors.

Chapter 3

Research Methodology

Chapter 3 presents a detailed discussion of the research design used to explore and analyze the lived experiences of first and third year provisionally licensed Business and Information Technology (BIT) and Marketing Education (MKED) teachers in Virginia. Sections of this chapter include a review of the purpose of the study, statement of the problem, and the research question. The chapter also provides a discussion of the research design, how participants were selected, the number of participants selected, data gathering procedures, and data analysis procedures. The chapter is concluded with a summary.

Purpose of the Study

The goal of this research was to assess the provisional teaching license path for earning a Virginia teaching license with an endorsement in Business and Information Technology (BIT) and Marketing Education (MKED). The study examined teacher preparedness as it relates to core teaching and program management competencies for teachers with these endorsements who enrolled in Virginia's three-year teacher provisional licensure route. For this study provisional licensure covers the non-traditional route to teacher licensure in Virginia available through the approval of the individual's employing Virginia school division. The research studied how their teacher preparation path impacted their preparedness and retention and how the aspects of the provisional path aided their confidence to teach. It also studied how this teacher preparation path impacted teacher retention and how aspects of the provisional path aided the teacher's confidence in teaching. Finally, the researcher examined how beginning BIT and MKED teachers' professional interactions with mentors and administrators affected their perceived job satisfaction, teaching confidence, and effectiveness.

Statement of the Problem

Research is needed to examine the effectiveness of provisional routes for teacher preparedness and obtaining a teaching license in Virginia with an endorsement in Business and Information Technology (BIT) and Marketing Education (MKED). Teacher preparedness is the teacher's ability and knowledge to perform their teaching responsibilities competently based on how well they are prepared. According to Ruhland and Bremer (2002), CTE educators are a unique group because many of them join the teaching profession via a provisional licensure route after spending years working in their respective industries. Many provisional licensure programs have been created, producing differing levels of self-efficacy among teachers. Some participants of provisional licensure route programs feel extremely self-confident, and others feel incompetent and overwhelmed (Raudenbush, Rowan, & Cheong, 1992). The problem addressed in this study was to determine the effectiveness of Virginia's three-year teacher provisional licensure route for preparing successful BIT and MKED teachers.

Research Questions

The main question the researcher is seeking to answer in this study: What is the effectiveness and impact of Virginia's three-year teacher provisional licensure route for Business and Information Technology (BIT) and Marketing Education (MKED) teacher preparedness as related to core teaching and program management competencies?

Sub-questions for the study included:

1. What characterizes the first and third years of teaching for a provisionally-licensed BIT and MKED teachers?
2. As perceived by Virginia BIT and MKED three-year licensed teachers, what needs to be done to improve the Virginia three-year provisional teaching license preparation program?

Research Methods Overview

Qualitative investigation was used in this study to provide rich meaning and understanding from the participant (Patton, 2015). Taylor et al. (2015) mention that qualitative methods produce significant descriptive data from people's words, written or spoken, or observed behaviors. According to Denzin and Lincoln (2011), qualitative methodology is a set of interpretative activities that researchers use to identify the nature of reality.

Patton (2015) indicates qualitative research is interested in understanding meaning from the perceptions of each person's experiences. According to Willig (2013), qualitative researchers are much more focused on the experience instead of exploring the cause and effect. This study utilized face-to-face semi-structured interviews as the primary method for gathering data. Prior to each interview, an online survey was sent to each participant to obtain demographic information and to introduce CTE core teaching and program management competencies that are included in the study. This allowed the researcher to explore the teaching and program management skills of each participant in the study (Patton, 2015).

Research Design and Procedure

This study used a qualitative research design. Qualitative studies are advantageous in that they include the ability to examine emerging variables and how their patterns affect behavior. Using a Qualtrics online pre-survey, this study examined provisionally licensed teachers' levels of understanding and skills for applying CTE teaching and program management competencies. Once these levels were determined, the study qualitatively examined emerging variables that may have affected their understanding and skills related to these competencies. The qualitative part of the study provided rich data to better understand the phenomena examined. A qualitative research design was used for this study to determine the factors that affect the level of core teaching and program management competency obtainment as determined by the teachers. Semi-structured

interviews were conducted in order to gain a more in-depth and rich knowledge of the participants' perspectives. Other information was gathered from the interviews, including identifying challenges to professional development for CTE competencies, strategies for overcoming the challenges, and best practices for implementing competencies. Participants were selected from three regions within the state of Virginia. The interviewing process began in the Fall of 2020 after IRB approval in the Summer of 2020. A pilot study was conducted in the Summer of 2020, and the research questions and design of the study were revised as needed. An interview protocol was used to gather the data for the study. Probing questions were asked by the interviewer to gather information. It was anticipated that between 12 to 18 interviews would take place. With the permission of each interviewee, interviews were video recorded and expected to last from 45 minutes to one hour. The interviews were informal and open-ended conversational style, allowing the interviewee to feel more at ease. The researcher wrote field notes during the interviews. Memoranda was written while listening to recorded interviews, typing transcripts, and reflecting upon an interview. Data analysis took place during the research process. Recorded interviews, memoranda, and field notes were digitized. The software, NVivo 12 Pro and Word programs were used in the coding process to organize different questions and themes found in the transcripts and other documents. Hard copies of all digitalized data also were coded line by line using comments in NVivo 12 Pro to mark the margins with the appropriate numbers and letters.

Pilot Study

A pilot study was conducted to test the research design and procedures. The pilot study used the qualitative methods utilized in the main research. To ensure the credibility of the study, a voluntary online survey and interviews were conducted in the Summer of 2020 of four provisionally licensed CTE teachers. Data was collected and analyzed by using the same procedures as the main research study. Interviews for the pilot study were video recorded,

transcribed, and digitalized with field notes and memos. The data collected was tested to see if it could be analyzed. As a result of the pilot study, revisions of the online survey took place, and detailed structured interview questions were changed to be clearer for participants.

The researcher identified career and technical education faculty at Virginia Public Schools to participate in the pilot testing of the instrument. The purpose of pilot testing was to ensure that all phases of the study worked and actually collected data that would assist in answering the research questions.

The pilot study was conducted to answer the following questions:

1. Will the online survey provide an introduction of the core teaching and program management competencies, as well as an initial assessment of their attainment?
2. Are the interview questions appropriate?
3. Will the researcher be able to identify open codes, categories, and themes?
4. Are procedures to be used in the study standardized?
5. How consistent is information obtained?

Participant and Selection Plan

Participants were selected and data collected once the researcher obtained Virginia Tech Internal Review Board (IRB) approval. This approval letter may be seen in Appendix K. Provisionally licensed BIT and MKED teachers in their first year of teaching and provisional licensed BIT and MKED teachers in their third year of teaching was the target population for this study. It was felt that an in-depth viewpoint was needed concerning the extent to which CTE core teaching and program management competencies were being understood and integrated. For this reason, purposeful selection was used to identify the participants since each participant brings different experiences of preparation and teaching in different school systems throughout the state of Virginia.

Participant size. The participant size of qualitative research depends on the type of information sought and the point of time when saturation is achieved during the interview process (Patton, 2015). It is anticipated that between 12–18 participants will need to be interviewed from diverse areas across the state of Virginia. Interviews will continue until saturation of data is experienced.

Recruitment. CTE administrators from school systems in each of the regions of the study were contacted to provide an overview of the study and obtain their support. They were asked to email a letter of support for conducting the study to all the Business and Information Technology and Marketing Education provisionally licensed CTE teachers in their respective school divisions. The letter described the study and encouraged their participation in the study. Participants were selected from those teachers who replied through email that they were interested in participating in the study. In addition, a list of provisionally licensed teachers who took required VDOE courses from a public college in Southwest Virginia were obtained. The recruitment email described the study in detail and about interest in participating in the study. The email recruitment letter had an online survey link asking for their consent to participate in the study.

Participant selection. The selection of six provisionally licensed first-year teachers and six provisionally licensed third-year BIT and MKED teachers were taken from the population of teachers in Virginia. Each region had two first-year provisionally licensed CTE teachers and two third year provisionally licensed CTE teachers. Two types of purposeful sampling were used, convenience, and criterion. According to Teddlie and Yu (2007), convenience sampling is a type of purposeful method that helps the researcher in selecting participants who were accessible and willing to participate. Criterion sampling is an effective technique for assisting the researcher in selecting participants who can fully answer the research questions (Patton, 2015). Regions of the Commonwealth were used when identifying participants to obtain diversity. These regions will

include Southwest Virginia, Central Virginia, and Northern Virginia. Stratified and criterion-based sampling was utilized when selecting the participants. Stratification was achieved by selecting participants from school districts located in urban, suburban, and rural areas of the state from each of the selected education regions. In addition, the participants had to meet one of the two following criteria:

1. A first year provisionally licensed BIT and MKED teacher with plans to teach one or two additional years.
2. A third year provisionally licensed BIT and MKED teacher.

Online Survey

In the email letter, an online survey link was attached requesting the consent to participate in the online survey. This letter may be seen in Appendix C. The online survey instrument is developed from CTE teacher and management competencies updated through a study done by Manley and Zinser (2012). Permission has been obtained with Manley and Zinsser to use their performance-based teacher education competencies. CTE core teaching competencies are fundamental pedagogical competencies teachers should know and be able to do to guarantee every PK-12 student reaches the goal of being ready to enter college or the workforce in today's world (InTASC Model Core Teaching Standards, 2011). CTE core program management competencies are fundamental management competencies teachers should know and be able to do to guarantee their BIT or MKED program is operated properly by required guidelines and standards. The online survey instrument is designed for Virginia BIT and MKED teachers and consists of 144 CTE core teaching and program management competencies across 13 categories of standards using a four-point Likert scale so respondents can indicate their level of knowledge. Interviews will follow the survey to gather emerging themes within the data. A sample survey is provided in Appendix D. The online survey will gather experience and demographic information about the participants,

level of CTE teacher competency knowledge and obtainment, information about the participants' schedule, and availability for setting up an interview. Interviewees were offered a $15 gift card as a token of appreciation for their commitment to participate in the study**.**

Interviews

According to Seidman (2013), in-depth interviewing is not to get answers to questions but to understand the lived experiences of other people and the meaning they make of that experience. Rich and thorough qualitative data are obtained from interviews, and the researcher can understand participants' skills and perceptions of that by seeing how the participant makes meaning on the experiences (Rubin & Rubin, 2011). A semi-structured interview protocol was developed to allow for further questions regarding the participants' responses in more detail (Seidman, 2013). The developed key questions were open-ended. Interviewees were free to only answer the questions they are comfortable answering. Probing questions helped the researcher to broaden the extent of the researcher's understanding of each teacher's experiences correlated to the interviews. The interviewer remained consistent with using the same questions for each participant.

Developing interview protocol. The researcher developed an interview protocol associated with the purpose of the study**.** A CTE teaching and program management competency obtainment survey followed by thirteen questions will serve as the foundation for the teacher interviews. Follow-up and probing questions were used to clarify or further investigate initial responses. An interview protocol of fifteen questions was used and can be seen in Appendix F. The questioning process was inquiry driven. The researcher examined each question for transparency, ease, and answerability.

Interview procedure. When respondents agreed via voluntary email to participate in the online survey, a copy of the consent form for the interview was emailed for their review. The researcher contacted those who agreed to participate to determine the date and time for an interview. Respondents were grouped into two groups: provisionally licensed CTE teachers in their first year of teaching and provisionally licensed CTE teachers in their third year of teaching. Participant interviews took place remotely through an online application called Zoom. Respondents were asked to sign the Informed Consent form before the interview to be able to explain any concerns or respond to questions. The consent for the interview is in Appendix E. The consent forms remained separate from the research data and were not coded to the interviews to fully protect the participants' identity. At the beginning of the interview, the details of consent were discussed, and permission to audio record the interview was asked of each participant. Interviews were scheduled for exactly one hour. The only individual who conducted the interviews was the researcher, therefore eliminating reliability issues. The researcher took notes and audio recorded the interviews and then transcribed the audio recordings shortly after each interview. The researcher's password-protected personal computer was used to store all electronic information. After each interview, the recording was transcribed, and each respondent was assigned a pseudo name allowing confidentiality and anonymity. In addition, their school system and school were assigned a pseudo name. Member checking was used to establish credibility and trustworthiness. Participants received a copy of their transcript and were asked to read through it in order to clarify and verify the information.

Data Analysis Procedures

Data analysis is a categorization and analysis process to state the inherent and specific elements and meaning-making structures that the researcher wants. (Flick, 2014). According to Merriam and Tisdell (2016), a computer application should be used to organize the data

collected. The researcher used NVivo 12 Pro software to find themes and significant terms and statements. Field notes and memos were added to the program to manage the data. The NVivo 12 Pro software allows a detailed analysis of the data regarding the topics and supports the systemic process of the study and increases the validity and reliability.

Merriam and Tisdell (2016) indicate open coding is performed by reading the data multiple times and creating notes about important points of the data. The notes or codes consist of the participant's exact words, the researcher's words or a concept from the literature, or other sources outside of the study. Each transcribed interview was reviewed by the researcher multiple times to become immersed in the data. Then the transcribed data was coded using an open coding method (Patton, 2015). Similar ideas and themes were grouped to identify conceptual codes. Open coding was chosen to examine, compare, and search for similarities and differences throughout the data.

The researcher then performed axial coding. In axial coding, the open codes were reviewed, and similar codes were clustered together to form categories (Charmaz, 2006; Merriam & Tisdell, 2016). This included the frequency of categories, identifying unique categories and categories that reveal something that might not be known. The categories were then grouped into themes that became the answers to the research questions (Merriam & Tisdell, 2016). Axial coding gave this study the basis to explain categories and major themes underneath the segments of the data.

Qualitative research design has emerging data and information analyzed as it is collected. Ensuring the accuracy of the interview transcripts, surveys, field notes, and utilizing a system for handling data at the beginning were important measures taken in this study. Audio recordings were used to capture the participants' spoken words. Surveys were used to identify competency understanding and obtainment. As data is collected, organized procedures were used to examine

it. The audio transcriptions, surveys, and field notes were thoroughly analyzed to detect open codes and axial codes that evolve into categories, and categories that emerge into themes through the transcriptions, surveys, and notes. Themes and attributes were found and examined by finding patterns, survey responses, and categorizing common codes. Sample interview transcriptions are provided in Appendix M.

Field Notes

The researcher took field notes of key phrases and major points made by each participant during the interview. Patton (2015) indicates that field notes help the researcher develop new inquiries as the interview is given. Field notes help recognize important facets of the study early and help later examination (Patton, 2015). Field notes were taken to give explanations of what was noticed during the interview, the researcher's thoughts and responses, and reflections that were important to interpreting information. The physical setting of the interview, the meaning of the words used, physical clues, nonverbal interaction, and body language were all vital data stated in the field notes. Once the interview is completed, the researcher immediately transcribed the audio recording to text and reviewed the field notes.

Transcribing Interviews

Analyzing qualitative data involves the method of being absorbed in the information gathered while giving meaning by categorizing and coding, resulting in the emergence of common patterns and themes. The researcher transcribed each interview into one single Microsoft Office Word document for simplicity in keeping transcripts. As each interview was transcribed within the document columns were added for notes as needed. The researcher used cautious judgment when transcribing the meaning of words. The researcher played short sections of the interview recordings allowing greater transcription accuracy. Reading the transcription while listening to the audio recordings permitted the researcher to develop familiarity with the data. According to Hatch

(2002), the researcher should ask four questions to determine when the qualitative analysis of the data is complete. These questions were: a) are different cases and conflicting data clarified, b) can the evaluation be warranted, c) is a full story stated, and d) can the analysis be authored into a consistent finding.

Codes

Patton (2015) indicates coding is the initial action in classifying and managing field notes and precise transcription of the audio. The researcher picked out significant categories and organize the data. The researcher scrutinized the data, identify codes, and categorize appropriate meaning. This study used open coding and axial coding (Charmaz, 2006). The initial reading of the field notes and transcripts were examined, adding comments on how to organize the data into different categories using NVivo 12 Pro. This allowed the researcher to emphasize segments of the transcripts and arrange them corresponding to a theme giving a better understanding of what was happing with the data. During open coding, a line-by-line analysis of the transcript took place using noun forms of verbs or gerunds. This allowed the researcher to establish a connection between the codes and themes. Appendix M shows a sample transcript with codes.

Categories

Hatch (2002) indicates finding patterns and regularities in codes, and analyzing the codes allows the researcher to collect the characteristics from the codes. From the coding attributes were the concepts that emerged. The larger attributes were the key concepts of the concluding story. In the analysis of the data gathered in this research, the codes were designated on a line-by-line basis in the interview transcripts.

Themes

Themes state the meaning that emerges through the data and combines concepts (Ely et al., 1991). Emerging themes take place when discovering how the attributes relate to each other.

Analyzing and comparing content were methods of data analysis used in this study. Segments of data were analyzed and formed into codes. Codes were then compared with each another to discover similarities and differences. The codes were then sorted into categories and then themes. The subsequent themes support the results of the research questions**.**

Organizing Matrices

One form of visual display used in this study was the use of matrices. Hatch (2002) defines matrices as defined rows and columns that force the researcher to "see relationships between the parts and the entirety" (Hatch, 2002, p. 175). The researcher used matrices to analyze the data as thoroughly as possible. According to Miles and Huberman (1994), showing data by placing it into a graphic format presents information in an organized way and is a suggested approach for obtaining a complete picture of the data.

Theoretical Memo Writing

According to Merriam and Tisdell (2016), memos help the researcher keep track of thoughts, speculations, and hunches. The researcher's thoughts and understanding of the data was written as memos in this study (Graue & Walsh, 1998). The researcher will constantly write self-reflective memos when visiting different participants to document the impressions made upon the researcher (Morrow & Smith, 1995). Speculations about the data was written and made by the researcher using analytic memos (Morrow & Smith, 1995). A sample memo is shown in Appendix L.

Quality and Rigor

Quality and rigor in this qualitative research were defined by several aspects. An online survey of collective responses demonstrates the research participant's level of CTE teaching knowledge and competency. According to Hatch (2002), utilizing quotations that clearly express the idea of the research indicates that the conclusions are supported. The use of interview quotes

and survey responses are extensively utilized in Chapter 4.

Factors used to ensure quality and rigor of the research were, trustworthiness, credibility, transferability, dependability, confirmability, triangulation, and reflexivity. A brief explanation of each factor and how they are addressed in the study are as follows.

Trustworthiness

Merriam and Tisdell (2016), indicate that trustworthiness refers to having confidence in the research results. Lincoln and Guba's (1985) four criteria for evaluating the trustworthiness of qualitative research were followed by the researcher. These criteria included 1) credibility, 2) transferability, 3) dependability, and 4) confirmability.

Credibility

The researcher engaged in activities to make the research findings more likely to be credible. These activities included collecting data until the data became saturated (Merriam & Tisdell, 2016). The research was conducted over a three-month period allowing the researcher to study and understand the findings (Lincoln & Guba, 1985). Member checking was used to enhance credibility. According to Shenton (2004), member checking is related to the accuracy of data collection dialogues. Transcripts of their interview were emailed to each participant, asking them to check for correction and clarification, and any additional information they wish to add.

Transferability

The results of this qualitative research cannot be generalized to the greater population. According to Merriam and Tisdell (2016), the possibility of transferability does exist; however, by the ability of the reader to determine if the results apply to his/her setting or situation. The researcher will utilize several techniques to improve the possibility of readers being able to determine if the results can apply to their situation. First, the researcher provided thick descriptions of the study to let the readers determine if the research applies to their situation. This will involve

providing detailed and descriptive information on the setting and findings of the study. The researcher also included a variety of participants and multiple sites to select a wide range of cases in order to increase the likelihood of transferability.

Dependability

According to Merriam and Tisdell (2016), dependability refers to the ability of other researchers to track the procedural steps, followed during data collection and analysis. The researcher provided detailed explanations of the research methods used in the study. The dependability of this study was met by following clear and concise steps for conducting the structured interviews and survey as well as following procedures for data analysis. The researcher increased dependability by audio recording participant responses during the interviews and transcribing the interviews accurately.

Confirmability

Triangulation was utilized to ensure confirmability. Patton (2015) indicates using multiple methods provides validity checking and reduces errors when only one method of data collection is utilized. By using multiple methods, the researcher in this study will build on the strengths of each type of method. Weaknesses of interview and survey data include the possibility of inaccurate responses by the participant because they are impacted by their emotional state at the time of the interview (Patton, 2015). Research participants can be subject to recall error. Documents and records have limitations because they can be incomplete or inaccurate**.**

Triangulation. Patton (2015) indicates that numerous sources of data are necessary in qualitative research because a single source of information cannot provide a complete viewpoint on what is taking place. According to Patton (2015), triangulation involves using many types of data collection methods and helping strengthen the study. Triangulation was used in this study to improve the probability that the results and explanations are creditable (Lincoln & Guba, 1985).

Lincoln and Guba (1985) indicate triangulation can be achieved by using different sources of the same information. In this study, the researcher will gather data from participant interviews and surveys about CTE teaching and program management competence and compare them. The researcher will look for similarities and differences between the data sources. Lincoln and Guba (1995), indicate member checking can be used to enhance credibility. Member checking was utilized in this study when each participant was requested to review the transcript of their interview for accuracy. In addition, all participants were emailed a copy of the group findings to assess the accuracy of the researchers' portrayal of their experiences.

Reflexivity. According to Merriam and Tisdell (2016), reflexivity involves explaining any biases and experiences the researcher may have related to the study. According to Patton (2015), reflexivity stresses the importance of self-awareness from the researcher's viewpoint and reminds the researcher to be aware of one's own perspective. The researcher conceived the idea of exploring Virginia CTE teachers who are on a provisional license and their preparedness as it relates to core teaching and program management competencies based on personal experience as an assistant principal of a CTE Technical Center and CTE Teacher. The researcher holds a master's degree in Career and Technical Education as well as vast content knowledge expertise. The researcher believes that the lack of formal teacher preparation makes the transition to educator difficult. The researcher made efforts to be reflexive about the study during all phases of the research.

Summary

The qualitative techniques used in this study were summarized in Chapter 3. The purpose of the study, the statement of the problem, and the research questions in the study were explained. Participant selection, data collection using surveys, qualitative data collection using interviews, and analysis procedures were explained. Pilot testing measures were discussed, consisting of

testing in all phases of the research. Numerous procedures for ensuring trustworthiness such as credibility, confirmability, dependability, transferability, triangulation, trustworthiness, and reflexivity were explained.

Chapter 4

Findings

Chapter 4 begins with the purpose of the study, the research questions used to guide the study, demographic information of participants, and an overview of the pilot study. All of this is followed by the findings of the study and a chapter summary.

Purpose of the Study

The goal of this research was to assess the Virginia three-year provisional teaching license preparation path for earning a teaching license with an endorsement in Business and Information Technology (BIT) and Marketing Education (MKED). The study examined BIT and MKED teacher preparedness as it relates to core teaching and program management competencies for CTE programs to determine the effectiveness of the provisional license preparation path. It also studied how this teacher preparation path impacted teacher retention and how aspects of the provisional path aided the teacher's confidence in teaching. Finally, the researcher examined how beginning BIT and MKED teachers' professional interactions with mentors and administrators affected their perceived job satisfaction, teaching confidence, and effectiveness.

Research Questions

The main question the researcher was seeking to answer in this study was:

What is the effectiveness and impact of Virginia's three-year teacher provisional licensure route for Business and Information Technology (BIT) and Marketing Education (MKED) teacher preparedness as related to core teaching and program management competencies?

Sub-questions for the study included:

1. What characterizes the first three years of teaching for a provisionally-licensed BIT and MKED teachers?
2. As perceived by Virginia BIT and MKED three-year licensed teachers, what needs to be done to improve the Virginia three-year provisional teaching license preparation program?

Research Design and Methodology

A qualitative research design was used for this study to determine the factors that affect the first and third year provisionally licensed BIT and MKED teacher competency obtainment in the state of Virginia. A pre-interview survey of essential core teaching and program management competencies was given to create awareness of the interview topic to the interviewees. This survey was followed by an in-depth interview to gather rich data relating to the obtainment of core competencies. A rigorous method to analyze the data was conducted to identify codes, categories, and themes. Following Patton's recommendations (Patton, 1987, 2015), interviews were used by the researcher to allow for gaining the participants' perspectives. They also attempted to better comprehend the nature of competency level obtainment during the first three years of teaching. A standardized open-ended format was used to conduct the interviews. Participants in this study were interviewed in locations and an environment with which they were comfortable. Minimal manipulation of the study's setting took place, and the outcomes were not predetermined. The design of qualitative research emerged and was flexible as the fieldwork evolved. In this interview, a set of questions was created and used for all the participants. This format guaranteed that each participant received the same questions with the same words. Using a standardized format helped reduce variation and therefore bias. A pre-interview online survey was sent to the participants before the interview and used to collect participants' demographic information and create awareness of the interview topic to the interviewees. Participants were selected from three regions in the state of Virginia. All the participants were provisionally licensed and currently teaching BIT and MKED courses.

Participant Demographics

A pre-interview survey was sent to participants to obtain demographic information including name, provisional licensure endorsement area, amount of formal teacher preparation, gender, college education level, and year/(s) of teaching. The region of each school was identified by assessing the Public-School Division Local Descriptions on Virginia Department of Education (VDOE) website. The demographic information collected is in Table 3.

Table 3
Demographic Profile of Participants

Participant Name	Provisional Licensure Endorsement Area	Year of Teaching	Degree	Amount of Formal Teacher Preparation	Locality of School	Region of School
Connie	Business & Information Technology	3rd	Bachelors	3 years	Town Small	Region 4 Northern
George	Business & Information Technology	3rd	Bachelors	2 years	City Large	Region 1 Central
Holly	Business & Information Technology	1st	Masters	Less than a year	City Large	Region 1 Central
Jimmy	Marketing Education Business & Information Technology	1st	Masters	1 Year	City Large	Region 1 Central
Joe	Business & Information Technology	3rd	Bachelors	3 years	City Large	Region 1 Central
John	Business & Information Technology	1st	Masters	1 year	City Large	Region 4 Northern
Olivia	Business & Information Technology	1st	Masters	3 years	City Mid-Size	Region 6-Western

Table 3 (continued)
Demographic Profile of Participants

Participant Name	Provisional Licensure Endorsement Area	Year of Teaching	Degree	Amount of Formal Teacher Preparation	Locality of School	Region of School
Rachel	Business & Information Technology	1st	Bachelors	Less than a year	City Mid-Size	Region 4 Northern
Scott	Marketing Education	1st	Masters	Less than a year	Town Mid-Size	Region 6 Western
Serena	Business & Information Technology	3rd	Bachelors	3 years	City Mid-Size	Region 6-Western
Walter	Marketing Education	3rd	Bachelors	3 years	Town Small	Region 4 Northern
Wendy	Business & Information Technology	3rd	Bachelors	3 years	City Large	Region 4-Northern

Note: All names in the table are pseudonyms, listed alphabetically.

Summary of Participants

Participants in this study had one or three years of secondary teaching experience with regards to Business and Information Technology (BIT) and Marketing Education (MKED) teaching. All participants were current teachers and were provisionally licensed in their respective fields. The secondary Business and Information Technology (BIT) and Marketing Education (MKED) teachers were taking formal teacher preparation classes and completing other Virginia Department of Education licensure requirements while teaching in a high school room. All participants had to complete the Virginia Department of Education licensure requirements to receive their Virginia ten-year renewable teaching license no later than their third year of teaching. The secondary Business and Information Technology (BIT) and Marketing Education (MKED) education teachers had between less than a year to three years of formal teacher preparation. Six participants were female, and six participants were male.

Description of the Participants

The following is a description of the participants. They are identified by pseudonyms in order to protect their identity and to conform to the confidentiality agreement. Pseudonyms listed below are in alphabetical order.

"Connie" is a secondary Business and Information Technology Teacher (BIT) and entered teaching from the accounting and real estate industry. Connie has a bachelor's degree in business and is working on her master's in accounting. She has obtained her CPA certification and her goal is to eventually teach adults accounting. She is teaching the Economics and Personal Finance course to high school students.

"George" is a secondary Business and Information Technology Teacher (BIT), has a bachelor's degree with a business major and entered teaching from the banking industry. George teaches Economics and Personal Finance, Digital Applications, Multimedia, and Entrepreneurship.

"Holly" is a secondary Business and Information Technology Teacher (BIT) and has an MBA. Holly entered teaching with twenty-five years' experience as a manager in the broadcast news industry. Holly is teaching the Economics and Personal Finance class.

"Jimmy" is a Business and Information Technology (BIT) and Marketing Education secondary education teacher with a master's degree in finance. Jimmy entered teaching with industry experience in consulting, technology, and finance. Jimmy has taught Marketing, Economics and Personal Finance, AP Computer Science, Business Law, and Entrepreneurship.

"Joe" is a secondary Business and Information Technology Teacher (BIT) with a bachelor's degree in marketing. Joe entered teaching with two years of industry experience in retail management. Joe started teaching CTE courses in middle school as a part time teacher and then moved to a full-time position at a high school.

"John" is a secondary Business and Information Technology Teacher (BIT) teacher. He entered teaching after retiring from the military as an officer. John has a bachelor's degree in Computer Information and Science and an MBA. John is currently teaching CTE technology courses at a middle school.

"Olivia" is a secondary Business and Information Technology (BIT) teacher with a master's degree in business. Olivia entered high school teaching with experience as a post-secondary college teacher. Olivia teaches Computer Information Systems, Digital Applications, and Business and Marketing courses.

"Rachel" is a secondary Business and Information Technology Teacher (BIT) teacher with a bachelor's degree in accounting. Rachel entered teaching with industry experience as an accountant. Rachel teaches Economics and Personal Finance, Coding, and Advanced Coding.

"Scott" is a secondary Marketing Education (MKED) teacher with a master's degree in marketing. Scott entered teaching with industry experience for a multinational technology company in sales and marketing, Scott was originally hired to teach cyber security but not teaches marketing courses.

"Serena" is a secondary Business and Information Technology (BIT) teacher with a bachelor's degree in history with a minor in education. Serena entered teaching with experience in video production in the television industry. Serena currently teaches Design, Multimedia, and Web Technologies.

"Walter" is a secondary Marketing Education teacher (MKED) with a bachelor's degree in marketing. Walter entered teaching with experience as a sales trainer and director of sales. Walter teaches Entrepreneurship and Economics and Personal Finance.

"Wendy" is a secondary Business and Information Technology (BIT) teacher with a bachelor's degree in finance. Wendy entered teaching with experience in the accounting industry

as an accounts payable accounts receivable coordinator. Wendy currently teaches Economics and Personal Finance and Design Multi-Media, and Web Technologies. Wendy also has a school program where she helps students refurbish computers. Wendy has recently taken the role of mentor for a new teacher in her department.

Pilot Study

A pilot study was performed prior to the research study using the same qualitative research methods and procedures as the main study. Four provisional licensed secondary education teachers were used in the pilot study to represent the two different participant groups being researched during the main study. All pilot study participants took the pre-survey and then participated in an interview sharing their lived experiences going through the Virginia's provisional teacher licensure process.

The researcher deemed the pre-survey information gathered and interview questions within the pilot study needed to be improved to include a pre-survey question and interview question on teaching adults. Thus, the researcher determined that a modification of the pre-survey and the addition of one interview question was needed. Participants from the pilot study were able to candidly respond to the questions. Following the pilot study interviews, the researcher transcribed the four interviews. The researcher was able to effectively evaluate the exact transcripts and produce codes, categories, and themes.

Pre-Interview Online Survey Phase

The pre-interview online survey regarding essential CTE core teaching and program management competencies was conducted for two reasons. First, it was used to create awareness of the interview content among the participants. Second, it created a simple baseline as to the participants' perceptions regarding their knowledge of and abilities to implement each competency. The results of the survey were determined from three different perspectives. First,

participants were asked to indicate their perceptions regarding their degree of competence for each of the core CTE teaching and program management competencies. Detailed responses for each participant may be seen in Appendix J. Second, the average degree of competence for each of the core CTE teaching and program management competencies was calculated for each group of first and third-year participants. Detailed responses for this perspective may be seen in Appendix J. Third, the overall average of degree of competence for each competency category was calculated by first-and third-year teacher groups. Table 4 (First Year) and Table 5 (Third Year) shows the overall average degree of competence for each category.

On a scale of 1-5 with 1 = Weak and 5 = Strong, the first-year teacher group perceived their average degree of competence for each category in a range from 2.80 to 4.33. This represents a perceived overall below average to above average rating for each competency category. First-year participants perceived themselves below average in strength for coordination of cooperative education and average strength for serving students with special needs, career and technical student organizations, school-community relations, instructional management, instructional evaluation, instructional execution, program planning, development, and evaluation and teaching adults. They felt they were above average in strength for instructional planning, guidance, professional role, and development, and assisting students in improving their basic skills. *It should be noted that these results were based on a pre-interview survey of perceived knowledge and competence. Once the interviews were conducted, it was found that participants' knowledge and competence were substantially lower than indicated in the pre-interview survey results.*

Table 4
Overall Average Perceived Strength: Pre-Interview Survey for First Year BIT and MKED Teachers

Core Teaching and Management Competencies	**Number of Competencies**	**Average Strength Score** (n=6)
Category A – program planning, development, and evaluation	10	3.95
Category B – instructional planning	7	4.26
Category C – instructional execution	33	3.93
Category D – instructional evaluation	7	3.90
Category E – instructional management	11	3.96
Category F – guidance	5	4.33
Category G – school-community relations	15	3.74
Category H – career and technical student organizations	7	3.43
Category I – professional role and development	11	4.27
Category J – coordination of cooperative education	11	2.80
Category K – serving students with special needs	13	3.45
Category L – assisting student in improving their basic skills	7	4.00
Category M – teaching adults	6	3.70

Scale: Degree of Strength 1-5, 1 = Weak and 5 = Strong
Note: Once interviewed it was found that actual levels of competence were substantially lower than indicated on the pre-interview survey.

On a scale of 1-5 with 1 = Weak and 5 = Strong, the third-year teacher group perceived their average degree of competence for each category in a range from 3.05 to 4.14. This represents a perceived overall average to above average rating for each competency category. Third-year participants perceived themselves average with program planning, development, and evaluation, instructional execution, instructional management, school-community relations, career and technical student organizations, professional role and development, coordination of cooperative education, serving students with special needs, assisting student in improving their basic skills, and teaching adults. They felt they were above average in strength for instructional planning, instructional evaluation, and guidance. *It should also be noted that these results were based on a pre-interview survey. As it was the case with first-year teachers, once the interviews were conducted, it was found that participants' perceived competence were substantially lower than indicated in the pre-interview survey results, with only a slight degree of increase from their first year of teaching.*

Table 5
Overall Average Perceived Strength: Pre-Interview Survey for Third Year BIT and MKED Teachers

Core Teaching and Management Competencies	**Number of Competencies**	**Average Strength Score** (n=6)
Category A – program planning, development, and evaluation	10	3.50
Category B – instructional planning	7	4.14
Category C – instructional execution	33	3.73
Category D – instructional evaluation	7	4.09
Category E – instructional management	11	3.76

Table 5 (continued)
Overall Average Perceived Strength: Pre-Interview Survey for Third Year BIT and MKED Teachers

Core Teaching and Management Competencies	**Number of Competencies**	**Average Strength Score** (n=6)
Category F – guidance	5	4.0
Category G – school-community relations	15	3.79
Category H – career and technical student organizations	7	3.86
Category I – professional role and development	11	3.77
Category J – coordination of cooperative education	11	3.05
Category K – serving students with special needs	13	3.78
Category L – assisting student in improving their basic skills	7	3.88
Category M – teaching adults	6	3.77

Scale: Degree of Strength 1-5, 1 = Weak and 5 = Strong
Note: Once interviewed it was found that actual levels of competence were substantially lower than indicated on the pre-interview survey, with only a slight degree of increase from their first year of teaching.

Interview Phase

Upon completing the pre-interview online survey, appointments were made with each participant to conduct individual in-depth interviews by using Zoom. During these interviews, participants shared their perceptions and experiences regarding their knowledge of and ability to implement essential CTE core teaching and program management competencies. Once the interviews were conducted and transcribed, codes and categories were extracted and analyzed. Overall themes then emerged from the codes and categories. Both groups of participants indicated there were individual, professional, administrative, and institutional factors that contributed to their

success or failure for implementing the essential competencies. They also identified changes they felt are necessary to improve the three-year provisional licensure process. The remainder of Chapter 4 presents the results of the interview phase of the study.

Main Research Question

As previously stated, the main question the researcher was seeking to answer in this study was: What is the effectiveness and impact of Virginia's three-year teacher provisional licensure route for Business and Information Technology (BIT) and Marketing Education (MKED) teacher preparedness to successfully implement essential CTE core teaching and program management competencies? To answer this basic question two sub-questions were used. The results relating to these sub-questions are reported first to gain insight into answering the main question.

Research Sub-Question One: Characterization of the First and Third years

RSQ1: What characterizes the first three years of teaching for a provisionally licensed BIT and MKED teachers?

The first research sub-question in this study investigated the experiences of the first three years of teaching for provisionally licensed BIT and MKED teachers. This question sought to characterize what their day-to-day lives were like during these years. First-year teachers were asked to reflect on their experiences during their first year. Third-year teachers were asked to reflect on all three years. Five themes emerged when investigating and analyzing data related to this characterization. They were: 1) Lack of Support System, (2) Struggle to Implement Essential Teaching Competencies, 3) Struggle to Implement Essential Program Management Competencies, 4) Taking Coursework While Teaching Does Not Work, and 5) Slight Improvement by Third Year, But Still a Struggle.

A variety of responses characterized the first three years of teaching for the participants. They experienced very little support from their administrators, mentors, or peers. They were told

they would have an experienced teacher to serve as their mentor but indicated the lack of mentoring as a daily struggle to help them be successful. They were totally unaware of the essential CTE core teaching and program management competencies that are required to be a successful CTE teacher and had very little confidence in implementing them. Many respondents indicated that professional development to obtain their license was ongoing for the first three years and was difficult to complete while learning to teach on the job. *All participants wished they had taken pedagogical courses and training prior to teaching.* As Rachel stated (Line 174), "I would say starting out I felt so lost. It was a lack of information. I know your contract does not start until a week or so before school opens. But I honestly think they should change first year contracts to be the beginning of the summer. I think new teachers should do trainings all summer." Finally, third-year participants did feel they experienced improvement by their third year, but it was only a slight improvement. They still felt a great amount of stress, and many were considering going back into industry. A more detailed analysis of themes associated with RSQ 1 characterizing participants' first three years of teaching is provided below and on succeeding pages.

Theme One: Lack of Support System

Participants in the study consistently reported they felt they were left alone with little assistance to do their job throughout the first three years of teaching. They received little support from administrators, mentors, and other peers/teachers. Most of them felt all alone, without a great deal of assistance to assist them in succeeding. Table 6 presents codes and categories for theme one.

Table 6
Characterization of the First Three Years - Lack of Support System

Major Codes	Categories	Theme
Absence of administrative observation, support, and guidance Absence of mentoring Mentor not a good fit Mentor has a different endorsement area No support for teaching student with special needs Difficult to find teachers who are willing to collaborate	Administrative support Mentor support Other teachers' support Administrative support	Lack of Support System

Administrators

Administrative observation, support, and guidance was too infrequent, if not totally absent, during all three years. They were told before going into their first year that they would have an administrator to assist them along the way. However, once they started their job, they rarely saw an administrator. As John stated (Line 171), "I have exploited the idea that as a CTE teacher I am on this island that they often forget that is out there." Jimmy explained the problem by stating (Line 202), "My biggest feeling coming out of my first year of teaching was that I feel like I am an independent contractor that is leasing a classroom in this building, but I am not connected to anybody or anything and we just happen to share some of the same clients. That part was awful." Jimmy also shared that he was never observed by his administrator or given feedback from him on his teaching. Instead, his administrator turned in a teaching evaluation completed by someone else

who the school system hired to provide professional development. Jimmy felt it would have been very beneficial to have received feedback from his administrator as well (Jimmy, Line 144).

Participants also struggled to get the proper support and advice they needed when trying to complete the requirements of the provisional licensure process. Participants expressed frustration with regards to communication provided about this process. Serena shared (Line 349), “The whole way of going about doing the stuff to get a license was kind of confusing. I am not sure if it was the person here who maybe did not communicate enough. The person prior to her who was here my first year was very helpful if I had a question. The person who replaced her was not the same. I felt like I was kind of left out there.”

Mentoring

Effective mentoring rarely occurred. For the mentoring that did occur, it was simply not a good fit. Many of the participants were assigned mentors that were in an entirely different program and some were not in CTE at all. In many cases they were not initially assigned a mentor, as they were told would happen, but rather they had to request a mentor or had to seek out unofficial mentors. Many of the participants had to take it upon themselves to go outside the school and/or school system to seek support and guidance. Serena shared (Line 249), “They assigned me a mentor, but they did not do a very good job.” Holly stated (Line 49), “To answer your question about the mentor I did not have one when I started, and it took several months for the paperwork to go through and once I did get a mentor and she is a super lovely, wonderful woman. But quite honestly, I got nothing from that.”

It was also reported that many of the mentors were not a BIT or MKED teacher, some were not even from a CTE program area at all. Nearly all the mentors had a full load of classes to teach and could not find the time needed to serve as an effective mentor. Many of them were in a different part of the school building, which presented logistical problems.

Assistance from Teachers

Participants often did not receive support from other teachers as well (other, meaning mentors). When taking over programs they were left with little curriculum materials. When they reached out to share ideas and curriculum they were often ignored. They expressed frustration with not being able to work with other teachers. Jimmy shared (Line 35), “My coordinator gave me the names of the other teachers but did not follow up with anything. When I went to her and said I did not hear anything back, so I am just going to create it. She was like ok.”

Oliva stated (Line 7), “As far as the support goes back and forth the support from the school where I am at now the lady that left did not leave me anything.” In addition, other teachers seemed to have a feeling of ownership with what they had developed and were very reluctant to share and/or collaborate their curriculum and teaching strategies with them. As George explained (Line 262), “I understand intellectual property and that they came up with the lesson plans and they might not want to give me the lesson plan. I understand it. As a new teacher trying to figure that out can be tough.” Jimmy experienced the same thing (Line 16), “Other people (teachers) are really reluctant to share. I have come across a scarcity mentality. If I give my stuff to you then you are going to make it better and you are going to do better than I have done in this and that’s a negative.”

Theme Two: Struggle to Implement Essential Teaching Competencies

Many of the participants indicated they had no idea there were essential CTE core teaching competencies that were required of them. They did not understand how to create a complete lesson plan. Many struggled to create relevant curriculum materials. Participants faced numerous challenges with classroom management. Many participants did not understand how to use work-based learning methods and student organizations to increase student involvement. They expressed frustration when they were not able to engage students. They struggled to gain the knowledge and skills necessary to implement these competencies. They felt their content knowledge and industry

experiences would be enough to help them become a good teacher. After a week or two on the job they realized there was more to *teaching than just content knowledge.* Table 7 presents codes and categories for theme two.

Table 7
Characterization of the First Three Years – Struggle to Implement Essential Teaching Competencies

Major Codes	Categories	Theme
Struggle to find curriculum materials Struggle to developing overall curriculum plan Struggle to develop detailed and comprehensive lesson plans Spend excessive amounts of time developing curriculum Struggle to connect with students Struggle to engage students in lessons Struggle to help students with special needs Struggle to use cooperative method of instruction Struggle with classroom behavior management strategy Struggle with integrating FBLA/DECA into curriculum	Overall curriculum planning Lesson planning Teaching methods and engaging students Students with special needs Classroom management	Struggle to Implement Essential Teaching Competencies

Curriculum Development

All participants indicated they had to learn how to teach on the job. Doing this was very stressful and time consuming. They felt they had an idea of what to teach but were clueless in how to put their ideas into an organized manner; in other words, being able to develop an overall curriculum and then putting that into daily lesson plans. Most of them had to stay up wee hours in the morning preparing for their classes and this created a great amount of stress. As George and Jimmy stated:

> "The most discouraging thing is when you walk into the class and you see the kids have their heads down and I am like I have been up since 2:00 am. developing these lesson plans please listen to what I am saying" (George, line 266).

> "As a teacher I am not doing that bad. I am probably working around seventy hours per week. My pay is one fourth what I was making (in industry). So that is a bit of a drag." (Jimmy, line 86).

Participants indicated their struggle to develop lesson plans not only dealt with formatting, but also knowing how to sequence instruction, knowing different teaching methods to include that would engage students, and knowing the best way to assess learning. John stated (Line 9), "I have struggled in developing lesson plans. I have struggled in the sense that I often felt I was sort of adlibbing it. Based on my experience in the military I recognize the need for structure and organization in my lesson plans and I never quite got there." Scott shared (Line 154), "Often times I will be working on a lesson plan leading into the week on a Sunday. I would have thought about it multiple times then it is on a Sunday evening and I'm starting to put something together. I do not have a fixed plan for the entire year."

Teaching Methodology and Engaging Students

One of the most difficult things participants said they experienced was not knowing how to engage students in lessons and motivating them to learn. Their lack of pedagogical knowledge and skills regarding teaching methodology and learning theory simply put them at a disadvantage. As

Wendy pointed out (Line 111), “But, teaching five classes and trying to find a way to keep them engaged for eighty minutes is very difficult especially when they do not respond.” Rachel stated (Line 44), “I teach two sections of Economics and Personal Finance and they are failing all over the place. They are not turning anything in and are not showing up for class. They do not care.”

Integrating FBLA or DECA

Nearly all participants were unaware of aspects relating to their professional student organization, FBLA or DECA. Their comments concerning these organizations illustrated the fact they knew very little about their structure, activities, or the fact that these activities should be integrated into their curriculum. The concept of “co-curricular” was totally foreign to them. They unaware that integrating these activities is a type of teaching method/strategy from which they can use to engage and motivate their students. Finally, they did not know these activities could be used as individual or group learning activities and were fully developed with detailed instructions for student to follow to complete them and they provided rubrics for them to use to evaluate student completion of the activities. As Joe stated (Line 102), “If FBLA fell off the face of the earth tomorrow I would be the happiest person. It is just outdated. It is ridiculous to put that on us.” Holly explained (Line 221), “We do have FBLA and I think they automatically put you in it as a new teacher. Honestly, I did not participate in it last year. And this year I do not see how it is going to happen anytime soon.” Connie states (Line 190), “There was no way I could done (FBLA) in addition to everything else.” Serena explained (Line 188), “I remember doing all this stuff (student organization) when I was in high school. Now that I am here, I do not know what to do. There is not real good training on that stuff.” Serena further explained (Line 192), “They came to me and said here see if you can get some people to join the (student organization) but they did not tell me anything about how to do it. I am working on making it better. The first year I did not know

when anything was due. I had no clue where to look. We did not do any of the leadership stuff the first year.

Correlated Work-Based Learning

One of the types of work-based learning (WBL) typically used in BIT and/or MKED is the cooperative method of instruction (cooperative education). Nearly all participants were not aware that utilizing this type of work-based learning is another teaching methodology they can use to further engage and motivate students. They did not realize that this WBL involves correlating classroom instruction with student on-the-job experiences and the student work site is actually a type of teaching laboratory for their program. The only difference between a biology lab and a work-site lab is in location, whereas the biology lab is in the school building and the work-site lab is in their local business community. As with integrating FBLA and/or DECA, participants revealed their lack of understanding of the cooperative method being a teaching method. As Jimmy shared (Line 260), "No, we are not doing the co-operative method of instruction. The teacher who was in the role before me who retired we talked to me about that and said it was shut down because it became too big of a hassle." Connie stated (Line 214), "I did not know anything about the co-operative method of instruction. We do have it and I have never done anything with it."

Student Classroom Behavior

Their lack of pedagogical knowledge and skills often led to student classroom behavior problems, which they had a difficult time knowing how to handle. Most of them indicated they needed help with learning behavior management techniques they could use to minimize these problems. Many felt as if they were the only ones having students acting out. Serna explained (Line 58), "Oh goodness. I would say classroom management, I find that part probably the most challenging part of everything." Holly stated (Line, 87), "That was probably the biggest struggle (classroom management)." Holly explained (Line 32), "The very first day was horrible. I literally

had a couple of kids laughing out loud at me and calling me a joke. Kids made fun of me the first day of school because they could smell fear on me because I have never taught."

Students with Special Needs

Participants also felt unprepared to work with students with special needs. They expressed surprise when they suddenly had a class that is comprised largely of students with disabilities. They expressed dismay of not being given any support with these students and revealed they did not know what to do to accommodate their needs. Connie felt very ill prepared with this part of her job. She stated (Line 154), I just felt completely unprepared for that. I have never felt really good about it." Jimmy felt a tremendous need with one of his classes when he stated (Line 352), "I asked for an aide in this class because two thirds of the class have an IEP or a 504. I don't understand why I do not have somebody else that can help me with this."

Theme Three: Struggle to Implement Essential Program Management Competencies

It became obvious that when the participants began their jobs, they thought they were only going to be responsible to teach classes. They knew very little about the program management responsibilities they were going to have. Participants also revealed a lack of knowledge and confidence in implementing essential core program management competencies. By listening to their comments regarding program management (or lack of comments) it was obvious that prior to starting their jobs, they had no idea their success as a teacher also depended on being able to manage their programs. Table 8 presents codes and categories for theme three.

Table 8
Characterization of the First Three Years of Teaching - Struggle to Implement Essential Program Management Competencies

Major Codes	Categories	Theme
Mission of program Do not know how to serve as the FBLA/DECA advisor Do not know how to establish and utilize advisory committee Not aware of how to develop and implement community-based program Do not know how to manage the cooperative method of instruction	Mission of the program not u understood Student organization not being implemented Cooperative method of instruction not understood or utilized Not implementing a community-based program	Struggle to Implement Essential Program Management Competencies

Program Promotion

Participants were made aware after being hired they had to immediately improve and promote low enrollment programs. They had to reach out to in their schools and communities to attract students to take their courses and gain industry support to keep a full-time teaching position. Many struggled to do so because they did not have training on program management competencies related to program promotion. According to Joe (Line 3), “I picked up a couple other duties so I could basically be fulltime. I had to evaluate the program and the principal told me I had to get the enrollment up so he could keep me fulltime.” Joe further explains (Line 24), “The program and no insult to the lady before me she was a dinosaur, and it was dying program.”

Mission of the Program

Participants were not aware of the importance of having a well-conceived program mission statement, even though they probably had experience with them in industry. They did not

understand how to begin to develop a program mission statement using the Virginia Department of Education's CTE VERSO website that helps describe programs and list program management and course competencies. John states (Line, 20), "I looked at it and it is so generic. Is that the one that is down? I looked at it (CTE VERSO) and it is not actionable. To use a term from my prior lifetime. It is general theory. Sure, "Promote a business-like atmosphere". Ok. That is word smithing."

Student Organization

They were totally unprepared and did not understand the program management required to organize and run the professional student organization DECA or FBLA. Many did not set up or participate in the program at all or keep up with required timelines to enter events or competitions. According to Serena (Line 198), "Like I said they came to me and said here see if you can get some people to join the student organization, but they did not tell me anything about how to do it. I am working on making it better. The first year I did not know when anything was due. I had no clue where to look. We did not do any of the leadership stuff the first year. We stuck to the video because I knew I could do that. I asked myself who do I turn in the video to? When do I turn in it? Nobody told me there was a link on the website and book in PDF format to read" John states (Line 123), "I am new and I have decided there are certain things that will not get done (FBLA) this year in order for me to focus. I purposefully decided that is one of the things that is going to wait until next year. I have seen new teachers lose their mind because they try to do everything at once on day one" For participants who did try to implement the student organization they struggled because they had no program management training. Wendy states (Line 146), "The first year was challenging (FBLA) because I was learning it all as we went along."

Cooperative Method of Instruction

Participants were not familiar with the program management required to implement and run a work-based learning program. This resulted in the co-operative method of instruction not being used as a work-based learning. According to Connie (Line 214), “I do not know anything about the co-operative method of instruction. We do have it and I have never done anything with it” They did not know how to place students in jobs that matched their tentative career interests, how locate training stations, how to correlate classroom instruction and on-the-job experiences, how to create training agreements, create training plans, and obtain student trainee job performance evaluations because they had not had training on work-based learning methods. As stated by Serena (Line 257), “No, I don’t use the co-operative method of instruction. I tried to place a student on an internship, and I reach out to a couple of different TV stations in town.”

Community Based Program

The concept of establishing a community-based program was totally foreign to them. They were unaware of the importance of building business partners and how to go about establishing and nurturing these partnerships. Very little knowledge was expressed regarding the managerial aspects of implementing the cooperative method of instruction or their professional cocurricular student organizations, and by using these components of their programs could help build community partners. In addition, they were unaware of being responsible for establishing and implementing program advisory committees. As stated by Connie (Line 175), “I would like to say I did (building school and community relationships) because I came from industry, I do not think I did.” Jimmy explained (Line 245), “Coming from industry that is one of things that I knew I could really assist the school on. I have been hugely disappointed that the school has not taken me up on offers that I have made to be able to do this. I would like to really seriously have industry and business become a much more active member of our school community.”

Theme Four: Taking Coursework While Teaching Does Not Work

Participants had to take coursework during their first three years of teaching to complete the requirements for a full teaching license. Many reported they were unaware of the amount of coursework and test requirements they would have to take until after they were hired and well into teaching. Table 9 presents codes and categories for theme four.

Table 9
Characterization of the First Three Years of Teaching - Taking Coursework While Teaching Does Not Work

Major Codes	Categories	Theme
Not aware of the requirement to take courses during the first three years Little assistance in knowing what to take and locating where to find them Too much stress to take courses while teaching Need coursework and training before starting to teach Little knowledge of non-credit professional development opportunities	Required coursework for VDOE licensing Not enough time to take courses Need education and training before teaching Non-credit professional development	Taking Coursework While Teaching Does Not Work

Taking coursework and required exams was very time consuming and added stress to the daily demands of learning to teach on the job. Olivia stated (Line 167), “Everything needs to be up front on what that teacher needs to get the license. Instead of getting in the door and by the way this is what you need. To be honest if I were told I had to go back to school (courses) and take three more tests I probably would not have applied.” George pointed out (Line 191), “I was like

trying to get my lesson plans, teaching, and taking the courses. With me having my wife and kids I had to have a balance somewhere."

Participants also encountered financial stress with having to pay for the required courses and felt not enough financial assistance and support was provided. Some actually had to take on a part-time job to pay for them, which added additional stress in their lives. Joe stated (Line 167), "I can give you a couple of viewpoints here. I had to pick up a side job just to pay for the required courses for my licensure. The economy was not good then and it was a challenge." Furthermore, their timeline for taking the required teacher preparation courses during their first three years impacted their ability to implement core teaching and program management competencies effectively.

Theme Five: Slight Improvement by Third Year, But Still A Struggle

Third-year participants indicated they did feel a slight improvement in their knowledge of and skills to implement the essential CTE core teaching and program management competencies by their third year. However, they were still struggling with performing their job and still did not feel comfortable with many of the different responsibilities they had. Table 10 presents codes and categories for theme five.

Table 10

Characterization of the First Three Years of Teaching - Slight Improvement by Third Year, But Still a Struggle

Major Codes	Categories	Theme
Mentoring support can be a factor that helps when transitioning to teaching Peer support can be a factor that helps when transitioning to teaching	When limited effective support occurred, it helped to gain slight improvement in skills, but still a struggle Experience helped to gain slight improvement, but still a struggle	Slight Improvement by Third Year, But Still a Struggle

Table 10 (continued)
Characterization of the First Three Years of Teaching - Slight Improvement by Third Year, But Still a Struggle

Major Codes	Categories	Theme
Administrative support can be a factor that helps when transitioning to teaching	Seeking help outside of school or school system helped to gain slight improvement in skills, but still a struggle	Slight Improvement by Third Year, But Still a Struggle

When Limited Effective Support Occurred

Support from mentors, administrators, and other teachers did occur, but was infrequent and inconsistent. Jimmy points out (Line 35), “My coordinator gave me the names of the other teachers but did not follow up with anything.” Sometimes participants would present ideas for improvement based on training they had taken but their ideas were rejected. Jimmy explains (Line 330), “That was one of the most frustrating days of my life… I reached out to the central office contact person that says I have to use the required platform. I said we need to revisit this because I went through the training and the two platforms are not comparable. If they were comparable, I would be ok because they would be about the same. One of the platforms clearly separates itself and one of our goals in our district (I was still made to use the noncompatible platform).” When support did happen, it was very beneficial and contributed to the slight improvement in their knowledge and skills. They felt that frequent and consistent effective support would have made a tremendous difference in their growth to become a successful teacher, but it just was not there. According to Serena (Line 379), “I needed someone who understood my world for like five minutes and I did not have that. I was stressed and it was not a good moment. I am rather lucky in that the guy I replaced who had taught my program for years became an assistant principal (in a

different school). Granted he kind of left everything out of date and I had to fix all of that. I have at least a little bit of relationship with him."

Experience

Participants indicated they had made slight improvements in specific teaching and program management competencies by their third year. However, they indicated they were still learning and felt they needed help to improve. According to Joe (Line, 57), "I would say probably my third year (for improving classroom management). Each year you adapt stuff (you improve) and you put more things in your toolbox." George states (Line, 65), "I am still working on that (classroom management). It has gotten better over the years for sure. According to Holly (Line 19), "Last year the first year took a while. I kind of did my own thing. I saw the content that needed to be taught and I sort of found my own way. By the way this is the other thing its important for you understand. Nobody handed me a pacing guide. I had to figure it out. During pre-service this year they were making a big deal about pacing guides. I was like you mean this existed last year and no one gave it to me. I had no idea."

Seeking Outside Support

In some cases, they even had to seek assistance from teachers outside their school and/or school system. According to Serena (Line 341), "Having a more active mentor would have been helpful. I did have my hometown High School teacher and she was available. Having the cosmetology teacher kind of take over as my (informal) mentor was helpful. For school related things like a field trip form, she is the person I went and asked." John states (Line 97), "The irony is the mentor that was an experienced technology teacher that was hired at the same time in the classroom next to me ended up mentoring me in an informal mentorship relationship that I could not have made it to end of year without her." Finally, they wished they had obtained the necessary education and training they needed prior to starting their teaching position. According

to Connie (Line 44), “It was tough. When I knew I had to take those five classes I did not know if the classes would help me (since I was already teaching). First going into it without any classroom management strategies or ideas was tough. Part of me wishes I could have a little bit more on that (before I started). That first year was tough because I knew nothing.” Serena states (Line 183), “I worked all summer, but it could have been more targeted if I had known what exactly I needed to be working on. I was willing to do the work.”

Research Sub-Question Two: Improvement of the Provisional Licensure Program

RSQ2: As perceived by Virginia BIT and MKED three-year licensed teachers, what needs to be done to improve the Virginia three-year provisional teaching license preparation program?

The second research sub-question in this study investigated the participants perceptions of what needs to be done to improve the Virginia three-year provisional teaching license preparation program. This question sought participant feedback based on what their day-to-day lives were like during the three years. First-year teachers were asked to reflect on their experiences during their first year. Third-year teachers were asked to reflect on all three years. Three themes emerged when investigating and analyzing data related to participants perceptions on what needs to be done to improve the Virginia three-year provisional licensure preparation program. They were: 1) Need for Effective Support System, (2) Need for Increased Funding for Teacher Pay and Required College Courses, and 3) Need for Focused Training on Specific CTE Teaching and Program Management Competencies.

A variety of responses were given from participants regarding their perceptions on what needs to be done to improve the Virginia three-year provisional teaching license preparation program. They believe more support is needed from administrators, mentors, and peers. Many wished they had direct access to their mentor and administrator during class. Because participants have never taught, they indicated they needed direct in class observation and feedback to verify

they were performing the CTE teaching and program management competencies correctly. Many participants entered the provisional licensure process unaware of the amount of course work they would have to take during the three-year process while teaching. Compounding their frustration was the lack of support and understanding on how to complete the three-year provisional licensure process. Participants indicated they left industry professions believing teaching would require less hours but quickly found out otherwise. Because participant salaries decreased and little financial support for the required classes was offered, they struggled to pay for the required coursework. Finally, participants indicated they need course work and training *with direct supervision* prior to going solo and entering the classroom to teach. Even when participants took teacher preparation classes, they indicated the teacher preparation was very condensed causing loss of information and understanding. A more detailed analysis of themes associated with RSQ 2 is provided below and on succeeding pages.

Theme One: Need for Effective Support System

When interviewing the participates, the lack of a support system was consistently reported as a major problem with the Virginia three-year provisional license teacher preparation program. A more effective support system is needed to improve the program. Table 11 presents codes and categories for theme one.

Table 11
Participant Perceptions: Improving the Virginia Three-Year Provisional Teaching License Preparation Program-Need for Effective Support System

Major Codes	Categories	Theme
Compatible mentor Effective mentoring Peer support Administrative support	Effective mentoring that involves direct in class observation, supervision, and feedback.	Need for Effective Support System

Table 11 (continued)
Participant Perceptions: Improving the Virginia Three-Year Provisional Teaching License Preparation Program-Need for Effective Support System

Major Codes	Categories	Theme
Understanding the culture of teaching Working with peers Did not understand the provisional licensure process. Job responsibilities and culture of the teaching profession. Process of the provisional licensure process not clear Requirements of the provisional licensure process Finding courses to complete the provisional licensure	Peer support, help, observation, and encouragement from successful teachers Administrative support that involves observation, supervision, and feedback Not understanding the job responsibilities and culture of the teaching profession Did not understand what they needed to do to complete the provisional licensure process	Need for Effective Support System

Mentor Support

Participants felt for the provisionally licensed program to be more effective the mentor component of the program needs to be greatly improved. Mentoring needs to be provided very frequent and consistent. Training needs to be provided regarding the roles of both the mentor and mentee. They also expressed the need for the mentor and mentee to be in the same CTE program area. For those who did not have a mentor from their program area, they had to reach-out beyond their mentor to establish an informal mentorship with a more compatible person. In other cases, they had to request a mentor. According to Holly (Line 26), “I started off the year without a mentor. I specifically asked the recruiter if I would have a mentor and she stated it depends. I thought for sure they would recognize that this was literally my first year of teaching. Knowing the

politics of the school, which forms to fill out, and how to work with google classroom would be helpful." Many stated the mentor did not help them. Serena states (Line 249), "They assigned me a mentor, but they did not do a very good job. I never saw them." According to Serena (Line 341), "Having a more active mentor would have been helpful." Many stated the mentor was not a good fit for them. As stated by John (Line 49), "Yes, last year I received a mentor. The mentorship was not a good fit." Many felt it would be helpful if their mentor had also come from an industry background. According to John (Line 234), "The mentors that were offered to me were wonderful people and had well meaning. They did not speak my old language. You need a translator that speaks both your old language and your new language."

Administrator Support

Participants felt for the provisionally licensed program to be more effective, administrator support, and guidance also needs a great amount of improvement. Effective administrator support needs to involve very frequent and consistent supervision. This supervision needs to include weekly meetings and frequent teaching observations with constructive feedback.-According to Jimmy (Line 35), "My coordinator gave me the names of the other teachers but did not follow up with anything" They indicated they needed more observation and feedback. As stated by Jimmy (Line 149), "I would have appreciated more (administrative) perspectives on what I was doing." Participants indicated they needed proper support and advice. Participants expressed the need for improved administrative decisions, response, and communication process. According to Serena (Line 357), "There are certain areas it would have been helpful to have more communication from someone. I do not know if that is from the state side or a person from our school system. In those first three years there was one point in the second year I was just so lost." They felt they needed to be connected to the rest of the school. Serena further stated (Line 366), "One day I was over in the office and I needed to talk to someone. The person I needed to talk to could not talk to me. They

had not responded to my email and they were supposed to call me and never did. I literally walked out of the office and walked back to my room crying because I was so fed up with everything."

Peer Support

Participants felt for the provisionally licensed program to be effective more support from their colleagues needs to be provided. According to Jimmy (Line 19), "What I have found is that if your brand new…and this is not just for someone coming out of industry for one reason or the other people are really reluctant to share. I have come across a scarcity mentality. If I give my stuff to you then you are going to make it better and you are going to do better than I have done in this and that's a negative." When taking over programs they felt they should have been provided curriculum materials instead of having to find or create them. According to Olivia (Line 8), "The lady that left did not leave me anything." They indicated being able to collaborate, share curriculum, and observe other teachers would be helpful. According to Connie (Line 257), "Observation of other classes would be very helpful. I think it is so important to observe other teachers to see how they do things. I now think that it is required. I did not do a second of it."

Lack of Support and Understanding to Complete Provisional Licensure Process

Participants felt that the three-year provisional path to teaching could be improved by making sure the requirements for getting a full license within the three provisional years is completely understood prior to entering the three provisional years. Most of them were told about the requirements after they were hired. And many of them said they had very little help in knowing what the requirements were and how to satisfy them.

Participants indicated the process to get a teaching license needs to be less confusing. According to Serena (Line 349), "I will say just from never teaching before the whole way of going about doing the stuff to get a license was kind of confusing. I am not sure if it was the person here who maybe did not communicate enough. The person prior to her who was here my first year

was very helpful if I had a question. The person who replaced her was not the same. I felt like I was kind of left out there" They indicated they need to know how to find the coursework to take. Holly states (Line 271), "The biggest thing for me now is I'm so focused on getting my legs under me as a teacher that I have all these classes because I come into this without a single education course. I reached out to our person who handles the licensures and she basically said she cannot help with that." Participants indicated they need to be informed of the required coursework prior to being hired. According to Olivia (Line 97), "When I was asked to apply, I was told the only thing I needed to do is take my Praxis. I said ok I can do that. Once I was hired, I was then informed I needed to take more classwork. I was upset because I thought I was finished with school. I am taking six classes." Participants indicated they need help understanding educational terminology and concepts when selecting professional development opportunities and college courses. Serena states (Line 350), "I was like what do I need to do next? What do I need to do for this? I could not find it anywhere. I am trying to do it myself and I would look at the website and I did not understand the information on it.

Theme Two: Need for Increased Funding for Teacher Pay and Required College Courses

When interviewing the participates, the need for increased funding for teacher pay and required college courses was consistently reported as a major problem with the Virginia three-year provisional license teacher preparation program. More funding is needed to improve the program. Table 12 presents codes and categories for theme two.

Table 12
Participant Perceptions: Improving the Virginia Three-Year Provisional Teaching License Preparation Program- Need for Increased Funding for Teacher Pay and Required College Courses

Major Codes	Categories	Theme
Teacher salary low compared to industry position they left Need help finding affordable college courses required for the provisional licensure. Financial Support for taking courses.	Financial strain of paying for required courses and lower pay compared to industry job left	Need for Increased Funding for Teacher Pay and Required College Courses

Decrease in Pay Coming from Industry

Participants felt the three-year provisional route to teaching could be improved by having school divisions provide a pay differential for industry experience. They all indicated a significant pay cut entering teaching from an industry job and felt a financial strain. Jimmy states (Line 87), "My pay is one fourth what I was making. So that is a bit of a drag. It is tough. They indicated the salary difference made them consider leaving the teaching profession." Jimmy further states (Line 303), "If I can resist the urge to go back and make some money. If I can resist that I have got to advance seven years every single year." Many indicated their dissatisfaction with their salary. According to Walter (Line 199), "First of all, I make 43,000 dollars a year. If I were young, I would not be a teacher for a minute. You cannot pay your bills. Teaching is absolutely rewarding. But it is also rewarding to be able to live in a nice house and drive a nice car."

Lack of Funding to Help with Coursework

Participants felt they needed to know what courses were required and the cost for taking them prior to being hired. According to participants, providing funding to pay for the required

courses and tests for full licensure would improve the Virginia three-year provisional license program tremendously. It would relieve a great deal of stress and show greater support for the provisionally licensed teacher. As stated by George (Line 247), “Funding for the classes. Making sure there is some type of funding. I understand the concept of maybe not paying for it all. There could be a point the teacher says this is not for me. The school will then say I paid for three of your classes and you are leaving. I will say if they complete the classes maybe they could have a complete refund of the classes they took. I think that is fair. You have your license at that point, and you are most likely going to keep with it.” Participants felt a financial strain of having to pay for courses while having a lower salary compared to their past industry positions. Wendy stated (Line 285), “Absolutely. I could not afford it. I still really cannot. My dad is paying for it and I am paying him back.” Some participants had to take a second job to pay for the required courses. Joe stated (Line 167), “I had to pick up a side job just to pay for the required courses for my licensure.

Theme Three: Need for Focused Training on Specific CTE Competencies

Participants felt the education and training received during the three provisional years needed to be focused on the essential CTE core teaching and program management competencies. The current requirement allowed them to take generic education courses, not those relating specifically to the essential CTE core competencies. Taking generic curriculum development and teaching methods courses did not assist them with gaining the specific knowledge and skills associated with teaching CTE courses. They were not required to take a course relating to essential CTE program management competencies. They felt a course relating to these competencies would also improve the three-year provisional program. Table 13 presents codes and categories for theme three.

Table 13

Participant Perceptions: Improving the Virginia Three-Year Provisional Teaching License Preparation Program- Need for Focused Training on Specific CTE Teaching and Program Management Competencies

Major Codes	Categories	Theme
Struggling to develop lesson plans. Struggling to develop and find appropriate curriculum resources Struggling to engage students Struggling with classroom management Building trust and relationships with students Struggling to work with students with special needs. In classroom help working with students with special needs. Need for professional development prior to entering classroom Teacher preparation very condensed causing loss of information Helping students with basic reading, writing, and math skills Problems with program promotion, advisory committees, rebuilding program	How to create lesson plans How to find and develop curriculum support materials Building positive relationships with students How to engage students. How to work with students with special needs Process, timing, and quality of CTE pedagogical course work and professional development Classroom Management Strategies How to integrate FBLA and DECA into the curriculum How to develop and maintain program	Need for Focused Training on Specific CTE Teaching and Program Management Competencies

Table 13 (continued)
Participant Perceptions: Improving the Virginia Three-Year Provisional Teaching License Preparation Program- Need for Focused Training on Specific CTE Teaching and Program Management Competencies

Major Codes	Categories	Theme
Not integrating and implementing FBLA/DECA into daily lessons Not using work-based learning methods Struggling to connect and get support to work with local industry	How to implement work-based learning methods How to create a community-based BIT/MKED program	Need for Focused Training on Specific CTE Teaching and Program Management Competencies

Lesson Planning

Participants indicated they need training and support to develop lesson plans using the VDOE CTE course competencies task lists. They indicated much of their training was limited or generalized to regular high school academics and did not involve lesson planning using the required CTE course competencies. They indicated they need help understanding the formal structure and process to develop complete lesson plans using competency-based education methods. They recognized the need to develop engaging well organized lessons that connect to the real world and result in successful student outcomes but had not yet formalized their lesson plans. According to Scott (Line 156), “I certainly need more help around the planning types of things. Often times I will be working on a lesson plan leading into the week on a Sunday. I would have thought about it multiple times then it is on a Sunday evening and I am starting to put something together. I do not have a fixed plan for the entire year.” Participants indicated they were still learning. George stated (Line 7), “With me being a career switcher, I was in banking. When you go

into it you just want to teach. I do not want to do all that (lesson planning) just give me someone else's lesson plans and I will look at it and do it. My first year was a little rough."

Curriculum Development

Participants indicated they need support and training to develop and find curriculum resources that match the VDOE CTE course competencies task lists. Again, they indicated much of the training was not extensive enough or was not specific enough to CTE for them to understand competency-based education methods. Many indicated they must develop curriculum from scratch because it is not provided. They feel they need help on how to develop and find content that connects real world job tasks and engages students. According to Connie (Line 72), "The textbook came with PowerPoints and they were my skeleton. I started with those, but I was up very late every night redoing them or adding to them and that kind of thing to get them to where I wanted them to be even though I did not know what the heck I was doing," Participants indicated they spend enormous amounts of time finding and creating curriculum materials to match up with the Virginia CTE course competencies. Jimmy states (Line 8), "I ended up having to develop all my own stuff. To be honest with you it's just so…..like the materials that are out there. When I took over Business Law the textbook was twelve to fourteen years old and there is some stuff in there but if you get into anything that is cyber related or anything technology related it is just so dated. So, what I do I end up weeding through the textbook and I did that over the first summer. There were no materials passed to me. I take my notes and I turn those in PowerPoint, and I use lessons I have learned through my career in industry. I create my own quiz and tests. I am really fortunate if there is a quiz or two that I can borrow."

Building Positive Relationships with Students

Participants indicated they started to realize the importance of building positive relationships with students during their third year but suggested training on how to connect with

students using competency-based teaching methods is needed prior to entering the classroom. Joe states (Line 55), “I would say probably my third year. Each year you adapt stuff and you put more things in your toolbox. These teachers got to know kids change,” However, very few participants experienced this during their first two years. Third year participants said it helped them when they attempted to get to know students interests but wished they had better strategies for connecting with students based on their career interests. A few third-year teachers said it helped to identify student career interests through a career interest inventory. According to Walter (Line 44), “My personality comes out in teaching and it all stems from connecting to the kids. Trying to understand them. Letting them know that you care no matter what. They can do anything to me and the next day I will come back and try to figure out how we can work together. I think there is a lot of kids need that,”

Engaging Students

Participants indicated they need help learning how to engage and motivate students using competency-based education methods. Many wished they had received training prior to entering the classroom. Those that did receive training indicated it was limited and focused on generalized education methods and not specific to the VDOE CTE course competencies task lists. Getting students to complete their classwork was a challenge. Scott states (Line 166), “I am so involved trying to cover the content that I think sometimes I do not take enough time to develop content that’s more fun and engaging for students.” They indicated they get some students that are engaged and interested and want to learn but some students that just want to sit there. They work with students that want to be involved in the lesson but eventually leave disinterested students alone. According to Serena (Line 58), “I cannot figure out how I want to say this. I get students that want to learn and do it and they are engaging and interested and want to learn and then you have students that just want to sit there. I try to get them involved and at a certain point you are going to

sit there with your head down I'm just going to leave it be." They indicated they have difficulty engaging students for ninety-minute block classes.

Classroom Management

Participants indicated they need help with developing CTE based classroom management strategies. They indicated they received limited or no classroom management training specific to CTE prior to entering the classroom. Many wished they had clearly defined rules agreed by students that focused around CTE tasks, safety procedures, and work-based readiness skills. According to Serena (Line 58), "Oh goodness. I would say classroom management, I find that part probably the most challenging part of everything." They indicated they are still figuring out which classroom management style works best for them. Many felt as if they were the only one having students acting out. Jimmy states (Line 183), "I keep feeling like I was the only one that was having students that were acting out." They indicated they have more work to do with regards to classroom management. According to George (Line72), "It is getting there. There is more work that I need (on classroom management) but it is getting there."

Working with Special Education Students

CTE courses involve work related job tasks that often integrate academic concepts. Participants feel they need support and training to help special education students within CTE courses. Connie states (Line 154), "I suppose there was a (special education) class and maybe I was inundated with teaching when I took that class. Maybe it was not taught. It did not hit home with me. I just felt completely unprepared (working with special education students) for that. I have never felt really good about it." They express surprise when they suddenly have a class that is comprised largely of students with disabilities. Participants expressed dismay of not being given any support or training. Jimmy states (Line 352), "I do not have an aide. I asked for an aide in this class because two thirds of the class has an IEP or a 504. I don't understand why I do not have

somebody else that can help me with this. Most of my other classes its four or five students out of thirty that have an IEP or 504. This class its eighteen out of twenty-seven students who have an IEP or 504." They indicated they need help to understand what exactly they need to do to help their special education students complete the VDOE CTE course competencies task lists. According to Serena (Line 266), "I have been to a few of the meetings and gotten the IEP. I have had some of the meetings I have had to say I do not understand what exactly do I need to do? I have one student that has vision issues, and the IEP talks about braille. I am like I have no clue what I will do with this kid."

Creating a Community Based CTE Program

Participants indicated they need help and support creating a community based CTE program. However, most indicated they had no program management training prior to entering the classroom. According to Connie (Line 175), "I would like to say I did because I came from industry, I do not think I did. I do not think I had time to do that. I was just focused on getting a lesson the next day and covering everything." Some participants tried to reach out to industry but did not get the support they needed from school administrators. Jimmy stated (Line 438), "I would really enjoy (creating a community-based program) and I thought I would be able to do that. But its hit and miss. I do not feel like I am being recognized or rewarded for it. I would love if someone would tell me (administrator) if I was doing a killer job on it. I have given some time to focus on it."

Student Organization (CTSO)

Participants felt they needed training and support to effectively implement and integrate their FBLA or DECA student organization into the curriculum. However, the training they received did not cover student organizations (FBLA/DECA). They indicated they had limited experience and knowledge with implementing their student organization, which caused feelings of

inadequacy. According to Serena (Line 187), “I probably have not done that as much as I should (integrating the student organization into daily lessons). That is one thing I have said to other people. I remember doing all this stuff when I was in high school. Now that I am here, I do not know what to do. There is not real good training on that stuff.” They did not realize the student organization is co-curricular and is required. They indicated that it was not a priority for them in addition to everything else they were being required to do. According to John (Line 132), “Once I feel better about my classroom management and my lesson plans. I think in tiers. I will go to that next tier and work on FBLA and right now that is not a priority event.” Participants indicated they did not know how to implement the student organization but planned to work on this in the future once they receive support and training.

Work-Based Learning

Participants felt they needed more experience and knowledge with how to implement the cooperative method of instruction. Most indicated they had not received training on how to implement work-based learning methods. They indicated that it was not available, or if it was another teacher oversaw getting students to join. Holly states (Line 189), “There is a program where they will receive a credit for working on a job. No. I do not handle that part. One of our teachers handles that. I do not know quite exactly how that works. But as far as I know these kids are not part of that exactly. I think we end up going to recruit them to be part of that rather than them coming to us.” Participants indicated they did not know quite exactly how the cooperative method of instruction works in relation to their BIT or MKED classes. According to Wendy (Line 104), “I do not really have my hands in that right now. I am our work-based learning liaison for our school, so I have been learning a lot about it through our central office employees.”

Main Research Question: Effectiveness and Impact of the Provisional License Preparation Path

Main Question: What is the effectiveness and impact of Virginia's three-year teacher provisional licensure route for Business and Information Technology (BIT) and Marketing Education (MKED) teacher preparedness to successfully implement essential CTE core teaching and program management competencies?

The researcher's main goal in this study was to determine the effectiveness and impact of Virginia's three-year teacher provisional licensure route for earning a teaching license with endorsements in Business and Information Technology (BIT) and Marketing Education (MKED). The investigation of this licensure path sought to determine how well it prepared teachers to gain knowledge of and skills to implement essential Career and Technical Education (CTE) core teaching and program management competencies.

The pre-interview online survey and questions asked during interviews revealed the participants struggled with knowing and implementing essential CTE teaching and program management competencies their first two years and only slightly improved by their third year. As participants were struggling with how to implement the essential CTE core teaching and program management competencies during their first three years little or no support structure existed. They indicated that once the first school year started, they felt they were left alone to fend for themselves. They had very little knowledge of and skills to implement the teaching and program management competencies. The lack of support from their mentors, administrators, and other teachers served as a barrier for them to gain the knowledge and skills associated with the essential competencies by the end of the third year. In addition, participants were given a list of required courses from the Virginia Department of Education (VDOE) at the beginning of the process with little knowledge of where to locate the courses nor the sequence in which to take them. Many of

the participants did not take the courses until their third year of teaching. Conclusions regarding the effectiveness and impact of the three-year provisional license program is presented in Chapter 5.

Summary

First year and third year secondary Business and Information Technology (BIT) and Marketing Education (MKED) teacher interview responses were used to determine the extent of teacher preparedness as it relates to core teaching and program management competencies. The study had one main question and two sub-questions. The responses to the two sub-questions were used to answer the main research question which was to determine the effectiveness and impact of the provisional license preparation path.

The first research sub-question in this study investigated the experiences of the first three years of teaching for provisionally licensed BIT and MKED teachers. This question sought to characterize what their day-to-day lives were like during these years. First-year teachers were asked to reflect on their experiences during their first year. Third-year teachers were asked to reflect on all three years. Themes that emerged relating to RSQ1 were: *1) Lack of Support System, (2) Struggle to Implement Essential Teaching Competencies, 3) Struggle to Implement Essential Program Management Competencies, 4) Taking Coursework While Teaching Does Not Work, and 5) Slight Improvement by Third Year, But Still a Struggle.*

The second research sub-question in this study investigated the perceptions of participants as to what needs to be done to improve the Virginia three-year provisional teaching license preparation program. The themes that emerged relating to RSQ2 were: *1) Need for Effective Support System, (2) Need for Increased Funding for Teacher Pay and Required College Courses, 3) Need for Focused Training on Specific CTE Teaching and Program Management Competencies.*

The main question to be answered in this study: What is the effectiveness and impact of Virginia's three-year teacher provisional licensure route for Business and Information Technology (BIT) and Marketing Education (MKED) teacher preparedness as related to core teaching and program management competencies. Analyzing the data obtained for RSQ1 and RSQ2 allowed the researcher to answer the main question which will be addressed in the conclusions and discussion found in Chapter 5.

Chapter 5

Results and Conclusion Discussion

Chapter 5 begins with a summary of the study, statement of the problem, review of study, research questions, and a summary of the research methodology. The remainder of the chapter provides conclusions based on the results of the study, a discussion of results, recommendations for practice, recommendations for future research, and ends with final remarks.

Summary of the Study

The goal of this research was to assess the Virginia three-year provisional teaching license preparation path for earning a teaching license with an endorsement in Business and Information Technology (BIT) and Marketing Education (MKED). The study examined BIT and MKED teacher preparedness as it relates to core teaching and program management competencies for CTE programs to determine the effectiveness of the provisional license preparation path. It also studied how this teacher preparation path impacted teacher retention and how aspects of the provisional path aided the teacher's confidence in teaching. Finally, the researcher examined how beginning BIT and MKED teachers' professional interactions with mentors and administrators affected their perceived job satisfaction, teaching confidence, and effectiveness.

Statement of the Problem

Research is needed to examine the effectiveness of provisional routes for teacher preparedness and obtaining a teaching license in Virginia with an endorsement in Business and Information Technology (BIT) and Marketing Education (MKED). Teacher preparedness is the teacher's ability and knowledge to perform their teaching responsibilities competently based on how well they are prepared. According to Ruhland and Bremer (2002), CTE educators are a unique group because many of them join the teaching profession via a provisional licensure route after spending years working in their respective industries. Many provisional licensure programs have

been created, producing differing levels of self-efficacy among teachers. Some participants of provisional licensure route programs feel extremely self-confident, and others feel incompetent and overwhelmed (Raudenbush, Rowan, & Cheong, 1992). The problem addressed in this study was to determine the effectiveness of Virginia's three-year teacher provisional licensure route for preparing successful BIT and MKED teachers.

Research Questions

The main question the researcher was seeking to answer in this study was:

What is the effectiveness and impact of Virginia's three-year teacher provisional licensure route for Business and Information Technology (BIT) and Marketing Education (MKED) teacher preparedness as related to core teaching and program management competencies?

Sub-questions for the study included:

1. What characterizes the first and third years of teaching for a provisionally-licensed BIT and MKED teachers?
2. As perceived by Virginia BIT and MKED three-year licensed teachers, what needs to be done to improve the Virginia three-year provisional teaching license preparation program?

Research Methodology

A qualitative research design was used for this study to determine the factors that affect the first year and third year provisionally licensed BIT and MKED teacher competency obtainment in the state of Virginia. A pre-survey of essential core teaching and program management competencies was given to create awareness of the interview topic to the interviewees. This survey was followed by an in-depth interview to gather rich data relating to the obtainment of core competencies. A rigorous method to analyze the data was conducted to identify codes, categories, and themes. Both interviews and surveys were used to establish a better understanding of the viewpoint of the participants. Patton observes: "the purpose of interviewing, then, is to

allow us to enter the other person's perspective" (Patton, 1987, p. 109). This researcher attempted to better comprehend the nature of competency level obtainment during the first year and third year of teaching. Interviews were conducted, using standardized open-ended questions. This format guaranteed that each participant received the same questions with the same words. Using a standardized format helped reduce variation and therefore bias. Instead of meeting with participants in person, Zoom technology was used to conduct the interviews because of the COVID-19 pandemic. A pre-interview online survey was sent to the participants before the interview and used to collect participants' demographic information and created awareness of the interview topic to the interviewees. Participants were selected from three regions in the state of Virginia. All the participants were provisionally licensed and currently teaching BIT and MKED courses. A more detailed discussion of the research design and methodology for this study is discussed in Chapter 3.

Key Results

Key results of the study for first and third year provisionally licensed Business and Information Technology (BIT) and Marketing Education (MKED) teachers included the following:

1. They struggled with implementing CTE teaching and program management competencies.
2. It was difficult to take coursework throughout their first three years while teaching.
3. They often experienced a lack a support to assist them to be successful.
4. Degree of confidence directly related to the amount of peer, mentor, and administrative support and feedback that is provided.
5. Degree of confidence directly related to the professional development they took.

6. Taking more professional development coursework slightly increased their familiarity with core teaching and program management competencies.
7. First-year teachers did not feel confident with their ability to perform the core CTE teaching and program management competencies.
8. Third-year teachers felt a slight increase in confidence in their abilities to implement the CTE teaching and program management competencies depending on the degree and level of mentoring, experience, and professional development. However, they still struggled with implementing them in the third year.
9. They felt inadequate with the following instructional and program management abilities:
    a. Their ability to implement the cooperative method of instruction.
    b. Their ability to integrate a co-curricular student organization (FBLA or DECA) into their curriculum.
    c. Their ability to develop their curriculum.
    d. Their ability to develop comprehensive, detailed, daily lesson plans.
    e. Their ability to do program planning and evaluation.
    f. Their ability to implement classroom management.
    g. Their ability to engage students in lessons.
    h. Their ability to teach students with special needs.
10. They encountered the following challenges:
    a. Inadequate administrative support.
    b. Limited peer support among other teachers.
    c. Absence of mentor support.

d. Program management.

e. Engaging students when teaching a lesson.

f. Taking required courses while teaching.

11. They indicated that the following could have made a difference in their first year of teaching:

    a. A school culture with administrative support and observation with feedback.

    b. A greatly improved mentor program.

    c. Peer assistance with periodic checks through the academic year.

    d. Reaching out to guidance counselors.

    e. Reaching out to the special education department.

12. They found the following as things that could have been helpful in successfully completing their first year if they had happened more frequently:

    a. Observing other successful teachers.

    b. When they were able to create engaging real-world assignments, it helped them to successfully engage students.

13. The following things made it difficult for them to complete the first year successfully:

    a. Absence of mentoring.

    b. Absence of administrative support and observation.

    c. The financial burden of taking required courses while teaching.

    d. Absence of a program foundation and curriculum materials.

14. The following instructional strategies could have been helpful influences on their completion of their first three years of teaching but was difficult for them to implement the strategies:
    a. Building positive relationships with students.
    b. Monitoring and assisting students when they needed help.
    c. Being able to adjust instruction based on student feedback.
15. Negative influences on their completion of their first three years of teaching included the following:
    a. Not receiving enough observation and feedback.
    b. Not understanding what they needed to do to complete the provisional licensure process.
    c. Not knowing how to engage students.
    d. Not being familiar with the cooperative method of instruction.
    e. Not knowing how to integrate their professional student organization (FBLA or DECA) into their curriculum.
    f. Not being prepared to work with students with special needs.
16. They encountered the following challenges during their first three years of teaching:
    a. Obtaining support.
    b. Confusing and time-consuming professional development.
    c. Knowledge and familiarity with CTE core teaching and program management competencies their first three years of teaching.
    d. Salary and funding to help them pay for required licensure course work their first three years of teaching.

Conclusions

At the end of the three-year process, participants had a slight degree of improvement in their knowledge and implementation of the teaching and program management competencies. Participants indicated they would have greatly benefited from having a far more reaching and effective support system. They felt they would have learned a great deal more, had far less stress, and had been more successful in gaining knowledge of and implementing the essential core teaching and program management competencies. Traditional teacher preparation programs prepare teachers through coursework, a rigorous early field experience, and a teaching internship (student teaching) with a university supervisor and an internship cooperating teacher. This process allows pre-service teacher education students to gain knowledge of pedagogical teaching concepts and CTE program management competencies and then apply this knowledge in a real classroom setting with active supervision to assure mastery.

It was found that the current VDOE three-year provisional licensure process for BIT and MKED teachers in Virginia lacks effectiveness based on a limited support system, sequence and timing of coursework taken, and limited formal in-class supervised and guided practice. More supervision and guidance of participants applying teaching and program management competencies would increase the validity of the issued license and competence of the individual to perform required job responsibilities.

Based on the results of this study, the following conclusions were made regarding the provisional licensure process for first- and third-year Business and Information Technology (BIT) and Marketing Education (MKED) teachers:

1. Teachers need the following:
    a. Specific preparation training focused on core CTE teaching and program management competencies prior to entering the classroom.

b. A student teaching and/or co-teaching experience prior to entering the classroom by themselves.
c. Effective and active mentoring during the entire three-year provisional licensure process.
d. Administrator feedback and support during the three-year provisional licensure process.
e. Peer support and encouragement during the three-year provisional licensure process
f. Taking all required licensure course work within the first year of teaching.
g. Frequent checks on progress during the three-year provisional licensure process.
h. Observing successful teachers during the first year of the provisional licensure process.
i. Help obtaining and developing curriculum materials.
j. Help and support regarding:
    a. Working with students with special needs during the first year of the provisional licensure process.
    b. Developing relevant and engaging lesson plans during the first year of the provisional licensure process.
    c. Classroom management strategies during the first year of the provisional licensure process.
    d. Program management the first year of the provisional licensure process.

2. The Virginia Department of Education, working with school divisions, needs to establish, regulate, and develop mentor standards and training required of all school divisions.
3. Teachers should be introduced to the following support departments:
    a. Guidance department prior to entering the classroom.
    b. Special education department prior to entering the classroom.
4. Teachers should be provided professional development regarding:
    a. The core CTE teaching and program management competencies.
    b. How to integrate their co-curricular student organization (FBLA or DECA) into their curriculum during the first year of the provisional licensure process.
    c. How to implement work-based learning methods prior to entering the classroom.
    d. How to build proper role model relationships with youth.
5. The Virginia Department of Education working, with school divisions, should update, regulate, and clarify the provisional licensure process.
6. The state of Virginia should provide the following support:
    a. Resources to create and/or improve teacher preparation programs at universities and colleges.
    b. Creating and/or improving funding for teacher preparation programs at universities and colleges.
    c. Creating and/or improving scholarship opportunities to support traditional teacher preparation and provisional licensure pathways.

    d. Requiring school divisions to hire traditional teacher preparation candidates first and to only use the provisional licensure pathway as a last resort.

7. When using the provisional licensure pathway, school divisions should be required to sign a statement to Virginia Department of Education licensure indicating they did not have any fully licensed candidates apply.
8. School divisions should pay CTE teachers with significant industry experience higher on the teacher pay scale once they complete the requirements for a full teacher licensure.
9. Components of the Virginia three-year provisional license path to teaching appear to be good on paper. However, these components are rarely implemented at the local school system level.
10. The Virginia three-year provisional license path to teaching has served as an emergency stopgap to filling teaching vacancies throughout Virginia but has not worked well for most participants in preparing them in becoming qualified teachers.

Discussion of Results and Conclusions

Below and on the following pages is a discussion of the results and conclusions of the study. The discussion is organized as follows: 1) ineffectiveness of the provisional licensure pathway for BIT and MKED teacher preparedness as it relates to core teaching and program management competencies for CTE programs, 2) barriers provisional licensed BIT and MKED teachers encounter, 3) improving the provisional licensure pathway for BIT and MKED teachers, and 4) the theoretical framework supporting this study.

Ineffectiveness of the Provisional Licensure Pathway

Provisionally licensed Business and Information Technology (BIT) and Marketing Education (MKED) teachers were asked questions regarding their lived experiences with

implementing CTE core teaching and program management competencies. Most participants in year one and year three of their teaching responded they had experienced a great deal of difficulty to implement the competencies. Their degree of struggle correlated to their lack of knowledge of the competencies as well as the lack of quality mentoring, peer support, administrative support, and the quality, type, and year the professional development was taken. The level of struggle varied from teacher-to-teacher and school-to-school. Other negative factors included the lack of financial support and salary to support taking required provisional licensure courses as well as appropriate guidance on how to complete the course work and requirements for a full teacher licensure. It should be noted that many potential participants of the study declined to participate once they started completing the online survey. They simply said they had no idea that the competencies existed and knew very little, if anything, regarding how to implement them.

Many respondents from both participant groups mentioned knowing very little about the professional co-curricular student organizations, FBLA or DECA, associated with their respective programs. They were totally oblivious to the requirement to integrate student organization activities into their curriculum, much less regarding to how to actually implement the integration. They also had very little knowledge and skills associated with utilizing the cooperative method of instruction. Most of them did not even know it existed. Participants also cited classroom management as being one of the biggest learning curves during the three-year provisional licensure process. During year three participants started to see the importance of building relationships with students and reaching out to parents. But they still struggled with knowing how to do so. One business teacher mentioned the benefit of reporting positive news back to parents. Teachers also referenced the lack of collaboration and sharing among their peers. Teacher collaboration and sharing, at least within the context of provisionally licensed BIT and MKED education teachers does not occur frequently.

Most participants mentioned they struggled with helping students with special needs. One teacher mentioned the importance and benefit of attending Individualized Education Plan (IEP) meetings and reaching out to the special education department throughout the year. But again, most participants knew very little about how to accomplish this. The division culture and professional development taken by teachers impacted the level of teacher confidence when working with students with special needs. Within this study, the first-year teachers were less likely to attend IEP meetings. As teachers approached their third year, they were somewhat more likely to attend IEP meetings. Teachers often felt they were on their own island and were left out of the communication process from other departments within the school.

According to participants, a common problem was lesson planning and developing or finding curriculum support materials. Many indicated they would stay up into the late hours of the night creating their lesson activities and then became discouraged when students did not respond. Other teachers indicated they had no formalized or structured lesson plans but recognized the need to do so. They mentioned when they reached out to collaborate on lesson planning, many peer teachers were reluctant to help them. They indicated having to create curriculum from scratch and had limited curriculum materials provided to them when they took over their programs. In addition, they had no knowledge or skills regarding how to create their curriculum. Many of them created lessons and curriculum support materials based on their industry experience which was a good thing. But they lacked the pedagogical skills such as writing behavioral objectives, sequencing instruction, utilizing a variety of student engaging teaching methodologies, and student assessment. They indicated they were totally unprepared to becoming a good teacher and were very frustrated with the entire process. Teachers indicated they had less time available to them once the school year began and wished they had worked on lesson and curriculum content preparation during the summer. Many were informed of the courses they would teach just prior to

the school year starting or were hired on short notice. Many first-year participants mentioned they did not know how to create lessons that engage students. The degree of success with lesson plan delivery was directly correlated to the type and when the professional development was taken regarding curriculum development. The lack of professional development focused on practice teaching was also noted during the first year of the participants teaching.

Based on responses, many teachers felt they were lured into teaching from their industry jobs and misled regarding the job responsibilities of being a CTE teacher. Many did not understand the number of hours required, job competencies, and commitment to teach effectively before entering the classroom. Most participants indicated they struggled with implementing the core teaching and management competencies during the three-year provisional licensure process. Others mentioned they were stressed with the financial cost of the required college course work required of them to obtain their regular license and the time commitment to complete the courses while teaching within their three-year probation period. Others mentioned they had to get an additional job to help them pay for the required course work. Many participants indicated they were considering leaving high school teaching based on the job requirements, time commitments to teaching, and salary.

Participants indicated they had no idea which courses that were listed as provisional licensure requirements by the Virginia Department of Education (VDOE) as the most crucial for them to improve their teaching performance. They indicated they were left alone to determine which coursework to take and prioritize in the three-year provisional licensure period to improve their performance. With no experience in teaching, it was very frustrating and stressful for them to know which professional development activities (PDA) and coursework to select and prioritize to improve their performance. They also had difficulty in knowing where to look to find these PDA and coursework.

The researcher determined the current provisional license preparation path for BIT and MKED teachers in Virginia is not an effective way to prepare teachers for the classroom. Both, BIT and MKED teachers' professional interactions (or lack thereof) with mentors, colleagues, and administrators often negatively affected their perceived job satisfaction, teaching confidence, and effectiveness. Effective teacher preparation paths should increase teacher retention and aide the teacher's confidence and ability in teaching. Many of the teacher and program management competencies are critical skills needed for effective teaching and should be learned prior to entering the classroom. The current provisional license preparation path for BIT and MKED teachers in Virginia places teachers in a position where they struggle to learn the essential teaching and program management competencies on a three-year timeline.

Barriers Provisional Licensed Teacher Encounter

Business and Information Technology (BIT) and Marketing Education (MKED) teachers were asked, “What keeps you from implementing core teaching and program management competencies?” and “What struggles did you go through during the provisional licensure process?” when teaching throughout the school year. As compared to responses of other interview questions, it was common for long responses and discussion. This was not a difficult question for both groups of participants because they were eager to share their lived experiences. First-year and third-year BIT and MKED teachers shared similar thoughts on barriers to implementing core teaching and management competencies. Responses varied very little between the two groups of participants. Participants identified several barriers to implementing related teacher and program management competencies.

Lack of Practical Experience and Knowledge

Participants admitted they had very little knowledge or no knowledge at all of the core CTE teaching and program management competencies; much less how to implement them effectively.

Several stated, “You don’t know what you don’t know”. One participant mentioned she did not have a clue about pacing guides until an administrator asked her during her second year why she had not turned them in to be reviewed. Participant responses were similar with implementing the student organization (CTSO) and the co-operative method of instruction as well as other core competencies essential to effective teaching. Participants struggled to effectively implement many of the core teaching and management competencies because they did not have an applied teaching strategies class prior to teaching, or a student teaching or co-teaching experience with a cooperating teacher.

Lack of Administrative Support

Overall, administrative observation and feedback of teachers during the provisional licensure process was limited. Many teachers expressed the desire to receive feedback regarding their performance. Participants indicated because they were a CTE teacher they were just left on their own and they kind of just do what you want to do. Many indicated they wanted to be organized and informed and struggled with the lack of administrator feedback. Many were left to figure out what do in many cases. All participants indicated they wanted to do the best job possible. One teacher summed up the overall feeling of the teachers by saying, “I do not want to fly by the seat of my pants for a couple of weeks until I figure out what the heck I’m doing” (Rachel, line 183).

Lack of Administrator Knowledge of CTE

During this study, many participants reached out to their administrators for advice, guidance, and feedback regarding their Career and Technical Education (CTE) program areas and their teaching performance. In many cases participants began to realize they had to become the program expert because their administrators had limited knowledge of their CTE program area as well as the required CTE teaching and program management competencies required of them. They

would often reach out to administration to share ideas and gain feedback regarding their decisions but would receive limited response. When this took place, they struggled with program development and teaching and sought out advice from people with more experience in their CTE area. In some cases, participants reached out for administrative help and support in other school divisions. Many participants indicated they would have liked to have received more administrator guidance regarding their CTE program areas and teaching. Many were worried they would make a catastrophic mistake that would impact their students and sought administrator knowledge and approval when making decisions. Participants describe a feeling of being on their own island in CTE and distant from the communication process of the school.

Lack of Mentor Support

Teachers did not have sufficient mentor support to guide them through three years of the provisional licensure process. In many cases they felt the mentor was not compatible and reached out to others to find an unofficial mentor. In some cases, they had to request a mentor and the process was delayed well into their teaching. One teacher mentioned that they felt the mentor wanted to talk about how they were feeling and their emotions, but they felt they were not helping them with how to implement the teaching competencies. Most of the participants felt the mentoring they received did not help them. Participants wanted their mentors to provide guidance and then confirm they were performing the CTE teaching and program management competencies correctly through direct observation. In most cases the lack of effective mentoring impacted the participants self-confidence and ability to grow.

Lack of Peer Support

Participants mentioned when they reached out to collaborate, they found many peer teachers were reluctant to share or help them. They indicated that other teachers felt threatened they might do a better job. Participants indicated they made attempts to share lessons and

curriculum materials they had developed but met resistance. One participant sent emails to division wide teachers wanting to collaborate with no response and little support from administration. Another teacher asked for example lesson plans and met resistance. A culture of positive peer support and collaboration was identified as a key factor for success of the provisionally licensed teacher.

Lack of Support to Complete the Provisional Licensure Process

Participants indicated they needed help with figuring out how to successfully complete the provisional licensure process. Many participants were left trying to figure out which courses to take. Others indicated they took the courses over a three-year time frame but realized they needed the knowledge in the courses prior to teaching. One participant indicated the process was confusing and not the same for everyone. Other participants indicated the financial strain of paying for courses and struggled to find affordable classes to take. Participants indicated completing the provisional licensure requirements while teaching was stressful.

COVID

The COVID-19 pandemic has required provisionally licensed BIT and MKED teachers to learn to teach distantly. This has complicated the already problematic provisional licensure process as they go through learning to implement related teacher and program management competencies in a face-to-face and virtual environment. It is important to note many of the same struggles provisionally licensed teachers encounter in the face-to-face environment they also encountered in a distance learning format. Participants reported they struggled to develop lessons, develop curriculum materials, engage students, assess students, utilize work-based learning methods, and implement the student organization (CTSO) distantly. All the participants had face-to-face teaching experience and some form of distanced teaching through an online platform.

Improving the Provisional Licensure Pathway

Several improvements need to be made regarding the provisional licensure process for BIT and MKED teachers. One of the biggest obstacles identified was mentoring and supervisory support for BIT and MKED teachers. Participants would have benefited greatly if they had co-taught or student taught with an experienced teacher prior to being turned loose in the classroom by themselves. Mentors, administrators, and peer teachers have other responsibilities and are often not located near the provisionally licensed teacher.

Other considerations are to prioritize essential coursework within the three-year process that revolves around critical core teaching and program management competencies. Teachers taking coursework related to helping students with special needs, lesson planning, program management, teaching methods, curriculum development, and classroom management should not be taken in the third year of the provisional licensure process. First year teachers lack knowledge on what professional development courses to take because they have never taught before. Therefore, it is essential; provisional licensed teachers be guided through administrative feedback and observation regarding what professional development to take to improve performance.

The Virginia Department of Education (VDOE) along with legislators should make great efforts to regulate and develop guidelines for the use of the provisional licensure process. School divisions that opt to hire candidates through a provisional licensure pathway should have to sign an accountability and requirement statement to the VDOE prior to the issuance of a provisional license. School divisions should be required to meet rigorous guidelines that outline the training and support that is needed when they hire candidates through the provisional licensure process. In addition, a statewide hiring database of fully licensed highly qualified teacher candidates should be kept for school divisions to use. This database would incentivize school divisions to hire traditional teacher preparation candidates and list and encourage the requirements that potential teacher

candidates have to obtain before their names are listed in the hiring database. The use of provisional licensure decades ago was utilized as a last resort to hiring a CTE teacher. However, today it has become the primary way we place BIT and MKED teachers in the classroom. The provisional licensure process should be periodically reviewed for improvement.

The state of Virginia should seek to re-establish and strengthen traditional teacher preparation programs and establish provisional licensure teacher preparation programs in Virginia colleges and universities that support co-teaching and/or student teaching. With regards to provisionally licensed Business and Information Technology (BIT) and Marketing Education (MKED) teacher professional development it is very difficult for school divisions to provide all the comprehensive training needed to learn everything involved with CTE core teaching and management competencies. CTE programs are very distinct and require specialized teacher preparation. Funding should be provided that incentivizes formal teacher preparation paths be it through a revised and improved provisional licensure path or a traditional teacher preparation path.

Theoretical Framework Serving as an Underpinning of the Study

John Dewey was an educational philosopher who had important thoughts on teacher training (Zeichner & Liston, 2014). He believed having both content knowledge/expertise and pedagogical knowledge/expertise are equally important in order for someone to be a successful teacher. Provisionally licensed teachers who transition into teaching are entering a new occupation and are faced with the challenge of learning how to teach. Dewey's theory relates directly to the process of the three-year provisional licensure path to becoming CTE teachers in Virginia. It served as the theoretical underpinning to this study.

Dewey articulates his views about teacher training and the appropriate connection between pedagogical methods, subject matter expertise and applied teaching experience in the preparation of teachers. He believed that to become an exceptional teacher, one must have an in-

depth understanding of the subject matter being taught *and* knowledge and skills associated with how to teach, followed by practical teaching experience (Dewey, 1904). According to Dewey (1904), prospective teachers need to understand how their pedagogical practice in the classroom affects student learning (Dewey, 1904). Both aspects of his theory are significant in that if one is missing the chance of becoming an exceptional teacher is diminished. According to Dewey, teachers who master content knowledge and proper pedagogical techniques can recognize which teaching strategies work with students.

Dewey (1904) indicates beginning teachers placed in a classroom encounter and resolve two interrelated problems which are 1) "mastery of subject matter from the standpoint of its educational value and uses" (p. 253) and 2) "mastery of the technique of class management" (p. 253). According to Dewey, the fledgling teacher cannot give both problems attention at the same time (Dewey, 1904). According to Dewey, the gaining of knowledge and understanding of the pedagogical practice of teaching should come before the application of the theory in an actual classroom (Shulman, 1988). Dewey (1904) believed it is possible for a teacher to learn the methods of teaching before knowing how to use the methods in a practical classroom. Teachers who face the challenge of leading a class before they become knowledgeable in content and pedagogy develop teaching behaviors that sustain order in the classroom rather than helping and discovering how their students learn (Cochran-Smith & Lytle, 1993). Dewey (1904) believed that aspiring teachers should understand pedagogy and content knowledge prior to practical teaching experience in a real classroom. The results of this study illustrate the importance of both components of Dewey's theory.

Dewey's philosophy about teacher training is important because subject matter knowledge is the only qualification required by the Virginia Department of Education to become a provisionally licensed CTE teacher in the state of Virginia (Virginia Department of

Education, 2017). Prospective teachers in Virginia Public Schools are required to hold a degree in the field taught. Provisionally licensed teachers in Virginia receive a three-year non-renewable license and are required to take course work and licensure tests as outlined by the Virginia Department of Education licensure office within three years of their teaching starting date in order to obtain the ten-year renewable license. Pedagogy knowledge and practical teaching experience is not an entrance requirement for provisionally licensed CTE teachers in Virginia, but rather something they must learn on the job. As the results of this study indicate, this path to a teaching career is ineffective. Again, it illustrates the importance of having both content and pedagogical knowledge prior to teaching. Understanding that this path to teacher licensing is a stopgap measure to solve the teacher shortage in Virginia, in order for it to work there needs to be a more rigorous process for implementing and completing the program.

Recommendations for Practice

Based on the findings and conclusions of the study, recommendations for practice are as follows:

1. The Virginia Department of Education (VDOE) should take the following action:
    a. A supervised student teaching experience should be required of provisionally licensed Business and Information Technology (BIT) and Marketing Education (MKED) teachers prior to them entering the classroom.
    b. If a supervised student teaching experience is not available prior to the provisionally licensed BIT and MKED teacher being hired and entering the classroom a co-teacher should be assigned to work with them for a minimum of six months to enhance the learning and understanding of the core teaching and management competencies.

c. The VDOE should improve, discourage, and regulate the use of the provisional licensure pathway.
d. The VDOE should review, revamp, publish, and approve a list of statewide college coursework that can be taken by provisionally licensed BIT and MKED teachers to ensure essential core teaching and program management competencies required for effective teaching are taken.
e. Provisionally licensed BIT and MKED teachers should be required to take specific coursework identified as critical during their first year of teaching by the VDOE to teach and run a CTE program prior to entering the classroom by themselves.
f. The VDOE should develop a statewide hiring database of fully licensed highly qualified teacher candidates wishing to teach in Virginia for all school divisions to use.
g. The VDOE should require school divisions that opt to hire candidates through a provisional licensure pathway to sign an accountability and requirement statement to the VDOE indicating they did not have any fully licensed candidates apply prior to the issuance of a provisional license.
h. The VDOE should improve and regulate the training requirements for mentoring.
i. The mentoring process for provisionally licensed BIT and MKED teachers should be greatly improved.
j. Licensed administrators running CTE departments should be required to have a demonstrated in depth understanding of CTE teaching and program management competencies.

k. Pedagogical courses required of BIT and MKED provisional licensed teachers for full licensure must relate to the core CTE teaching and program management competencies.

l. A course on CTE program management needs to be added to the list of required courses to be taken by BIT and MKED provisional licensed teachers within their first three years of teaching.

2. School divisions should take the following action:

   a. Meet rigorous guidelines that outline the training and support that is needed when they hire candidates through the provisional licensure process.

   b. Identify, create, and provide professional development training for provisionally licensed BIT and MKED teachers with regards to core teaching and program management competencies.

   c. Ensure that provisionally licensed BIT and MKED teachers understand their professional roles and responsibilities as it relates to core teaching and management competencies prior to being hired.

   d. Ensure that provisionally licensed BIT and MKED teachers understand the requirements that are required to complete the provisionally licensure process prior to them being hired.

   e. Ensure that administrative observation, feedback, and guidance for provisionally licensed BIT and MKED teachers be provided frequently and consistently.

   f. Provide training to ensure administrative understanding and competence of Career and Technical Education (CTE) programs as well as the required related core teaching and management competencies that teachers must know to effectively implement such programs.

g. School administration and school divisions should create and encourage a "positive culture" for teacher collaboration with newer teachers.

3. The Virginia General Assembly (VGA) should provide the following support:
    a. The VGA should provide increased funding to restore, create, and improve traditional teacher preparation programs at colleges and universities.
    b. The VGA should provide increased funding to improve and create provisional licensure preparation programs at colleges and universities.
    c. The VGA should provide increased scholarship funding to recruit new teachers and help pay for traditional teacher preparation.

Recommendations for Future Research

1. Address educational or training deficits of all CTE teachers with regards to core teaching and management competencies of CTE administrators.
2. Duplicate this study in other states or other regions in Virginia.
3. Implement research towards creating guidelines of best practice with regards to mentoring and supervision of provisionally licensed teachers.
4. Implement research to determine the types of specific CTE teaching and management competencies training being offered to MKED and BIT teachers through school division professional development and college coursework.
5. Implement research specifically identifying why provisional licensure teachers remain or leave the teaching profession.

Final Remarks

The researcher is thankful for the BIT and MKED teachers who participated in the study. It was an honor to learn about the lived experiences of each participant. During the global pandemic of COVID-19 participants gave the researcher valuable time in a year that was personally and professionally challenging. Every participant remained optimistic about their students and their ability to improve their teaching. The dedication to their profession and to their students was well noted. Many participants reached out and sought advice on how to find additional support for their continued professional development and growth. The research took notice that provisional licensed BIT and MKED teachers want to do a tremendous job for their students. They spent many hours and devoted long efforts for their students to receive a better education. As a teacher, the participants reminded me of how important teaching is to the future of our children. The researcher was also reminded how important it is for new teachers to have positive relationships with their highly successful peers. It is the researcher's opinion that stakeholders within school divisions should look for better ways to embrace and support new teachers into their communities. Additionally, the researcher is aware of the tremendous sacrifices provisionally licensed BIT and MKED teachers made coming from industry to teach students. The researcher wishes to express appreciation from the bottom of his heart.

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Appendix A

Participant Recruitment Letter

Dear CTE Teachers,

As a Ph.D. doctoral candidate in Career and Technical Education at Virginia Tech, I am conducting a qualitative research study as partial fulfillment of my doctorate degree. The title of the research project is "Effectiveness of the Provisional Teaching License Route in Virginia for Preparing Business and Information Technology (BIT) and Marketing Education (MKED) Teachers".

Since the use of provisional licensure for teachers in Virginia has increased, resulting in most CTE teachers obtaining licensure through the provisional licensure process research is needed to determine the effectiveness of the routes.

You are being requested to participate in this study because of your daily experiences of developing and delivering CTE curriculum as you pursue CTE teacher licensure through a provisional route. You, above all others, are in a perfect position to provide insight into your level of understanding of CTE teaching and program management competencies. The findings of this study will assist administrators and policy makers across the state of Virginia with their attempt to improve the effectiveness of the provisional route for CTE teacher preparedness.

Your participation in the study will involve a one-on-one interview that will take approximately 45 minutes to complete. The interview will be held at a time and place that is convenient for you. A pseudonym will be used in a final report of the findings and your identity will be kept completely confidential. Participation in the study is voluntary and you can withdraw at any time during the interview process if you so choose. After the interviews are conducted, you will be able to review the findings for accuracy.

My personal background includes serving as a CTE teacher and administrator in Virginia. I am excited about the opportunity for this research to improve the effectiveness of the provisional licensure route for CTE teacher preparedness.

As a token of my appreciation for your participation in this study, I will provide you with a $15 honorarium card. If you have any questions or have an interest in participating, please feel free to reply to this email or call me at (540)-656-8507.

Thank you in advance.

Sincerely,

Michael D. Shumate
Doctoral Candidate
Career and Technical Education
Virginia Tech

Appendix B

Participant Follow Up Email

Dear CTE Teachers,

As I mentioned in an earlier email to you, I am conducting a research study concerning Business and Information Technology (BIT) and Marketing Education (MKED) CTE teacher preparedness as it relates to core teaching and program management competencies for CTE educators who are seeking licensure through Virginia's CTE teacher provisional route. I am very excited about the potential this research has to improve the effectiveness of the provisional licensure route in Virginia for CTE teacher preparedness.

Your participation in this study will involve a one-on-one interview that will take approximately 45 minutes to complete. The interview will be held at a time and place that is convenient for you. Participation in the study is voluntary and your identity will be kept completely confidential. If you decide to participate, you can withdraw at any time during the interview process. You will have the opportunity to review the findings for accuracy.

Please contact me via email or at (540) 656-8507

Thank you in advance.

Sincerely,

Michael D. Shumate
Doctoral Candidate
Career and Technical Education
Virginia Tech

Appendix C

Consent for Pre-Interview Survey

VIRGINIA POLYTECHNIC AND STATE UNIVERSITY

Informed consent for Participants in Research Projects

Involving Human Subjects

Title of Research Project: Effectiveness of the Provisional Teaching License Route in Virginia for Preparing Business and Information Technology (BIT) and Marketing Education (MKED) Teachers

Researcher: Michael D. Shumate, Career and Technical Education, Virginia Polytechnic and State University

I. Purpose of this Research/Project

The purpose of this research study was to assess the provisional teaching license path in Career and Technical Education for Business and Information Technology (BIT) and Marketing Education (MKED) teachers in Virginia. The study examined CTE teacher preparedness as it relates to core teaching and program management competencies for CTE educators who enrolled and completed Virginia's teacher provisional licensure route to determine the effectiveness of the routes themselves.

II. Procedures

Your participation in this study will require you to participate in a pre-interview survey (open-end questionnaire). The pre-interview survey will take approximately 30-45 minutes. During the pre-interview process you will be asked about yourself, teaching experiences, and your level of understanding of CTE teacher competencies.

III. Risks

The risks associated with participating in this study are considered to be minimal.

IV. Benefits

No promise or guarantee of benefits has been made to encourage me to participate. However, the results of this study might provide: (1) Help to improve the provisionally licensed teacher route process to prepare beginning CTE teachers in Virginia, (2) Provide factors in CTE provisional-route programs that prepare teachers to teach with confidence, (3) Identify successful methods of a CTE provisional-route programs, (4) Identify the significance of beginning CTE teachers' professional relationships with administrators and mentor teachers and (4) assist school district governing boards to better designate staff and resources to adequately support provisionally licensed teachers.

V. Extent of Anonymity and Confidentiality

Every effort will be made to protect your identity in any written work resulting from this study. Where need arises to use a name, a pseudonym will be used to identify you in any written materials. The researcher will make every effort to mask identifiers. For example, your school will not be identified by name or other identifying characteristics. The researcher is the only individual who will have access to the results of the Pre-Interview Survey and the recordings of the interviews. The results of pre-interview survey will be saved as pdf files. Both survey results and the recording data will be stored in a locked filing cabinet in the researcher's personal residence. The recordings will be erased/destroyed after a minimum of 3 years. Before the recordings are destroyed, the researcher will have determined that all necessary data and conclusions have been retrieved and transcribed. Transcripts may be viewed by the researcher and members of the dissertation committee. The Virginia Tech (VT) Institutional Review

Board (IRB) may view the study's data for auditing purposes. The IRB is responsible for the oversight of the protection of human subjects involved in research.

VI. Compensation:

You will receive a $15 VISA gift card at the completion of the interview as compensation for participating in this study.

VII. Freedom to Withdraw

It is important for you to know that you are free to withdraw from this study at any time without penalty. You are free not to answer any questions that you choose or respond to what is being asked of you without penalty. Please note that there may be circumstances under which the investigator may determine that a subject should not continue as a subject. Should you withdraw or otherwise discontinue participation, you will be compensated for the portion of the project completed in accordance with the Compensation section of this document.

VIII. Questions or Concerns

Should you have any questions about this study, you may contact the researcher or researcher's advisor whose contact information is included at the end of this document. If I should have questions about the protection of human research participants regarding this study, I may contact the Virginia Tech Institutional Review Board at irb@vt.edu or (540) 231-3732.

IX. Participant's Consent

I have read the Consent Form and conditions of this project. I have had all my questions answered. I hereby acknowledge the above and give my voluntary consent:

_____ Date _____

Signature of Participant

_____

Printed Name

_____ Date _____

Signature of Principal Investigator

_____

Printed Name

Contact Information:

Michael D. Shumate Researcher	540.235.6789/mshumate@vt.edu Telephone/email
Dr. Bill Price Faculty Advisor	540.231.7390/wprice@vt.edu Telephone/email
Virginia Tech Institutional Review Board	540.231.3732/irb@vt.edu Telephone/email

[Note: Participants were given a complete copy (or duplicate original) of the signed Informed Consent.]

Appendix D

Pre-Interview Survey for CTE Teacher's Pursuing Licensure Through Virginia's Provisional Licensure Route

Part I: Demographic Information

Instructions: The demographic information section will take approximately 5-10 minutes. During this process you will be asked to type in information and/or select a drop-down box for questions. Once each question is completed you will click an arrow at the bottom right to continue to the next question. At the completion of question five you will be asked to continue to the pre-interview survey "CTE Core Teaching and Competency List" by clicking a link.

What is your name?

What is the highest level of formal education you have completed?

Select:

- Associates
- Bachelors
- Masters
- Doctoral

What amount of formal teaching preparation and professional development training for teaching do you have?

- None
- Less than 6 months
- Less than a 1 year
- 1 Year
- 2 Years
- 3 Years
- Greater than 3 years

How many years of teaching experience do you have?

Select 1st Year
Select 3rd Year

Please indicate the name of your school system.

Please indicate the courses you are teaching.

How should the interviewer get in touch with you to set up an interview

- Email
- Phone/Text
- Other

Click to continue to the pre-interview survey "CTE Core Teaching and Management Competency List"

Part II: CTE Core Teaching and Management Competency List

Career and Technical Education (CTE) core teaching competencies are pedagogical competencies CTE teachers should know and be able to do to guarantee every PK-12 student reaches the goal of being ready to enter college or the workforce in today's world. CTE core program management competencies are fundamental for CTE teachers to know and be able to do to guarantee their CTE program is operated properly by required guidelines and standards.

Instructions: You will be given a list of CTE core teaching and management competencies and you are to select by clicking your level of strength as it relates to each competency listed using the survey

Rating Scale: Rate your ability to implement each point on a scale of 1 (weakness) to 5 (strength)

	1	**2**	**3**	**4**	**5**
Category A – program planning, development, and evaluation					
A1 Develop program goals and objectives					
A2 Conduct a student follow-up survey					
A3 Develop a course of study based on industry or state Standards					
A4 Develop long-range plans					
A5 Evaluate CTE programs					
A6 Collaborate with other CTE teachers and administrators to plan, development, and evaluate a CTE program					
A7 Organize and maintain an occupational advisory Committee					
A8 Search for existing regional employment forecasts					
A9 Conduct an occupational analysis					
A10 Prepare, conduct, and report community survey					
	1	**2**	**3**	**4**	**5**
Category B – instructional planning					
B1 Develop a unit of instruction					
B2 Research and select instructional materials					
B3 Develop student performance objectives					

B4 Determine needs and interests of students					
B5 Prepare teacher-made instructional materials					
B6 Develop a lesson plan					
B7 Integrate academic instruction within CTE courses					

	1	**2**	**3**	**4**	**5**
Category C – instructional execution					
C1 Direct students in applying problem-solving techniques					
C2 Present information using instructional videos					
C3 Employ reinforcement techniques					
C4 Introduce a lesson					
C5 Demonstrate a concept or principle					
C6 Direct student lab experience					
C7 Provide instruction for slower and more capable learners					
C8 Employ oral questioning techniques					
C9 Summarize a lesson					
C10 Employ the project method					
C11 Direct field trips					
C12 Employ simulation techniques					
C13 Present information using a variety of internet resources					

C14 Demonstrate a manipulative skill					
C15 Individualize instruction					
C16 Guide student study					
C17 Use subject matter experts to present information					
C18 Present information using a variety of electronic media (LCD projector, tablet, document camera, interactive whiteboard, clickers, etc.)					
C19 Direct students in instructing other students					
C20 Present information with models and real objects					
C21 Present information using presentation software (PowerPoint, Keynote, etc.)					
C22 Present an illustrated talk					
C23 Conduct group discussions, panel discussions, and symposiums					
C24 Present information with televised and videotaped materials					
C25 Employ the brainstorming technique					
C26 Employ a team-teaching approach					
C27 Employ programmed instruction					
C28 Prepare bulletin boards and exhibits					
C29 Present information with the whiteboard					
C30 Present information with overhead and opaque materials					
C31 Present information with audio recordings					
C32 Employ the question box technique					

C33 Employ the buzz group technique					

	1	2	3	4	5
Category D – instructional evaluation					
D1 Assess student performance – skills					
D2 Evaluate instructional effectiveness					
D3 Assess student performance – knowledge					
D4 Establish student performance criteria					
D5 Assess student performance – attitudes					
D6 Determine student grades using formative and summative assessments					
D7 Search for industry-related assessments for use in class					

	1	2	3	4	5
Category E – instructional management					
E1 Provide for student safety					
E2 Project instructional resource needs					
E3 Assist students in developing self-discipline					
E4 Manage the CTE lab					
E5 Maintain a filing system					
E6 Organize the CTE lab					
E7 Provide for the first aid needs of students					
E8 Arrange for improvement of CTE facilities					
E9 Manage budgeting and reporting responsibilities					

E10 Assist other professionals (teachers, counselors, administrators) with student behavioral issues (drug abuse and bullying)					
E11 Monitor students' use of CTE lab chemicals					

	1	**2**	**3**	**4**	**5**
Category F – guidance					
F1 Provide information on educational and career opportunities					
F2 Assist students in applying for employment or further education					
F3 Use conferences to help meet student' needs					
F4 Gather student data through personal contacts					
F5 Gather student data using formal data-collection techniques					

	1	**2**	**3**	**4**	**5**
Category G – school-community relations					
G1 Develop and maintain a relationship with school guidance counselors					
G2 Work with members of the community					
G3 Obtain feedback about the CTE program					
G4 Give presentations to promote the CTE program					
G5 Conduct an open house					
G6 Develop brochures to promote the CTE program					
G7 Work with state administrators and local educators					
G8 Develop a professional relationship with parents and guardians					
G9 Prepare displays to promote the CTE program					

G10 Prepare news releases and articles concerning the CTE program					
G11 Develop a school-community relations plan for the CTE program					
G12 Develop student-ambassador programs to assist with marketing CTE programs					
G13 Develop and maintain a program web site					
G14 Arrange for television and radio presentations concerning the CTE program					
G15 Develop and maintain a program social media presence					

Category H – career and technical student organizations	**1**	**2**	**3**	**4**	**5**
H1 Supervise activities of the CTSO					
H2 Guide participation in CTSO					
H3 Prepare CTSO members for leadership roles					
H4 Develop a personal philosophy concerning CTSOs					
H5 Assist CTSO members in developing and financing a yearly program of activities					
H6 Develop creative/effective alternatives to official					
CTSOs (local or regional competitions and/or service learning projects)					
H7 Establish a CTSO					

Category I – professional role and development	**1**	**2**	**3**	**4**	**5**
I1 Keep up-to-date professionally					
I2 Serve the school and community					
I3 Obtain a suitable teaching position					

I4 Serve the teaching profession					
I5 Develop an active personal philosophy statement					
I6 Mentor new CTE teachers					
I7 Supervise student-teachers					
I8 Build a network of supportive resources such as a mentor teacher, as well as state and national organizations					
I9 Provide lab experiences for prospective teachers					
I10 Plan the student teaching experience					
I11 Work summer externships to keep up-to-date with industry trends and changes					

	1	**2**	**3**	**4**	**5**
Category J – coordination of cooperative education					
J1 Prepare for students' related instruction					
J2 Develop alternative work-based learning experiences (job shadowing, unpaid internships, etc.) where co-op experiences are not possible					
J3 Establish guidelines for a cooperative CTE program					
J4 Evaluate co-op students' on-the-job performance					
J5 Coordinate on-the-job instruction					
J6 Enroll students in a co-op program					
J7 Secure high-quality training stations for the co-op program					
J8 Place co-op students on the job					
J9 Develop the training ability of work site instructors					

J10 Supervise an employer/employee appreciation event					
J11 Manage the attendance, transfers, and terminations of co-op students					

	1	**2**	**3**	**4**	**5**
Category K – serving students with special needs					
K1 Improve teacher communication skills					
K2 Promote peer acceptance of students with special needs					
K3 Use instructional techniques to meet the needs of students with special needs					
K4 Assess the progress of students with special needs					
K5 Prepare to serve students with special needs					
K6 Plan instruction for students with special needs					
K7 Provide appropriate instructional materials for students with special needs					
K8 Modify the learning environment for students with special needs					
K9 Prepare special education students for employability					
K10 Work collaboratively with special education personnel including assisting in the development of IEPs and accommodations					
K11 Assist special education students in developing career planning skills					
K12 Counsel special education students with personal-social problems					
K13 Promote a CTE program for students with special needs					

Category L – assisting student in improving their basic skills	**1**	**2**	**3**	**4**	**5**
L1 Assist students in improving their career and employability skills					
L2 Assist students in improving their oral communication skills					
L3 Assist students in improving their survival skills					

L4 Assist students in developing technical reading skills					
L5 Assist students in improving their math skills					
L6 Assist students in improving their writing skills					
L7 Assist students in achieving basic reading skills					

Category M – teaching adults	**1**	**2**	**3**	**4**	**5**
M1 Prepare to work with adult learners					
M2 Manage the instructional process					
M3 Plan instruction for adults					
M4 Evaluate the performance of adults					
M5 Determine individual training needs					
M6 Market the adult education program					

Source: Manley Adam, Richard Zinser, (2012). "A Delphi study to update CTE teacher competencies", Education +Training, Vol. 54 Issue: 6, pp.488-503, https://doi.org/10.1108/00400911211254271

Appendix E
Interview Questions for CTE Teacher's pursuing licensure through Virginia's provisional licensure route

Consent for Interview

VIRGINIA POLYTECHNIC AND STATE UNIVERSITY

Informed consent for Participants in Research Projects

Involving Human Subjects

Title of Research Project: Effectiveness of the Provisional Teaching License Route in Virginia for Preparing Business and Information Technology and Marketing Education Teachers

Researcher: Michael D. Shumate, Career and Technical Education, Virginia Polytechnic and State University

X. Purpose of this Research/Project

The purpose of this research study was to assess the provisional teaching license path in Career and Technical Education in Virginia. The study examined CTE teacher preparedness as it relates to core teaching and program management competencies for Business and Information Technology and Marketing Education CTE educators who enrolled and completed Virginia's teacher provisional licensure route to determine the effectiveness of the routes themselves.

XI. Procedures

Your participation in this study will require you to participate in a pre-online survey prior to the interview. The pre-online survey will be take approximately 30-40 minutes. During the pre-online survey process you will be asked about yourself, teaching experiences, and your level of understanding of CTE teacher competencies. The interview will take approximately 45-60 minutes to complete and will take place at mutually agreed upon the methods. You may choose a traditional face to face interview or online interview through ZOOM. During the interview, you will share with the interviewer your experiences of implementing CTE teacher competencies within your CTE program in Virginia. The traditional interview will be held at a time and venue that is convenient for you. The online video interview will be held at a time that is convenient for you through ZOOM. To ensure the reliability of the data, video recording is required for whole interview.

During the interview process you may be asked questions on the following topics:

What are the lived experiences of CTE teachers with regards to integrating and using CTE teacher and program management competencies into your curricula?

What is your experience with program planning, development, and evaluation?

What do you do for instructional planning?

What is involved with instructional execution?

What approaches do you take for instructional evaluation?

What are some of your instructional management strategies?

How do you provide guidance to students?

How do you establish school-community relations?

What is involved with managing your career and technical student organization?

How do you maintain your professional role and development?

How do you coordinate cooperative education with students?

How do you serve students with special needs?

What is involved with assisting student in improving their basic skills?

What is involved with teaching adults?

You will be interviewed the time and place that are convenient for you. You may also be asked to provide your syllabus and other instructional materials and your consent is requested for the researcher analyze these documents. If you do not wish to share written instructional materials, but are willing to participate in the interview, that is perfectly fine.

XII. Risks

The risks associated with participating in this study are considered to be minimal.

XIII. Benefits

No promise or guarantee of benefits has been made to encourage me to participate. However, the results of this study might provide: (1) Help to improve the provisionally licensed teacher route process to prepare beginning CTE teachers in Virginia, (2) Provide factors in CTE provisional-route programs that prepare teachers to teach with confidence, (3) Identify successful methods of a CTE provisional-route programs, (4) Identify the significance of beginning CTE teachers' professional relationships with administrators and mentor teachers and (4) assist school district governing boards to better designate staff and resources to adequately support provisionally licensed teachers.

XIV. Extent of Anonymity and Confidentiality

Every effort will be made to protect your identity in any written work resulting from this study. Where need arises to use a name, a pseudonym will be used to identify you in any written materials. The researcher will make every effort to mask identifiers. For example, your school will not be identified by name or other identifying characteristics. The researcher is the only individual who will have access to the results of the Pre-Interview Survey and the recordings of the interviews. The results of pre-interview survey will be saved as pdf files. Both survey results and the recording data will be stored in a locked filing cabinet in the researcher's personal residence. The recordings will be erased/destroyed after a minimum of 3 years. Before the recordings are destroyed, the researcher will have determined that all necessary data and conclusions have been retrieved and transcribed. Transcripts may be viewed by the researcher and members of the dissertation committee. The Virginia Tech (VT) Institutional Review Board (IRB) may view the study's data for auditing purposes. The IRB is responsible for the oversight of the protection of human subjects involved in research.

XV. Compensation:

You will receive a $15 VISA gift card at the completion of the interview as compensation for

participating in this study.

XVI. Freedom to Withdraw

It is important for you to know that you are free to withdraw from this study at any time without penalty. You are free not to answer any questions that you choose or respond to what is being asked of you without penalty. Please note that there may be circumstances under which the investigator may determine that a subject should not continue as a subject. Should you withdraw or otherwise discontinue participation, you will be compensated for the portion of the project completed in accordance with the Compensation section of this document.

XVII. Questions or Concerns

Should you have any questions about this study, you may contact the researcher or researcher's advisor whose contact information is included at the end of this document. If I should have questions about the protection of human research participants regarding this study, I may contact the Virginia Tech Institutional Review Board at irb@vt.edu or (540) 231-3732.

XVIII. Participant's Consent

I have read the Consent Form and conditions of this project. I have had all my questions answered. I hereby acknowledge the above and give my voluntary consent:

_____ Date _____

Signature of Participant

_____

Printed Name

_____ Date _____

Signature of Principal Investigator

_____

Printed Name

Contact Information:

Michael D. Shumate Researcher	540.235.6789/mshumate@vt.edu Telephone/email
Dr. Bill Price Faculty Advisor	540.231.7390/wprice@vt.edu Telephone/email
Virginia Tech Institutional Review Board	540.231.3732/irb@vt.edu Telephone/email

[Note: Participants were given a complete copy (or duplicate original) of the signed Informed Consent.]

Appendix F
Interview Questions

This study addresses the following main research question: What are the lived experiences of Virginia Business and Information Technology (BIT) and Marketing Education (MKED) teachers with regard to integrating teacher and program management competencies into their curricula?

The following is a list of prompts designed to collect data to address the research questions. The interview will be semi-structured, which may result in participant comments that may or may not relate directly to the research questions but could contribute to the data collection. The following statements and prompts will guide the interview:

1. Thank you for participating this interview. My name is Michael Shumate. It is pleasure to have you help me with my research. Before we start, I would appreciate if you would restate your consent to be recorded as the beginning of our formal interview (Give them a hard-copy of the written consent form to review, sign, and initial and collect back from them. Turn on the video device).

2. I will tell you what is going to happen during your interview. I am going to begin by giving you some more information about the research and then be asking you some questions to hear your experiences. Is this ok? (answer)

3. I was recently a high school teacher like you. One day, I asked myself "am I doing ok with the job duties and requirements of being a BIT and MKED teacher in Virginia? Am I helping my students acquire knowledge and skills needed?" This is the origin of this research topic. The purpose of this research is to determine the factors that affect the implementation of BIT and MKED teacher and

program management competencies as defined by lived experiences of Virginia CTE teachers. Do you have any question about the research?

4. Please tell me about yourself. I want to hear from you; your name and which high school you are teaching.

5. Which courses are you teaching? How long have you taught?

6. What is your experience with program planning, development, and evaluation?

7. What do you do for instructional planning?

8. What is involved with instructional execution?

9. What approaches do you take for instructional evaluation?

10. What are some of your instructional management strategies?

11. How do you provide guidance to students?

12. How do you establish school-community relations?

13. What is involved with managing your career and technical student organization?

14. How do you maintain your professional role and development?

15. How do you coordinate cooperative education with students?

16. How do you serve students with special needs?

17. What is involved with assisting student in improving their basic skills?

18. What is involved with teaching adults?

At the end of the interview, the teacher will be given a $15.00 honorarium in appreciation for his or her participation in the study. The interview recording will be transcribed as soon as possible after the interview.

Appendix G

Thank You Letter After an Interview

Dear Teacher

Thank you for your participation in my study. I was very impressed with your experience concerning the integration of teacher competencies into Virginia CTE curricula. The information you provided will be helpful to the study's outcome.

You will soon have the opportunity to review the transcript of the interview for accuracy. This will be a very important step for providing validity to the study.

Please note when conducting your review that all individual identification will have been removed and a pseudonym will be used for your name.

Again, thank you for your time!

Sincerely,

Michael D. Shumate
Doctoral Candidate
Career and Technical Education
Virginia Tech

Appendix H
1960 Core Teaching and Management Competencies for CTE Teachers

Category A: Program Planning and Evaluation

Prepare a Community Survey

Conduct a Community Survey

Report the Findings of a Community Survey

Organize an Occupational Advisory Committee

Maintain an Occupational Advisory Committee

Develop Program Goals and Objectives

Conduct an Occupational Analysis

Develop a Course of Study

Develop Long-Range Program Plans

Conduct a Student Follow-Up Survey

Evaluate Your Career and Technical Education Program

Category B: Instructional Planning

Determine Needs and Interests of Students

Develop Student Performance Objectives

Develop a Unit of Instruction

Develop a Lesson Plan

Select Student Instructional Materials

Prepare Teacher-Made Instructional Materials.

Category C: Instructional Execution

Direct Field Trip

Conduct Group Discussions, Panel Discussions and Symposiums

Employ Brainstorming, Think Pair Share, Take a Stand, Buzz Group, and Question Box Techniques etc.

Direct Students in Instructing Other Students

Employ Simulation Techniques

Guide Student Study

Direct Student Lab Experience

Direct Students in Applying Problem-Solving Techniques

Employ the Project Method

Introduce a Lesson

Employ Oral Questioning Techniques

Employ Reinforcement Techniques

Provide Instruction for Slower and More Capable Learners

Present an Illustrated Talk

Demonstrate a Manipulative Skill

Demonstrate a Concept or Principle

Individualize Instruction

Employ the Team-Teaching Approach

Use Subject Matter Experts to Present Information

Prepare Bulletin Boards and Exhibits

Present Information with Models and Real Objects

Present Information with Smart Boards

Present Information with an Overhead Projector

Present Information with Video Clips

Present Information with Slides

Present Information with Audio Recordings

Employ Programmed Instruction

Present Information with the Chalkboard and Flip Chart

Category D: Instructional Evaluation

Establish Student Performance Criteria

Assess Student Performance: Knowledge

Assess Student Performance: Attitudes

Assess Student Performance: Skills

Determine Student Grades

Evaluate Your Instructional Effectiveness

Category E: Instructional Management

Project Instructional Resource Needs

Manage Your Budgeting and Reporting Responsibilities

Arrange for Improvement of your CTE Facilities

Maintain a Filing System

Provide for Student Safety

Provide for the First Aid Needs of Students

Assist Students in Developing Self-Discipline

Organize the CTE Lab

Manage the CTE Lab

Category F: Guidance

Gather Student Data Using Formal Data-Collection Techniques

Gather Student Data Through Personal Contacts

Use Conferences to Help Meet Student Needs

Provide Information on Educational and Career Opportunities

Assist Students in Applying for Employment or Further Education

Category G: School-Community Relations

Develop a School-Community Relations Plan for your CTE program

Give Presentations to Promote Your CTE program

Develop Brochures to Promote Your CTE program

Prepare Displays to Promote Your CTE program

Prepare News Releases and Articles Concerning Your CTE program

Arrange for Television and Radio Presentations Concerning Your CTE program

Conduct an Open House

Work with Members of the Community

Work with State and Local Educators

Obtain Feedback about Your CTE program

Category H: Student Career and Technical Student Organization

Develop a Personal Philosophy Concerning CTE student organizations

Establish a Student CTE Organization

Prepare Student CTE Organization Members for Leadership Roles

Assist Student CTE Organization Members in Developing and Financing a Yearly Program

Supervise Activities of the Student CTE Organization

Guide Participation in CTE Student Organization Contests

Category I: Professional Role and Development

Keep Up-to-Date Professionally

Serve Your Teaching Profession

Develop an Active Personal Philosophy of Education

Serve the School and Community

Obtain a Suitable Teaching Position

Provide Laboratory Experiences for Prospective Teachers

Plan the Student Teaching Experience

Supervise Student Teachers

Category J: Coordination of Cooperative Education

Establish Guidelines for Your Cooperative CTE Program

Manage the Attendance, Transfers, and Termination of Co-Op Students

Enroll Students in Your Co-Op Program

Secure Training Stations for Your Co-Op Program

Place Co-Op Students on the Job

Develop the Training Ability of On-the-Job Instructors

Coordinate On-the-Job Instruction

Evaluate Co-Op Students On-the-Job Performance

Prepare for Students' Related Instruction

Supervise an Employer-Employee Appreciation Event

Source: Center for Vocational Education & American Association for Vocational Instructional Materials (1960). *Titles of the center's performance-based teacher education modules*. Columbus, OH & Athens, GA

Appendix I
1977 Core Teaching and Management Competencies for CTE Teachers

Category A – Program planning, development and evaluation

- Develop program goals and objectives
- Conduct a course of study based on industry or state standards
- Develop long-range plans
- Evaluate CTE programs
- Collaborate with other CTE teachers and administrators to plan, develop, and evaluate a CTE program
- Organize and maintain an occupational advisory committee
- Search for existing regional employment forecasts
- Conduct an occupational analysis
- Prepare, conduct, and report community survey

Category B – Instructional planning

- Develop a unit of instruction
- Research and select instructional materials
- Develop student performance objectives
- Determine needs and interests of students
- Prepare teacher-made instructional materials
- Develop a lesson plan
- Integrate academic instruction within CTE courses

Category C – Instructional execution

- Direct students in applying problem-solving techniques
- Present information using instructional videos

- Employ reinforcement techniques
- Introduce a lesson
- Demonstrate a concept or principle
- Direct student lab experience
- Provide instruction for slower and more capable learners
- Employ oral questioning techniques
- Summarize a lesson
- Employ the project method
- Direct field trips
- Employ simulation techniques
- Present information using a variety of internet resources
- Demonstrate a manipulative skill
- Individualize instruction
- Guide student study
- Using subject matter experts to present information
- Present information using a variety of electronic media (LCD projector, tablet, document camera, interactive whiteboard, clickers, etc.)
- Direct students in instructing other students
- Present information with models and real objects
- Present information using presentation software (PowerPoint, Keynote, etc.)
- Present an illustrated talk
- Conduct group discussions, panel discussions, and symposiums
- Present information with televised and videotaped materials

- Employ the brainstorming technique
- Employ a team-teaching approach
- Prepare programmed instruction
- Prepare bulletin boards and exhibits
- Present information with the whiteboard
- Present information with overhead and opaque materials
- Present information with audio recordings
- Employ the question box technique
- Employ the buss group technique
- Present information with a flip chart

Category D – Instructional evaluation

- Assess student performance – skills
- Evaluate instructional effectiveness
- Assess student performance – knowledge
- Establish student performance criteria
- Assess student performance – attitudes
- Determine student grades using formative and summative assessments
- Search for industry-related assessments for use in class

Category E – Instructional management

- Provide for student safety
- Project instructional resource needs
- Assist students in developing self-discipline
- Manage the CTE lab

- Maintain a filing system
- Organize the CTE lab
- Provide for the first aid needs of students
- Arrange for improvement of CTE facilities
- Manage budgeting and reporting responsibilities
- Assist other professionals (teacher, counselors, administrators) with student behavioral issues (drug abuse and bullying)
- Monitor students' use of CTE lab chemicals

Category F – Guidance

- Provide information on educational and career opportunities
- Assist students in applying for employment or further education
- Use conferences to help meet student needs
- Gather student data through personal contacts
- Gather student data using formal data-collection techniques

Category G – School-community relations

- Develop and maintain a relationship with school guidance counselors
- Work with members of the community
- Obtain feedback about the CTE program
- Give presentations to promote the CTE program
- Conduct an open house
- Develop brochures to promote the CTE program
- Prepare news releases and articles concerning the CTE program
- Develop a school-community relations plan for the CTE program

- Develop student-ambassador programs to assist with marketing CTE programs
- Develop and maintain a program web site
- Arrange for television and radio presentations concerning the CTE program
- Develop and maintain a program social media presence

Category H – Career and technical student organizations

- Supervise activities of the CTSO
- Guide participation in CTSO
- Prepare CTSO members for leadership roles
- Develop a personal philosophy concerning CTSOs
- Assist CTSO members in developing and financing a yearly program of activities
- Develop creative/effective alternatives to official CTSOs (local or regional competitions and/or service learning projects)
- Establish a CTSO

Category I – Professional role and development

- Keep up-to-date professionally
- Serve the school and community
- Obtain a suitable teaching position
- Serve the teaching profession
- Develop an active personal philosophy statement
- Mentor new CTE teachers
- Supervise student-teachers
- Build a network of supportive resources such as a mentor teacher, as well as state and national organizations (MBEA, MHOEA, etc.)

- Provide lab experiences for prospective teachers
- Plan the student teaching experience
- Work summer externships to keep up-to-date with industry trends and changes

Category J – Coordination of cooperative education

- Prepare for students' related instruction
- Develop alternative work-based learning experiences (job shadowing, unpaid internships, etc) where co-op experiences are not possible
- Establish guidelines for a cooperative CTE program
- Secure high-quality training stations for the co-op program
- Place co-op students on the job
- Develop the training ability of work site instructors
- Supervise an employer/employee appreciation event
- Manage the attendance, transfers, and terminations of co-op students

Category K – Serving students with special needs

- Improve teacher communication skills
- Promote peer acceptance of students with special needs
- Use instructional techniques to meet the needs of students with special needs
- Assess the progress of students with special needs
- Prepare to serve students with special needs
- Plan instruction for students with special needs
- Provide appropriate instructional materials for students with special needs
- Modify the learning environment for students with special needs
- Prepare special education students for employability

- Work collaboratively with special education personnel including assisting in the development of IEPs and accommodations
- Assist special education students in developing career planning skills
- Counsel special education students with personal-social problems
- Promote a CTE program for students with special needs

Category L – Assisting students in improving their basic skills

- Assist students in improving their career ad employability skills
- Assist students in improving their oral communication skills
- Assist students in improving their survival skills
- Assist students in developing technical reading skills
- Assist students in improving their math skills
- Assist students in improving their writing skills
- Assist students in achieving basic reading skills

Category M – Teaching adults

- Prepare to work with adult learners
- Manage the instructional process
- Plan instruction for adults
- Evaluate the performance of adults
- Determine individual training needs
- Market the adult education program

Source: Norton, R.E. (1977), *The Development of Competency-Based Instructional Materials for the Preparation of Local Administrators of Secondary and Post-Secondary Vocational Education*, National Center for Research in Vocational Education, Columbus, OH.

Appendix J
Pre-Survey Results

Pre-Interview Survey Results for First Year BIT and MKED Teachers

Rating Scale: 1 indicates weakness to 5 indicating strength							
	Holly	**Jimmy**	**John**	**Olivia**	**Rachel**	**Scott**	**Group Strength Avg.**
Category A – program planning, development, and evaluation							
A1 Develop program goals and objectives	5	4	4	5	5	3	4.33
A2 Conduct a student follow-up survey	5	4	3	5	5	3	4.17
A3 Develop a course of study based on industry or state Standards	4	5	4	5	2	4	4
A4 Develop long-range plans	5	5	4	5	3	4	4.33
A5 Evaluate CTE programs	3	4	3	5	3	3	3.5
A6 Collaborate with other CTE teachers and administrators to plan, development, and evaluate a CTE program	3	3	3	5	4	3	3.5
A7 Organize and maintain an occupational advisory committee	5	3	2	5	3	3	3.5
A8 Search for existing regional employment forecasts	5	3	4	5	5	4	4.33
A9 Conduct an occupational analysis	5	4	3	5	5	3	4.17
A10 Prepare, conduct, and report community survey	5	4	3	5	2	3	3.67
							Total Avg. 3.95

Pre-Interview Survey Results for First Year BIT and MKED Teachers

	Holly	**Jimmy**	**John**	**Olivia**	**Rachel**	**Scott**	**Group Strength Avg.**
Category B – instructional planning							
B1 Develop a unit of instruction	4	5	4	5	5	3	4.33
B2 Research and select instructional materials	5	5	3	5	5	4	4.5
B3 Develop student performance objectives	4	4	3	5	5	3	4
B4 Determine needs and interests of students	4	4	3	5	5	4	4.17
B5 Prepare teacher-made instructional materials	4	4	3	5	5	4	4.17
B6 Develop a lesson plan	4	4	4	5	5	4	4.33
B7 Integrate academic instruction within CTE courses	4	4	4	5	5	4	4.33
							Total Avg. 4.26

Pre-Interview Survey Results for First Year BIT and MKED Teachers

	Holly	Jimmy	John	Olivia	Rachel	Scott	Group Strength Avg.
Category C – instructional execution							
C1 Direct students in applying problem-solving techniques	5	4	5	5	3	3	4.17
C2 Present information using instructional videos	4	5	4	5	5	4	4.5
C3 Employ reinforcement techniques	4	5	4	5	4	4	4.33
C4 Introduce a lesson	4	4	4	5	5	4	4.33
C5 Demonstrate a concept or principle	4	4	4	5	5	3	4.17

	Holly	Jimmy	John	Olivia	Rachel	Scott	Group Strength Avg.
C6 Direct student lab experience	4	3	3	5	4	3	3.67
C7 Provide instruction for slower and more capable learners	4	3	3	5	1	4	3.33
C8 Employ oral questioning techniques	3	4	4	5	3	4	3.83
C9 Summarize a lesson	4	5	4	5	5	4	4.5
C10 Employ the project method	5	5	5	5	5	4	4.83
C11 Direct field trips	5	2	4	4	5	2	3.67
C12 Employ simulation techniques	5	3	4	5	5	3	4.17
C13 Present information using a variety of internet resources	4	5	4	5	5	4	4.5
C14 Demonstrate a manipulative skill	3	5	3	5	4	2	3.67
C15 Individualize instruction	3	4	3	5	3	4	3.67
C16 Guide student study	4	4	3	5	4	3	3.83
C17 Use subject matter experts to present information	5	5	5	5	3	5	4.67
C18 Present information using a variety of electronic media (LCD projector, tablet, document camera, interactive whiteboard, clickers, etc.)	3	5	4	5	5	4	4.33
C19 Direct students in	3	3	4	5	5	4	4

	Holly	Jimmy	John	Olivia	Rachel	Scott	Group Strength Avg.
instructing other students							
C20 Present information with models and real objects	5	4	3	5	5	4	4.33
C21 Present information using presentation software. (PowerPoint, Keynote, etc.)	4	5	5	5	5	4	4.67
C22 Present an illustrated talk	3	5	4	5	2	3	3.67
C23 Conduct group discussions, panel discussions, and symposiums	4	5	4	5	3	3	4
C24 Present information with televised and videotaped materials	5	4	3	5	5	4	4.33
C25 Employ the brainstorming technique	5	3	4	5	1	3	3.5
C26 Employ a team-teaching approach	4	4	4	5	3	3	3.83
C27 Employ programmed instruction	4	4	4	5	3	3	3.83
C28 Prepare bulletin boards and exhibits	4	3	2	5	3	3	3.33
C29 Present information with the whiteboard	3	5	4	5	3	2	3.67
C30 Present information with overhead and opaque materials	4	1	3	5	5	4	3.67
C31 Present information with audio recordings	4	3	2	5	5	3	3.67
C32 Employ the question box technique	3	3	3	5	1	1	2.67
C33 Employ the buzz group technique	3	3	2	4	1	1	2.33
							Total Avg. 3.93

Pre-Interview Survey Results for First Year BIT and MKED Teachers

	Holly	Jimmy	John	Olivia	Rachel	Scott	Group Strength Avg.
Category D – instructional evaluation							
D1 Assess student performance – skills	4	3	3	5	5	3	3.83
D2 Evaluate instructional effectiveness	4	4	4	5	4	3	4
D3 Assess student performance – knowledge	4	3	4	5	3	3	3.67
D4 Establish student performance criteria	4	4	4	5	4	3	4
D5 Assess student performance – attitudes	3	4	4	5	3	3	3.67
D6 Determine student grades using formative and summative assessments	4	4	3	5	5	2	3.83
D7 Search for industry-related assessments for use in class	5	5	5	5	3	3	4.33
							Total Avg. 3.9

Pre-Interview Survey Results for First Year BIT and MKED Teachers

	Holly	Jimmy	John	Olivia	Rachel	Scott	Group Strength Avg.
Category E – instructional management							
E1 Provide for student safety	3	3	4	5	5	5	4.17
E2 Project instructional resource needs	4	3	4	5	5	4	4.17
E3 Assist students in developing self-discipline	4	3	4	5	5	4	4.17
E4 Manage the CTE lab	3	3	4	5	3	4	3.67
E5 Maintain a filing system	4	3	4	5	4	2	3.67
E6 Organize the CTE lab	3	3	4	5	4	3	3.67

E7 Provide for the first aid needs of students	5	3	5	5	5	2	4.17
E8 Arrange for improvement of CTE facilities	3	3	5	5	2	4	3.67
E9 Manage budgeting and reporting responsibilities	5	4	3	5	4	4	4.17
E10 Assist other professionals (teachers, counselors, administrators) with student behavioral issues (drug abuse and bullying)	5	2	4	5	*5*	4	4.17
E11 Monitor students' use of CTE lab chemicals	5	1	4	5	*5*	3	3.83
							Total Avg. 3.96

Pre-Interview Survey Results for First Year BIT and MKED Teachers

	Holly	**Jimmy**	**John**	**Olivia**	**Rachel**	**Scott**	**Group Strength Avg.**
Category F – guidance							
F1 Provide information on educational and career opportunities	5	5	5	5	4	4	4.67
F2 Assist students in applying for employment or further education	5	5	5	5	4	5	4.83
F3 Use conferences to help meet student' needs	5	5	4	5	4	4	4.5
F4 Gather student data through personal contacts	5	5	3	4	4	3	4
F5 Gather student data using formal data-collection techniques	5	3	3	4	4	3	3.67
							Total Avg. 4.33

Pre-Interview Survey Results for First Year BIT and MKED Teachers

	Holly	**Jimmy**	**John**	**Olivia**	**Rachel**	**Scott**	**Group Strength Avg.**
Category G – school-community relations							
G1 Develop and maintain a relationship with school guidance counselors	4	5	4	5	4	4	4.33
G2 Work with members of the community	5	5	4	5	4	4	4.5
G3 Obtain feedback about the CTE program	5	3	4	5	3	3	3.83
G4 Give presentations to promote the CTE program	5	4	5	4	3	4	4.17
G5 Conduct an open house	5	4	4	4	3	4	4
G6 Develop brochures to promote the CTE program	5	3	4	4	3	4	3.83
G7 Work with state administrators and local educators	5	3	4	5	3	4	4
G8 Develop a professional relationship with parents and guardians	5	5	4	5	4	4	4.5
G9 Prepare displays to promote the CTE program	5	3	4	3	3	3	3.5
G10 Prepare news releases and articles concerning the CTE program	5	3	4	2	3	3	3.33
G11 Develop a school-community relations plan for the CTE program	5	3	4	3	2	3	3.33
G12 Develop student-ambassador programs to assist with marketing CTE programs	5	3	4	3	2	3	3.33
G13 Develop and maintain a program web site	5	4	3	3	5	1	3.5
G14 Arrange for television and radio presentations. concerning the CTE program	5	3	3	3	2	2	3

G15 Develop and maintain a program social media presence.	4	3	2	3	5	1	3
							Total Avg 3.74

Pre-Interview Survey Results for First Year BIT and MKED Teachers

Category H – career and technical student organizations	**Holly**	**Jimmy**	**John**	**Olivia**	**Rachel**	**Scott**	**Group Strength Avg.**
H1 Supervise activities of the CTSO	3	3	2	5	4	2	3.17
H2 Guide participation in CTSO	3	4	2	5	4	2	3.33
H3 Prepare CTSO members for leadership roles	4	4	2	5	4	2	3.5
H4 Develop a personal philosophy concerning CTSOs	3	5	2	5	4	4	3.83
H5 Assist CTSO members in developing and financing a yearly program of activities	4	4	2	5	4	2	3.5
H6 Develop creative/effective alternatives to official CTSOs (local or regional competitions and/or service learning projects)	3	4	2	5	4	2	3.33
H7 Establish a CTSO	3	5	2	5	3	2	3.33
							Total Avg 3.43

Pre-Interview Survey Results for First Year BIT and MKED Teachers

Category I – professional role and development	**Holly**	**Jimmy**	**John**	**Olivia**	**Rachel**	**Scott**	**Group Strength Avg.**
I1 Keep up-to-date professionally	5	5	4	5	4	4	4.5
I2 Serve the school and community	5	5	4	5	4	5	4.67
I3 Obtain a suitable teaching position	5	5	4	5	5	4	4.67

Category I – professional role and development	**Holly**	**Jimmy**	**John**	**Olivia**	**Rachel**	**Scott**	**Group Strength Avg.**
I4 Serve the teaching profession	5	5	4	5	5	4	4.67
I5 Develop an active personal philosophy statement	5	5	4	5	5	4	4.67
I6 Mentor new CTE teachers	5	5	3	5	5	4	4.5
I7 Supervise student-teachers	5	3	4	5	5	4	4.33
I8 Build a network of supportive resources such as a mentor teacher, as well as state and national organizations	5	3	3	5	3	4	3.83
I9 Provide lab experiences for prospective teachers	3	3	2	5	4	3	3.33
I10 Plan the student teaching experience	5	3	2	5	4	3	3.67
I11 Work summer externships to keep up-to-date with industry trends and changes	5	5	2	3	5	5	4.17
							Total Avg 4.27

Pre-Interview Survey Results for First Year BIT and MKED Teachers

	Holly	**Jimmy**	**John**	**Olivia**	**Rachel**	**Scott**	**Group Strength Avg.**
Category J – coordination of cooperative education							
J1 Prepare for students' related instruction	1	3	3	1	3	3	2.33
J2 Develop alternative work-based learning experiences (job shadowing, unpaid internships, etc.) where co-op experiences are not possible	1	3	4	1	2	4	2.5
J3 Establish guidelines for a cooperative CTE program	1	3	4	1	2	3	2.33

J4 Evaluate co-op students' on-the-job performance	1	3	4	4	3	4	3.17
J5 Coordinate on-the-job instruction	1	3	4	1	2	4	2.5
J6 Enroll students in a co-op program	1	3	5	4	2	3	3
J7 Secure high-quality training stations for the co-op program	1	3	5	4	2	3	3
J8 Place co-op students on the job	1	3	5	4	2	3	3
J9 Develop the training ability of work site instructors	1	3	5	3	3	3	3
J10 Supervise an employer/employee appreciation event	1	3	4	3	4	3	3
J11 Manage the attendance, transfers, and terminations of co-op students	1	3	4	3	4	3	3
							Total Avg 2.8

Pre-Interview Survey Results for First Year BIT and MKED Teachers

	Holly	**Jimmy**	**John**	**Olivia**	**Rachel**	**Scott**	**Group Strength Avg.**
Category K – serving students with special needs							
K1 Improve teacher communication skills	3	3	2	5	4	4	3.5
K2 Promote peer acceptance of students with special needs	5	2	4	5	5	4	4.17
K3 Use instructional techniques to meet the needs of students with special needs	4	2	3	5	5	3	3.67
K4 Assess the progress of students with special needs	4	2	2	5	3	3	3.17
K5 Prepare to serve students with special needs	4	2	2	5	5	3	3.5
K6 Plan instruction for students with special needs	4	2	2	5	3	2	3

K7 Provide appropriate instructional materials for students with special needs	4	3	3	5	3	2	3.33
K8 Modify the learning environment for students with special needs	4	3	3	5	3	3	3.5
K9 Prepare special education students for employability	5	2	2	5	3	2	3.17
K10 Work collaboratively with special education personnel including assisting in the development of IEPs and accommodations	4	3	2	5	3	3	3.33
K11 Assist special education students in developing career planning skills	5	2	3	5	3	3	3.5
K12 Counsel special education students with personal-social problems	5	2	3	5	3	3	3.5
K13 Promote a CTE program for students with special needs	5	2	3	5	3	3	3.5
							Total Avg 3.45

Pre-Interview Survey Results for First Year BIT and MKED Teachers

Category L – assisting student in improving their basic skills	**Holly**	**Jimmy**	**John**	**Olivia**	**Rachel**	**Scott**	**Group Strength Avg.**
L1 Assist students in improving their career and employability skills	5	5	5	4	5	4	4.67
L2 Assist students in improving their oral communication skills	5	5	4	4	5	4	4.5
L3 Assist students in improving their survival skills	4	5	5	4	2	4	4
L4 Assist students in developing technical reading skills	5	5	4	4	4	2	4
L5 Assist students in improving their math skills	4	5	3	4	4	2	3.67
L6 Assist students in improving their writing skills	5	5	2	4	4	2	3.67
L7 Assist students in achieving basic reading skills	5	3	2	4	4	3	3.5

							Total Avg 4

Pre-Interview Survey Results for First Year BIT and MKED Teachers

Category M – teaching adults	**Holly**	**Jimmy**	**John**	**Olivia**	**Rachel**	**Scott**	**Group Strength Avg.**
M1 Prepare to work with adult learners	5	5	3	5	4	3	4.17
M2 Manage the instructional process	5	5	4	5	5	3	4.5
M3 Plan instruction for adults	5	5	5	5	5	3	4.67
M4 Evaluate the performance of adults	5	5	5	5	5	3	4.67
M5 Determine individual training needs	5	4	4	5	4	3	4.17
M6 Market the adult education program	5	4	5	5	3	3	**Total Avg** 3.7

Source: Manley Adam, Richard Zinser, (2012). "A Delphi study to update CTE teacher competencies", Education +Training, Vol. 54 Issue: 6, pp.488-503, https://doi.org/10.1108/00400911211254271

Pre-Interview Survey Results for Third Year BIT and MKED Teachers

Rating Scale: 1 indicates weakness to 5 indicating strength							
	Connie	**George**	**Joe**	**Serena**	**Walter**	**Wendy**	**Group Strength Avg.**
Category A – program planning, development, and evaluation							
A1 Develop program goals and objectives	4	4	4	4	4	5	4.17
A2 Conduct a student follow-up survey	4	4	3	2	4	3	3.33
A3 Develop a course of study based on industry or state Standards	4	5	4	3	3	5	4
A4 Develop long-range plans	4	5	3	3	4	4	3.83

A5 Evaluate CTE programs	3	4	4	3	4	4	3.67
A6 Collaborate with other CTE teachers and administrators to plan, development, and evaluate a CTE program	3	4	4	3	4	5	3.83
A7 Organize and maintain an occupational advisory Committee	2	4	4	3	3	3	3.17
A8 Search for existing regional employment forecasts	3	4	3	3	3	3	3.17
A9 Conduct an occupational analysis	3	4	1	2	3	3	2.67
A10 Prepare, conduct, and report community survey	2	5	4	2	3	3	3.17
							Total Avg 3.5

Pre-Interview Survey Results for Third Year BIT and MKED Teachers

	Connie	**George**	**Joe**	**Serena**	**Walter**	**Wendy**	**Group Strength Avg.**
Category B – instructional planning							
B1 Develop a unit of instruction	4	5	5	3	4	5	4.33
B2 Research and select instructional materials	4	4	4	3	4	5	4
B3 Develop student performance objectives	4	5	4	3	4	5	4.17
B4 Determine needs and interests of students	4	5	5	3	4	5	4.33
B5 Prepare teacher-made instructional materials	4	4	4	3	4	5	4
B6 Develop a lesson plan	4	4	4	3	4	5	4

B7 Integrate academic instruction within CTE courses	4	5	4	3	4	5	4.17
							Total Avg 4.14

Pre-Interview Survey Results for Third Year BIT and MKED Teachers

	Connie	George	Joe	Serena	Walter	Wendy	Group Strength Avg.
Category C – instructional execution							
C1 Direct students in applying problem-solving techniques	4	5	5	3	3	5	4.17
C2 Present information using instructional videos	4	5	4	4	4	5	4.33
C3 Employ reinforcement techniques	4	4	4	4	4	3	3.83
C4 Introduce a lesson	4	5	4	4	4	3	4
C5 Demonstrate a concept or principle	4	4	3	4	4	3	3.67
C6 Direct student lab experience	4	5	4	4	3	3	3.83
C7 Provide instruction for slower and more capable learners	4	4	5	3	3	4	3.83
C8 Employ oral questioning techniques	3	4	4	3	4	3	3.5
C9 Summarize a lesson	3	4	4	3	4	4	3.67
C10 Employ the project method	3	4	4	3	4	3	3.5
C11 Direct field trips	3	4	4	4	4	5	4

	Connie	George	Joe	Serena	Walter	Wendy	Group Strength Avg.
C12 Employ simulation techniques	4	3	3	3	3	4	3.33
C13 Present information using a variety of internet resources	4	5	3	4	4	5	4.17
C14 Demonstrate a manipulative skill	3	4	4	3	3	4	3.5
C15 Individualize instruction	3	4	4	3	4	4	3.67
C16 Guide student study	3	4	4	3	4	3	3.5
C17 Use subject matter experts to present information	4	4	4	4	4	5	4.17
C18 Present information using a variety of electronic media (LCD projector, tablet, document camera, interactive whiteboard, clickers, etc.)	4	5	3	4	4	5	4.17
C19 Direct students in instructing other students	4	5	4	3	4	5	4.17
C20 Present information with models and real objects	4	5	4	3	4	4	4
C21 Present information using presentation software (PowerPoint, Keynote, etc.)	4	5	5	4	5	5	4.67
C22 Present an illustrated talk	3	4	4	3	4	3	3.5
C23 Conduct group discussions, panel discussions, and symposiums	4	4	5	2	4	4	3.83
C24 Present information with televised and videotaped materials	4	5	4	4	4	4	4.17
C25 Employ the brainstorming technique	4	4	4	4	5	4	4.17

	Connie	George	Joe	Serena	Walter	Wendy	Group Strength Avg.
C26 Employ a team-teaching approach	2	4	4	3	4	3	3.33
C27 Employ programmed instruction	3	4	4	3	3	4	3.5
C28 Prepare bulletin boards and exhibits	3	4	4	4	3	5	3.83
C29 Present information with the whiteboard	3	5	4	2	3	4	3.5
C30 Present information with overhead and opaque materials	2	4	3	2	3	4	3
C31 Present information with audio recordings	2	4	3	3	4	4	3.33
C32 Employ the question box technique	2	5	4	2	3	1	2.83
C33 Employ the buzz group technique	2	3	4	2	3	1	2.5
							Total Avg 3.73

Pre-Interview Survey Results for Third Year BIT and MKED Teachers

	Connie	**George**	**Joe**	**Serena**	**Walter**	**Wendy**	**Group Strength Avg.**
Category D – instructional evaluation							
D1 Assess student performance – skills	4	5	5	4	4	4	4.33
D2 Evaluate instructional effectiveness	4	5	4	3	4	4	4
D3 Assess student performance – knowledge	4	5	4	4	4	4	4.17
D4 Establish student performance criteria	3	5	4	3	4	4	3.83

	Connie	George	Joe	Serena	Walter	Wendy	Group Strength Avg.
D5 Assess student performance – attitudes	4	5	5	4	4	5	4.5
D6 Determine student grades using formative and summative assessments	4	5	4	3	4	4	4
D7 Search for industry-related assessments for use in class	3	4	4	4	4	4	3.83
							Total Avg 4.09

Pre-Interview Survey Results for third year BIT and MKED Teachers

	Connie	George	Joe	Serena	Walter	Wendy	Group Strength Avg.
Category E – instructional management							
E1 Provide for student safety	4	5	5	4	4	5	4.5
E2 Project instructional resource needs	3	4	5	3	4	5	4
E3 Assist students in developing self-discipline	4	4	4	3	4	5	4
E4 Manage the CTE lab	4	4	3	4	4	5	4
E5 Maintain a filing system	4	5	4	2	3	5	3.83
E6 Organize the CTE lab	4	5	3	4	3	5	4
E7 Provide for the first aid needs of students	3	4	4	4	4	5	4
E8 Arrange for improvement of CTE facilities	4	4	4	3	3	5	3.83
E9 Manage budgeting and reporting responsibilities	4	4	3	2	4	5	3.67
E10 Assist other professionals (teachers, counselors, administrators) with student behavioral issues (drug abuse	3	5	5	3	4	5	4.17

	Connie	George	Joe	Serena	Walter	Wendy	Group Strength Avg.
and bullying)							
E11 Monitor students' use of CTE lab chemicals	2	5	4		3	5	1.33
							Total Avg 3.76

Pre-Interview Survey Results for third year BIT and MKED Teachers

	Connie	George	Joe	Serena	Walter	Wendy	Group Strength Avg.
Category F – guidance							
F1 Provide information on educational and career opportunities	4	4	4	4	4	5	4.17
F2 Assist students in applying for employment or further education	4	4	4	4	4	5	4.17
F3 Use conferences to help meet student' needs	4	4	5	3	4	4	4
F4 Gather student data through personal contacts	3	5	4	3	3	5	3.83
F5 Gather student data using formal data-collection techniques	3	5	5	2	3	5	3.83
							Total Avg 4

Pre-Interview Survey Results for Third Year BIT and MKED Teachers

	Connie	George	Joe	Serena	Walter	Wendy	Group Strength Avg.
Category G – school-community relations							
G1 Develop and maintain a relationship with school guidance counselors	4	4	4	4	5	5	4.33
G2 Work with members of the community	4	5	5	3	5	5	4.5
G3 Obtain feedback about the CTE program	4	5	4	3	3	5	4

G4 Give presentations to promote the CTE program	4	5	4	3	4	5	4.17
G5 Conduct an open house	4	5	4	3	4	4	4
G6 Develop brochures to promote the CTE program	4	4	4	3	3	5	3.83
G7 Work with state administrators and local educators	4	5	4	3	3	5	4
G8 Develop a professional relationship with parents and guardians	3	4	5	3	5	5	4.17
G9 Prepare displays to promote the CTE program	4	4	4	2	3	4	3.5
G10 Prepare news releases and articles concerning the CTE program	4	5	5	2	3	4	3.83
G11 Develop a school-community relations plan for the CTE program	2	5	4	2	3	4	3.33
G12 Develop student-ambassador programs to assist with marketing CTE programs	3	5	4	2	3	5	3.67
G13 Develop and maintain a program web site	2	4	3	3	3	3	3
G14 Arrange for television and radio presentations concerning the CTE program	2	3	3	3	3	3	2.83
G15 Develop and maintain a program social media presence	4	4	3	3	3	5	3.67
							Total Avg 3.79

Pre-Interview Survey Results for Third Year BIT and MKED Teachers

Category H – career and technical student organizations	**Connie**	**George**	**Joe**	**Serena**	**Walter**	**Wendy**	**Group Strength Avg.**
H1 Supervise activities of the CTSO	4	4	3	4	4	5	4

Category H – career and technical student organizations	**Connie**	**George**	**Joe**	**Serena**	**Walter**	**Wendy**	**Group Strength Avg.**
H2 Guide participation in CTSO	4	4	3	4	4	5	4
H3 Prepare CTSO members for leadership roles	4	5	2	4	4	5	4
H4 Develop a personal philosophy concerning CTSOs	4	5	2	4	4	5	4
H5 Assist CTSO members in developing and financing a yearly program of activities	4	5	2	3	4	5	3.83
H6 Develop creative/effective alternatives to official CTSOs (local or regional competitions and/or service learning projects)	3	5	2	3	4	5	3.67
H7 Establish a CTSO	4	5	1	2	4	5	3.5
							Total Avg 3.86

Pre-Interview Survey Results for third year BIT and MKED Teachers

Category I – professional role and development	**Connie**	**George**	**Joe**	**Serena**	**Walter**	**Wendy**	**Group Strength Avg.**
I1 Keep up-to-date professionally	4	5	4	4	5	5	4.5
I2 Serve the school and community	4	4	4	3	5	5	4.17
I3 Obtain a suitable teaching position	4	4	4	3	4	5	4
I4 Serve the teaching profession	4	4	5	3	4	5	4.17
I5 Develop an active personal philosophy statement	3	4	4	3	4	5	3.83
I6 Mentor new CTE teachers	4	4	4	2	3	5	3.67

Category I – professional role and development	**Connie**	**George**	**Joe**	**Serena**	**Walter**	**Wendy**	**Group Strength Avg.**
I7 Supervise student-teachers	4	4	3	2	4	3	3.33
I8 Build a network of supportive resources such as a mentor teacher, as well as state and national organizations	3	4	4	3	4	5	3.83
I9 Provide lab experiences for prospective teachers	3	4	3	2	3	5	3.33
I10 Plan the student teaching experience	4	4	4	2	3	5	3.67
I11 Work summer externships to keep up-to-date with industry trends and changes	2	4	2	3	4	3	3
							Total Avg 3.77

Pre-Interview Survey Results for Third Year BIT and MKED Teachers

	Connie	**George**	**Joe**	**Serena**	**Walter**	**Wendy**	**Group Strength Avg.**
Category J – coordination of cooperative education							
J1 Prepare for students' related instruction	2	4	4	3	4	1	3
J2 Develop alternative work-based learning experiences (job shadowing, unpaid internships, etc.) where co-op experiences are not possible	2	4	4	2	4	1	2.83
J3 Establish guidelines for a cooperative CTE program	2	4	3	2	3	3	2.83
J4 Evaluate co-op students' on-the-job performance	2	4	4	3	4	3	3.33
J5 Coordinate on-the-job instruction	2	4	4	2	4	3	3.17
J6 Enroll students in a co-op program	2	4	4	2	4	3	3.17

	Connie	George	Joe	Serena	Walter	Wendy	Group Strength Avg.
J7 Secure high-quality training stations for the co-op program	2	4	3	2	4	3	3
J8 Place co-op students on the job	2	4	4	2	4	3	3.17
J9 Develop the training ability of work site instructors	2	4	3	2	4	3	3
J10 Supervise an employer/employee appreciation event	2	4	2	3	4	3	3
J11 Manage the attendance, transfers, and terminations of co-op students	2	4	2	3	4	3	3
							Total Avg 3.05

Pre-Interview Survey Results for Third Year BIT and MKED Teachers

	Connie	George	Joe	Serena	Walter	Wendy	Group Strength Avg.
Category K – serving students with special needs							
K1 Improve teacher communication skills	3	4	3	3	4	5	3.67
K2 Promote peer acceptance of students with special needs	4	4	4	3	4	5	4
K3 Use instructional techniques to meet the needs of students with special needs	3	4	4	3	4	5	3.83
K4 Assess the progress of students with special needs	4	4	5	2	4	5	4
K5 Prepare to serve students with special needs	3	4	5	2	4	5	3.83
K6 Plan instruction for students with special needs	3	4	5	2	4	5	3.83
K7 Provide appropriate instructional materials for students with special needs	3	4	4	2	4	5	3.67
K8 Modify the learning environment for students with	3	4	5	3	4	5	4

	Connie	George	Joe	Serena	Walter	Wendy	Group Strength Avg.
special needs							
K9 Prepare special education students for employability	2	4	4	3	4	5	3.67
K10 Work collaboratively with special education personnel including assisting in the development of IEPs and accommodations	3	4	5	3	4	5	4
K11 Assist special education students in developing career planning skills	2	4	5	2	4	5	3.67
K12 Counsel special education students with personal-social problems	1	4	5	2	4	5	3.5
K13 Promote a CTE program for students with special needs	1	3	5	3	4	5	3.5
							Total Avg 3.78

Pre-Interview Survey Results for Third year BIT and MKED Teachers

Category L – assisting student in improving their basic skills	Connie	George	Joe	Serena	Walter	Wendy	Group Strength Avg.
L1 Assist students in improving their career and employability skills	4	5	4	4	5	5	4.5
L2 Assist students in improving their oral communication skills	4	4	5	3	5	5	4.33
L3 Assist students in improving their survival skills	3	4	5	3	4	5	4
L4 Assist students in developing technical reading skills	3	4	4	3	4	5	3.83
L5 Assist students in improving their math skills	3	3	5	2	3	5	3.5
L6 Assist students in improving their writing skills	2	3	4	3	3	5	3.33
L7 Assist students in achieving basic reading skills	2	4	4	3	4	5	3.67

							Total Avg 3.88

Pre-Interview Survey Results for Third Year BIT and MKED Teachers

Category M – teaching adults	**Connie**	**George**	**Joe**	**Serena**	**Walter**	**Wendy**	**Group Strength Avg.**
M1 Prepare to work with adult learners	4	4	4	3	4	5	4
M2 Manage the instructional process	4	5	4	2	4	5	4
M3 Plan instruction for adults	4	4	4	2	4	5	3.83
M4 Evaluate the performance of adults	3	4	4	2	4	5	3.67
M5 Determine individual training needs	3	4	3	2	4	5	3.5
M6 Market the adult education program	3	3	2	2	4	5	3.17
							Total Avg 3.7

Source: Manley Adam, Richard Zinser, (2012). "A Delphi study to update CTE teacher competencies", Education +Training, Vol. 54 Issue: 6, pp.488-503, https://doi.org/10.1108/00400911211254271

Appendix K
IRB Approval Letter

VIRGINIA TECH

Division of Scholarly Integrity and
Research Compliance
Institutional Review Board
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Blacksburg, Virginia 24061
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MEMORANDUM

DATE: June 5, 2020

TO: Bill Price Jr, Mike Shumate

FROM: Virginia Tech Institutional Review Board (FWA00000572, expires October 29, 2024)

PROTOCOL TITLE: Effectiveness of the Provisional Teaching License Route in Virginia for Preparing Business and Information Technology and Marketing Education Teachers

IRB NUMBER: **20-181**

Effective June 5, 2020, the Virginia Tech Human Research Protection Program (HRPP) determined that this protocol meets the criteria for exemption from IRB review under 45 CFR 46.104(d) category (ies) 2(ii).

Ongoing IRB review and approval by this organization is not required. This determination applies only to the activities described in the IRB submission and does not apply should any changes be made. If changes are made and there are questions about whether these activities impact the exempt determination, please submit an amendment to the HRPP for a determination.

This exempt determination does not apply to any collaborating institution(s). The Virginia Tech HRPP and IRB cannot provide an exemption that overrides the jurisdiction of a local IRB or other institutional mechanism for determining exemptions.

All investigators (listed above) are required to comply with the researcher requirements outlined at:

https://secure.research.vt.edu/external/irb/responsibilities.htm

(Please review responsibilities before beginning your research.)

PROTOCOL INFORMATION:

Determined As:	**Exempt, under 45 CFR 46.104(d) category(ies) 2(ii)**
Protocol Determination Date:	**June 5, 2020**

ASSOCIATED FUNDING:

The table on the following page indicates whether grant proposals are related to this protocol, and which of the listed proposals, if any, have been compared to this protocol, if required.

Appendix L
Sample Memo

Interviewee

October 22, 2020 3:00 p.m.

The interview was my first Zoom interview for the dissertation. The teacher was new to teaching coming from an MBA program and had taken no pedagogical course work. For me, the lack of teaching experience of the interviewee was apparent. She expressed frustration with the lack of support and wished she had a more effective mentor. She indicated she struggled with classroom management and spent long hours developing curriculum. At times, the participant expressed emotion and was on the verge of crying.

Interviewee

January 29, 2021 3:20 p.m.

The interviewee arrived late to the scheduled zoom session and seemed very busy. I interviewed the teacher after school hours. This was the first year of teaching for this participant. The participant had taken condensed pedagogical training during the summer prior to teaching. The interviewee expressed frustration with the amount of support they were receiving. They were frustrated because they believed they were being forced to use curriculum resources that did not support the course they were teaching. The interviewee wanted to talk beyond the normal questions to get advice on finding curriculum support materials.

Issues

January 25, 2021 3:22 p.m.

This teacher did not fully understand that FBLA was co-curricular. They expressed frustration about the amount of time it took to organize it properly. They wished FBLA did not exist. The brief responses regarding FBLA seemed great for data analysis, but I needed to figure out how to get the participant to reflect more in depth on the question.

Appendix M
Sample Transcript with Codes

Code: Lacking Administrative Observation and Support

Michael: What courses are you teaching? Are you teaching Marketing or Business courses or both?

Jimmy: Yes business. A whole variety of things. I teach Business Law. That is a one semester course. I am just about to start my basic management half of it. I teach Economics and Personal Finance, Entrepreneurship, and then I teach AP Computer Science.

Michael: So, you are going for an endorsement in Business and Information Technology and Marketing?

Jimmy: Got them already and I did that coming out of the teacher preparation.

Michael: You have just started teaching and you were going for your teaching license and you have your masters. What was the experience like when you were doing program planning, evaluation, and development for your courses? You have a variety of courses. It sounds like you have several preps.

Jimmy: I ended up having to develop all my own stuff. To be honest with you it's just so…..like the materials that are out there. When I took over Business Law the textbook was twelve to fourteen years old and there is some stuff in there but if you get into anything that is cyber related or anything technology related it is just so dated. So, what I do I end up weeding through the textbook and I did that over the first summer. There were no materials passed to me. I take my notes and I turn those in PowerPoint and I use lessons I have learned through my career in industry. I create my own quiz and tests. I am really fortunate if there is a quiz or two that I can borrow. What I have found is that if your brand new…and this is not just for someone coming out of industry for one reason or the other people are really reluctant to share. I have come across a scarcity mentality. If I give my stuff to you then you are going to make it better and you are going to do better than I have done in this and that's a negative. Versus everything I have given. I did curriculum development over the summer and I posted it out for others to be able to use. The mindset in the business world is just different. It was if I give this to you and you make it better than we have both have gotten better. So that mentality in a school is from people who have been in the position for a long time and they feel a bit threatened. Somebody that is ** with my energy level and the way I develop it and how quick I can get that stuff done

is intimidating to others even though I give them all my stuff should they choose to accept it and they do not have to. Anyway, that has been really an aggravating kind of thing.

Michael: You have created your material and I bet its good. I used to be in industry. Is your industry background in business?

Jimmy: Mine was consulting at first, then I went into technology, and then I went into finance.

Michael: Ok so you have a business background. I bet you have good material. I here what you are saying. You want to share material, but you are going to create my own thing.

Jimmy: Yes. Because I cannot get anyone to share back. Business Law which I love that course I ended up my first year sending out a note to Business Law teachers in my district saying before I create this does anybody have anything that I can use, and I will share with you any other lessons or anything I get. There were five other teachers, and I did not hear anything back. My coordinator gave me the names of the

other teachers but did not follow up with anything. When I went to her and said I did not hear anything back, so I am just going to create it. She was like ok. I was like I will share with you what I created.

Michael: Your material might be better then what they already have.

Jimmy: In my semester course I do a mock trial. I got it from the state of Ohio who runs this really great competition at the high school level. So, I took it and I simplified it for students who are in my class. This is not their club and they are placed into my class to have something to do as opposed to taking drivers training. I made it so I could have my good students who are into it they are my attorneys. Students that are kind of into it are my witnesses. The people who care less about this stuff and I need to keep occupied are my jury. It works out really great. I tweak it and modify it.

Michael: I bet the students like it.

Jimmy: Its good stuff. For Entrepreneurship I have created all my own stuff again for that. I have partnered with Junior Achievement and ** in ** where they have a competition. I am routing my students into that college type competition through Jr. Achievement. I have them have a capstone type of event for what we are doing. I am also doing a mini shark tank in the class. I have made friends with some of the student's parents who are entrepreneurs and they are coming in to be able judge our local competition. All of these things just in business kind of feel natural to do and I love to be able to introduce that into the curriculum.

Michael: I can tell that would be engaging. I bet students get excited.

Jimmy: Yes, they sure do.

Michael: So, you spend a lot of time developing your lessons. Do you stay up late?

Jimmy: Yes. The first year I had three preps. At that time with Business Law, it was like with Business Management. I had Economics and Personal Finance then I had a Principles of Business and Marketing. My second year which I am in now Principles of Marketing went to another teacher and then I picked up the AP Computer Science.

Michael: We have taught the same courses. I have taught AP Computer Science.

Jimmy: We have been instructed that we have to use this curriculum called the Beauty and Joy of computing for AP Computer Science.

Michael: I used Code.Org.

Jimmy: Over the summer I went to the two trainings back-to-back, I went Code.org which was three weeks and we only met once or twice a week and the Beauty and Joy of computing one week which was full day. There was no comparison between the two. Code.org was so much the better curriculum. The Beauty and Joy of computing to some extent has some elements of ** My ** is a ** **. It is not **. In Code.org when we learned what a procedure is or what a block of code is they did all the scaffolding that built you to what you will need on the AP test. BJC is just another assignment where they interweave not just building a block, but they have introduced Boolean at that time and introduced some of the elements of list at the same time. So, the student has no idea what the lesson is focused on. They just try to solve something. They get completely lost if the instructions do not detail what to do. I get in stuff that is half done because they just give up on it. Versus Code.org it scaffolds and builds. As a teacher it allows you to teach something. BJC is all about handing an exercise to the student and that they will figure their way out.

Michael: I agree with what you are saying. I have used code.org.

Jimmy: My last few weeks in AP Computer Science we did a practice performance task. Students had to come up with their own ideas. They had to follow the curriculum of what the AP needs. You need a list, you need input and output, you need a procedure, and your procedure has to have iteration, selection, and sequencing. These are seniors that I have. I have thirty of them and twenty of them did not follow two or more of what they needed to do. Their AP practice score was a one for most of my students. I just attribute it to the curriculum.

Michael: Code.org is hard to beat. It can be hard to pick a platform to use for a class. So you have

been working a lot.

Jimmy: I wanted to get out of what I was doing because I was working ninety- and one-hundred-hour weeks routinely. As a teacher I am not doing that bad. I am probably working around seventy. My pay is one fourth what I was making. So that is a bit of a drag. There are other rewards in a non COVID world. It is tough.

Michael: With instructional planning I take it you are creating everything. Once you get it developed you can add to it.

Jimmy: That is exactly it. For the classes I have retaught Business Law and EPF I have revised those over the summer. I spent two weeks on each. For Business law what I did not like was last year I did a professional services contract and students did not get that at all. I spent a lot of time developing it and they spent a lot of time working on it. They just did not get anything out of it. This year I did a musical contract and they got to pick their band. The contract was already laid out but when I was doing the teaching, we talked about what acceptance is and then they had to go into their contract and identity the elements of valid legal acceptance. One of the band members was seventeen years of age. They needed to know the age of majority was eighteen and how could they make it in the contract so that person could sign and it still be a valid contract. They had to go in and put a cosigner.

Michael: I bet they did better with the music contract.

Jimmy: Yes. It was better organized. My idea for next year it will be a bachelorette kind of contest or bachelor where they have all these restrictions in the contract. They cannot have social media and they cannot let anyone know what the results of it were.

Michael: How do you execute your lessons? How does it go? How do you start your day with the lesson?

Jimmy: I thought my program was very good for teacher preparation. It was "Educate Virginia". It was a Summer into the Fall program and you spent ever third Saturday. It was a full day. You had thirty hours of homework every week.

Michael: Was it intense?

Jimmy: Yes, it was. It was good. It made me transition. One of the tips they give you is that you always start with a question. Or you kind of have some kind of a hook. I have used a class hook. In Economics and Personal Finance in the next generation personal finance you get they have some really good teases you can use in the particular topic. If I do not have something along that

line. What I look to be able to do then is last time I gave you this assignment lets make sure we go through it. Here are the points I was trying to emphasis. So I try to bring it from two days ago when we had the last class.

Michael: You review it.

Jimmy: Yes. exactly. Very specifically there were five things on here, here is what you really need to know, here was the concept I was chasing, does everyone have it, explain to me how you got it. It works much better in a face-to-face classroom not so good in chat.

Michael: Did you ever have a face-to-face classroom?

Jimmy: Yes. three quarters of the year last year. We were mid-way through the third quarter then we were virtual.

Michael: Are you back to face to face or are you all virtual?

Jimmy: We are virtual, and It is going to end up being a full year. It will probably be mid-March before we get back to face to face instruction.

Michael: Students have a tendency to shut their camera off during online instruction.

Jimmy: Yes. We are not allowed to require them to cut on their camera. In many instances, if they are paying attention and most of the time they are not they are working in kitchen and they have three family members behind them or they are babysitting or if they are in their room you don't want the camera on. There are all of those things where I understand why we are not able to do that.

Michael: How do you evaluate students? How do you evaluate your instruction? Do you use testing?

Jimmy: We break it up into four different parts for evaluation. I do the same. You get synchronous work that we work on together in class then they have to complete it in the last ten to fifteen minutes. That is ** precent. ** for me are quizzes. Then I never do tests I just do project work. There is one or two big projects where I try to make them where they have to budget their time a bit. Which always does not work. I remain optimistic by doing that I am forcing them to improve very gradually from zero to maybe five from a scale of a one hundred.

Michael: Are you giving them the WISE financially literacy certification test?

Jimmy: We are doing that and for us that is in early March. I have one more unit on investing to go and then we begin with the WISE preparation. That will be very short, and they will take the pre-test and they will all score horribly on it. I will get their attention and then I will have students that will do really well on it.

Michael: Do you ever survey your students regarding your instruction and get feedback?

Jimmy: We do not. This has been a bit of a disappointment. The administration did not really give me a review last year. Because of the teaching program I was in they came in and did a full day observation observation was great and they gave me some really great feedback and I very much appreciated it from the program I was in. But I would have appreciated more perspectives on what I was doing. They did have pear teacher come in as part of the mentoring and he gave me some really helpful tips.

Michael: So you have a mentor. Are they in the same building as you and same endorsement areas? **Jimmy:** Same building. Somewhat the same department. Although he teaches AP ** that the school offers. We are the only school in the district that offers that.

Michael: Have you found the mentoring to be helpful?

Jimmy: For the most part. The styles are so different. If I was dealing with only AP kids which he is then I think what he is asking me to do would be more effective. Having the gen pop students which are predominately what I had last year. The students that are there are occupying space, but they are really not interested in the subject matter at all. Counseling just put them there cause they needed somewhere to go and they could not have five study halls in the day. You need a different skill set to be effective with that group then you do with the AP kids.

Michael: So, you have discovered every class can be different.

Jimmy: Yes. Some of the things he was telling me it has to mix with who you are and what your personality is. He was saying if students are acting out just kick them out of the room immediately. There is no leeway. I am like ok what do they do outside. I have turned my problem into a problem for this wing of the school. He was no make them stand there. I am ok. So I tried it. He knows better and I am being too soft on these guys. It ended up being a disruptive game to see who could get kicked out first. It was not my style anyways. My style is to work three times as hard as any of the students because I want them to emulate a good example because many of them have not had a good example in their lives. I am that example. So I will work hard. I always be patient. I will always be as professional as I can in this environment. Those are the creeds I went into teaching with. They mentor asked me to do what I thought was different than that. I started to relax the first year probably right after the observation that I had where they came in and said, "actually you are doing fine". You just need to be true to who you are and to follow what others are doing. Still I had to have control so I had to figure out a

way to get control using my style based on the students I have. Now what ends up happening if they start acting up it becomes, ok well great what you are showing me is that the material is not advanced enough for you. What I am going to do is stand here and you and I are going to have a conversation where we are going to take this to the next level in the terms of the academics on what is involved. Anytime that you feel like I have gone beyond your capacity just raise your hand and say you are going to stop misbehaving and we will continue that with the class with everyone.

Michael: You are telling me that you discovered your classroom management style is different from your mentor's classroom management style? Did it take you a while to figure out what classroom management style worked for you?

Jimmy: Yes it did. I keep feeling like I was the only one that was having students that were acting out. As it turned out these students act out in everyone's class. Even the teachers that have been here for twenty-five years that I really thought were excellent teachers they also struggled with them. Some of these kids made the teachers cry. This one teacher approached me and said you are doing fine. I have never cried in school before and this group of students made me cry. Its like ok. Number one I am sorry for that. Thank you for letting me know I am doing a decent job because at times it did not feel like that.

Michael: It can take a while to figure out what works with your classroom management style. You have to figure out what works.

Jimmy: No doubt. That skill is important. I put that down in my own performance review. I did one and I did it to the best of my ability even through the administration did not do one for me. Technically they did but it was not an observation.

Michael: I can understand. When I was teaching, I would like to invite the administrators into the classroom to get feedback. I wanted to do a good job.

Jimmy: Figuring out your classroom management style is important as you have described. My biggest feeling coming out of my first year of teaching was that I feel like I am an independent contractor that is leasing a classroom in this building, but I am not connected to anybody or anything and we just happen to share some of the same clients. That part was awful. Heading into this year my goal was I have got to eliminate that, or I am not going to be in this profession long. I did not go from what I was doing to what I am doing now because I wanted to be isolated.

Michael: When you had students face to face and now that you have them virtually how do you provide guidance to students?

Jimmy: Exactly the same. What I was really surprised at but I also saw this when I was coaching youth sports was the things that students would open up to me about. It was my first full year of teaching and I had done substitute teaching the year before as I was going through the training program. They very quickly…students can very quickly recognize those adults that they would feel more comfortable with approaching subjects with. Fortunately for my relationship with the students I am one of those people that never is going to shut someone down or try not to do that. I try to be so respectful of their feelings. In the moment of crisis, they should feel they are someone you can approach with something. I have made really great friends with the counseling area. Whenever there is anybody's IEP or 504 meeting and they need a teacher I'm the first to be able to sign up because I want that relationship with the counseling group to be super strong. As an independent contractor that I feel like but I am a teacher at school, but I feel like an independent contractor and if I do not have that relationship and a student brings to me and they really need to see the counselor over that... the counseling group really trusts me, and they know I'm in this for the right reasons. If they ask me to do something, I will get it done on time and delivery a good quality product. That relationship is established so it is really easy for me to go well these ones I can handle the boyfriend kind of stuff where they are being an idiot, the one on conversations with the student about with just kind of listening to the background where I understand but you need to rise above that.

Michael: It sounds like to me the students trust you.

Jimmy: Yes. Some of it was the things I learned in the teaching program.

Michael: If students can trust you they can learn.

Jimmy: Exactly. They always say no one cares what you know until they know who you are. I believe in that. I meet people at the door. I know every student name by the first or second day because I have studied it. I went home and took the seating charts with the names and the faces. The things that you do to be able to represent to them that your trustworthy and that you care about them. My kids actually went to this high school and my daughter graduated the year before I became a teacher here. I never will forget my daughter said she raised her hand in class and the teacher did not know who she was. She said she had been there since mid-second quarter. She had been there fourteen weeks. She said she did not trust the teacher for anything.

Michael: You have learned the importance of building a proper relationship with students.

Jimmy: That is it. I have put into my goals this year… like we have a large EL population from

all over. Like a very big ..maybe ten percent of the school is ** and they speak **. From ** and ** is a big population center for us. What I wanted to do is mentor a couple of the EL students. So I am doing that for two students. I meet with them for a half an hour a week one on one during office hours. One is from ** and I have gotten to know him very well and he where he works at McDonalds and what his life is about. The other student is from ** in east **. The language they speak is **. He and I can hardly communicate. But we work through the materials for the class and that is the way we are kind of bonding. He is really an outgoing guy. The language is just killing these guys.

Michael: How about the school and community relationships with parents and businesses? How do you build these relationships?

Jimmy: Where most of our relationships exist from a business side to the school is parents that own their own business, or they work in a business and we are able to bring them in and get some advertising dollars or maybe you can have a guest speaker that sort of thing. Coming from industry that is one of things that I knew I could really assist the school on. I have been hugely disappointed that the school has not taken me up on offers that I have made to be able to do this. I would like to really seriously have industry and business become a much more active member of our school community.

Michael: One time I had a major company pay for our student's industry certifications because the students were working for that company. You never know what can happen until you try.

Jimmy: That is it. We have ** here in **. I worked there for seven years. I have had a bunch of people from ** come in and speak to my organizations and clubs I run or to come into my class. I just will go and meet people in their small business and ask them to speak. Every single person that I have asked has said absolutely I would love to do that. I had a coffee shop owner just last week came in and spoke to my FBLA club and talked about what it is like to business in the times of COVID. I had an entrepreneur from the city of ** come out. Her and her husband run three different clothing stores. The do like consignment clothing. She talked about what her business model was. I offered that to the general student population, and we held that one in the library and no one took me up on it. It has been disappointing.

Michael: There is the co-operative method of instruction where you place students on a job, design a training agreement, evaluate them, and they receive a credit. Do you have the co-operative method of instruction?

Jimmy: No we are not. The teacher who was in the role before me who retired we talked to me about that and said it was shut down because it became too big of a hassle.

Michael: Would you be interested in implementing the co-operative method of instruction?

Jimmy: I am. She kept meticulous notes. My guess is that it if it got shut down it was not that she was not keeping the right kind of notes. She was a bookkeeper. She kept notes on everything. I have to find out if we can offer that up again. Last year was just too much. Again, as you point out that gets us more engaged in the community. I have a student right now in AP Computer Science that I am trying to get a summer internship for because he is not like the best student, but he excels so much in his coding and design work. He is ready to work in a technology company right now.

Michael: He needs to get his foot in the door.

Jimmy: Exactly. He met with one of the parents of a student I had last year that I made friends with. He gave him some pointers. Just today I sent him the code he did for the practice performance task. Everybody else was doing this very simple one item list kind of stuff. He recreated the video game asteroids from the 1980's. He did it where it is fully functional. Every aspect of Asteroids is in that game You can keep score, move, you got an accelerator, a decelerator. Bullets that you are shooting. I made a copy of that code and sent it to that guy and said do you think you have a spot for him in your company this summer.

Michael: I have done a few placements like that before. Sometimes students are very gifted with coding. Sometimes if you do not have the support within the school you have to explain it to administrators and guidance. Hopefully, your student will get the summer internship. The co-op is something you know about, but you have not done it yet.

Jimmy: Yes. We have not done it yet. But yes, we should that would be a great way to get community involvement.

Michael: How about FBLA? How is that going? That can be hard sometimes for new teachers. It can be a lot of work.

Jimmy: It is. It is. The teacher that I took over from she was retiring due to medical issues. The club had been very vibrant maybe six or seven years ago, but it just dropped off because she could not devote time to it. It was almost like restarting it. But I had this group of freshmen that I taught in my first period class which was **. They were exceptional. They were just outstanding. I am going to love watching them grow during their four years of high school. We had thirty students

that signed up and fifteen of them were from that one class I had. We made it into a voluntary organization. We did some school projects and volunteered for those. We did the competitions. We raised some money and did ok on that. We went through all the different steps. This year in the competitions we only entered two and won them both.

Michael: You went to districts then.

Jimmy: Yes we did. Then states got canceled on us. My four students that entered all were eligible for state. This year we will probably have maybe eight competitions that we are entering. I would be surprised if we do not win those.

Michael: That is awesome that you went ahead in your first year and got the CTSO going.

Jimmy: My philosophy in this is that I joined so late. My teaching career has to be that every year is a dog year. If I can resist the urge to go back and make some money. If I can resist that I have got to advance seven years every single year. I'm only going to be doing this ten more years max. I feel the pressure that I do not have the chance to ease my way into it… I have to jump in and make a difference. When I speak to people, they do not see it that way. They think number one I am trying to do too much. I am like dude you do not know what I am capable of. I am like rather you can help me otherwise I am going to push you out of the way. I need to do this. We need to be moving and advancing.

Michael: What about your professional development? Do you get in house professional development? Did you have to take college courses to get your license?

Jimmy: Yes we do. We get an hour for attending some of the professional development that the school offers like in-service kind of stuff. You have to have one hundred eighty hours over the ten years for your license. I could only start counting on June ** which was my hire date. I ended up getting a hundred and thirty-eight hours of the one hundred eighty hours last summer. I did the two Computer Science I went through then I did twenty-eight hours where I got credit for Curriculum Development because I published it out to other teachers in the district to use. So they gave me twenty eight hours for that. I have been active in that.

Michael: Did you have to take any college courses during your provisional licensure process?

Jimmy: No. The last thing they had to do for me was for me…they had to come in…in like in spring of last year my first year I had to give up another weekend to attend a couple of days' worth of training. I did not get professional development points for that. That was still looking backward.

Michael: That was a requirement before your license issue date. Did you have any financial

support for your professional development?

Jimmy: Funny you should mention that. Yes and No. I have asked for the AP because the curriculum I have been told to use is so horrible. I asked if I could have a pier teacher from AP central to work with me to make sure my class is ready. I am so fearful that I have been trusted with these thirty minds and that I am going to miss something. Some stupid loophole rule that I will miss and they are all going to fail because I missed it.

Michael: I have used code.org but I have used several other platforms at once in my class.

Jimmy: Ok. I am using Khan Academy believe it or not. That was one of the most frustrating days of my

life… I reached out to the central office contact person that says I have to use the required platform. I said we need to revisit this because I went through the training and the two platforms are not comparable. If they were comparable, I would be ok because they are about the same. One of the platforms clearly separates itself and one of our goals in our district is to increase nontraditional AP student enrollment. We want them to take AP because it is a different path that you go on. The expectations are different.

Michael: They do get college credit if they get the required score.

Jimmy: Yes. It is so important. You cannot launch the non-traditional student in the BJC curriculum because it drops students off in the middle of nowhere. You can use code.org because of scaffolding. I want to use it. I gave her five bullets explaining. She essentially wrote back to me and said, "Thank you very much for your note that was very good analysis, but you need to continue to use the BJC platform" I said you got to be kidding me I am an adult.

Michael: You mentioned IEP's and you said you have gone to meetings. How do you work with students with special needs? How did it go your first year?

Jimmy: In the classes I teach I have one EPF class where out of twenty-seven students eighteen have an IEP or 504. Heading into it you know the students are going to struggle in some way. Whether it be the struggle in their ability to concentrate, ability to understand the terminology, or the amount of time they use for tests or quizzes. In the classroom there can be disruption where you need to understand why the student is acting out.

Michael: Do you have a special education department you can reach out to? Do you have an aide for this class?

Jimmy: I do not have an aide. I asked for an aide in this class because two thirds of the class has an IEP or a 504. I don't understand why I do not have somebody else that can help me with

this. Most of my other classes its four or five students out of thirty that have an IEP or 504. This class its eighteen out of twenty-seven students who have an IEP or 504.

Michael: This can be tough when you first start teaching.

Jimmy: There is a department and I know the person who works there because she also when through the same program I did. I have a previous working relationship with her. She is excellent at what she does. There is so much turnover in that department it makes it tough. In these COVID times you feel so removed from it. Last year you had to deal with it because the students were face to face in my classroom. Now I talk to screens and initials all day.

Michael: So you try to make the modifications the best you can in the virtual platform.

Jimmy: Exactly. I send home a parent communication for all my classes and all my students every single week on what we covered and here is what we are going to cover. I always give some bullet items for each class. I do an overall on the top saying this is the class that is going to have a tough week and here is why. So if your student is having difficulty make sure you encourage them to reach out because I have office hours. I meet with students in the video world at nine or ten o'clock at night because that is when they are most active. I do not mind. My kids are in college and my wife and I are alone. This is fine and this is normal for me. In my past working environment I had people all around the world working and I had to meet with them at different times.

Michael: Do you attend the IEP meetings?

Jimmy: I attend every single IEP meeting. I am there when they are crafted and when we are making decisions on what we think would work for the student. I am there with mom and dad if there is mom and dad when they are advocating for the student. I am there giving examples regarding my experiences with the student. I am there when I am implementing the IEP.

Michael: SOLs tie into CTE. Career and Technical Education courses can connect to SOL courses. Sometimes students have deficiencies in reading, writing, and math skills. What do you do to improve the basic academic skills of students?

Jimmy: Yes I do. The biggest skill that I think is kind of lacking with the students I teach is they come without any kind of emotional intelligence. Simple things like how to constructively give criticism. In my district we call it workplace readiness skills. It is but it is not. I actually put them through exercises where they practice active listening skills. I teach this as part of **, **, and **. In the upcoming ** class I have redone the lesson. I teach them about procrastination. I talk about the root cause of procrastination and what you can do to actually work around it. I have

had students that have come back to me to say this was very helpful. One student told me she had an assignment in another class and she did not want to
do the assignment and she realized I had talked about how to overcome procrastination. I taught them to spend fifteen minutes on the assignment then to give themselves an award. She said she spent fifteen minutes on the assignment and then realized it was not that bad and kept working on it.

Michael: If they have a reading problem do you work with them individually?

Jimmy: I have not had that issue except in the EL world. Where I have had the difficulty has been in math. By in large the group does not understand how to multiply percentages times numbers. I ended up taking a full class and did nothing but percentages. We use it in EPF for the baking unit, loan unit, and investment unit. If you do not understand this the wheels will fall off three times on me. I spent the time upfront and I would still say a third of them are still not getting it after all that time. I spent extra time during our focus time period which is a school wide study hall and office hours to work individually. What I found was if I could work with a student one time and draw. If I could draw and they can draw. There is an application we have that allows us both to be able to draw on the screen. If I can use that I can break it up into pieces of pie. Students start to understand it. Instead of the math they understand it more visually.

Michael: Have you taught adults before in industry?

Jimmy: Yes I have.

Michael: Sometimes CTE teachers may be asked to teach other teachers, a chamber of commerce course, or a course at a local community college. Have you had any experience with this in the high school yet?

Jimmy: Not in the high school but definitely in the professional world. What I was cued up to do last year was to help one of the governor's centers. Our school is the leadership center. The one school in the same district not too far from us is the center of Information Technology and I was going to run their summer internship program. But then COVID hit. With the parents there I would have kept them alert and aware of what the students were going through during their summer internships. I would have had open houses and training around those aspects. I would have had training on performance reviews and what the students and parents should be expecting. In the business world I have had several times where I had to give companywide training and presentations. I was in the ** business and had to educate new people.

Michael: Is there anything going through the licensure process that could be approved?

Jimmy: I think working with pears. That would have also been beneficial to me working with the Computer Science curriculum. I think if there was a way for me to maintain relationships with industry as part of my teaching responsibilities. To be able to maintain relationships and to have a corporate sponsor. Similar to how we endow chairs at universities. If students that I am working with knew they had the potential of a scholarship, summer internship program, or some type of program that what they are learning now could become something they could express into the future and be able to continue to learn. They could also use their social media skills to contribute to **. There is a ton of stuff I would like to be able to do. I would like to have that formal opportunity for my development.

Michael: Let me clarify. You are saying you should have a connection to the local industry near you but also have an experienced teacher mentor at the school.

Jimmy: That is right. When I push on this at colleagues at ** what I have run into is resistance. I get the resistance because ** is very active in the community. They pick a school that serves many more underprivileged students then my school does. My school is about ** minority and we do not hit that threshold to allow ** to get active with our school. That does not mean my students are not important. I would love to have that opportunity to be able put ideas in front of industry to what I think students can do and to build that partnership between what is going on in the real world versus what is going on in the academic world. If I get one good connection in that all the sudden I can loop in the person that is teaching marketing.

Michael: What this sounds like is that you are talking about developing local competencies that connect to local industries suggested by a local industry advisory panel. You might end up adding to your course competencies listed on the CTE VERSO if the school system approves it. You might create a local industry advisory panel.

Jimmy: I would really enjoy that. I thought I would be able to do that. I was making good progress on it. But its hit and miss. I do not feel like I am being recognized or rewarded for it. I would love if someone would tell me I was doing a killer job on it. I have given some time to focus on it.

Michael: Anything else before we conclude?

Jimmy: The pay gap is just astronomical. What I always tell people is I pre-retired. I saved a whole bunch of money from my days in industry so I could afford to become a teacher.

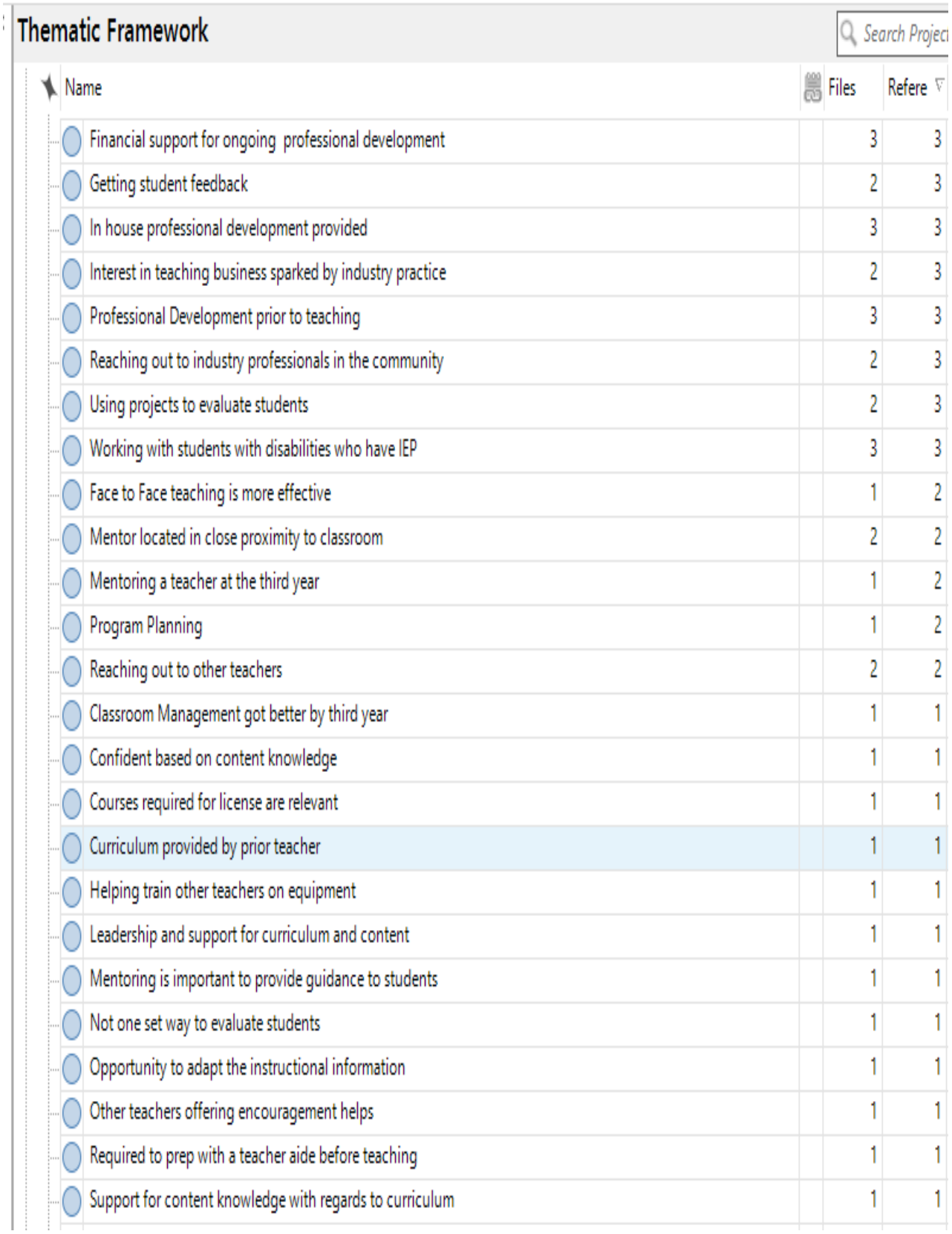
Otherwise, I would have not be able to. There is so many more people out there like me that just cannot afford the significant drop in salary. That one I have given up on. Heading into this I gave up on it. It is just something you accept in being in this role. You are seeking other benefits other than it being monetary.

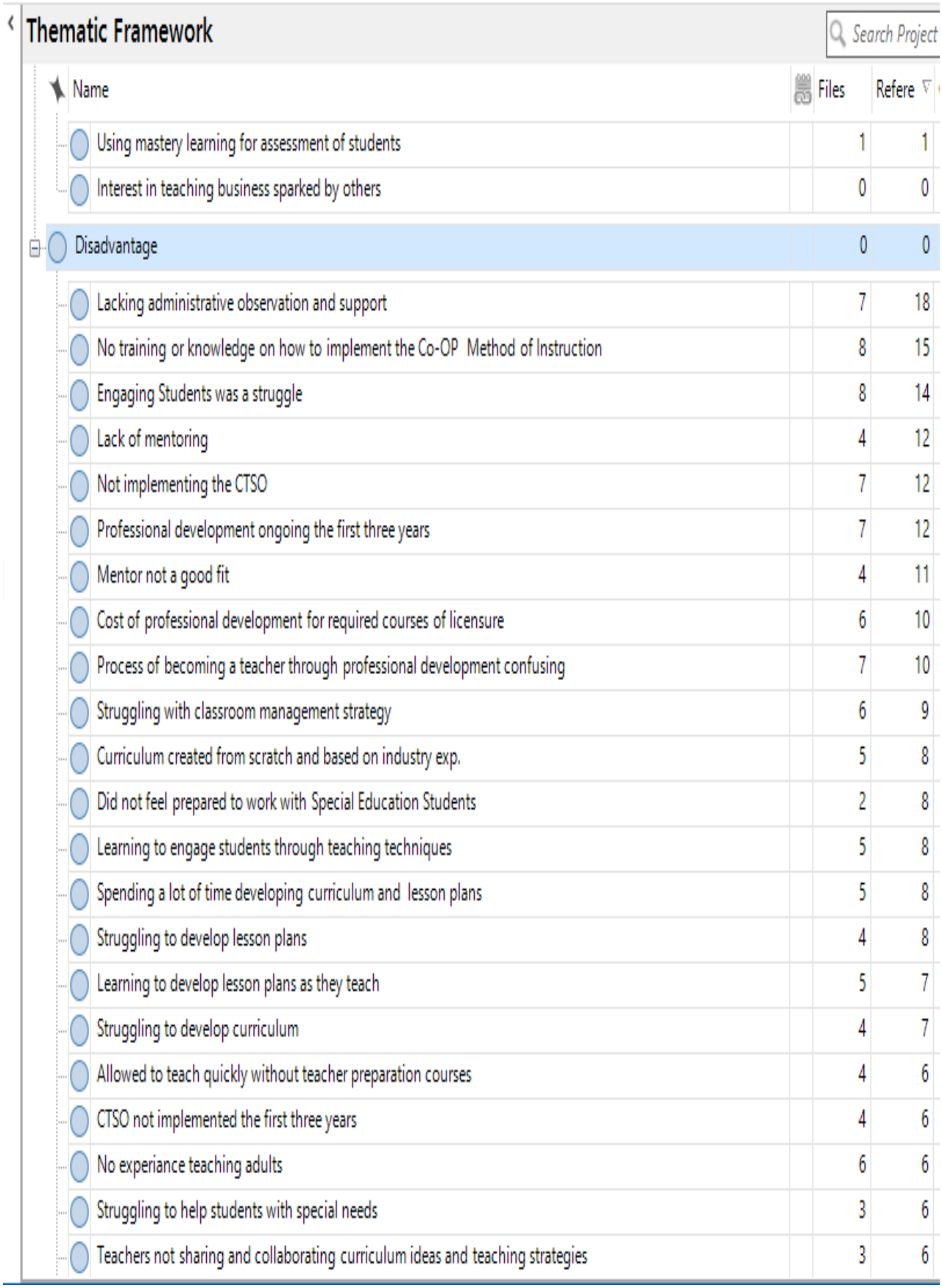
Michael: Thank you for taking the time to give me this interview. This concludes the interview.

Thematic Framework

Search Project

Name	Files	Refere
Advantage	0	0
Mentoring is a factor that helps when transitioning to teaching	7	17
Experiance teaching adults	6	13
Building trust and relationships with students	6	12
Providing guidance to students	10	12
Helping students with basic reading, writing, and math skills	7	11
Reaching out to guidnace	7	10
Serving students with special needs	6	10
Engaging students	6	9
Reaching out to build a school community relationship	6	9
Using real world examples to teach	6	9
Evaluating students	6	8
Administrator involvment helps	5	7
Accessing students	5	6
Attending IEP meetings	5	6
Classroom Management Strategies	4	6
Implementing the CTSO	4	6
Teaching related SOL skills in CTE courses	4	6
Making adjustment to lessons when they are not working	4	5
Reaching out to Special Education Department	5	5
Evaluating Curriclum	3	4
Reaching out and building relationshohips with parents	3	4
Teaching Workplace Readiness Skills	3	4
Understanding of Co-op method of instruction	3	4
Department Chair Support	3	3


Thematic Framework
Search Project
Name
Files
Refere
Financial support for ongoing professional development 3 3
Getting student feedback 2 3
In house professional development provided 3 3
Interest in teaching business sparked by industry practice 2 3
Professional Development prior to teaching 3 3
Reaching out to industry professionals in the community 2 3
Using projects to evaluate students 2 3
Working with students with disabilities who have IEP 3 3
Face to Face teaching is more effective 1 2
Mentor located in close proximity to classroom 2 2
Mentoring a teacher at the third year 1 2
Program Planning 1 2
Reaching out to other teachers 2 2
Classroom Management got better by third year 1 1
Confident based on content knowledge 1 1
Courses required for license are relevant 1 1
Curriculum provided by prior teacher 1 1
Helping train other teachers on equipment 1 1
Leadership and support for curriculum and content 1 1
Mentoring is important to provide guidance to students 1 1
Not one set way to evaluate students 1 1
Opportunity to adapt the instructional information 1 1
Other teachers offering encouragement helps 1 1
Required to prep with a teacher aide before teaching 1 1
Support for content knowledge with regards to curriculum 1 1



Thematic Framework

Search Project

Name	Files	Refere
Using mastery learning for assessment of students	1	1
Interest in teaching business sparked by others	0	0
Disadvantage	0	0
Lacking administrative observation and support	7	18
No training or knowledge on how to implement the Co-OP Method of Instruction	8	15
Engaging Students was a struggle	8	14
Lack of mentoring	4	12
Not implementing the CTSO	7	12
Professional development ongoing the first three years	7	12
Mentor not a good fit	4	11
Cost of professional development for required courses of licensure	6	10
Process of becoming a teacher through professional development confusing	7	10
Struggling with classroom management strategy	6	9
Curriculum created from scratch and based on industry exp.	5	8
Did not feel prepared to work with Special Education Students	2	8
Learning to engage students through teaching techniques	5	8
Spending a lot of time developing curriculum and lesson plans	5	8
Struggling to develop lesson plans	4	8
Learning to develop lesson plans as they teach	5	7
Struggling to develop curriculum	4	7
Allowed to teach quickly without teacher preparation courses	4	6
CTSO not implemented the first three years	4	6
No experiance teaching adults	6	6
Struggling to help students with special needs	3	6
Teachers not sharing and collaborating curriculum ideas and teaching strategies	3	6

Disadvantage	0	0	2
Lacking administrative observation and support	7	18	2
No training or knowledge on how to implement the Co-OP Method of Instruction	8	15	2
Engaging Students was a struggle	8	14	2
Lack of mentoring	4	12	2
Not implementing the CTSO	7	12	2
Professional development ongoing the first three years	7	12	2
Mentor not a good fit	4	11	2
Cost of professional development for required courses of licensure	6	10	2
Process of becoming a teacher through professional development confusing	7	10	2
Struggling with classroom management strategy	6	9	2
Curriculum created from scratch and based on industry exp.	5	8	2
Did not feel prepared to work with Special Education Students	2	8	2
Learning to engage students through teaching techniques	5	8	2
Spending a lot of time developing curriculum and lesson plans	5	8	2
Struggling to develop lesson plans	4	8	2
Learning to develop lesson plans as they teach	5	7	2
Struggling to develop curriculum	4	7	2
Allowed to teach quickly without teacher preparation courses	4	6	2
CTSO not implemented the first three years	4	6	2
No experiance teaching adults	6	6	2
Struggling to help students with special needs	3	6	2
Teachers not sharing and collaborating curriculum ideas and teaching strategies	3	6	2

Thematic Framework

Search Project

Name	Files	Refere
Developing curriculum as they gain experience	4	5
Leaving High School Teaching	3	5
Need for better professional development	4	5
Not reaching out to build school and community relationships	5	5
Sought out another mentor	3	5
Struggling toimplement the CTSO	4	5
Teacher salary is lower than industry salary	3	5
Administrator decisions that require excessive work impact new teachers	2	4
Classsroom management strategy is trial and error	2	4
Creating curriculum from scratch	3	4
Industry culture different then teaching culture	3	4
It's hard to take courses and teach	4	4
No support for teaching special education students	3	4
Not attending IEP meetings	2	4
Teaching more than three different preps the first year	3	4
Teaching the first year is hard	1	4
Accessing students based on just one method	3	3
Better support for teachers coming from industry	1	3
Provisional Licensure Process is condensed information lost	3	3
Struggling to evaluate students	3	3
Entered teaching because of hours working in inidustry	2	2
First couple of years tough	2	2
Hard to Program Planning and Evaluation the first three years	1	2
Lack of school support for reaching out to the community	1	2
Mentor has a different endorsement area	2	2

Thematic Framework

Name	Files	References
No training on how to use the CTE competencies	2	2
Not Reaching out to parents	1	2
Professional Development not based on industry background and kn	2	2
Teaching at the lower levels of Blooms Taxonomy	1	2
Coming from industry culture	1	1
CTSO being used does not match courses	1	1
Does not attend summer conferences for professional development	1	1
Feeling the pressure of teaching responsibilites	1	1
Felt like they already knew the information in licensure courses	1	1
Hired without any teacher preparation	1	1
Knowledge in teacher preparation courses hard to implement	1	1
Lack of content knowledge	1	1
Learning how to access students takes time	1	1
Learning assessment strategies	1	1
Needs help with SOL content knowledge	1	1
Needs money for technology resources	1	1
No connection with academic teachers that teach SOLS	1	1
Not doing direct instruction	1	1
Not evaluating instruction the first year	1	1
One week course to prepare to teach	1	1
Opportunity restricted for teaching adults	1	1
Other teachers using outdated methods	1	1
Switching from CO-OP to Internship. Not doing traditional CO-OP	1	1
Switching to Teaching Because of Economy	1	1
They ask new teachers to do a million things	1	1

Thematic Framework

Name	Files	References	C
Working on building enrollment	1	1	2
Worried about state licensure test	1	1	2
Would like to teach adults	1	1	2
Observation of successful teachers would be helpful	0	0	2
Teaching two classes in one block	0	0	2