The Self-Reported Perceptions of Levels of Preparedness of Alternately-Licensed Career and Technical Education Teachers in the State of Ohio Completing the Resident Educator Summative Assessment

DISSEPTION

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Abstract

Requiring teachers to complete a performance-based assessment in the form of a teacher performance assessment is becoming a common way for initial teacher licensure or advancing a license. While some traditionally- and alternatively-licensed teachers from all content areas may have to complete some type of performance-based assessment for initial licensure, the impact of having teachers who are alternatively-licensed in the field of career and technical education complete a performance-based assessment for renewal of a license has not yet been studied. Research has indicated (Ruhland & Bremer, 2001; 2002) that the needs’ of alternatively-licensed career and technical education teachers are different from the needs’ of traditionally-licensed career and technical education teachers especially when it comes to making pedagogical and instructional decisions. In the state of Ohio, alternatively-licensed career and technical education teachers are still completing their educational coursework as beginning teachers and do not complete field experiences and student teaching requirements which a traditionally-licensed teacher would complete while training to be a teacher.

The Resident Educator Summative Assessment (RESA) is a type of performance-based teacher assessment that had to be completed for renewing a license for both traditionally- and alternatively-licensed teachers in the state of Ohio. Describing the levels of preparedness of each task of the RESA of alternatively-licensed career and technical education teachers was the purpose of the study. Survey research in the form of
a questionnaire distributed via e-mail was the instrument used for data collection which asked teachers to describe their levels of perceived preparedness over all four tasks associated with the RESA among demographic variables. The demographic variables induced the teacher’s career and technical content area, gender, degree level, type of school, background of school, and years of work experience outside of education.

Descriptive statistics were reported which included the mean, standard deviation, median and percentages and frequencies of percentages. Both parametric and non-parametric statistical tests were performed to describe the differences among the groups over levels of perceived preparedness, and effect sizes were calculated after conducting a one-way analysis of variances between-groups. Anecdotal evidence was also presented from e-mail responses from the participants and analyzed for themes.

Results indicated that group differences were not statistically significant among demographic variables when describing levels of preparedness on all four tasks of RESA. Effect sizes were also calculated to be small. Percentages and frequencies of percents indicated that there were group differences in levels of preparedness among all demographic variables on each task of the RESA. Anecdotal evidence from participants included not perceiving to be fully prepared to complete RESA in one school year and perceiving as though RESA was not designed for alternatively-licensed career and technical education teachers, which affected levels of preparedness. Some recommendations included a succinct version of a task that requires teachers to analyze formative and summative assessment on a performance-based assessment, involving
teacher educators in the creation of a performance-based assessment, and allowing teachers more time to complete this type of assessment instead of just one school year.
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Fields of Study

Major Field: Educational Studies
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Chapter 1: Introduction

Implementing a fair and adequate system to evaluate teachers based on effectiveness has become ubiquitous in the field of education, especially in the kindergarten through twelfth grade levels. An increasingly popular form of assessing teacher effectiveness, whether it be for initial teacher licensure, continuing teacher licensure, or even national board certification includes the usage of teacher-performance assessments (TPA’s). Teacher-performance assessments are used throughout education as a way to gauge teacher effectiveness (Darling-Hammond, 2010a; Darling-Hammond, 2010b.; Darling-Hammond, 2013; Darling-Hammond, Newton, & Wei, 2013; Darling-Hammond, Wei, & Johnson, 2009; Darling-Hammond, Wise, & Klein, 1999), and have teachers complete activities and tasks that are seen as more authentic to what is found in the classroom. One way of evaluating a teacher’s performance is by using performance-based assessments where the teacher demonstrates competence by providing evidence of effective instructional and pedagogical decision-making. Performance-based assessment is a form of teacher performance assessment and using this type of assessment has been a national trend dating back to 2003 (Darling-Hammond, 2013). These types of assessments are designed to evaluate both traditionally- and alternatively-licensed teachers, with teachers being evaluated per measures of effectiveness and evaluated by an assessor (Darling-Hammond, 2010a; Darling-Hammond, 2010b.; Darling-Hammond,
Before performance-based assessments were implemented, teachers were required to complete an assessment that was not performance-based, such as a traditional licensing examination (McCaslin & Parks, 2002).

Nationally, four different states including New Mexico, Massachusetts, Washington, and Ohio have been utilizing performance-based assessments to gauge teacher effectiveness. This first began in the state of New Mexico when the state department of education required teachers to submit a portfolio of evidence as part of a performance-based assessment (Darling-Hammond, 2013). The portfolio was a requirement for teachers to progress from a beginning teacher license (tier one) to the next tier of a teacher license (Darling-Hammond, 2013). New Mexico also implemented a three-tier teacher licensure system, which was modeled after the same structure found in the National Board Certification for teachers seeking to become nationally-recognized teachers. Teacher performance assessments in the form of a performance-based assessment have since evolved, and three key areas in which teachers must demonstrate competence include instruction, student learning, and professional acumen. The teachers need to submit evidence in each area for the teacher constructed portfolio (Darling-Hammond, 2013).

The state of Ohio has its own requirements for both initial teacher licensure that are specific to traditionally- and alternatively-licensed teachers. There are also requirements related to how to advance a teaching license by having teachers who are either traditionally- and alternatively-licensed complete a performance-based assessment. After receiving a teaching license, teachers must participate in an induction program and
successfully complete a performance-based assessment to advance his or her teaching license (Ohio Department of Education, 2016a).

The induction program for all new teachers in the state of Ohio is known as the Ohio Resident Educator program which is four years in duration (Ohio Department of Education, 2016a). Specific tasks must be completed each year by the teacher as established through program requirements. Some of the requirements of the Ohio Resident Educator during years one, two, and three of the program include mentoring activities with a state-assigned mentor, reflections on teaching, and most importantly, a culminating performance-based assessment that requires teachers to demonstrate competence of successful teaching, including pedagogy, assessment, and instruction known as the Resident Educator Summative Assessment (RESA) (Ohio Department of Education, 2016b).

Both traditionally- and alternatively-licensed teachers must successfully pass all tasks associated with RESA through the 2016 – 2017 school year. Those teachers who successfully pass all four tasks will then be able to complete leadership modules in year four of the Resident Educator program, and after successfully completing that requirement, they may then advance to a professional license (Ohio Department of Education, 2016a). Those teachers who do not pass all four tasks of RESA must remediate each task until successful completion. All teachers have three chances to pass the RESA before they have exhausted all opportunities to pass the assessment (Ohio Department of Education, 2016a).
Completing the RESA successfully requires traditionally- and alternatively-licensed teachers from all content areas to make instructional and pedagogical decisions. However, in the field of career and technical education, there are self-perceived differences in levels of preparedness when it comes to making pedagogical and instructional decisions between traditionally-licensed and alternatively-licensed teachers. Traditionally-licensed teachers in the state of Ohio have completed requirements for a baccalaureate degree and other licensure requirements before being granted a teaching license (Ohio Department of Education, 2016a). Alternatively-licensed career and technical education teachers are granted a teaching license once they are hired by an employing school district. There are differences between the two groups of teachers when it comes to pedagogical decisions, and they are described by Ruhland & Bremer (2002) stating that, “In pedagogy, teachers with a baccalaureate degree in education felt the most prepared, and alternatively certified teachers felt the least prepared” (p. xii). Traditionally- and alternatively-licensed career and technical education teachers must both be prepared to make pedagogical and instructional decisions all throughout the Resident Educator program and provide evidence of effective decision-making on the RESA.

**Statement of the Problem**

Currently, there is no data specific to the self-perceived levels of preparedness of alternatively-licensed teachers in the field of career and technical education completing each task for the RESA, a performance-based form of teacher performance assessment. The focus of this study was to address the lack of baseline data describing the self-
perceived levels of preparedness of career and technical education teachers who are alternatively-licensed completing a performance-based assessment.

Context of the Problem

Teachers who were either traditionally- or alternatively-licensed in the state of Ohio must complete a performance-based assessment to advance a teacher license and demonstrate competence in making teacher-related decisions. One such area of concern for those teachers who were alternatively-licensed was their ability to absorb as much pedagogical content and ability to make effective instructional decisions in their training, all while being fully-fledged classroom teachers. It is noted in a research study by Myers et al., 2007 (originally cited by Shen & Palmer, 2005) that alternatively-licensed programs may inadequately prepare alternatively-licensed teachers to impart appropriate pedagogical knowledge for effective instructional decisions. This is further described in a study by Lynch (1996) titled In Search of Vocational and Technical Teacher Education as the amount of time alternatively-licensed trade and industry teachers receive directly related to pedagogy, and Lynch stated that,

Most states do require some (average required equals about 120 clock hours) of pedagogical preparation concurrent with the first year of teaching. This teacher preparation typically consists of short, intensive workshops offered in the summer or dispersed throughout the year … [a] vast numbers of T&I teachers initially and continually teach in public schools and technical institutes without benefit of any formal teacher preparation from a college or university” (Trade and Industrial Education, parag. 3).

Teacher education programs were also requiring more immersive experiences for preservice, traditionally-licensed teachers when it comes to learning to make pedagogical decisions through experiencing what is like to be a teacher. These traditionally-licensed
teachers had shown improvement in making these such types of decisions when they were carefully mentored by a cooperating teacher before becoming a fully licensed teacher (Cochran-Smith et al., 2015).

It is also stated by Stephens (2015) that novice alternatively-licensed career and technical education teachers are less likely to feel prepared to use a variety of instructional and pedagogical decision-making and skills in comparison to those career and technical education teachers who are traditionally-licensed. This was due in part to traditionally-licensed career and technical education teachers completing a traditionally-based licensure program at a college/university provider of traditional licensure and these teachers having more time to prepare in their teacher education programs. Stephens (2015) also acknowledged that, “More mature AOA [alternatively-licensed career and technical education teachers] teachers incorporate background and prior knowledge into the introduction of lessons containing new content” (p. 132).

Alternatively-licensed career and technical education teachers have reported different self-perceived levels of feeling prepared to make instructional and pedagogical decisions, while some felt inadequately prepared in comparison to those who reported they were prepared (Ruhland & Bremer, 2002). The levels were quantified in another study by Ruhland & Bremer (2003) when the authors concluded that eight percent of traditionally-licensed career and technical teachers reported feeling inadequate to make pedagogical decisions, whereas 16% of alternatively-licensed career and technical education teachers reported feelings of inadequacy. Additionally, when it came to reporting feelings of “very adequate,” 25% of traditionally-licensed career and technical
teachers reported that measure, whereas 16% of alternatively-licensed career and technical teachers reported a feeling of “very adequate.” The feelings of being unprepared between traditionally- and alternatively-licensed career and technical teachers are further exemplified by Ruhland & Bremer (2002) when the authors state that, “Results from this study reported secondary CTE teachers who completed a traditional certification program had better pre-service preparation in pedagogy while alternatively certified teachers felt more prepared in knowledge of subject matter” (p. 106). It is also noted in a study by Kee (2011) that alternatively-licensed teachers feel less prepared in comparison to traditionally-licensed teachers when it comes to making pedagogical decisions, which is due in part to fewer (if any) field experiences and fewer courses related to instruction and pedagogy.

The needs were also different between traditionally- and alternatively-licensed career and technical teachers when it comes to perceptions of being prepared to make both instructional and pedagogical decisions. Alternatively-licensed teachers have different needs than their traditionally-licensed counterparts, and they were still receiving their educational training and working on best practices when it comes to instruction during their first few years of teaching (Wash, Lovedahl, & Paige, 2000). They may not feel prepared to complete a large authentic assessment in addition to all other licensure requirements during their initial years of teaching. Traditionally-licensed teachers were able to practice their teaching strategies during field experiences and a culminating student teaching experience where there are classroom teachers who direct and mentor them. Additionally, these teachers were also completing the Teacher Performance
Assessment known as the edTPA (American Association of Colleges for Teacher Education, 2016), which was a performance-based assessment that had similar tasks to RESA while they are student teaching (American Association of Colleges for Teacher Education, 2016); alternatively-licensed career and technical teachers were not able to participate in edTPA as full-fledged teachers and are granted a teaching license as soon as they were hired by an employing school district in their content area. Also, alternatively-licensed teachers were hired by a school district and must make the transition from business and industry into being a full-fledged teacher without going through preparation in the form of training that traditionally-licensed teachers receive (including edTPA).

They had only four years to complete all licensing requirements, including coursework, and they also must prepare for and successfully complete the Resident Educator Summative Assessment in either year three or year four of their beginning teaching career (Ohio Department of Education, 2016). Receiving deficient scores on one or more tasks of RESA put the future of a career and technical teacher’s license in jeopardy. The self-perceived levels of preparedness of career and technical teachers completing each task of RESA has yet to be studied. Research has indicated that alternatively-licensed teachers have perceptions of anxiety and insecurity when it comes to making pedagogical decisions in comparison to their traditionally-licensed counterparts (Darling-Hammond, Chung, & Frelow, 2002; Ruhland & Bremer, 2002; Ruhland & Bremer, 2003). The RESA had tasks that focus specifically on teacher knowledge of pedagogy and assessment and the ability to demonstrate competency on all requirements of teaching.
Another area for consideration was the progress that alternatively-licensed teachers have made with their required coursework. Alternatively-licensed teachers were still working on gaining their knowledge of what it takes to make effective pedagogical decisions, whereas traditionally-licensed teachers would have received these opportunities from structured field experiences, completed all required educational courses, and a culminating student teaching experience. This is especially reflected in a study conducted by Duncan, Cannon, & Kitchel (2013) when the authors stated that, “One may argue that traditionally certified teachers have been exposed to more pedagogical and learning theories and experiences than alternatively certified teachers that will increase their self-efficacy as it relates to the items within the teaching and learning domain” (p. 65). The RESA is a performance-based assessment that tested teachers’ knowledge over pedagogy including instructional practices and assessment.

Although alternatively-licensed teachers were completing coursework and gaining teaching experience during their first four years of teaching, they may not have perceived themselves as being prepared to complete all tasks required of RESA.

**Significance of the study**

This study addressed the lack of research related to preparedness of alternatively-licensed career and technical education teachers completing the RESA. No research currently addressed the preparedness of alternatively-licensed career and technical teachers completing RESA as alternatively-licensed career and technical education teachers having to make instructional and pedagogical decisions that are assessed by a teacher from their career and technical content area on four different tasks as a part of
RESA. Research indicated that alternatively-licensed career and technical education teachers struggled with making pedagogical decisions in comparison to traditionally-licensed and career and technical education counterparts (Conneely & Uy, 2009; Ruhland & Bremer, 2002; Ruhland & Bremer, 2003). This was especially reflective in the scoring guide that accompanies RESA detailing how assessors assessed both alternatively- and traditionally-licensed teachers who have completed RESA. The scoring guide had clear guidelines for assessing the RESA according to the pedagogical and instructional decisions that they make, and teachers who completed RESA were not able to work as closely with a mentor as they did in earlier years of the Resident Educator program (Ohio Department of Education, 2016a). Both traditionally- and alternatively-licensed teachers were assessed by the same rubrics for each task associated with the RESA. Each section of the RESA had scoring rubrics which range from level one (the lowest level) to level four (the highest level), so that teachers could see how they were assessed when it came to each individual task associated with the RESA. In order for teachers to score at the highest level (a level four), they had to demonstrate competence when it comes to making pedagogical decision making, and the assessors of the RESA focused on the, “teacher’s ability to use content and pedagogical knowledge to deliver instruction that is engaging and challenging to students in the class without being overwhelming or confusing” (Ohio Department of Education, 2016d, p. 7).

Another area of concern related to preparing for the RESA was the completion of a performance-based assessment during preservice teacher years, which is an assessment that alternative-licensed career and technical education teachers are exempted from since
they are already teaching. According to the edTPA website, the edTPA is an assessment designed to, “help determine if new teachers are ready to enter the profession with the skills necessary to help all of their students learn” (What is edTPA designed to achieve? parg. 1). Since alternatively-licensed career and technical teachers do not have to complete the requirement of the edTPA for initial licensure, these teachers would be completing tasks of the RESA for the first time without being able to complete a performance-based type of assessment requiring teachers to make pedagogical and decision-making skills. This is in stark contrast to traditionally-licensed teachers from all content areas who must complete the edTPA during student teaching as part of licensure. It is noted by Darling-Hammond, Jaquith, and Hamilton (2010) that performance-based assessments are best when used for initial licensure before being used at a different point in time for continuing teacher licensure.

**Purpose of the study**

The purpose of this research study was to describe self-perceived levels of preparedness of alternatively-licensed career and technical teachers in the state of Ohio, for completing requirements of the Resident Educator Summative Assessment (RESA). Specifically, the study was designed to address four research questions:

1. What are the differences in self-perceived levels of preparedness of each content area career and technical teacher completing the first instructional cycle task of RESA among demographic variables?
2. What are the differences in self-perceived levels of preparedness of each content area career and technical teacher completing the formative and summative assessment task of RESA among demographic variables?

3. What are the differences in self-perceived levels of preparedness of each content area career and technical teacher completing the second instructional cycle task of RESA among demographic variables?

4. What are the differences in self-perceived levels of preparedness of each content area career and technical teacher completing the communication and professional growth task of RESA among demographic variables?

**Assumptions underlining the study would include:**

1. Perceptions could be measured.

2. All respondents understood the questions being asked.

3. All respondents had attempted all parts of the Resident Educator Summative Assessment.

4. The questionnaire was appropriate in measuring perceptions of the respondents.

5. Respondents’ perceptions were measured using a reliable and valid instrument.

6. Respondents thoroughly understood the directions of the questionnaire and an appropriate readability level was selected.

7. Only alternatively-licensed career and technical education teachers responded to the questionnaire.
Delimitations

Several delimitations were put in place by the researcher to focus on certain aspects of the sample being studied. Altogether, four delimitations were employed by the researcher:

1. Only alternatively-licensed career and technical education teachers who completed the RESA during the school years of 2013 – 2014, 2014 – 2015, and 2015 – 2016 were included in the sample. Those alternatively-licensed career and technical education teachers who completed the RESA during the school year of 2016 – 2017 were not included in the study due to the changing landscape of the assessment as well as timing of data collection procedures.

2. The RESA originally had five tasks that teachers had to complete which included a reflection type of task. The reflection task was later omitted from more recent versions of RESA and was not a part of the tasks measured for levels of preparedness by the researcher (McCarthy-Beauvais, 2015).

3. Teachers who were sampled completed their alternative license in career and technical education from colleges/universities that opted to participate in the research study. Four colleges/universities participated in the research study.

4. Four tasks were measured including two different instructional cycles in order to describe levels of preparedness throughout the duration of the entire RESA process.
Limitations

Several limitations were addressed in the study, which affect the scope and sequence of the study. Altogether, seven limitations are addressed below.

1. Only alternatively-licensed career and technical education teachers from the state of Ohio completing RESA tasks were included in this study. Therefore, only generalizability could be to these particular groups of teachers, and not to any type of content area where alternative certification is available in the state of Ohio (i.e., special education, designated subjects, Montessori education) or to traditionally-licensed career and technical education teachers as they were all not a part of the sample in the study.

2. Respondents who completed the RESA in the beginning stages of its implementation may have a difficult time trying to remember all the way back to the school year of 2013-2014 and thus may have a harder time recalling levels of preparedness.

3. The RESA has undergone, and continues to undergo, changes to actual assessment in terms of formatting and the omission of a last task; some of the respondents from the earlier school years may wonder why Task 5 is not a part of the questionnaire.

4. If a low response is gathered from the respondents in the study, it may affect the ability to generalize the findings to the entire population of alternatively-licensed career and technical education teachers.
5. This study sought to only determine levels of preparedness of alternatively-licensed career and technical education teachers. The researcher did not attempt to discover why the alternatively-licensed teachers felt not as prepared on each task of the RESA, so additional questions could rise as to the reasons behind lower levels of preparedness for each major content area analyzed according to each task of the RESA.

6. Due to the large numbers of career and technical education content areas offered in Ohio, career and technical content areas were grouped so that analysis could be performed. In the state of Ohio, alternatively-licensed career and technical education teachers can be licensed to teach 16 different areas of career and technical education. For the purpose of this study, all 16 career and technical content areas were condensed into five major content area groupings including Agriculture and Environmental systems, Business, Finance, Marketing and Information Technology, Health Occupations and Human Services, and Trade and Industrial education.

**Definition of Terms**

To help clarify terminology used within this research study, the following definitions were expanded on:

*Alternative certification* – A teaching license issued to teachers who are not traditionally trained through a university licensure program and who enter teaching with a provisional license and must complete licensure teaching courses within the preliminary years of
teaching (Wayman, et al., 2003; Ng & Petzer, 2009). Sometimes referred to as lateral-entry teachers. Usually recruited from business and industry.

**Alternative certification pathway** – The courses, field experiences, and other licensing requirements that alternatively-licensed teachers across all content areas must complete in order to keep or advance their preliminary license (Ohio Department of Education, 2017c).

**Alternative Resident Educator** – Refers to teachers who were licensed through alternative means, and did not pursue a license through the traditional pathway. These teachers in the state of Ohio are granted an Alternative Resident Educator License. In the state of Ohio, teachers can be alternatively-licensed in five areas including designated subjects K-12, world languages grades P-12, intervention specialist grades K-12, career and technical education and workforce development, and Montessori education (Ohio Department of Education, 2017c).

**Authentic Assessment** – Refers to tasks completed by teachers that mimic real-world conditions and are not comprised of traditional, paper-and-pencil examinations. Instead, authentic assessments require teachers to complete an activity such as an instructional event to demonstrate competence (Wiggins, 1990).

**Career and Technical Education** – Defined as vocationally-oriented programs that prepare both teenagers and adults in the training and skills needed in order to obtain a skilled job upon the completion of the program (Association for Career and Technical Education, 2016a). May be offered in comprehensive high schools, a compact high school, a career
and technical center, or even through incarceration programs upon the release of the student.

Career and Technical Agriculture Education – Defined as the area of career and technical that prepares students for careers in the agriculture industry as well as environmental sciences and is aligned to the agriculture, food and natural resources and education and training career clusters (Association for Career and Technical Education, 2016b).

Career and Technical Business, Marketing, and Finance Education – Defined as the area of career and technical education that prepares students for careers related to business and students acquire and learn the necessary skills to function in the world of business. Career clusters aligned this area of career and technical education include business, management and administration, finance, and marketing, sales, and services (Association for Career and Technical Education, 2016c).

Career and Technical Health Occupations Education – Also known as health science education, this is the area of career and technical education that prepares students in the health occupations field as health care professionals including jobs in nursing, dental hygiene and dental assisting, home health aide and medical technician. Aligned to the career clusters of Health Occupations and Human Services (Association for Career and Technical Education, 2016d).

Career and Technical Trade and Industrial Education – Defined as those students who are seeking the skills and expertise within the career clusters of architecture and construction, arts, A/V technology and communications, government and public administration, human services, information technology, law, public safety and security, manufacturing, science,
technology, engineering and mathematics, and transportation, distribution and logistics (Association for Career and Technical Education, 2016e).

**Career Clusters** – The 16 different career fields that encompass career and technical education in the state of Ohio that students can choose to complete a pathway that may lead to a degree, credential, or licensure. These are also the different areas of career and technical education in which CTE teachers are licensed in a chosen content area ("Career Clusters", 2014).

**edTPA** – Defined as the performance-based assessment completed by preservice teachers seeking traditional licensure where they must demonstrate competence in three key areas related to teaching. Is also a type of teacher performance assessment that is performance-based. The key areas include effective planning, instruction and assessment (American Association of Colleges for Teacher Education, 2016). Results of edTPA are used for initial licensure decisions by college/university institutions offering education programs of study.

**Instructional decision-making** – Defined as the teachers’ abilities to implement decisions that directly affect student learning including both teacher- and student-centered strategies, and increasing students’ abilities to learn new material through instruction. Also are decisions made related to effective teaching that come after pedagogical decision-making (Hunter, 1979; Kansanen, n.d.).

**Pedagogical decision-making** – defined as the decisions that a teacher makes before instructional decision-making whereby a teacher must decide and justify the reasons
behind the thinking of a teacher as well as making curriculum decisions that directly impact student teaching (Kansanen, n.d.).

Perceptions – These are defined as the ways in which a person interacts and interprets events from the world, and constructs his or her own meaning from those events and construes meaning out of the events (Pickens, 2005; originally cited by Lindsday & Norman, 1977).

Resident Educator – Refers to teachers participating in the four-year induction program in the state of Ohio who are traditionally-licensed. These traditionally-licensed teachers complete activities under the guidance of a mentor the first two years, the Resident Educator Summative Assessment during year three, and leadership activities during year four (Ohio Department of Education, 2016a).

Resident Educator Program – The Resident Educator was officially launched in Ohio in 2011, and is a four-year induction program required for both traditionally and alternatively-licensed teachers in the state of Ohio. By participating in the Resident Educator program, beginning teachers participate in required activities including mentoring, some videotaping of teaching, and many reflection activities in order to prepare for the Resident Educator Summative Assessment in year three (Ohio Department of Education, 2016a). Year four is comprised of leadership modules, and beginning teachers must pick, develop, and implement certain activities that demonstrate competence related to being both an effective leader and teacher.

Resident Educator Summative Assessment (RESA) – The required performance-based, non-subject specific assessment that all beginning teachers in the state of Ohio must
complete. Originally, alternatively-licensed career and technical teachers could complete this assessment in either year three or year four of the induction program (school years 2013-2014 and 2014-2015) but is now required to be completed by year three by both traditionally-licensed and alternatively-licensed teachers in the state of Ohio (Ohio Department of Education, 2016b). Also, teachers must demonstrate competence in four different tasks including assessment, communication, professional development, differentiated instruction and basic pedagogical knowledge in education.

**Resident Educator Summative Assessment Task One** – For task one of the Resident Educator Summative Assessment, resident educators must be prepared to complete an instructional cycle, which includes videotaping an entire period of instruction. After videotaping the lesson, the Resident Educator is required to analyze the lesson and provide evidence of student learning by answering prompts related to the lesson itself (Ohio Department of Education, 2016d).

**Resident Educator Summative Assessment Task Two** – For task two of the RESA, teachers are required to analyze student learning through formative and summative assessments. The teacher must be prepared to analyze student learning using both formative and summative assessments for three different levels of student abilities, including low-, mid-, and high-performing students, and provide evidence as to how they use assessment to inform their instruction and pedagogical decision-making (Ohio Department of Education, 2016d).

**Resident Educator Summative Assessment Task Three** – Exactly similar to task one, teachers must be prepared to videotape and analyze a second instructional cycle, but must
focus on a different class or subject. The teacher analyzes evidence gathered from the lesson and reflect on instruction and pedagogical decision-making related to making effective instruction decisions (Ohio Department of Education, 2016d).

Resident Educator Summative Assessment Task Four – For task four of RESA, teachers must be prepared to provide evidence of communication with colleagues and parents/caregivers and also must provide evidence of their continued professional development (Ohio Department of Education, 2016d).

Teacher Performance Assessment – Assessments used to determine the competence of a teacher, whether the teacher is fully-licensed or is a preservice teacher, as he or she completes activities related to teaching effectiveness (Pecheone, Pigg, Chung, & Souviney, 2005). These are assessed by a trained assessor who may or may not be from the teacher’s content area.

Teacher Preparation Program (TPP) – Colleges/universities that have teacher education programs that lead to licensure for prospective teachers. Both alternatively- and traditionally-licensed teachers can complete licensure requirements at a teacher preparation program, and the requirements vary state-by-state (Lys, L’Esperance, Dobson, & Bullock, 2014).

Traditionally-licensed teachers – Those teachers who complete a formal teacher licensure program at a college or university that incorporates pedagogical courses, field experiences, and a culminating student teaching internship prior to becoming a fully-licensed teacher (Shen, 1997). Additionally, a standardized assessment such as Praxis or
Ohio Assessment of Educators may also be needed to be taken before being granted licensure to practice teaching.

**Operational Definition**

Perceptions of preparedness – Perceptions of preparedness were measured using a Likert scale on a questionnaire that was developed by the researcher after the researcher tested it for both validity and reliability. The Likert scale was derived by selecting a number between 1 and 4, with 1 = Very Unprepared, 2 = Unprepared, 3 = Prepared, and 4 = Very Prepared.

**Summary**

The RESA was a type of teacher performance assessment in the form of a performance-based assessment that both alternatively- and traditionally-licensed teachers from all content areas in the state of Ohio must complete successfully to qualify for a five-year professional license. There were four tasks involved, and the tasks included having teachers making pedagogical decisions and instructional decisions such as reflecting on instructional strategies, gathering evidence of collaboration with colleagues and parents/caregivers, and gathering evidence of student learning through formative and summative assessments. A precursory performance-based assessment to the RESA was the edTPA, which was completed by traditionally-licensed teachers during student teaching as a part of obtaining a teaching license. The preparedness levels of alternatively-licensed career and technical education teachers completing all tasks associated with the RESA have not been measured, and this study addressed that gap in the literature. Several research studies, including those conducted by authors Kee (2011)
and Ruhland & Bremer (2002; 2003) have indicated that alternatively-licensed career and technical teachers may not be as prepared to make pedagogical decisions in comparison to traditionally-licensed career and technical education teachers. The results of this study established baseline data to delineate the self-perceived levels of preparedness of career and technical education teachers completing each task of the RESA.
Chapter 2: Literature Review

Studies that include research related to the current forms of teacher assessment including performance-based assessment for teacher licensure and the history of alternative licensure are all detailed in the upcoming section. Also included the following sections are the history of licensure for career and technical and other content areas, the history and current forms of performance-based teacher assessment, the history and current form of the Resident Educator Summative Assessment, the preparedness levels of all content area teachers who are alternatively-licensed, the theoretical framework used for this study and newly enacted legislation that impacted alternatively-licensed career and technical teachers completing RESA.

History of teacher residency nationally and in Ohio

Teacher residency programs were originally established to recruit and retain those individuals who do not come from an education background. At present, the teacher residency programs are designed to train and acclimate a novice teacher, known as a teacher resident, to the wide range of decisions that teachers make daily, as the individual works with a master teacher who trains and mentors the novice teacher. While also receiving on-the-job training, the novice teacher also takes courses towards a Master’s degree and also usually receives tuition reimbursement and a stipend (Thorpe, 2014). There are some advantages to a teacher residency program including increased recruitment and retention, mentoring, and creating a diverse workforce. Some
disadvantages could include how to recruit teachers and costs associated with supporting two teachers in the classroom. This model has also influenced the state of Ohio, and the induction program known as the Resident Educator program. Aspects of the teacher residency model will be explored, including unintended outcomes associated when launching and using a residency program for teachers in the United States, as well as some potential areas for improvement for the teacher residency structure.

**Overview of teacher residency**

Initially modeled after the medical residency that medical practitioners are required to complete after they graduate from medical school (Thorpe, 2014), teacher residency can be described as the time a beginning teacher dedicates to being self-reflective and analytical in order to determine best practices to deliver effective teaching pedagogy within the classroom, while completing coursework relevant to the field of teaching in education (Papay, West, Fullerton, & Kane, 2012). Another part of the teacher residency model is the role of the school district hiring new teacher residents. School districts will also partner with a local college/university in order to provide the teacher resident with a chance to obtain a Master’s degree while completing courses that lead to teacher licensure (Papay, West, Fullerton, & Kane, 2012); it is also noted that sometimes certain school districts will use a third-party vendor in order to create the structure of the teacher residency program for the school district wanting to start such a program.

Another aspect of the teacher residency program was a much longer and deeper process than just a few field experiences and student teaching as the program, “goes
beyond a traditional student teaching capstone experience and provides a more substantive and meaningful teacher preparation experience. In this program, candidates engaged in a series of school-based experiences and teaching opportunities under the guidance of an accomplished teacher while simultaneously applying theories learned from coursework” (National Education Association, 2013). Teacher residents were expected to learn and assist a mentor in the form of a master teacher, and gain the insights and knowledge dedicated to being an effective teacher within the kindergarten through twelfth grade educational system. Once the teacher resident completed a full year of teaching under a master teacher, the teacher resident then took over a classroom of his or her own and teach individually without a mentor directly assisting in the classroom (Darling-Hammond, 2008). Teacher residents also committed to a time span of four to six years, in which time the teacher resident received compensation and even tuition reimbursement as part of their compensation package.

Teacher residencies were designed as a to recruit uncertified personnel into the teaching profession, who had no teaching experience, as a way to work alongside a master-teacher for one year during an intensive internship where that person would not be the teacher of record, but instead, would gain the knowledge and insights from the master teacher (National Center for Teacher Residencies, 2015). Teaching residency programs also served as a way to recruit those teachers to teach in high-demand schools and subjects, as, “the teaching residency model creates a pipeline that channels recruits directly into urban districts; even better, it allows districts to develop strong training models so that their recruits are prepared for what they will encounter on the job and will
be encouraged to stay on and become leaders in the district” (Darling-Hammond, 2008, p. 732). There has been some increase in retention of a beginning teacher, as research indicates that teaching residencies have had some successes in retaining teachers for longer periods of time in comparison to other teacher retention models that are not technically teacher residency programs such as the Teacher for America (TFA) program (Ingersoll & Merrill, 2011).

A teacher residency program was viewed as a “third-option” for licensing teachers who were not trained in a formal education program or through alternative means. Some teachers in the state of Ohio were trained through a traditional route of which includes courses over pedagogy, field experiences, state licensing examinations, and a culminating student teaching experience. Other teachers such as alternatively-licensed teachers who in the state of Ohio seeking licensure in the field of career and technical education were lateral-entry teachers with significant real-world experience in their content area and take courses at a university over pedagogy, as well as complete any other licensing requirements (Manley and Zinser, 2012). Additionally, a teacher residency program was uniquely different. A teacher residency program provided novice teachers an experience where they worked in cohorts with other teachers, and were still viewed as preservice teachers as they completed their residency training.

**History of teacher residency in the United States**

The first teacher residency programs were referred to as urban teacher residencies (UTRs) (Berry et al. 2008), as residents were recruited to work in schools that were perceived as harder-to-fill positions. The first urban teacher residency program began in
2001, as National Louis University (NLU) and the Academy for Urban School Leadership (AUSL) came together to recruit teacher residents into schools that were of high need, especially when it came to high-needs subjects including math, science, and special education (Gardiner & Salmon, 2014). A few years later more teacher residency programs emerged as school districts in both Boston, Massachusetts, and Mapleton, Colorado, also launched their own teacher residency programs between 2003 and 2005 (Haycock & Crawford, 2008; Keller, 2006).

A primary reason for the proliferation of teacher residency programs was for the recruitment and retention of teachers in both high-needs areas and high-needs subjects were the reasons for teacher residencies, and the residencies allowed those from outside education and with no teaching experience to become acquainted with teaching methodologies by working alongside a master teacher (Gardiner & Salmon, 2014). Two of the first teacher residency programs, the Boston Teaching Residency and the Academy for Urban School Leadership, were flagship programs that are still being utilized for teacher recruitment, and also still being studied related to effectiveness.

**Boston Teaching Residency**

In 2002, public schools within Boston were experiencing a problem with a noticeable deficiency when it came to recruiting and retaining teachers to stay in the classroom past one year (Papay, et al., 2012). Both high-need schools and high-need subject areas were struggling with finding teachers to fill vacancies, especially in science, math, and special education. In order to alleviate the problem of recruiting and retaining teachers in the K-12 school system, the superintendent established the Boston Teacher
Residency in conjunction with Boston Plan for Excellence (Berry et al., 2008). The residency program was officially launched in 2003, and teachers were required to commit to at least four years of service and would receive both a stipend and tuition reimbursement for their services to teaching all while working towards earning a graduate degree (Keller, 2006). The program then flourished, and the residency program has had an increase in the number of teachers staying through the duration of the entire residency as well as teachers of record after they complete residency requirements. Additionally, it became apparent to the administrators of the program that this model could be used to increase recruitment and retention in Boston Public Schools (Keller, 2006). The ultimate goal of the Boston Teacher Residency program was to increase the number of residents from 75 teachers per year when it first launched to 120 teacher residents per year, which in turn constituted approximately 30 percent of the new teachers that Boston hires per school year (Solomon, 2009).

**Urban Teaching Academy in Chicago: Academy for Urban School Leadership**

Originally founded in Chicago, Illinois, in 2003, the urban teacher residency program was slightly different from other urban teaching academies as the first-year resident teachers change to new mentors/master teacher’s half way through the school year (Berry et al., 2008a). Participants who decided to become teacher residents agree to a six-year commitment, and are also provided a salary and tuition reimbursement (Keller, 2006). Teacher residents also worked in professional learning communities with other residents, and they worked together to formulate effective teaching strategies. After the first year of the residency, the teachers were then assigned to their own classrooms.
without having a master teacher in the room with them, but they continued to receive mentoring and support throughout the duration of the entire residency (Berry et al., 2008a).

While completing a one-year residency under the direction of a mentor/master teacher, these beginning teachers were also enrolled at National Louis University and completed coursework which led to a graduate degree as well as teaching certification. The teachers were also reimbursed for all college coursework taken towards their degree, and this was contingent on the teachers completing all requirements and staying in the residency of the duration of their contract (Berry, et al, 2008; Keller, 2006). Typically, the teachers completed all requirements for coursework in three to five years, and the teacher residents committed to a time of a six-year residency (Keller, 2006).

**Recent History of teacher residency in Ohio**

During the month of January, 2009, it was under the direction and leadership of former governor Ted Strickland to transition Ohio from an entry-year program for all new teachers which included Praxis requirements in the state to a new program, which focused on residency for new teachers. The new program was to focus more on mentoring during the first few years of residency, as, “Recognizing that beginning teachers need additional support and training, the four-year teacher residency program will provide Ohio’s newest educators with coaching, mentoring and guidance that is critical to long and successful careers as educators” (Ohio Department of Education, 2016k, parag. 1). Then governor Strickland acknowledged the changes during an update
on the state of Ohio in 2009, as the governor proclaimed in a “State of the State” speech that:

…under my plan, in recognition of the enormous importance of excellent teachers, we will revolutionize teacher preparation and development in Ohio with a residency program. Just as future doctors begin their careers under the watchful eye of an experienced colleague, we will give our new teachers the benefit of thoughtful guidance from an accomplished senior teacher. After a four-year residency, successful candidates will earn their professional teaching license (The Columbus Dispatch, 2009).

The Resident Educator program in Ohio replaced both the entry-year program and the Praxis requirements for beginning teachers as per requirements of House Bill 1 legislation. House Bill 1 was devised and articulated by congress as a way to revolutionize education in the state of Ohio for K-12 teachers, and also included a new teaching licensure structure in the form of a four-tiered system (Soloninka, 2010). The first tier consisted of the Resident Educator license, of which was granted to new teachers for a period of four years before an advancement to the next tier of licensure could be granted (Soloninka, 2010). An Alternative Resident Educator license was granted to those teachers seeking licensure through an alternative pathway. The bill was signed into law officially in July, 2009, and accordingly, “This four-year resident educator experience will provide Ohio teachers just entering the profession with quality mentoring and guidance essential for a long and flourishing career. Successful completion of the residency program will be required to qualify for a five-year professional educator license” (Soloninka, 2010, “Ohio Transition Resident Educator Program”, parag. 2). The Ohio Department of Education was tasked with developing a framework for the new teacher residency program in conjunction with the Ohio Standards for the Teaching
Before the residency program could officially be launched as a result of the newly passed legislation, a transition period had to be implemented to allow those teachers who already held a provisional two-year license. These teachers were granted an opportunity to advance to a five-year professional license, and this transition occurred from July 1, 2009 through January 1, 2011 (Ohio Department of Education, 2016k).

Another key area of the Resident Educator program was gathering a pool of qualified mentors to mentor first-year teachers through the program one-on-one during the first year of the Resident Educator program, and also in a group mentoring structure during the program for year-two teachers. During the years 2009-2011, mentors had to be selected and trained according to certain criteria (i.e., availability, teacher experience, other criterion) and the mentors also had to complete mentor training requirements established by the Ohio Department of Education (Soloninka, 2010). Once the mentors were fully-trained and completed all mentoring requirements, they were then assigned to new teachers entering the Resident Educator program.

**Resident Educator Program: Presently**

The Resident Educator teaching license was not technically considered a professional license, as a professional license was not granted to teachers in Ohio until he or she successfully completes all requirements and activities associated with the Resident Educator program including successfully completing the Resident Educator Summative Assessment (RESA) (Paliokas, 2013). Also, unlike the teacher residency programs modeled after the urban teaching academy framework in Boston or Chicago, teachers in the state of Ohio teach on their own when being placed in a classroom, without first
assisting a master teacher or a lighter teaching load the first year. Also, they were assigned a mentor to complete mentoring activities throughout year one and year two of the program, and the mentor and mentee are required to meet at least once a month if not more often in order to complete year one activities (Ohio Department of Education, 2016a). A more in-depth examination of each year of the Resident Educator program is discussed below.

**Residency in Ohio: Resident Educator Year One**

All first-year teachers were required to complete and participate in mentoring activities with a state-assigned mentor during year one. Certain requirements were also required of teachings including communicating with their principals and state-assigned mentors about their progress through the first year of the program (Ohio Department of Education, 2016e). The first year of the program was meant to acclimate teachers to the culture of the school and teachers receive an opportunity to reflect on best practices of effective teaching by collaborating with his or her assigned mentor. It was recommended that teacher document his or her growth as a first-year teacher by completing a collaborative log with his or her mentor. Teachers also documented their growth through evidence, and this evidence could come from several sources which included reflective journals, videotaped teaching sections, or possibly a professional growth plan or goals of which documents the activities performed with the mentor (Ohio Department of Education, 2016e).
Residency in Ohio: Resident Educator Year Two

Teachers completed the second year of the Resident Educator program no longer worked one-on-one with an assigned mentor and also completed different tasks. Teachers instead worked with a group of other teachers who also in their second year in the program and the group continued to collaborate with a state-assigned mentor (Ohio Department of Education, 2016e). As teachers completed the requirements of year two, they continued to collect evidence that supported their instructional and pedagogical decision-making. The major requirement for year two was the formative progress review (FPR) of which was submitted by the teacher by the end of year two, and is also verified by the mentor (Ohio Department of Education, 2016e). As long as the teacher had completed the FPR thoroughly and provided evidence of teaching decisions and reflected on those decisions, the teacher successfully completed year two of the program.

Residency in Ohio: Resident Educator: Year Three

During year three, teachers completed all four tasks of the RESA. Each task had a different due date, with two tasks were due by the fifteenth of December and the last two tasks were due by the fifteenth of February (Ohio Department of Education, 2016d). Score reports for all teachers who completed the RESA were available on the first day of June and include whether a certain task was successfully passed as well as feedback on each task. Each task was assessed by at least two independent assessors who are familiar with the teacher’s content area (Ohio Department of Education, 2016d).

Teachers could also re-take one or more tasks of the RESA that were assessed to be deficient and not successfully completed by the teacher. Teachers who remediated
RESA had to have all four tasks submitted by the middle of February (Ohio Department of Education, 2016d).

**Resident Educator Summative Assessment: History and Current Version**

The Ohio Department of Education partnered with a third-party vendor, Educopia, and created an assessment as part of the Resident Educator program (Ohio Department of Education, 2016f). The Resident Educator Summative Assessment (RESA) was officially launched during the school year of 2013-2014, and originally had five tasks that teachers from all content areas and grade levels had to complete during the third or fourth years of teaching in Ohio. Task five was dropped after the 2013 – 2014 school year, and now only four tasks had to be completed by teachers (Ohio Department of Education, 2016d). For task five, teachers had to distribute a questionnaire to students, the students completed the questionnaire related to how effective they perceived the teacher to be, and the teacher had to reflect on their responses (Ohio Department of Education, 2016d). The RESA instrument itself had also undergone several changes each year, which have been referred to as “enhancements”. Throughout each school year the RESA continued to evolve such as a more streamlined process for submission and tips and techniques in a handbook about how to pass all four tasks of the assessment on the first attempt (Ohio Department of Education, 2016a).

For tasks one and three of the RESA, teachers completed an instructional cycle but at different times during the school year (Ohio Department of Education, 2016d). The first task was known as the *First Lesson Cycle*, and the third task was known as the *Second Lesson Cycle*. Teachers had to videotape an entire lesson, without stopping or
pausing the recording, analyzed the lesson after it is been taught, and addressed specific prompts related to the lesson (Ohio Department of Education, 2016d). Teachers were required to thoroughly communicate to assessors that they understood the mechanics of the lesson including instructional- and pedagogical-decision making by completing and submitting five different forms. The five forms that teachers were then uploaded to be evaluated by two different assessors. The forms included a lesson overview and commentary form, an instructional strategies overview form, a video overview form, and an overall lesson analysis form, all of which included corresponding evidence (Ohio Department of Education, 2016d). Teachers also completed the same forms and provided evidence for the Second Lesson Cycle, but a noticeable difference was that teachers were required to choose from and videotape a different lesson; if a teacher were to submit the same lesson for analysis that would result in an automatic failing grade for the Second Lesson Cycle. Each instructional cycle had a different due date and the teacher uploaded all materials through an account created on the Educopia website (Ohio Department of Education, 2016d).

There was also a task on the RESA related to assessment. This task was known as Formative and Summative Assessment, and teachers had to select an instructional unit to analyze with both forms of assessment (Ohio Department of Education, 2016d). The requirements also mandated that teachers chose an instructional unit that had some variability in it, so that teachers could reflect on their teaching practice and instructional strategies as they related to assessment decisions. Teachers were required to choose three different students, who performed at three distinctive learning levels. The learning levels
included different students who were categorized as either high-, medium-, and low-performing students; teachers then analyzed and reflected on work submitted by each student. The formative assessment was meant to be a “check-in” point for the teachers as they analyzed the work submitted by the three different students, and the summative assessment was meant to be an all-encompassing assessment that covered the entire instructional unit (Ohio Department of Education, 2016d). Teachers used the three same assessments including two formative and one summative assessment that was given to each type of student during and after instruction occurred. Teachers also submitted the assessments and corresponding reflection questions as evidence of instructional and pedagogical decision-making. Evidence was required to show that teachers were using learning outcomes to guide their instructional strategies and assessment, as, “The connection between the learning outcomes for the unit and the content standards or curriculum priorities should be clearly explained” (Educopia, 2016, p. 48). Several reflection forms were assessed by two different assessors familiar with the teacher’s content area of the teacher completing RESA (Ohio Department of Education, 2016d). The forms for submission assessed included the instructional unit context form, the actual assessments given to students unaltered, and the results/analysis of the three selected students with different performance abilities; all assessments were assessed using rubrics with different levels that directly corresponded to each task and sub-task of this portion of the RESA (Ohio Department of Education, 2016d).

The last task associated with RESA was known as Communication and Professional Growth. To successfully pass this task, teachers had to demonstrate
competency in three different sub-tasks related to communication and professional development: communication with parents/guardians, communication with other teachers and teaching professionals, and how a teacher is developing professionally (Ohio Department of Education, 2016d). Teachers also provided evidence documenting how they communicated with stakeholders such as parents/guardians or other educational professionals as well as how they participated in professional development. Examples of evidence that teachers submitted for how they communicate with stakeholders such as parents/guardians or other educational professionals included a teacher website, a teacher’s phone contact log, e-mail communication, a newsletter, or other relevant documentation (Ohio Department of Education, 2016d). To demonstrate that a teacher was actively engaged and participated in professional development a teacher submitted evidence in the form of a class or workshop attended by the teacher, participation in a professional learning community event or action research performed by the teacher. As teachers gathered evidence for each sub-category associated with the communication and professional development tasks, teachers were also required to reflect on their abilities to communicate with stakeholders as well as reflect on the importance of professional development as a teacher (Ohio Department of Education, 2016d). Teachers were assessed by submitting four different forms as part of the communication and professional development task. The forms included a rationale for communication with parents and caregivers, examples of communication with parents or other caregivers, a rationale for professional collaboration, examples of communication and collaboration
with colleagues, and professional development and growth (Ohio Department of Education, 2016d).

**Residency in Ohio: Resident Educator: Year Four**

During the fourth and final year of the Resident Educator program, teachers had one of two options: they either completed deficient portion(s) of RESA or completed teacher leadership activities from a list of approved activities that demonstrate competence as a teacher-leader (Ohio Department of Education, 2016h). Those teachers who failed one or more tasks of RESA were allowed to re-take the RESA up to three times, but had to obtain a passing score on all four tasks before the teacher was able to advance his or her teaching license (Ohio Department of Education, 2016h). Teachers who passed all four tasks associated with RESA completed leadership activities from three different areas including deepening content expertise, collegial professional expectations, or teacher leadership. The activities were documented by the teacher, and verified by program coordinators who entered information into the C.O.R.E. database. Once all four years were completed of the Resident Educator program, the teacher then applied for a five-year professional license, which was the next tier in the four-tiered teaching license system in Ohio (Ohio Department of Education, 2016h).

**History of Performance-Based Teacher Performance Assessment**

When a teacher was seeking licensure by completing either a traditional pathway program or an alternative pathway program, each state established what an individual must do to either obtain a license or renew a provisional license. Teacher assessments, both computerized and performance-based, provided teacher preparation programs with
multiple data points before granting licensure to preservice teachers (Lim, Stallings, & Kim, 2015). Teacher preparation programs in the form of a college/university used multiple forms of assessments, and scores from those assessments in the decision-making process on whether to grant a license to a teacher (Lim, Stallings, & Kim, 2015).

Teacher performance assessment, in its current form, was first piloted during the late 1980’s when it was first used to assess teachers. One of the first teacher performance assessments that was performance-based were the requirements set forth to become a nationally-board certified teacher (NBPTS). The first piloted teacher performance was initiated by the Stanford Teacher Assessment, which then in turn become the foundation for the requirements used by the National Board for Professional Teaching Standards (NBPTS) which lead to national board certification (Pecheone, Pigg, Chung, & Souviney, 2005). The National Board for the Teaching Standards framework were derived and launched in 1994, and teachers were assessed in a more “authentic” fashion by completing activities that were not paper-and-pencil based (Sato, 2014). Teachers had to have at least three years of teaching experience before they completed activities related to becoming nationally-board certified. In order to qualify as a nationally-board certified teacher, teachers were required to submit a portfolio. Within the teaching portfolio, teachers had to demonstrate competence related to teaching tasks, and provided evidence of effective of instructional pedagogical decision-making which were all assessed by a rubric (Pecheone, Pigg, Chung, & Souviney, 2005).

One of the first states to launch a preservice, performance-based assessment was the state of California during the late 1990’s. Lawmakers in the state of California wanted
to have teachers demonstrate competence on an authentic assessment before receiving a teaching license, and lawmakers in conjunction with teacher educators created and adopted the Performance Assessment for California Teachers (PACT) (Pecheone & Chung, 2006). The PACT was pilot-tested during the 2002-2003 school year and became an integral part of teacher licensure in California shortly after being field tested in the mid-2000s (Pecheone, Pigg, Chung, & Souviney, 2005). Authentic assessments that preservice teachers demonstrated their teaching competence were related to the teacher’s ability to effectively plan, instruct, assess and reflect on a teaching event (Pecheone, Pigg, Chung, & Souviney, 2005). Teachers submitted evidence related to their teaching event including a description of the lesson, how they planned several lesson learning segments, one to two videotaping that included the teacher teaching the lesson and corresponding commentaries; an assessment plan which included student assessment examples; and lastly, a reflection piece on how the instruction went and what the student outcomes were (Pecheone, Pigg, Chung, & Souviney, 2005). Teachers are scored by a rubric which determines if they were successful.

**History of the Praxis Series**

Beginning in 1987, the Educational Testing Service (ETS) created and disseminated a new teacher performance assessment to assist teacher preparation programs in making decisions when it came to licensure for both prospective teachers and beginning teachers known as the Praxis Series: *Professional Assessments for Beginning Teachers* (McCaslin & Parks, 2002). The Praxis series was comprised of three separate assessments that teachers completed from the beginning of their educational
career through the third year of their career. The first part of the Praxis series, which was known as Praxis I, was a computer-administered test. It tested the academic skills and rigor of the teacher. The Praxis I was usually taken by undergraduate students before being admitted to an official teacher preparation program (McCaslin & Parks, 2002). After the teacher had completed much of his or her undergraduate career, the teacher then completed the Praxis II test. Teachers who completed the Praxis II test were assessed on their subject/content knowledge and instructional and pedagogical decision-making (McCaslin & Parks, 2002).

The last assessment of the Praxis Series was known as Praxis III: Classroom Performance Assessments for Licensing Beginning Teachers (Danielson & McGreal, 2000). The Praxis III framework included four domains of teaching responsibility including planning and preparation, classroom environment, instruction and professional responsibility. There were 22 sub-domains spread across all of the four major domains (Danielson & McGreal, 2000). The Praxis III was typically completed during the first year for a beginning teacher near the end of the school year, and included the teacher completing assessments designed to gauge the effectiveness of the teacher’s skills and expertise in the classroom (McCaslin & Parks, 2002). Teachers had to have passing scores on the Praxis III in order to advance his or her teaching license.

McCaslin & Parks (2002) also discussed the impact of the Praxis series on those who enter the field of education through an alternative pathway and do not hold a Bachelor’s degree. The alternative pathway had to be at least 25 semester hours in duration and included coursework over planning and preparation, the classroom
environment, instructional strategies, and professional responsibilities of teachers. Alternatively-licensed teachers first had to be employed by a local educational agency (LEA) such as a middle school/high school or a career center and pass the Praxis I assessment as well as the Praxis II subject-matter assessment only. Teachers completed the Praxis II assessment that covered the principles of teaching and learning after having completed a teacher education program as part of their alternative licensure requirements provided by a college/university (McCaslin & Parks, 2002).

Praxis series requirements varied state-by-state and also program-by-program. In the state of Ohio, only the content areas of school audiology, school speech pathology, and school psychology used the Praxis series tests for beginning licensure decisions (Ohio Department of Education, 2016i). Alternatively-licensed career and technical education teachers no longer had to complete Praxis requirements and completed the requirements of the Resident Educator program instead.

**History of edTPA**

There had been a call for reform by legislators when it came to assessing the teaching abilities of preservice teachers seeking traditional licensure. To meet the challenge, a new performance-based assessment was created that was also subject-specific. The request for a new way to grant licensure originated from suggestions that more data points were needed to determine just what exactly constituted an effective preservice teacher when it came to making instructional and pedagogical decisions before the teacher was fully licensed (AACTE, 2016). A new form of teacher performance assessment in the form of a performance-based assessment for preservice teachers was
developed called the edTPA (Parkes & Powell, 2015). The edTPA had become the assessment utilized by over 600 teacher education programs across 40 states to assess the readiness of preservice teachers (AACTE, 2016). The results of the edTPA were used to grant licensure to preservice teachers, but only after they had obtained a passing score on the entire assessment. Passing scores (also known as cut scores) varied state-by-state (Polly, 2016).

The design that became the foundation of the edTPA were first put forth by both teacher educators and researchers in conjunction with the Stanford Center for Assessment, Learning, and Equity (SCALE) at Stanford University (Lim, Stallings, & Kim, 2015). In 2010, a consortium was formed by the Association of Colleges for Teacher Education (AACTE) to create a new performance-based assessment which would become known as the edTPA (Lys, L’Esperance, Dobson, & Bullock, 2014). The edTPA was the result of teacher education programs wanting a more reliable way to gauge teacher effectiveness using data-driven decisions and more authentic assessments for preservice teachers. It is also mentioned by the researchers that the edTPA went through two major large-scales efforts designed to increase the reliability and validity of the assessment before it was fully implemented (Lys, L’Esperance, Dobson, & Bullock, 2014).

In its current form, the RESA required preservice teachers to complete tasks that emulate the edTPA. According to the edTPA website, preservice teachers completed three different tasks that included planning, instruction, and assessment, as teachers submitted a portfolio of evidence that was assessed by assessors using 15 different
rubrics (American Association of Colleges for Teacher Education, 2016). The edTPA assessment was viewed a way to better professionalize the field of education by having preservice teachers complete assessments that were more reflective of what they would find in the real-world (Gurl et al., 2016). Teacher preparation programs used the scores from a preservice teacher’s submission of all three edTPA tasks in deciding whether to grant a license to that particular teacher. If a teacher did not pass a task of edTPA on the first attempt, then the teacher had to re-take the assessment; teachers could re-take one, two, or all three tasks of the edTPA (American Association of Colleges for Teacher Education, 2016).

Preservice teachers were assessed on three major components that encompassed the edTPA. Various requirements and documentation for preservice teachers to submit to assessors included planning commentaries, lesson plans, reflections, and videotaped classroom teaching sessions to be scored by teachers within the candidate’s teaching content area (American Association of Colleges for Teacher Education, 2016). Materials submitted by preservice teachers were assessed by an assessor from the teacher’s content area which categorized the edTPA a subject-specific assessment (American Association of Colleges for Teacher Education, 2016).

Each task had different requirements that the preservice teacher had to document by collecting evidence and corresponding reflections. Task one was titled *Planning*, with five associated rubrics that preservice teachers adhered to pass the task (American Association of Colleges for Teacher Education, 2016). Task one was graded by an assessor using the first five rubrics found within the edTPA assessment. For the *Planning*
task, preservice teachers were required to describe their planning procedures over a set of lessons. Additionally, the first task further required preservice teachers to reflection and describe through writing how they approached teaching practices. A central focus for this task was how a preservice teacher planned and created assessments that focused on their conceptual understand of their content area (American Association of Colleges for Teacher Education, 2016).

Task two of the edTPA was titled *Instruction*, and had five corresponding rubrics that preservice teachers addressed to successfully pass this task. The central focus of task two dealt with how a preservice teacher created a learning environment conducive for student learning, and the tools that the preservice teacher used to involve students in the lesson that was being taught (American Association of Colleges for Teacher Education, 2016). Task two was assessed by having the preservice teacher submit a videotaped lesson and also a video commentary reflecting on the lesson that was videotaped. Task two was also assessed by an assessor from the teacher’s own content area (American Association of Colleges for Teacher Education, 2016).

The last task of the edTPA was titled *Assessment*, and had five rubrics that preservice teachers had to pass in order to be successful with this portion of edTPA (American Association of Colleges for Teacher Education, 2016). The central focus of task three was how the preservice teacher judged the effectiveness of assessment, and how the preservice teacher determined the needs of the students being instructed. A further emphasis was placed on the preservice teacher’s use of whole-group instruction and monitoring student response (American Association of Colleges for Teacher Education, 2016).
The preservice teacher submitted examples of student work and reflected on each piece of the student work. Task three was also assessed by an assessor from the teacher’s own content area (American Association of Colleges for Teacher Education, 2016).

**History and Characteristics of Alternative Licensure in American Education**

There have been alternative pathways into the field of education and these types of pathways had certain requirements that needed to be completed as part of the alternative pathway. More individuals were entering the field of education through this type of pathway. Authors Redding & Smith (2016) analyzed the results of the School and Staffing Survey (SASS) from 2011-2012 and concluded that approximately 25% of teachers entered the field of teaching through an alternative pathway.

The role of an alternative pathway that lead to alternative licensure began to permeate the field of education after the publication of *A Nation At Risk* (1983). The publication was highly critical of teacher educator programs within the field of education. The publication also pointed out a need to increase and retain more teachers in the field of education. With the call for more action to increase recruitment and retention of teachers across all content areas, alternative pathways for teachers to become licensed were established. This type of pathway was designed to “fast-track” a teacher with limited-to-no background in education and becoming a teacher (Turley & Nakai, 2000).

Turley & Nakai (2000) also noted the structure of alternative preparation programs including that, “Alternate routes may be linked to the university, but they typically seek to fast-track or circumvent traditional university-based teacher education”
A system of alternative licensure programs was established, and more states began implementing alternative programs to license teachers. The alternative pathway was generally known as alternative licensure.

One of the first states that initiated alternative licensure was the state of New Jersey during the early 1980s. According to research findings by Walsh & Jacobs (2007), the authors described the burgeoning field of alternative certification when they stated that, “In 1983, New Jersey created the first alternate route to the classroom. It expedited the entry of well-educated individuals into public schools by hiring them as teachers straight-away, reducing or eliminating ‘theory’ courses from their training, and using experienced teachers to mentor them during their first year or two on the job. At the end, the candidate either was awarded a full certificate or sought employment elsewhere” (p. 8).

Some of the first alternatively-licensed programs that prepared individuals to become teachers by issuing alternative credentials were operated by school districts, and sometimes in conjunction with local universities (McKibbin, 1988). There were several reasons that alternative licensure became a popular option for teachers outside the area of education to be issued credentials to teach in a classroom. One such reason for alternatively-preparing and licensing an individual who does not have a background in education is to fill both vacant positions that cannot be filled by a traditionally-licensed teacher. Another reason was to recruit individuals into school districts that have a lot of vacancies through high turnover rates. In an article by Feistritzer (1993), the author noted that most individuals who became teachers through alternative means had at least a
Bachelor’s degree and were recruited to alleviate the shortfall related to teacher vacancies. Additionally, Feistritzer pointed out three important reasons for the increased usage of alternative licensure programs for teacher recruitment in lieu of recruiting for a traditional teacher education program of which included (a) an increase in student enrollment at all levels of education including the elementary, middle school, and high school levels (b) attrition rates would see an increase and a need to lower the attrition rates and (c) fewer people studying to become teachers.

Feistritzer also noted that alternative licensure began as a standalone program for those outside of education to be recruited, trained, and licensed by school districts, and that the school districts took the lead in preparing the new alternatively-licensed teacher; as such, a local college/university was not necessarily involved with the preparation of alternatively-licensed teachers. Additionally, these alternatively-licensed preparation programs also had entry requirements that were considered to be just as stringent if not more stringent than the requirements by a traditional teacher education program at a local college or university (McKibbin, 1988). Sponsoring school districts were required to implement the training, recruitment, and retention of teachers who were seeking alternative licensure.

The programs that alternatively-licensed teachers can complete, across all content areas, can vary dramatically in their structure, length to completion, sponsorship, and other variables. It is stated by Darling-Hammond (1990) that alternative licensure programs are rarely identical and that, “Alternate routes’ operate under widely divergent standards” (p. 124). These program standards varied greatly depending on which state the
alternatively-licensed teacher was seeking licensure. Another area in which there was a
great deal of variation state-by-state was the educational requirements to enter such
programs. Some states required at least a Bachelor’s degree, or even an advanced degree,
before teachers could enter and complete alternative licensure requirements (Darling-
Hammond, 1990; Feistritzer, 1993; Redding & Smith, 2016; Sass, 2014; Turley & Nakai,
2000; Walsh & Jacobs, 2007). The degree level required for initial entry into an
alternative licensure program depended on two important factors, one being the state’s
requirement and another being the program sought to be completed as part of the
alternative licensure program.

Another aspect of an alternative teacher program was the time to completion for
an alternative program. As per law, each teacher of record receiving public funding must
be properly licensed in both the content area and grade-level(s) in which the teacher is
currently teaching (Hess, 2002). Another aspect of alternative licensure was the amount
of variation in both the time and the amount of coursework taken. According to a study
by Darling-Hammond (2000), the author determined wide variations in how much
coursework and length of time in an alternative program varied state-by-state. It is further
stated by Darling-Hammond (2000) that traditionally-licensed teachers generally required
a minimum amount of semester-hour coursework in both pedagogy and content
knowledge, as well as field experiences and a student teaching experience as part of the
requirements needed to become a full-fledged teacher. Further, requirements also varied
for those teachers who sought to become alternatively-licensed including a wide variation
in completing college coursework and field experiences (Darling-Hammond, 2000).
Darling-Hammond also concluded a wide variation in coursework such as quarter/semester hours needed related directly to instruction and pedagogy for those seeking alternative licensure. Each state determined the requirements for alternatively-licensed teachers including how much they have to complete after being granted a teaching license (Darling-Hammond, 2000).

Echoing the concerns addressed by Feistritzer (1993), McKibbin (1998) also addressed some of the further reasons why alternative licensure became a popular movement in the field of education. According to an article by McKibbin (1988), a main reason for the usage of alternative licensure was due to the perceptions of those in the department of education perceiving that traditionally-licensed teachers were not receiving well-rounded training in educational courses, and thus lacked some of the important concepts related to teaching within their teaching courses. This particular view arose from those in the New Jersey Department of Education. The proliferation of alternative license in subject areas outside of career and technical education began in the early 1980s in the state of New Jersey. Before alternative licensure became a mainstream way of certifying teachers who did not complete a traditional pathway in the field of education, emergency licenses were being issued in certain states in order to credential people to teach from outside the field of education (Rubino, Soltys, Wright, & Young, 1994).

**History of Alternative Licensure in Career and Technical Education**

Career and technical education had a long history in the American public education, which dated to the nineteenth century and passage of the Morrill Acts that established land for colleges/universities to operate (Gordon, n.d.; Lynch, 2000;
McCaslin & Parks, 2002; Ruhland & Bremer, 2002). These colleges/universities would eventually provide teacher education programs for both traditionally- and alternatively-licensed career and technical education teachers. It is noted by Gray (1991) that the field of career and technical education was originally established to meet the needs of the working class and to prepare working class children for the world-of-work by placing them in programs that were oriented towards the workforce. In order to meet the needs for students of the working class, a pathway for licensing career and technical education teachers was established so that these teachers could teach subjects related to career and technical education.

Another part of the new landscape in education which began occurring later at the beginning of the twentieth century included licensing requirements within career and technical education. In the early part of the twentieth century education was undergoing an important change when it came to how to license teachers, including ways to provide licensure to a teacher. Some lawmakers wanted teachers to be licensed by a traditional pathway, whereas some lawmakers were determined to licensed teachers based upon work experience (Walter & Gray, 2002). To establish a comprise among lawmakers, career and technical education (formerly known as vocational education) emerged as a way to license teachers based on work experience in the agricultural field (Gordon, n.d.). The burgeoning field of alternative license began, and the role of licensing teachers based on work experience became a new way to license teachers. Eventually, alternative licenses for career and technical education teachers would emerge in other content areas.
including trade and industry, business, marketing, information technology, health occupations, and human services.

Federally provided funding for career and technical education programs that focused on agriculture began to form as lawmakers sought funding for these types of programs. Legislation set forth in the Smith-Hughes Act of 1917 lay the foundation for certifying career and technical teachers on the basis of work experience, allowing them to become teachers of record of a classroom (Lynch, 2000; Ruhland & Bremer, 2002). According to Lynch (2000), the Smith-Hughes Act of 1917 was designed and implemented to train teachers in the vocations of which included home economics, agriculture and trade and industry. Vocational education was also viewed as a separate entity from traditional education, and with passage of the Smith-Hughes Act of 1917 and also noted by Lynch (2000), funding for teacher preparation that would lead to teacher certification in vocational education was meant to be kept separate from traditionally-trained teachers in other content areas.

A national board was formed that oversaw the administration of funding, as well as training, for vocational programs known as the Federal Board for Vocational Education (Lynch, 2000; McCaslin & Parks, 2002). The federal board oversaw the operation of all state vocational programs, as states were required to submit plans of study to the state about how vocational programs operated (Lynch, 2000). The federal board utilized a 50-25-25 rule with 50% of the time in a vocational program be used for the lab and shop work, 25% of the time be used for related subject matter, and the last 25% be used to focus on academic courses (Lynch, 2000; originally cited by Hayward &
Benson, 1993). The original idea and intent of the passage of the Smith-Hughes Act of 1917 was to prepare high school students for jobs in factories and farms, and an emphasis was placed on licensing teachers with specific occupational backgrounds based on their work experience so that students were prepared in their chosen career field.

A key figure in the creation and implementation of the Smith-Hughes Act of 1917, as well as a strong contributor to the field of career and technical education was David Snedden. According to Wonacott (2003), Snedden cited three key areas in which teachers should focus their instruction and pedagogy: practical studies, technical studies, and general vocational studies. Practical studies referred to completing tasks that were specific to the chosen career field and solving problems related to the career field. Technical studies referred to integrating principles and themes from other academics (such as math or science) that are the foundation for the chosen career field. And lastly, general vocational studies referred to the breadth and depth of the chosen career area including the history, issues, and perspectives of the career field that would prepare the student to one day get a job in the chosen career field. As alternatively-licensed career and technical education teachers were expected to be competent in all three areas as addressed by Snedden when licensing requirements for career and technical education were originally addressed.

Also established through the passage of the Smith-Hughes Act of 1917 were ways in which to license teachers who did not complete a traditional pathway program through a college or university. According to O’Connor (2012), there have been two major ways to get a teaching license in career and technical education as, “Historically, two paths for
CTE teacher licensure have co-existed for almost 100 years; the traditional approach and an alternative approach. The traditional approach is similar to academic areas and the other relies mainly on work experience. Many of the teachers in trade areas may have less than baccalaureate preparation” (Changes in Career-Technical Education Teacher Education, parag. 1). This is also supported by Ruhland & Bremer (2002) in which the authors state that, “Teachers in trade and industrial education and health fields were typically certified on the basis of their occupational experience, and were required to complete a minimal number of course hours in pedagogy” (p. 7).

Practical work experience plays a large role in when it came to licensure for career and technical education teachers, especially those who were seeking alternative licensure. Traditionally, trade and industrial teachers were licensed on work experience and had to complete courses related to instruction and pedagogy to renew their teaching licenses (Ruhland & Bremer, 2002). Other subject areas inside the field of career and technical including business, marketing, family and consumer science, technology education, and agriculture require teachers to have at least a baccalaureate degree (O’Connor, 2012; Ruhland & Bremer, 2002; Walter & Gray, 2002).

The ways in which each state determined licensing requirements for career and technical education teachers, whether they are seeking traditional licensure or alternative licensure, varied greatly by state (Bottoms et al., 2013; Zirkle, Martin & McCaslin, 2007). Each state determined the licensing requirements for career and technical education teachers, and there was even more variation when it comes to determining the credentialing requirements for those seeking alternative licensure (Zirkle, Martin &
According to Cohen and Wyckoff (2016) approximately 10 to 15% of teachers entering the teaching field originated from alternative licensing programs. Additionally, the requirements set forth by each state had wide variation in areas needed for licensing requirements including licensing examinations, field experiences, work experience, and whether or not student teaching would be required (Cohen & Wyckoff, 2016; Zirkle, Martin & McCaslin, 2007).

In the state of Ohio, teachers who teach a subject related to career and technical education can obtain licensure either by completing a traditional pathway or by completing an alternative pathway. For those teachers who complete the alternative pathway, they must be hired by a school district and complete appropriate licensure courses from a teacher education provider sponsored by a college or university (Ohio Department of Education, 2016). Alternatively-licensed career and technical education teachers completed 24 semester hours of coursework in order to advance their Resident Educator license, and they took courses related to pedagogy, methodology, curriculum development, foundations, and assessment strategies. As of the 2106-2107 school year, these teachers completed all requirements (including the Resident Educator program) within four years to advance their license to a professional license without a penalty of losing their current Resident Educator license (Ohio Department of Education, 2016b).

**Preparedness Levels of Alternatively-Licensed Teachers**

The perceived levels of preparedness for teachers from different content areas and who were alternatively-licensed can be mixed, or even contradictory, when it comes to describing just how prepared they perceive themselves to be when making instructional
and pedagogical decisions (Cohen-Vogel & Smith, 2007). Findings of perceptions of levels of preparedness when it comes to making pedagogical decisions across all content areas can vary tremendously, with some alternatively-licensed teachers reporting lower levels of preparedness in comparison to their traditionally-licensed counterparts (Kee, 2011), and conversely, some alternatively-licensed teachers report the same or even higher levels of preparedness when it comes to making pedagogical decisions (Stoddart & Floden, 1995).

Perceived levels of preparedness fluctuated based on how the teacher was certified. A study that examined the ways in which teachers are prepared, both through traditional and alternative pathways, was conducted by Haberman (1984) in a paper titled An Evaluation for the Rationale for Required Teacher Education: Beginning Teachers With and Without Teacher Preparation. In the research article, the author addressed the intricacies of preparing teachers, as well as perceptions of preparedness, for traditionally- and alternatively-licensed teachers. In his findings, the author described how teachers who completed an alternative pathway may not be as prepared as those teachers who completed a traditional, “liberal arts” pathway. This was due in part to the teacher who completed the traditional pathway took courses in subjects including teaching theory, methodology, instruction, and pedagogy with greater breadth and depth. Haberman (1984) also noted that teachers who were alternatively-licensed may perceive their abilities lower when they made teaching decisions related to pedagogy since they are learning on the job, in comparison to traditionally-licensed teachers who had courses
related to both instruction and pedagogy through formal education courses as preservice teachers.

The first reported perceptions of preparedness levels and variations among both alternatively- and traditionally-prepared teachers within the field of career and technical education came from Erekson & Barr (1985) in which the authors reported on the findings of levels of preparedness of career and technical teachers prepared from the two different pathways by conducting a literature review. In their findings, the authors’ research suggested that career and technical education teachers who were prepared and licensed via an alternative pathway, and thus with less formal education when compared to those career and technical education teachers licensed via a traditional pathway were found to be less prepared. The authors also suggested that policymakers reconsider the role in which alternative licensure played a role in preparing career and technical teachers and how to prepare these teachers to be effective teachers by making effective teaching decisions.

The differences in perceptions of being adequately prepared to make both pedagogical and instructional decisions, even before completing a performance-based assessment for licensure considerations, can be traced back to a research study by Houston, Marshall, & McDavid. According to Houston, Marshall, & McDavid (1993), the authors discussed findings related to the perceptions of preparedness among elementary school teachers who completed their training by either a traditional pathway or by an alternative pathway for certification. Within the first two months, the authors determined with statistical significance differences in the perceptions of inadequacy
related to pedagogy and instruction in the domains of student motivation and managing teacher time. It was indicated that elementary school teachers who were traditionally-trained reported higher levels of adequacy in comparison to those elementary school teachers who were trained by alternative means.

The field of career and technical education is not the only teaching field that alternatively-licensed teachers who do not have a background in education can become licensed teachers. Throughout other content areas including math, science, foreign language, special education, there were teachers who also completed an alternative pathway. Also, measuring levels of preparedness of teachers who entered education by the alternative pathway can be harder to gauge since each different state has different requirements for what it takes to be granted an alternative license to teach (Grossman & McDonald, 2008). Thus, deciphering the role of alternatively-licensed teachers across all content areas and their levels of preparedness can be harder to deduce, and can only be done on a state-by-state basis (Grossman & McDonald, 2008).

A study conducted by Miller, McKenna, & McKenna (1998) the authors examined the various needs of both traditionally- and alternatively-prepared teachers including perceptions of preparedness in the classroom. It was discovered through the research study of Miller, McKenna, & McKenna, as well as other studies noted by the authors (from (Feiman-Nemser & Parker, 1990; Grossman, 1989; Lenk, 1989; Mitchell, 1987) that teachers who completed an abridged route to entry were more likely to perceive themselves to be less prepared and encountered higher levels of difficulties such as curriculum development, pedagogical content knowledge, motivation and keeping
students engaged. However, there were no real differences between alternatively- and traditionally-licensed teachers when it came to other aspects of teaching including classroom management and classroom discipline. The major differences were seen through instructional and pedagogical decision-making.

The length and duration of an alternative program that leads to licensure also affected the perceived lower levels of making effective instructional and pedagogical decisions for teachers who completed an alternative pathway. It was pointed out by Darling-Hammond (2000) the impact of quicker and not-as-lengthy programs that were alternative in nature for teachers who did not have a traditional teaching background. Darling-Hammond (2000) stated that, “alternative programs have also noted that what little pedagogical training they provide tends to focus on generic teaching skills rather than subject-specific pedagogy” (p. 168). Darling-Hammond (2000) also stated that these alternatively-licensed teachers were also more likely to be assigned to schools within districts that have high turn-over rates due to teacher attrition. These types of teachers may feel less prepared than those teachers who were licensed through a traditional pathway to make both instructional and pedagogical decisions as newly licensed teachers.

Certain demographics of teachers also contribute to differing perceptions of preparedness. Mid-career changers who were candidates recruited from outside the field of education to work as teachers who may have had a limited-to-no background in the field of education, were relied on heavily to fill vacancies in the field of special education (Rosenberg, Boyer, Sindelar, & Misra, 2007). These participants were also more likely to have a Bachelor’s degree which meant that the alternative pathway program could be
streamlined and accelerated for those participating in the program; additionally, these participants are less likely to have an in-depth training in pedagogy which impacted their levels of preparedness to make pedagogical decisions (Rosenberg, Boyer, Sindelar, & Misra, 2007).

Alternatively-licensed career and technical education teachers also had differences in perceived levels of preparedness when they rated themselves on certain aspects related to instruction and pedagogy. Research conducted by Nakai & Turley, 2000; originally cited by Darling-Hammond & Cobb (1996) indicated teachers who were alternatively-licensed rated themselves lower on dimensions related to being an effective teacher including classroom management, teaching strategies, diversity of learners, making curriculum decisions and the integration of different learning styles when compared to how traditionally-licensed teachers rated themselves. Also, alternatively-licensed teachers were more likely to feel that they were not as prepared as their traditionally-licensed counterparts when it came to implementing a wide range of teaching strategies, with traditionally-licensed teachers reporting a higher perceived level of competency when it came to using different and diverse teaching strategies with students.

There have also been reported significant differences between traditionally-prepared and alternatively-prepared teachers when it comes to teaching activities including lesson planning (both short-term and longer-term lesson planning, the organization and implementation of lesson learning activities, and teaching and incorporating a wide-range of learning styles. (Isaacs et al., 2007). Isaacs et al. (2007)
conducted a study which looked at differences in perceptions of preparation between traditionally- and alternatively-licensed teachers in the state of Florida from teachers from all licensure areas and all grade levels. The authors concluded that alternatively-licensed could benefit from more mentoring and training in the perceived deficient areas as well.

When it came to training to be a special education teacher and completing licensure requirements by an alternative route, some alternatively-licensed special education program offer a limited emphasis and focus on pedagogical decision-making, and instead relied on content knowledge to help a teacher become more effective (originally cited by (Laczko-Kerr & Berliner, 2003). It is noted by Boe, Shin, & Cook (2007) that within the field of special education, there was a stronger emphasis on training related to pedagogical skills for these types of teachers. The authors’ findings also suggested that the more time that alternatively-licensed special education teachers spent in learning more about how to make effective pedagogical skills, the more prepared they felt to make those types of decisions (Boe, Shin, & Cook, 2007).

In a study by Carter and Keiler (2009), it was indicated that alternatively-licensed teachers were not prepared to handle all of the responsibilities that come with being a new teacher, both inside and outside of the classroom. Teaching responsibilities were perceived as overwhelming at times, as acknowledged by the participants in the study. It was further noted that the teachers were expected to work individually with little-to-no-support, and these teachers did not feel prepared for the extra responsibilities that came
along with being a new alternatively-licensed teacher in the classroom (Carter & Keiler, 2009).

A study by Darling-Hammond, Chung, & Frelow, (2002) also noted the different levels of preparedness among alternatively-licensed teachers across all content areas as they were completing responsibilities within their first four years of being a new teacher. It was found that teachers how were alternatively-licensed, or emergency-licensed, rated themselves lower than those new teachers who completed a formal teacher education program when it came to being prepared to handle classroom responsibilities. Some of the teaching responsibilities included instruction, meeting a diverse body of student needs’, and their preparedness related to their abilities to clearly communicate subject-specific instruction (Darling-Hammond, Chung, & Frelow, 2002).

A study by Wayman, Foster, Mantle-Bromley, & Wilson (2003) also examined the impact of teachers participating in an alternative pathway program and levels of perceptions of being prepared to make instructional and pedagogical decisions. The authors completed research regarding a teacher residency program for teachers who were recruited from outside of education to fill vacant positions in school districts across Colorado. The authors determined that these types of alternatively-licensed teachers reported lower levels of perceived adequacy when it came to making both instructional and pedagogical decisions in comparison to teachers who entered education by the traditional pathway (Wayman, Foster, Mantle-Bromley, & Wilson, 2003). The teachers who completed the teacher residency program in the form of an alternative pathway did not spend the same amount of time completing courses in education over instruction and
pedagogy, and they also lacked completing field experiences as traditionally-licensed teachers.

In a study by Utsmi & Kizu (2006) the authors examined the needs of both alternatively- and traditionally licensed teachers as they began their teaching careers, and the role of mentoring for both groups. The authors findings concluded that the needs’ of alternatively-licensed teachers in the role of perceptions of being prepared was not as adequate as the traditionally-licensed teachers, and that, “AC [alternatively-certified] programs need to embed examination of teacher beliefs and student expectations into their coursework so that teachers understand how their beliefs and cultural experiences impact their teaching and student learning” (p. 56). This was due in part to alternatively-licensed teachers perceived as though they needed more of an emphasis on teaching strategies, including pedagogical decisions and implementation as they completed the required college coursework towards licensure (Utsmi & Kizu, 2006).

**Theoretical Framework**

Guiding this study was the career theory of Social Cognitive Career Theory (SCCT), and the relation of the theory to those who are changing careers and preparing for perceived hindrances associated with a career change. Originally espoused by Lent, Brown, & Hackett (1994) and founded on Bandura’s theoretical base of social cognitive theory (1986), social cognitive career theory can be used to describe the challenges associated with those who wish to pursue a new career, and the roles and decisions that are made in the career change which are dependent on certain variables. The variables included within SCCT are perceived levels of self-efficacy, outcome expectations, and
goals. All three variables are interconnected and impact their decision to stay with a new career (Foley & Lytle, 2015; Koivisto, Vinokur, & Vuori, 2011 (Tang, Pan, & Newmeyer, 2008). Additionally, social cognitive career theory was designed for those people who are changing careers with an emphasis on, “understanding vocational interest formation, career choice, and academic/career performance” (Schaub & Tokar, 2005, p. 304). According to the article Social Cognitive Approach to Career Development: An Overview by Lent and Brown (1996), the theory of social cognitive career theory is based upon three developments of which include:

1. The development of both career and academic pursuits and goals
2. Making pertinent career choices that are related to the pursuits and goals
3. Individuals increase new knowledge learned through both their educational and career pursuits and goals

It is also noted by Lent and Brown (1996) (originally cited by Bandura, 1986; Lent, Larkin, & Brown, 1989) how self-efficacy and outcome expectations influenced an individual’s perceived ability to complete a major vocational task and being prepared. The authors go on to state that, “people form enduring interest in an activity when they view themselves as competent at it and when they anticipate that performing it will produce valued outcomes” (p. 313). The perceived levels of competency and being able to complete a task included perceived barriers that influenced whether or not a task will be successfully implemented within a change of career. These perceived barriers, also known by the authors as contextual factors (Albert & Luzzo, 1999; Lent et. al, 1994), influenced an individual’s perceived ability to do well on a task. Performing well on a
task increased the likelihood that a career changer would overcome barriers and remained in the new career (Albert & Luzzo, 1999).

The first major construct of social cognitive career theory is self-efficacy. Self-efficacy can be described as a person’s perceived ability to complete a task fully and to perform well (Lent et al., 1994). The higher an individual’s self-efficacy is, the more likely that person is perceived to be prepared to complete something related to a career change well and stay within that new career. The role of self-efficacy also plays an integral role in activity goals as well as choices, and how much effort a person in a new career will exert when it comes to performance and achieving a positive outcome (Lent, Brown, & Hackett, 1994). An individual’s belief that he or she can achieve a successful outcome within a new career, when presented with a large task, is also an important part of the self-efficacy component of social cognitive career theory (Albert & Luzzo, 1999; Lent, Brown, & Hackett, 1994).

Another construct associated with social cognitive career theory is outcome expectations. Outcome expectations are the perceptions an individual gets when he or she has completed a task or project in a new vocation, and is how likely the new task will lead to success (Lent, 2013; Lent et al., 1994). Outcome expectations also have to do with an individual determining the consequences, if any, of a given action that is related to a vocational change (Lent et al., 1994). Another component of outcome expectations involves an individual overcoming perceived barriers related to success in a new career, which in turn would increase both self-efficacy and outcome expectations in a positive way (Lent, Brown, & Hackett, 2000).
Intertwined with the component of self-efficacy is also outcome expectations. When both components are viewed as favorable by an individual in a new career, this can in turn have a positive impact on other performance factors associated with a new job. Some of the aspects of performance factors includes occupational goals, choices and action versus inaction, and performance accomplishments (Schaub & Tokar, 2005). Thus, the higher the self-efficacy of an individual the more likely it is that this individual will have a higher level of performance, and feel more prepared a task that is related to a vocational change. When an individual perceives to have a higher level of self-efficacy, this in turn can also positively influence a person’s perceived level of achieving a favorable outcome (Diegelman & Subich, 2001; Lent et al., 1994).

The last major component of social cognitive career theory is goal setting. Goal setting is described as a person’s ability to be successful in completing a task related to a new occupation, and to continue the success as the task gets progressively more difficult. A further aspect of goal setting is being self-regulated in setting appropriate goals that can be highly attainable and result in a successful outcome (Lent et al., 1994; Lent, Brown, & Hackett, 1994). Whereas the components of self-efficacy and outcome expectations deal with a person’s perceptions and consequences, goal setting is the component concerned with an individual reacting to desired outcomes of successfully completing a task within a new role (Lent, Brown, & Hackett, 1994). When attempting a new task associated with a career change, goal setting is important for an individual as it pertains to completing the goal successfully and overcoming any perceived hindrances (Belt & Brown, 1996; Lent et al., 1994 Lent, Brown, & Hackett, 1994).
The component of preparedness includes an individual’s perceived self-efficacy levels, outcome expectations, and goals, all of which are mutually exclusive (Lent et. al., 1994). It is noted by Swanson & Woitke (1997) that, “frequently perceive barriers related to not being adequately prepared for their careers and being dissatisfied with their careers” (p. 453). An individual who changes careers needs to be prepared for the challenges and perceived hindrances that may arise from the new career, with a stronger perceived level of self-efficacy meaning that outcome expectations are also higher, and career goals can be met. Self-efficacy is the person’s awareness to complete a task successfully, and to overcome any challenges associated with the task with a positive attitude (Lent et. al., 1994). Higher levels of perceived self-efficacy equate to higher perceptions of preparedness, and conversely, lower levels of self-efficacy, and a perception of not being as prepared as one should be can be a hindrance to that person staying in his or her new career and wanting to either go back to the former career or purse a new one altogether (Koivisto, Vinokur, & Vuori, 2011).

This research study focused on the intertwined components of SCCT including self-efficacy, outcome expectations, and goal setting as related and perceptions of preparedness. If an alternatively-licensed career and technical education teacher reports lower levels of self-efficacy, he or she should then in-turn report lower levels of perceptions of preparedness. Additionally, a teacher who reports higher levels of self-efficacy should also report higher levels of perceived preparedness. Perceptions of preparedness is the dependent variable, and was measured using the tenets of social cognitive career theory.
The status of the RESA and alternatively-licensed CTE teachers

A major legislative change occurred for those alternatively-licensed career and technical education teachers completing RESA with the passage of a new bill. The bill, known as Senate Bill 3 was officially signed into law on December, 8, 2016. A new performance-based assessment was to be developed for alternatively-licensed career and technical teachers only; alternatively-licensed teachers from other content areas and traditionally-licensed teachers still had to complete RESA for advancing licensure. (Senate Bill 3 Ohio, 2016). According to a news briefing issued by the Ohio Association for Career and Technical Education (Ohio ACTE) key personnel will be instrumental in the development of the new assessment, the bill will, “require that ODE collaborate with Ohio ACTE, OACTS, and CCS to develop an alternative method of assessment” (Ohio ACTE, parag. 3, 2016). It was a requirement per Senate Bill 3 that a new performance-based assessment be implemented no later than December 31, 2017.

Summary

An overview of the history of alternative licensure, a history of performance-based teacher assessment, the history and current form of the Resident Educator Summative Assessment, preparedness levels of all teachers who entered teacher through an alternative pathway, and the theoretical framework for the study were all discussed in chapter two. The current state of the Resident Educator Summative Assessment, as well as the history of the performance-based assessment that all Ohio teachers must complete as Resident Educators was also introduced and explained. The role of residency in the
state of Ohio, including a brief history, and the requirements were also discussed in chapter two.
Chapter 3: Methodology

The methods and procedures used by the researcher for this research study are all delineated in this chapter. Sections of chapter three include the research design, population and sampling frame, presumed description of the participants, instrumentation used to collect data, procedures detailing how the data were collected, how the data were analyzed, and a summary of the chapter.

**Research Design**

The research design that was used for this type of research was non-experimental research known as a one-shot case study, pre-experimental design (Campbell & Stanley, 1963) and the research study was descriptive in nature. The goal was to establish baseline research of the perceived levels of preparedness of alternatively-licensed career and technical teachers in the state of Ohio completing all four tasks of the Resident Educator Summative Assessment (RESA). Also, the participants in the study were studied only once with no manipulation of an independent variable. Campbell & Stanley (1963) also noted that some value can be obtained by using this type of research design, and studying a phenomenon at least once can provide useful insights for future research studies. With no manipulation of an independent variable, this research design was chosen as it was suitable to answer the research questions.

**Population**

The population studied included all career and technical education teachers who were alternatively-licensed in the state of Ohio and who completed the RESA as part of
the Resident Educator program beginning with the school year of 2013-2014 through the 2015 – 2016 school year. Both year three and year four alternatively-licensed career and technical education teachers who completed RESA (since alternatively-licensed career and technical teachers originally had the option to complete the RESA in either year) ("Resident Educator Program", 2016) were included in the population.

**Sampling Method**

A purposive sampling method was used as the researcher focused on the characteristics in the form of demographics of alternatively-licensed career and technical teachers completing the RESA. A purposive sampling technique is described as using a non-probability method, and is chosen based on the given characteristics of the population as well as the research aim of the study (Teddlie & Yu, 2007). Also, the sample was delimited to include all alternatively-licensed career and technical education teachers completing the RESA as part of their licensure program during the school years of 2013-2014, 2014-2015, and 2015-2016 from a college/university provider that issues alternative licensure in career and technical education. Establishing contact with participants was done by communicating with program coordinators at all college/university providers of alternative licensure in career and technical education in the state of Ohio. The researcher was able to obtain permission from Kent State University, University of Toledo, Rio Grande University, and Ohio State University to have the names and work/school e-mail addresses of alternatively-licensed career and technical education teachers who completed the RESA during the specified school years delivered to the researcher for research purposes. The researcher used the list of names
provided by the college/university providers to establish contact with participations via e-mail and invited them to participate in the research study.

**Presumed description of the study participants**

Over the course of the years since alternative certification that leads to alternative licensure has been established in the American educational school system, these alternatively-licensed teachers have been non-traditional adults who are classified as experienced older adults, including more work experience outside of education, more likely to be male, and those who are seeking a mid-career change to the teaching profession (Feistritzer, 1993; Fletcher & Zirkle, 2010; Hawley, 1990; Humphrey & Wechlesler, 2007; Lichty & Robles, 2003). This would include the alternatively-licensed career and technical education teachers in this research study. These teachers are also completers of a teacher preparation program at one of the six college/universities that offer licensure that leads to alternative licensure in career and technical education including Ohio State University, Kent State University, University of Toledo, Rio Grande University, Wright State University and Bowling Green State University. The program coordinator at Bowling Green State University indicated via e-mail that teachers completing their licensure program would not have completed RESA during the delimited school years. Also, Wright State University declined to participate in the study.

**Instrumentation**

The instrument that was used to collect data was a questionnaire developed by the researcher and validated using a panel of experts. The questionnaire was further validated through field testing the instrument with a central Ohio school (see Appendix G). The
researcher adapted and developed the wording and responses of questionnaire from three different sources. The scaling (perceived levels of preparedness including four different levels from very unprepared to very prepared) was derived from a survey associated with the National Center for Education Statistics and teachers’ perceived levels of preparedness in 1999. Questions related specifically to perceptions of preparedness related to the RESA were derived from the perceptions of preparedness from the *School and Staffing Survey* (2011) which was also disseminated by the National Center for Educational Statistics. And lastly, a questionnaire developed by Darling-Hammond, Newton, & Wei (2013), when the researchers conducted a study about perceptions of preparedness of a teaching event for preservice teachers in the state of California.

Although the researchers examined the preparedness levels of preservice teachers who were not yet teaching, in lieu of alternatively-licensed teachers, the inclusion of questionnaire by Darling-Hammond, Newton, & Wei (2013) is due to the structure and questions of preparedness posed to teachers and its relatedness to this study. A focus was on the dependent variable of perceptions of levels of preparedness as related to the theoretical framework. Each task has six questions on the questionnaire related to perceived levels of preparedness, with tasks one and three having the same type of questions since both tasks are the same but must be completed during different time periods of the school year. The researcher used a Likert-type scale to measure the perceptions of preparedness self-reported by participants in the study, and the participants selected a preparedness level from 1 to 4. The Likert-type scale had the following range: 1 = Very unprepared, 2 = Unprepared, 3 = Prepared, 4 = Very Prepared. The
questionnaire was completed by participants using Qualtrics. Participants self-identified all their demographic information on the questionnaire (i.e., background of school differentiating between urban, rural, and suburban).

**Establishing Validity**

Establishing validity is the act of verifying that the instrument measures what is it intended to measure (Golafshani, 2003). There are two types of validity that need to be addressed for making sure that the questionnaire measured what it was intending to measure: internal validity and external validity. Internal validity is making sure that the findings produced by a research instrument are triggered by the occurrences being investigated by the researcher and not some outside influence that cannot be accounted for (Winter, 2000), whereas external validity is the ability to generalize the findings of one study to the entire population and variables within the study (Winter, 2000).

**Establishing Internal Validity**

Face validity is described as the questions on the questionnaire measuring what the subject of the questionnaire is about related to the study (Onwuegbuzie et al., 2007). Face validity was established by having teachers who were traditionally-licensed and completed all four tasks of the RESA inspect the questionnaire for clarity, readability, and how concise questions were and provided feedback.

Another part of validity is content validity. Content validity is defined as making sure that the instrument can be interpreted by the intended audience during the data collection procedure (Burton & Mazerolle, 2011). Content validity was established by having diverse pool of professionals who were well-aware of both RESA and alternative
licensure in career and technical education critique and review the questionnaire using a feedback form disseminated by the researcher. The panel of experts was comprised of post-secondary faculty, teacher educators, and representatives from the Ohio Department of Education. The questionnaire was edited and revised per their recommendations.

**Establishing External validity**

External validity is the ability to generalize from the sample back to the population (Onwuegbuzie et al., 2007). Since only the sample of alternatively-licensed career and technical education teachers are being studied, results were only generalizable to these types of teachers completing RESA. No treatment variables or measurement variables are being studied, and only the perceptions of preparedness are being studied in a non-experimental research design.

The researcher used a one-shot case study, pre-experimental design with no manipulation of an independent variable that would occur in a quasi- or experimental research design. With no manipulation of an independent variable, this study will not be designed to control for any one variable. All variables were built into the survey instrument.

**Establishing Reliability**

Reliability was an integral part of this research study. Reliability is needed in order to measure the accuracy of the survey instrument being used for data collection to ensure the exactness of the results. According to Bartko (1999), reliability is defined as the ability to replicate the research study with similar results across time and instances. In order to establish reliability, the researcher used a pilot-test of the survey questionnaire
before it was given to the actual participations. The participants who were involved in the pilot test of the questionnaire were traditionally-licensed teachers from all content areas kindergarten through twelfth grade from a school district in central Ohio. The pilot study consisted of twenty teachers participating a week before the questionnaire was disseminated to the target sample in the research study. Results of the pilot study were aggregated for each subscale and for the four subscales combined, with a Cronbach’s Alpha level was established by using SPSS version 23. The first subscale (perceptions of preparedness related to the first instructional cycle) had a Cronbach’s Alpha of .795. The second subscale (perceptions of preparedness related to the formative and summative assessment) had a Cronbach’s Alpha level of .850. The third subscale (perceptions of preparedness related to the second instructional cycle) had a Cronbach’s Alpha level of .810. The fourth subscale (perceptions of preparedness related to communication and professional growth) had a Cronbach’s Alpha level of .846. Overall, the four subscales combined had a Cronbach’s Alpha level of .943. It is noted by Gliem & Gliem (2003) that a Likert-type scale and subscale reliability coefficient should be as close to 1.0 as possible. Desirable ranges of alpha when deriving a Cronbach’s Alpha level regarding internal consistency range from .7 to .9, with .7 to .9 interpreted as highly reliable; all four subscales had a desirable alpha level as well as the aggregated value for all four subscales combined (Tavakol and Dennick, 2011).

Data Collection Procedures

The researcher used survey research methodology to obtain data. The researcher used guidelines and principles espoused by Dillman, Smyth, & Christian from the book
Internet, Mail, and Mixed-Mode Surveys: The Tailored Design Method (2014), making sure that certain methodological procedures related to data collection were used to obtain as high of a response rate as possible.

The researcher established contact with program coordinators from college/university providers of alternative licensure in career and technical education and communicated to them the purpose of the research study. The researcher also asked for lists of teachers who would have completed educational requirements at the college/university providers during the delimited school years and would have needed to complete RESA. After the researcher obtained a list of alternatively-licensed career and technical education teachers, the researcher then verified information of the teachers’ background and credentials by utilizing the Connected Ohio Records for Educators (C.O.R.E.) provided by the Ohio Department of Education (Ohio Department of Education, 2017). The C.O.R.E. database contains demographic information for all the teachers in Ohio who have been granted a teaching license. The researcher verified that teachers included in the study were issued a 4 Year Alternative Resident Educator License - Career Technical Workforce Development teaching license which is specific to the target sample of participants that were included in the study.

E-mail was the chosen method of delivery of the questionnaire. An e-mail correspondence was sent to each participant that contained pertinent information about the scope of the study including information describing the rationale of the study, an estimate about the amount of time it took to complete the questionnaire, confidentiality of information gathered from participating, and an opt-out option that notified participants if
they did not want to participate in the study. Also, no prenotice was used to inform the participants about the study. The researcher created enough time for a data collection period long enough for the participants to respond (Sue & Ritter, 2012) and it was toward the end of the 2016 – 2017 school year. Following principles from Tailored Design Method, a five-contact e-mail strategy was used, and the researcher spread out the reminder emails over a time period of approximately five weeks beginning in April, 2017, through May, 2017 (Dillman et al., 2014).

The researcher sent a preliminary overview of the research study with a link to the questionnaire (known as round 1) followed by four rounds of e-mail reminders with varied messages to encourage the participant to complete the study in a timely manner and all in one setting. Using varied messages and further rounds of questionnaire reminders sent to participants has been shown to increase response rates by up to 37% (Dillman et al., 2014). The first follow up email reminder (also known as round two) was sent within a few days of the first invitation to participate. The third, fourth, and fifth rounds of e-mail reminders were all spread out among the months of April and May, 2017 (Dillman et al., 2014). Appendix E details the e-mail reminders of each round that was sent to each participant.

Round 1

During the week of April, 17, 2017, an e-mail invitation was sent to the target sample from a list of teachers who completed alternative licensure requirements from The Ohio State, Kent State University and the University of Toledo. After disseminating the
e-mails to the participants a total of eight e-mails were labeled as undeliverable. In total, 170 teachers received the e-mail invitation and questionnaire.

Round 2

During the week of April, 24, 2017, a list of alternatively-licensed career and technical education teachers from the University of Rio Grande was delivered to the researcher from the program coordinator. Just like the lists obtained from other participating colleges/universities, the researcher verified the provided list of teachers using C.O.R.E. A total of 15 participants from the University of Rio Grande were verified and contacted with the same e-mail overview and invitation to participate in the research study as those in round one. This brought the total number of participants to 185.

Also occurring during the week of April, 24, 2017, a second e-mail follow up was sent to the 170 participants from the e-mail invitation used during round 1. The first follow up email reminder was sent within a few days of the first invitation to participate, to encourage responders to complete the questionnaire (Dillman et al., 2014).

Round 3

During the week of May 1, 2017, a third round of e-mail invitations was sent to follow up with those who had not yet completed the questionnaire. Different wording from the previous e-mail correspondence was used in the e-mail message to encourage those participants who had not yet completed the questionnaire to do so, as well as thanking those participants who had completed the questionnaire (Dillman et al., 2014). In total, 185 e-mails were disseminated with reminders and a link to the questionnaire.

Round 4
During the week of May 8, 2017, a fourth round of e-mail invitations was delivered to follow up with those who had not yet completed the questionnaire. Different wording from the previous e-mail correspondence was used in the e-mail message to encourage those participants who had not yet completed the questionnaire to do so, as well as thanking those participants who had completed the questionnaire (Dillman et al., 2014). In total, 185 e-mails were disseminated with reminders and a link to the questionnaire.

Round 5

One last follow up reminder was used during the week of May 15, 2017, to encourage the target sample to complete the questionnaire. Different wording from the previous e-mail correspondence was used in the e-mail message to encourage those participants who had not yet completed the questionnaire to do so, as well as thanking those participants who had completed the questionnaire (Dillman et al., 2014). An e-mail reminder was sent to all 185 participants.

Data Analysis

The researcher used both descriptive and inferential statistics to analyze data. Since a non-experimental research design was selected, survey research was used in the form of a questionnaire to collect data from the participants using only close-ended questions. Creswell (2012) also classified this as a survey research design, which is frequently used in educational research to gather self-perceived levels of preparedness from the participants in the study. Cross-sectional research was also used as participants were studied only once (Creswell, 2012). Alternatively-licensed career and technical
education teachers in the state of Ohio who completed RESA during school years of 2013 - 2014, 2014 - 2015, and 2015 - 2016 were included in the sample. With the changing landscape of the RESA as established by Senate Bill 3 and implementing a new performance-based assessment for alternatively-licensed career and technical education teachers the school year of 2016 – 2017 was not included in the study.

A questionnaire was used to gather data from participants. To assess the preparedness levels of alternatively-licensed teachers on each task associated with RESA on the dependent variable, the Likert-type questions were converted to a Likert-type summated scale. There were four tasks altogether, so four different summated scales were developed for analysis. The range of each summated scale was six to 24.

Categorical data obtained from the questionnaire served as the independent variable. The categorical data included the content area of the teacher, gender, school type, background of the school, degree level, and number of years of work experience outside of education at the time the participant completed RESA.

Data for each research question were analyzed in two different ways. Descriptive statistics including the mean, standard deviation and mode and also percentage table showing frequency and cumulative percent were first presented for each research question. Assumptions were first verified before any parametric test. If none of the assumptions were violated then parametric testing in the form of a one-way analysis of variance (ANOVA) between groups was used for categorical variables containing 3 or more groups, and an independent samples t test was performed for an independent variable of 2 groups using the summated scale of each task as the dependent variable. If
an assumption of homogeneity of variances was violated, then the Welch’s ANOVA was interpreted from SPSS output. When one or more assumptions were violated, a Mann-Whitney U (only 2 groups per categorical variable) or Kruskal-Wallis H (3 groups or more per categorical variable) were used as a non-parametric alternative to the parametric test of the ANOVA (Rochon, Gondan, & Kieser, 2012). The alpha level was set \textit{a priori} at .0083 since 6 analyses were performed on each dependent variable and to control for committing a Type I error.

Some participants chose to e-mail the researcher further details describing in words his or her preparedness levels in addition to completing the questionnaire. This was not a mandatory part of the research study and was completely voluntary. The findings of the e-mails were reported as anecdotal evidence and analyzed for themes at the end of chapter four.

\textbf{Summary}

The population included all alternatively-licensed career and technical education teachers who completed the RESA. The target sample of participants included those teachers who completed RESA during the delimited school years of 2013 – 2014, 2014 – 2015, and 2015 – 2016. A questionnaire was validated, and reliability was established through a pilot test of the survey instrument. A total of 185 alternatively-licensed career and technical education teachers were included in the study to describe perceived levels of preparedness completing each task associated with RESA. The researcher utilized methods set forth according to \textit{Dillman’s Tailored Design} (2014) to collect data over a time period encompassing April and May, 2017. The recommended data analysis
included using both parametric and non-parametric tests in order to derive the perceived levels of preparedness of alternatively-licensed career and technical education teacher completing each task of RESA among demographic variables.
Chapter 4: Results of the study

The purpose of this study was to describe the perceived levels of preparedness of alternatively-licensed career and technical education teachers in the state of Ohio who completed each task the Resident Educator Summative Assessment during the school years of 2013 – 2014, 2014 – 2015, and 2015 – 2016. There were four research questions which included,

1. What are the differences in self-perceived levels of preparedness of each content area career and technical teacher completing the first instructional cycle task of RESA among demographic variables?

2. What are the differences in self-perceived levels of preparedness of each content area career and technical teacher completing the formative and summative assessment task of RESA among demographic variables?

3. What are the differences in self-perceived levels of preparedness of each content area career and technical teacher completing the second instructional cycle task of RESA among demographic variables?

4. What are the differences in self-perceived levels of preparedness of each content area career and technical teacher completing the communication and professional growth task of RESA among demographic variables?

The data were analyzed using Statistical Package for the Social Sciences (SPSS) version 23. Chapter four is broken down into different sections including the response
rate, handling of missing data, demographic data, assumptions of each statistical test, the results of each of the four result questions related to levels of perceived preparedness of the respondents, and anecdotal evidence received via e-mail further detailing levels of preparedness through words.

**Response Rate**

In total, 185 questionnaires were distributed to the target sample. The number was a result of the researcher verifying teacher demographic data including the year in which the teacher was granted a license and the type of license (alternative licensure in career and technical education) and creating a database of teacher name’s and e-mail addresses to include in the study. Over the course of sending out the e-mail invitations to participate in the study, some teachers e-mailed the researcher indicating not to be included in the study for several reasons including that he or she was not a part of the delimited years, were supplemental licensure program holders, or did not have to complete RESA for licensing-purposes. Also, some of the e-mails were marked as undeliverable even after the e-mail addresses was verified using publically-available information from public schools employing teachers with alternative licensure in career and technical education.

Of the 185 sampled, 74 were identified as useable with only some missing data for a total response rate of 40%. A response rate of 30-40% is expected when using distributing a questionnaire via e-mail in educational research (Fricker, & Schonlau, 2002; Sue & Ritter, 2012).
Handling of Missing Data

Overall, 74 questionnaires were used in the data analysis of which five had missing data in the form of incomplete response. Of the 74 questionnaires, 69 qualified as fully completed with no missing or incomplete data. Missing data can happen when using questionnaires to collect data, and there are various ways to handle missing data in educational research (Enders, 2010).

To account for the missing data, the researcher performed a missing data analysis using SPSS. According to Dong & Peng (2013) there are not set standards as a cutoff point for analyzing missing data for use in quantitative research; however, some researchers including Schafer (1999) and Bennet (2001) have determined that missing data is irrelevant as long as it does not proliferate above 5% (Schafer) or 10% (Bennett). Any questionnaires which had more than 10% of missing data were excluded from the analysis, and five questionnaires were excluded from statistical analysis. Table 4.1 details the analysis of the missing data; no extreme high values were reported by SPSS after the researcher conducted the analysis.

Missing data was also accounted for in SPSS using the command function of “99” letting SPSS know not to include missing data in the calculations. The missing data in the form of an incomplete questionnaire occurred randomly, and the researcher did everything possible during data collection to encourage full completion of the questionnaire by the participants. Additionally, statistical imputations or manipulations can only be performed on quantitative variables when using SPSS (IBM SPSS Missing Values 23, n.d.) and would only affect the summated scales for each task of RESA which
is also the dependent variable used in the study. No imputations were performed on the
task four subscale which had 72 participants complete the questionnaire (tasks one, two,
and three had 74 participants who completed the questionnaire). Some of the items
reported for categorical variables (including year completing RESA, gender, school type,
degree earned, background of school, and years of work experience) will have different
reported sample sizes.

Table 4.1

<table>
<thead>
<tr>
<th>Analysis of missing data</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
</tr>
<tr>
<td>---</td>
</tr>
<tr>
<td>Task One</td>
</tr>
<tr>
<td>Task Two</td>
</tr>
<tr>
<td>Task Three</td>
</tr>
<tr>
<td>Task Four</td>
</tr>
<tr>
<td>Q59</td>
</tr>
<tr>
<td>Q60</td>
</tr>
<tr>
<td>Q62</td>
</tr>
<tr>
<td>Q63</td>
</tr>
<tr>
<td>Q64</td>
</tr>
<tr>
<td>Q65</td>
</tr>
</tbody>
</table>

a. Number of cases outside the range (Q1 - 1.5*IQR, Q3 + 1.5*IQR).

*Note.* Q59 - Q65 is from the questionnaire and pertains to demographic variables
(Q59: a teacher’s career and technical education content area; Q61: gender; Q62:
degree level; Q:63: type of school; Q64: background of school; Q65: years of work
experience outside of education)

**Demographic Data**

Initial findings from the study indicated that 37 males (52.86%) and 33 females
(47.14%) completed RESA with an average age of 44 (SD = 11.77) years old. The last
part of the questionnaire asked respondents to describe their career and technical content
area, age, type of school, setting of their school, and their number of years of work.
experience outside of teaching at the time of taking the Resident Educator Summative Assessment which are all presented in tables 4.2 through 4.8.

Table 4.2

School year and amount for teachers completing RESA (n = 83)

<table>
<thead>
<tr>
<th>Year Taken RESA</th>
<th>Count</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013 - 2014</td>
<td>14</td>
<td>16.87</td>
</tr>
<tr>
<td>2014 - 2015</td>
<td>18</td>
<td>21.69</td>
</tr>
<tr>
<td>2015 - 2016</td>
<td>51</td>
<td>61.45</td>
</tr>
</tbody>
</table>
Table 4.3

*Content area for each CTE teacher at the time of completing RESA (n = 70)*

<table>
<thead>
<tr>
<th>CTE Content Areas</th>
<th>Count</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture and Environmental Systems</td>
<td>6</td>
<td>8.57</td>
</tr>
<tr>
<td>Business, Finance, Marketing, and Information</td>
<td>19</td>
<td>27.14</td>
</tr>
<tr>
<td>Technology</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health Occupations and Human Services</td>
<td>26</td>
<td>37.14</td>
</tr>
<tr>
<td>Trade and Industry</td>
<td>19</td>
<td>27.14</td>
</tr>
</tbody>
</table>

*Note.* Including in the Business, Finance, Marketing, and Information Technology CTE areas are Government and Public Administration, and Hospitality and Tourism (including Culinary). Included in the Health Occupations and Human Services CTE areas are Education and Training and Law and Public Safety. Included in the Trade and Industry CTE areas are Arts and Communication, Education and Training, Engineering, Construction, Manufacturing, and Transportation Systems.

Table 4.4

*Gender count and percentage of total respondents (n = 74).*

<table>
<thead>
<tr>
<th>Gender</th>
<th>Count</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>37</td>
<td>52.9</td>
</tr>
<tr>
<td>Female</td>
<td>33</td>
<td>47.1</td>
</tr>
</tbody>
</table>
Table 4.5

*Degree type at the time of each CTE teacher completing RESA (n = 69)*

<table>
<thead>
<tr>
<th>Degree Type</th>
<th>Count</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>High School Diploma/GED</td>
<td>21</td>
<td>30.43</td>
</tr>
<tr>
<td>Associate’s</td>
<td>16</td>
<td>23.19</td>
</tr>
<tr>
<td>Bachelor’s</td>
<td>17</td>
<td>24.64</td>
</tr>
<tr>
<td>Advanced Degree</td>
<td>15</td>
<td>21.74</td>
</tr>
</tbody>
</table>

*Note.* Advanced Degree included any degree beyond a Bachelor’s degree such as Master’s, Juris Doctorate (J.D.), Doctorate of Education (Ed.D.), and Doctorate of Philosophy (Ph.D.).

Table 4.6

*School type at the time of each CTE teacher completing RESA (n = 69)*

<table>
<thead>
<tr>
<th>School Type</th>
<th>Count</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Middle School</td>
<td>1</td>
<td>1.45</td>
</tr>
<tr>
<td>High School</td>
<td>24</td>
<td>34.78</td>
</tr>
<tr>
<td>Career Center</td>
<td>38</td>
<td>55.07</td>
</tr>
<tr>
<td>Charter School</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Corrections Facility</td>
<td>5</td>
<td>7.25</td>
</tr>
<tr>
<td>Other: Please Describe</td>
<td>1</td>
<td>1.45</td>
</tr>
</tbody>
</table>

*Note.* Other: Please Describe included a write-in choice of Compact school.
Table 4.7

*Background type of each school where each CTE teacher worked at while taking RESA (n = 69)*

<table>
<thead>
<tr>
<th>Background of School</th>
<th>Count</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rural</td>
<td>37</td>
<td>53.62</td>
</tr>
<tr>
<td>Suburban</td>
<td>16</td>
<td>23.19</td>
</tr>
<tr>
<td>Urban</td>
<td>16</td>
<td>23.19</td>
</tr>
</tbody>
</table>

Table 4.8

*Work experience for each CTE teacher completing RESA outside of education (n = 69)*

<table>
<thead>
<tr>
<th>Number of Years of Work Experience Outside of Education</th>
<th>Count</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-5</td>
<td>7</td>
<td>10.14</td>
</tr>
<tr>
<td>6-10</td>
<td>6</td>
<td>8.70</td>
</tr>
<tr>
<td>11-15</td>
<td>14</td>
<td>20.29</td>
</tr>
<tr>
<td>16-20</td>
<td>17</td>
<td>24.64</td>
</tr>
<tr>
<td>21-25</td>
<td>14</td>
<td>20.29</td>
</tr>
<tr>
<td>26 or more</td>
<td>11</td>
<td>15.94</td>
</tr>
</tbody>
</table>

Verifying assumptions: parametric and non-parametric testing

For analysis that involved using either parametric or non-parametric statistical testing, underlining assumptions were verified before proceeding with data analysis.

Table 4.9 delineates each statistical test and the corresponding underlining assumptions.
and protocols if any assumption was violated before conducting any statistical test. The assumptions were verified from different statistical sources (Field, 2013; Lomax & Hahs-Vaughn, 2013; Sawyer, 2009).

Table 4.9

Assumptions and protocols used for each statistical test

<table>
<thead>
<tr>
<th>Statistical Test</th>
<th>Assumptions</th>
<th>Type</th>
</tr>
</thead>
</table>
| One-way ANOVA or Welch’s ANOVA| 1. One dependent continuous variable and one independent categorical variable with two or more levels  
2. Independence of observations  
3. No significant outliers  
4. Normal distribution  
5. Homogeneity of variances  
6. Welch’s ANOVA reported if Levene’s Test is violated | Parametric       |
| Independent samples t test    | 1. One dependent continuous variable and one independent categorical variable with two dichotomous levels  
2. Independence of observations  
3. No significant outliers  
4. Normal distribution  
5. Homogeneity of variances | Parametric       |
| Kruskal-Wallis H test          | 1. One continuous dependent variable and one independent categorical variable of two or more levels | Non-parametric  |

continued
Before performing an independent samples $t$ test or one-way fixed-effects ANOVA between groups statistical test, each assumption associated with the ANOVA was checked and verified. With sample sizes less than 200, a boxplot was examined for any outliers and the Shapiro-Wilk test was conducted to make sure that the data were normally distributed (Ghasemi, & Zahediasl, 2012). Also, a Levene’s Test of equal variances was performed to check for equal variances with a non-significant $p$ value (Hoekstra, Kiers, & Johnson, 2012). If an assumption was violated due to significant outliers upon visual inspection of a boxplot or a significant value from a Shapiro-Wilk test of normality was found, then a Kruskal-Wallis H test or a Mann-Whitney $U$ test was
performed. If a significant p value resulted from the Levene’s test of homogeneity of variances thus violating this assumption, a Welch’s ANOVA result was interpreted from the SPSS output.

**Controlling for a Type I Error**

To minimize the risk of committing a family-wise Type 1 error which can be inflated by conducting six different tests on each dependent variable of levels of preparedness, a Bonferroni correction was implemented *a priori* to the alpha level (Abdi, 2007; Sawyer, 2009). A family-wise approach was used to guard against inflating a Type I error using multiple testing with statistical tests (Rojewski, Lee, & Gemici, 2012). The alpha level was set at .05, and with conducting six different tests the alpha level was divided by six using the following equation: \( \alpha = \frac{.05}{6} \) statistical tests for a new \( \alpha = .0083 \) (Abdi, 2007). An alpha level of .0083 was used to determine statistical significance after conducting each test but not for assumptions testing (i.e., Shapiro-Wilk test of normality or Levene’s test of homogeneity of variances).

**Reporting Effect Sizes**

According to Rojewski (1999) reporting effect size can be useful to establish practical significant in addition to statistical significance. Effect size interpretations for this study originated from an article by Lakens, 2013 (originally cited by Cohen, 1988) and shown in Table 4.9. Effect sizes were derived after conducting parametric statistical testing in the form of a one-way between groups ANOVA and were derived using the formula found in Figure 1. Confidence intervals at the 95% level were also reported in addition to effect sizes (Rojewski, Lee, & Gemici, 2012).
Table 4.10

Cohen’s $d$ interpretation of effect size values

<table>
<thead>
<tr>
<th>Value</th>
<th>Magnitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>.2</td>
<td>Small</td>
</tr>
<tr>
<td>.5</td>
<td>Medium</td>
</tr>
<tr>
<td>.8</td>
<td>Large</td>
</tr>
</tbody>
</table>

$\eta^2 = \frac{SS_{Between}}{SS_{Total}}$

Figure 4.1. Calculating Cohen’s $d$ effect size and eta squared

**Frequency and Percentage of Frequency Table**

Each research question has a frequency and frequencies of percentages associated with it detailing how often each number of the questionnaire was selected as well as how much. The following guidelines (as shown in Table 4.10) were applied when interpreting the frequency of the selected numbers related to perceived preparedness (1 = Very unprepared, 2 = Unprepared, 3 = Prepared, 4 = Very Prepared) and the percentage of the frequencies of selection.
Table 4.11

Determining levels of preparedness from frequencies and percentages of frequencies from the questionnaire

<table>
<thead>
<tr>
<th>Corresponding level of perceived preparedness</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 – 12</td>
<td>Very Unprepared to Unprepared</td>
</tr>
<tr>
<td>13 – 18</td>
<td>Perceptions of both unprepared and prepared</td>
</tr>
<tr>
<td>18 – 24</td>
<td>Prepared to Very Prepared</td>
</tr>
</tbody>
</table>

Note. Values and ranges derived from questionnaire where 1 = Very unprepared and six questions per task (6*1 = 6/Very unprepared), 2 = Unprepared and six questions per task (6*2 = 12/Prepared), 3 = Prepared and six questions per task (6*3 = 18/Prepared), and 4 = Very prepared and six questions per task (6*4 = 24/Very prepared).

Results: Research Question #1
The first research question was: What are the differences in self-perceived levels of preparedness of each content area career and technical teacher completing the first instructional cycle task of RESA among demographic variables? This question was analyzed using demographic data including a teacher’s career and technical content area, gender, type of school, background of school, and years of work experience outside of education to describe levels of preparedness. Descriptive statistics analysis indicated that the mean was 16.23 (SD = 4.60) with a median of 18.00. Percentages and frequency of percentages are presented below in table 4.12.
Categorical variable: Each teacher’s CTE area and task one

A total of 74 participants were included in the analysis of differences among groups pertaining to each career and technical education teacher’s content area and perceptions of preparedness from task one. In order to analyze the independent categorical variable of each teacher’s career and technical content area and differences in levels of preparedness from task one assumptions of normality and homogeneity of
variances were first checked. There were no outliers, as assessed visually by a boxplot; data were normally distributed for each group, as assessed by Shapiro-Wilk test \((p > .05)\); and there was homogeneity of variances, as assessed by Levene's test of homogeneity of variances \((p > .05)\). Results from a one-way ANOVA between groups indicated that there were differences in perceived levels of preparedness of each career and technical content area teacher in mean scores from Agriculture and Environmental Systems \((M = 17.00, SD = 7.10)\), Business, Finance, Marketing, and Information Technology \((M = 19.00, SD = 16.89)\), Health Occupations and Human Services \((M = 26.00, SD = 15.46)\), and Trade and Industry \((M = 19.00, SD = 17.16)\), but the differences between the groups was not statistically significant, \(F(3, 66) = .675, p = .571\).

An effect size using Cohen’s \(d\) and eta squared \((\eta^2)\) was determined in addition to the one-way ANOVA to test for practical significant (Rojewski, 1999). The effect size was derived using the output provided by SPSS using the equation found in figure 1.

The effect size was calculated by dividing 40.49 by 1361.27 for a \(\eta^2\) of 0.03, 95% CI \([15.11, 19.21]\) indicating a small effect size (Lakens, 2013; originally cited by Cohen, 1988).

**Categorical variable: Gender and task one**

A total of 74 participants were included in the data analysis of differences between groups pertaining to gender and perceptions of preparedness from task one. In order to analyze the independent categorical variable of gender and differences in levels of preparedness from task one assumptions of normality and homogeneity of variances were first checked. Two of the assumptions for the distribution of the gender variable
were found to be violated. Outliers were found after assessing a boxplot and a significant Shapiro-Wilk test \( (p = .006) \) was determined. Since the distribution violated an assumption of a normal distribution, a Mann-Whitney \( U \) test was performed as a non-parametric alternative to the parametric \( t \) test. Distributions of the dependent variable were similar for both males and females as assessed through visual inspection. A Mann-Whitney \( U \) test indicated that the perceived levels of preparedness on task one was not statistically significantly different in males than in females \( U = 459, z = -1.799, p = .072 \) using an exact sampling distribution for \( U \) (Dineen & Blakesley, 1973).

**Categorical variable: Degree level and task one**

A total of 74 participants were included in the data analysis of degree level, and four different degree types were reported and analyzed on the questionnaire including high school diploma/GED, Associate’s, Bachelor’s, and Advanced degrees. Visual inspection of a boxplot indicated that there were outliers, and a Shapiro-Wilk test indicated a significant result for the High School/GED category of the independent variable \( (p = .027) \) and the Levene’s test for homogeneity of variances indicated a non-significant result \( (p > 0.05) \). Since it was detected that the distribution may not be normally distributed, a Kruskal-Wallis H test was performed. A boxplot also indicated similar distributions for all levels of the categorical variable. Results from a Kruskal-Wallis H test indicated that there was not a statistically significant difference in degree level among the four groups on levels of preparedness, \( \chi^2 (3) = .538, p = .910 \). No effect size calculation was performed on a non-parametric test since it is usually not conducted on non-parametric tests (Tomczak & Tomczak, 2014).
Categorical variable: School type and task one

To analyze the independent, categorical variable of school type, the write-in choice of other: compact school was included in the career centers category for data analysis. Also, middle school was added to the high school category since only one participant selected that type of school. The category of charter school was not analyzed since none of the participants acknowledged working there after completing the questionnaire. A total of 74 participants were included in the analysis of school type.

Visual inspection of a boxplot indicated that there were some outliers, and a Shapiro-Wilk test indicated non-significant result for each category of the variable including of Middle School/High School ($p > .05$), Career center/Compact school ($p > .05$), and Corrections Facility ($p > .05$). A Levene’s test of homogeneity of variances also produced a non-significant result ($p > .05$). Since the assumptions of a one-way between groups ANOVA were met, this type of statistical test was conducted to determine the differences between type of school and the perceived levels of preparedness from task one. Results of the ANOVA indicated mean differences in type of school Middle school/High school ($M = 17.20$, $SD = 4.44$), Career center/Compact school ($M = 16.56$, $SD = 4.37$), and Corrections facility ($M = 12.60$, $SD = 3.71$) no significant results were found in levels of perceived preparedness $F(2, 66) = 2.33$, $p = .105$.

An effect size using Cohen’s $d$ and eta squared ($\eta^2$) was determined in addition to the one-way ANOVA to test for practical significant (Rojewski, 1999). The effect size was derived using the output provided by SPSS using the equation found in figure 1. The
effect size was calculated by dividing 88.46 by 1341.25 for a $\eta^2$ of 0.07, 95% CI [0.71, 1.49] indicating a small effect size (Cohen, 1988).

**Categorical variable: Background of school and task one**

A total of 74 participants were included in the data analysis, and the responses to the number of years of full-time work experience can be seen in table. To analyze the independent variable of background of school among three different categories (suburban, urban, and rural), assumptions of outliers, a normal distribution and homogeneity of variances were performed using SPSS. No outliers were found after being visually inspected from the boxplot. Results of the Shapiro-Wilk test indicated a non-significant result for rural, suburban, and urban as part the background of school variable ($p > .05$). A Levene’s test of homogeneity of variance indicated a non-significant result ($p > 0.05$). Results from a one-way ANOVA between groups indicated that there were differences in perceived levels of preparedness of each career and technical content area teacher in mean scores from each background of the school rural ($M = 16.67, SD = 4.74$), urban ($M = 15.93, SD = 3.79$), and suburban ($M = 16.75, SD = 4.54$) but the differences between the groups was not statistically significant, $F(2, 66) = .170, p = .844$.

An effect size using Cohen’s $d$ and eta squared ($\eta^2$) was determined in addition to the one-way ANOVA to test for practical significant (Rojweski, 1998). The effect size was derived using the output provided by SPSS using the equation found in figure 1. The effect size was calculated by dividing 6.88 by 1341.25 for a $\eta^2$ of 0.01, 95% CI [14.51, 18.99] indicating a small effect size (Cohen, 1988).
Categorical variable: Years of work experience and task one

A total of 74 participants were included in the data analysis, and the responses to the number of years of full-time work experience can be seen in table 4.7. To analyze the independent variable of years of work experience among 6 different groups, assumptions of outliers, a normal distribution and homogeneity of variances were performed using SPSS. No outliers were found upon visual inspection of a boxplot and no significant p values were found after performing the Shapiro-Wilk test (p > .05). A Levene’s test of homogeneity of variances also indicated a non-significant p value (p > .05). Since the assumptions of ANOVA were met, a one-way fixed-effects ANOVA between groups was conducted to see if perceived levels of preparedness from task one was different for groups with different years of outside work experience outside of education. Results of the ANOVA indicated that there were differences in perceived levels of preparedness among groups of outside of education work experience including 0-5 years of work experience outside of education (M = 19.57, SD = 3.05), 6-10 years of work experience outside of education (M = 16.33, SD = 4.80), 11-15 years of work experience outside of education (M = 17.04, SD = 4.98), 16-20 years of work experience outside of education (M = 14.00, SD = 3.16), 21-25 years of work experience outside of education (M = 17.29, SD = 4.95), and 26 or more years of work experience outside of education (M = 16.81, SD = 4.44) but the differences among the groups were not statistically significant, F(5, 63) = .2.038, p = .085.

Since a parametric test in the form of an ANOVA was conducted, an analysis of effect size was also performed. Using the output from SPSS as well as the formula found
in figure 1, Cohen’s d and eta squared was calculated. The effect size was derived using the output provided by SPSS using the equation found in figure 1. The effect size was calculated by dividing 186.777 by 1341.246 for a $\eta^2$ of 0.14, 95% CI [15.44, 17.57] indicating a small effect size (Cohen, 1988).

**Results: Research Question #2**

The second research question was: *What are the differences in self-perceived levels of preparedness of each content area career and technical teacher completing the formative and summative assessment task of RESA among demographic variables?* This question was analyzed using demographic data including a teacher’s career and technical content area, gender, type of school, background of school, and years of work experience outside of education to describe levels of preparedness. A total of 74 participants were included in the data analysis for research question two. Descriptive statistics analysis indicated that the mean was 15.70 ($SD = 4.34$) with a median of 16.00. Percentages and frequency of percentages are presented below in table 4.13.
Table 4.13

**Percentages and frequencies of percentages from task two**

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.00</td>
<td>4</td>
<td>5.4</td>
<td>5.4</td>
<td>5.4</td>
</tr>
<tr>
<td>9.00</td>
<td>1</td>
<td>1.4</td>
<td>1.4</td>
<td>6.8</td>
</tr>
<tr>
<td>10.00</td>
<td>3</td>
<td>4.1</td>
<td>4.1</td>
<td>10.8</td>
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<tr>
<td>11.00</td>
<td>2</td>
<td>2.7</td>
<td>2.7</td>
<td>13.5</td>
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<tr>
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<td>9.5</td>
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<td>28.4</td>
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<td>8.1</td>
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<td>66.2</td>
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<td>18.00</td>
<td>11</td>
<td>14.9</td>
<td>14.9</td>
<td>81.1</td>
</tr>
<tr>
<td>20.00</td>
<td>2</td>
<td>2.7</td>
<td>2.7</td>
<td>83.8</td>
</tr>
<tr>
<td>21.00</td>
<td>5</td>
<td>6.8</td>
<td>6.8</td>
<td>90.5</td>
</tr>
<tr>
<td>22.00</td>
<td>2</td>
<td>2.7</td>
<td>2.7</td>
<td>93.2</td>
</tr>
<tr>
<td>23.00</td>
<td>1</td>
<td>1.4</td>
<td>1.4</td>
<td>94.6</td>
</tr>
<tr>
<td>24.00</td>
<td>4</td>
<td>5.4</td>
<td>5.4</td>
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</tbody>
</table>

**Categorical variable: Each teacher’s CTE area and task two**

A total of 74 participants were included in the analysis for each career and technical education’s content area and perceptions of preparedness from task two. Upon visual inspection of a boxplot, no outliers were seen and a Shapiro-Wilks test indicated a non-significant result ($p > .05$) for each category of the variable including Agriculture and Environmental Systems, Business, Finance, Marketing, and Information Technology, Health Occupations and Human Services, and Trade and Industry. A significant $p$ value ($p = .04$) was found after performing a Levene’s test of homogeneity of variances so a
Welch’s ANOVA was interpreted. Results of the Welch’s one-way between groups ANOVA indicated that there were differences in perceived levels of preparedness of each career and technical content area teacher in mean scores including Agriculture and Environmental Systems ($M = 16.5$, $SD = 7.23$), Business, Finance, Marketing, and Information Technology ($M = 16.37$, $SD = 4.30$), Health Occupations and Human Services ($M = 15.35$, $SD = 3.87$), and Trade and Industry ($M = 16.26$, $SD = 3.25$), but the differences between the groups were not statistically significant, $F(3, 66) = .313$, $p = .811$.

An effect size using Cohen’s $d$ and eta squared ($\eta^2$) was determined in addition to the one-way ANOVA to test for practical significant (Rojewski, 1999). The effect size was derived using the output provided by SPSS using the equation found in figure 1. The effect size was calculated by dividing 16.45 by 1173.94 for a $\eta^2$ of 0.01, 95% CI [14.99, 16.95] indicating a small effect size (Cohen, 1988).

**Categorical variable: Gender and task two**

A total of 74 participants were included in the analysis for each career and technical education’s content area and perceived perceptions of preparedness from task two. Upon visual inspection of a boxplot, no outliers were seen and a Shapiro-Wilks test indicated non-significant result for each category of the variable including male ($p > .05$) and female ($p > .05$). To compare males and females on their perceived levels of preparedness an independent samples $t$ test was performed. There was not a statistically significant difference in mean levels of preparedness between males ($M = 16.59$, $SD = 4.04$) and females ($M = 15.27$, $SD = 4.17$), $t(68) = 1.34$, $p = .183$. 
Categorical variable: Degree level and task two

A total of 74 participants were included in the analysis for degree and perceived perceptions of preparedness from task two. Upon visual inspection of a boxplot, no outliers were seen and a Shapiro-Wilks test indicated non-significant result for each category of the variable including High School diploma/GED ($p > .05$), Associate’s degree ($p > .05$), Bachelor’s degree ($p > .05$), and Advanced degree ($p > .05$). Results of the Levene’s test of homogeneity of variances indicated a non-significant result ($p > .05$). Since all assumptions of an ANOVA between groups were met, this type of test was conducted.

An ANOVA indicated that there were differences in perceived levels of preparedness on task two among degree level: High School Diploma/GED ($M = 15.57$, $SD = 3.71$), Associate’s degree ($M = 16.44$, $SD = 4.34$), Bachelor’s degree ($M = 16.41$, $SD = 4.76$), and Advanced degree ($M = 15.80$, $SD = 4.84$) but the results were not statistically significant $F(3, 65) = .195$, $p = .899$.

An effect size using Cohen’s $d$ and eta squared ($\eta^2$) was determined in addition to the one-way ANOVA to test for practical significant (Rojewski, 1999). The effect size was derived using the output provided by SPSS using the equation found in figure 1. The effect size was calculated by dividing 10.34 by 1157.94 for a $\eta^2$ of 0.01, 95% CI [15.04, 17.02] indicating a small effect size (Cohen, 1988).

Categorical variable: School type and task two

A total of 74 participants were included in the analysis of school type and levels of perceived preparedness related to task two. To analyze the independent, categorical
variable of school type, the write-in choice of *other: compact school* was included in the
career centers category for data analysis. Also, middle school was added to the high
school category since only one participant selected that type of school. The category of
charter school was not analyzed since none of the participants acknowledged working
there after completing the questionnaire. Upon visual inspection of a boxplot, no outliers
were seen and a Shapiro-Wilks homogeneity of variances test indicated non-significant
result for each category of the variable including Middle school/High School ($p > .05$),
Career center/Compact school ($p > .05$), and Corrections facility ($p > .05$). Results of the
Levene’s test of homogeneity of variances indicated a non-significant result ($p > .05$).
Since the assumptions of a one-way ANOVA between groups were met, this type of
statistical test was conducted to determine the differences between type of school and the
perceived levels of preparedness from task two. Results of the ANOVA indicated mean
differences in type of school: Middle school/High school ($M = 16.36, SD = 4.37$), Career
center/Compact school ($M = 16.10, SD = 3.97$), and Corrections facility ($M = 13.8, SD =
4.32$) but no significant results were found in levels of perceived preparedness $F(2, 66) =
.812, p = .449$.

An effect size using Cohen’s $d$ and eta squared ($\eta^2$) was determined in addition to
the one-way ANOVA to test for practical significant (Rojewski, 1999). The effect size
was derived using the output provided by SPSS using the equation found in figure 1. The
effect size was calculated by dividing 27.79 by 1157.94 for a $\eta^2$ of 0.02, 95% CI [15.04,
17.02] indicating a small effect size (Cohen, 1988).
Categorical variable: Background of school and task two

A total of 74 participants were included in the analysis of background of school and levels of preparedness related to task two. In order to analyze the independent categorical variable of background of school, assumptions of normality and homogeneity of variances were first checked. Upon visual inspection of a boxplot, no significant outliers were viewed, and results of a Shapiro-Wilk test of normality indicated non-significant results for each level of the categorical variable including rural \( (p > .05) \), suburban \( (p > .05) \), and urban \( (p > .05) \). Results of a Levene’s test of equal variances also indicated a non-significant result \( (p > .05) \). Since the assumptions of a one-way between groups ANOVA were met, this type of statistical test was conducted to determine the differences between background of school and the perceived levels of preparedness from task two. Results of the ANOVA indicated mean differences in background of school: Urban \( (M = 16.32, SD = 4.00) \), Suburban \( (M = 15.50, SD = 4.32) \), and Urban \( (M = 15.88, SD = 4.43) \) but no significant results were found in levels of perceived preparedness \( F(2, 66) = .232, p = .794 \).

An effect size using Cohen’s \( d \) and eta squared \( (\eta^2) \) was determined in addition to the one-way ANOVA to test for practical significant (Rojewski, 1999). The effect size was derived using the output provided by SPSS using the equation found in figure 1. The effect size was calculated by dividing 8.08 by 1157.94 for a \( \eta^2 \) of 0.01, 95% CI \([15.04, 17.02]\) indicating a small effect size (Cohen, 1988).
Categorical variable: Years of work experience outside of education and task two

A total of 74 participants were included in the analysis of work experience outside of education and levels of perceived preparedness related to task two. In order to analyze the independent categorical variable of work experience outside of school, assumptions of normality and homogeneity of variances were first checked. Upon visual inspection of a boxplot, no significant outliers were viewed, and results of a Shapiro-Wilk test of normality indicated no significant outliers for all levels of the categorical variable including 0-5 years of work experience outside of education ($p > .05$), 6-10 years of work experience outside of education ($p > .05$), 11-15 years of work experience outside of education ($p > .05$), 16-20 years of work experience outside of education ($p > .05$), 21-25 years of work experience outside of education ($p > .05$), and 26 or more years of work experience outside of education ($p > .05$). Results of a Levene’s test of equal variances also indicated a non-significant result ($p > .05$). Since the assumptions of a one-way between groups ANOVA were met, this type of statistical test was conducted to determine the differences between years of work experience outside of education and the perceived levels of preparedness from task two. Results of the ANOVA indicated mean differences in years of work experience outside of education: 0-5 years ($M = 16.00, SD = 3.32$), 6-10 years ($M = 16.00, SD = 4.05$), 11-15 years ($M = 17.50, SD = 4.88$), 16-20 years ($M = 13.76, SD = 3.01$), 21-25 years ($M = 17.14, SD = 4.22$), and 26 or more years ($M = 16.27, SD = 4.34$) but no significant results were found in levels of preparedness $F(5, 63) = 1.67, p = .155$. 

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An effect size using Cohen’s $d$ and eta squared ($\eta^2$) was determined in addition to the one-way ANOVA to test for practical significant (Rojewski, 1999). The effect size was derived using the output provided by SPSS using the equation found in figure 1. The effect size was calculated by dividing 135.49 by 1157.94 for a $\eta^2$ of 0.12, 95% CI [15.04, 17.02] indicating a small effect size (Cohen, 1988).

**Results: Research Question #3**

The third research question was: *What are the differences in self-perceived levels of preparedness of each content area career and technical teacher completing the second instructional cycle task of RESA among demographic variables?* This question was analyzed using demographic data including a teacher’s career and technical content area, gender, type of school, background of school, and years of work experience outside of education to describe levels of preparedness. A total of 74 participants were included in the data analysis for research question three. Descriptive statistics analysis indicated that the mean was 16.61 ($SD = 4.12$) with a median of 17.50. Percentages and frequency of percentages are presented below in table 4.14.
Table 4.14

*Percentages and frequencies of percentages from task three*

<table>
<thead>
<tr>
<th>Frequency</th>
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<th>Cumulative Percent</th>
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</table>

**Categorical variable: Each teacher’s CTE area and task three**

A total of 74 participants were included in the analysis of differences among groups pertaining to each career and technical education’s content area and perceptions of preparedness from task three. Upon visual inspection of a boxplot, significant outliers were detected, and results of a Shapiro-Wilk test of normality indicated non-significant results for some levels of the categorical variable including Agriculture and...
Environmental Systems ($p > .05$), Business, Marketing, Finance, and Information Technology ($p > .05$), Health Occupations and Human Services ($p > .05$), but a significant result was determined for Trade and Industry ($p = .025$) level of the categorical variable. Since a significant result related to the normality of a level of the categorical variable, a Kruskal-Wallis H test was conducted as a non-parametric alternative to a one-way between groups ANOVA. A boxplot also indicated similar distributions for all levels of the categorical variable. Results from a Kruskal-Wallis H test indicated that there was not a statistically significant difference in each career and technical teacher’s content area among the four groups on levels of preparedness, $\chi^2(3) = 1.453$, $p = .693$. No effect size calculation was performed on a non-parametric test since it is usually not conducted on non-parametric tests (Tomczak & Tomczak, 2014).

**Categorical variable: Gender and task three**

A total of 74 participants were included in the analysis of differences among groups pertaining to the variable of gender and perceptions of preparedness from task three. Upon visual inspection of a boxplot, significant outliers were detected, and after conducting a Shapiro-Wilk test of normality a significant result was detected for the category of male ($p = .002$) but a non-significant result for female ($p > .05$). Since outliers were detected and a significant value was detected for the male category of the gender variable and similar distributions were detected for both groups of the independent variable, a Mann-Whitney $U$ test was conducted. Results of Mann-Whitney $U$ test indicated that median levels of preparedness on task three were not statistically
significantly different between males and females $U = 459, z = -1.799, p = .072$, using an exact sampling distribution for $U$ (Dineen & Blakesley, 1973).

**Categorical variable: Degree level and task three**

A total of 74 participants were included in the analysis of differences among groups pertaining to the categorical variable of degree level and perceptions of preparedness from task three. In order to analyze the independent categorical variable of degree level and differences in levels of preparedness assumptions of normality and homogeneity of variances were first checked. Upon visual inspection of a boxplot, no significant outliers were detected, and results from a Shapiro-Wilk test of normality indicated no significant results for each category of the independent variable of degree level including High school diploma/GED ($p > .05$), Associate’s degree ($p > .05$), Bachelor’s degree ($p > .05$), and Advanced degree ($p > .05$). Results from a Levene’s test of homogeneity of variances also indicated a non-significant result ($p > .05$). Since the assumptions of a one-way between groups ANOVA were met, this type of statistical test was conducted to determine the differences between degree level and the perceived levels of preparedness from task three. Results of the ANOVA indicated mean differences in degree level: High school diploma/GED ($M = 17.05, SD = 3.04$), Associate’s degree ($M = 16.88, SD = 3.01$), Bachelor’s degree ($M = 16.53, SD = 4.60$), and Advanced degree ($M = 17.07, SD = 5.42$) but no significant results were found in levels of preparedness $F(3, 65) = .065, p = .978$.

An effect size using Cohen’s $d$ and eta squared ($\eta^2$) was determined in addition to the one-way ANOVA to test for practical significant (Rojewski, 1999). The effect size
was derived using the output provided by SPSS using the equation found in figure 1. The effect size was calculated by dividing 3.20 by 1073.07 for a $\eta^2$ of 0.01, 95% CI [15.93, 17.84] indicating a small effect size (Cohen, 1988).

**Categorical variable: School type and task three**

A total of 74 participants were included in the analysis of differences among groups pertaining to the categorical variable of school type and perceptions of preparedness from task three. To analyze the independent, categorical variable of school type, the write-in choice of *other: Compact school* was included in the career centers category for data analysis. Also, middle school was added to the high school category since only one participant selected that type of school. The category of charter school was not analyzed since none of the participants acknowledged working there after completing the questionnaire. Upon visual inspection of a boxplot, significant outliers were detected, and after conducting a Shapiro-Wilk test of normality a significant result was detected for the category of Career center/Compact school ($p = .022$) but a non-significant result for the category of Middle school/High School ($p > .05$) and Corrections facility ($p > .05$). Since outliers were detected and a significant value was detected for the male category of the gender variable and similar distributions were detected for both groups of the independent variable, a Kruskal-Wallis H test was conducted as a non-parametric alternative to a one-way between groups ANOVA. A boxplot also indicated similar distributions for all levels of the categorical variable. Results from a Kruskal-Wallis H test indicated that there was not a statistically significant difference in school type among the three groups on levels of preparedness, $\chi^2 (2) = 2.949, p = .229$. No effect size
calculation was performed on a non-parametric test since it is usually not conducted on non-parametric tests (Tomczak & Tomczak, 2014).

**Categorical variable: Background of school and task three**

A total of 74 participants were included in the analysis of differences among groups pertaining to the categorical variable of background of school and perceptions of preparedness from task three. In order to analyze the independent categorical variable of background of school, assumptions of normality and homogeneity of variances were first checked. Upon visual inspection of a boxplot, significant outliers were determined. A Shapiro-Wilks test of normality indicated non-significant results for the categories of the independent variable including rural \( (p > .05) \) and urban \( (p > .05) \), but a significant result was detected for the category of suburban \( (p = .049) \). Since significant outliers were detected and a significant \( p \) value for the category of suburban were detected violating the assumption of a normal distribution, a Kruskal-Wallis H test was conducted as a non-parametric alternative to a one-way between groups ANOVA. A boxplot also indicated similar distributions for all levels of the categorical variable. Results from a Kruskal-Wallis H test indicated that there was not a statistically significant difference in school type among the three groups on levels of preparedness, \( \chi^2 (2) = .307, p = .858 \). No effect size calculation was performed on a non-parametric test since it is usually not conducted on non-parametric tests (Tomczak & Tomczak, 2014).

**Categorical variable: Years of work experience outside of education and task three**

A total of 74 participants were included in the analysis of differences among groups pertaining to the categorical variable of years of work experience outside of
education and perceptions of preparedness from task three. In order to analyze the
independent categorical variable of years of work experience outside of school,
assumptions of normality and homogeneity of variances were first checked. Upon visual
inspection of a boxplot, significant outliers were determined. A Shapiro-Wilks test of
normality indicated non-significant results for the categories of the independent variable
including 0-5 years ($p > .05$), 6-10 years ($p > .05$), 11-15 years ($p > .05$), 16-20 years ($p >
.05$), 21-25 years ($p > .05$), but a significant result was found for 26 or more years ($p =
.035$). Since significant outliers were detected and a significant $p$ value for the category of
26 or more years of work experience outside of education were detected violating the
assumption of a normal distribution, a Kruskal-Wallis H test was conducted as a non-
parametric alternative to a one-way between groups ANOVA. A boxplot also indicated
similar distributions for all levels of the categorical variable. Results from a Kruskal-
Wallis H test indicated that there was not a statistically significant difference in school
type among the three groups on levels of preparedness, $\chi^2(5) = 7.410$, $p = .192$. No effect
size calculation was performed on a non-parametric test since it is usually not conducted
on non-parametric tests (Tomczak & Tomczak, 2014).

**Results: Research Question #4**
The fourth research question was: *What are the differences in self-perceived
levels of preparedness of each content area career and technical teacher completing the
communication and professional growth task of RESA among demographic variables?*
This question was analyzed using demographic data including a teacher’s career and
technical content area, gender, type of school, background of school, and years of work
experience outside of education to describe levels of preparedness. A total of seventy-two
participants were included in the data analysis for research question four. Descriptive statistics analysis indicated that the mean was 16.61 ($SD = 4.53$) with a median of 17.50. Percentages and frequency of percentages are presented below in table 4.15.

Table 4.15

_Percentages and frequencies of percentages from task four_

<table>
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<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
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Categorical variable: Each teacher’s CTE area and task four
A total of 72 participants were included in the analysis of differences among groups pertaining to each teacher’s career and technical education content area and perceptions of preparedness from task four. In order to analyze the independent categorical variable of each teacher’s career and technical content area and differences in levels of preparedness assumptions of normality and homogeneity of variances were first checked. Upon visual inspection of a boxplot, significant outliers were determined. A Shapiro-Wilks test of normality indicated non-significant results for the categories of the independent variable including Agriculture and Environmental systems ($p > .05$), Business, Finance, Marketing, and Information Technology ($p > .05$), Health Occupations and Human Services ($p > .05$), but a significant result was found for the category of Trade and Industry ($p = .029$). Since significant outliers were detected and a significant $p$ value was determined for the category of Trade and Industry violating the assumption of a normal distribution, a Kruskal-Wallis H test was conducted as a non-parametric alternative to a one-way between groups ANOVA. A boxplot also indicated similar distributions for all levels of the categorical variable. Results from a Kruskal-Wallis H test indicated that there was not a statistically significant difference in each teacher’s career and technical content area among the four groups on levels of preparedness, $\chi^2(3) = .322, p = .956$. No effect size calculation was performed on a non-parametric test since it is usually not conducted on non-parametric tests (Tomczak & Tomczak, 2014).
**Categorical variable: Gender and task four**

A total of 72 participants were included in the analysis of differences among groups pertaining to gender and perceptions of preparedness from task four. In order to analyze the independent categorical variable of gender and differences in levels of preparedness assumptions of normality and homogeneity of variances were first checked. Upon visual inspection of a boxplot, significant outliers were determined. A Shapiro-Wilks test of normality indicated non-significant results for the category of female \((p > .05)\), but a significant result was discovered for male \((p = .007)\). Since outliers were detected and a significant value was detected for the male category of the gender variable and similar distributions were detected for both groups of the independent variable, a Mann-Whitney \(U\) test was conducted. Results of Mann-Whitney \(U\) test indicated that median levels of preparedness on task four were not statistically significantly different between males and females \(U = 535, z = -.896, p = .370\), using an exact sampling distribution for \(U\) (Dineen & Blakesley, 1973).

**Categorical variable: Degree level and task four**

A total of 72 participants were included in the analysis of differences among groups pertaining to degree level and perceptions of preparedness from task four. In order to analyze the independent categorical variable of degree level and differences in levels of preparedness assumptions of normality and homogeneity of variances were first checked. Upon visual inspection of a boxplot, no significant outliers were detected, and results from a Shapiro-Wilk test of normality indicated no significant results for each category of the independent variable of degree level including High school diploma/GED.
(p > .05), Associate’s degree (p > .05), Bachelor’s degree (p > .05), and Advanced degree
(p > .05). Results from a Levene’s test of homogeneity of variances also indicated a non-
significant result (p > .05). Since the assumptions of a one-way between groups ANOVA
were met, this type of statistical test was conducted to determine the differences between
degree level and the perceived levels of preparedness from task four. Results of the
ANOVA indicated mean differences in degree level: High school diploma/GED (M =
16.52, SD = 4.93), Associate’s degree (M = 17.38, SD = 3.07), Bachelor’s degree (M =
17.23, SD = 4.64), and Advanced degree (M = 16.83, SD = 4.92) but no significant
results were found in levels of preparedness $F(3, 65) = .256, p = .857$.

An effect size using Cohen’s $d$ and eta squared ($\eta^2$) was determined in addition to
the one-way ANOVA between groups to test for practical significant (Rojewski, 1999).
The effect size was derived using the output provided by SPSS using the equation found
in figure 1. The effect size was calculated by dividing 15.47 by 1325.91 for a $\eta^2$ of 0.01,
95% CI [15.77, 17.89] indicating a small effect size (Cohen, 1988).

**Categorical variable: School type and task four**

A total of 72 participants were included in the analysis of differences among
groups pertaining to school type and perceptions of preparedness from task four. In order
to analyze the independent categorical variable of school type and differences in levels of
preparedness assumptions of normality and homogeneity of variances were first checked.
Upon visual inspection of a boxplot, significant outliers were determined. A Shapiro-
Wilks test of normality indicated non-significant results for the category of the
independent variable of Corrections facility (p > .05), but significant results for the

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category of Middle school/High school ($p = .030$) and Career center/Compact school ($p = .013$). Since significant outliers were detected and a significant $p$ value was determined for the categories of Middle school/High school and Career center/Compact school violating the assumption of a normal distribution, a Kruskal-Wallis H test was conducted as a non-parametric alternative to a one-way between groups ANOVA. A boxplot also indicated similar distributions for all levels of the categorical variable. Results from a Kruskal-Wallis H test indicated that there was not a statistically significant difference in each teacher’s career and technical content area among the four groups on levels of preparedness, $\chi^2(2) = 1.563, p = .458$. No effect size calculation was performed on a non-parametric test since it is usually not conducted on non-parametric tests (Tomczak & Tomczak, 2014).

**Categorical variable: Background of school and task four**

A total of 72 participants were included in the analysis of differences among groups pertaining to background of the school and perceptions of preparedness from task four. In order to analyze the independent categorical variable of background of the school and differences in levels of preparedness from task four assumptions of normality and homogeneity of variances were first checked. Upon visual inspection of a boxplot, no significant outliers were determined. Results of a Shapiro-Wilk test indicated non-significant results for all levels of the independent variable including rural ($p > .05$), suburban ($p > .05$), and urban ($p > .05$). Results from a Levene’s test of homogeneity of variances also indicated a non-significant result ($p > .05$). Since the assumptions of a one-way between groups ANOVA were met, this type of statistical test was conducted to
determine the differences between background of the school and the perceived levels of preparedness from task four. Results of the ANOVA indicated mean differences in background of the school: rural ($M = 16.86, SD = 4.50$), suburban ($M = 16.63, SD = 4.60$), and urban ($M = 16.94, SD = 4.30$) but no significant results were found in levels of preparedness $F(4, 68) = .370, p = .829$.

An effect size using Cohen’s $d$ and eta squared ($\eta^2$) was determined in addition to the one-way ANOVA to test for practical significant (Rojewski, 1999). The effect size was derived using the output provided by SPSS using the equation found in figure 1. The effect size was calculated by dividing 29.69 by 1325.91 for a $\eta^2$ of 0.02, 95% CI [9.01, 26.99] indicating a small effect size (Cohen, 1988).

**Categorical variable: Years of work experience outside of education and task four**

A total of 72 participants were included in the analysis of differences among groups pertaining to years of work experience outside of education and perceptions of preparedness from task four. In order to analyze the independent categorical variable of years of work experience outside of education and differences in levels of preparedness from task four assumptions of normality and homogeneity of variances were first checked. Upon visual inspection of a boxplot, no significant outliers were determined. A Shapiro-Wilks test of normality indicated non-significant results for all the categories of the independent variable including 0-5 years ($p > .05$), 6-10 years ($p > .05$), 11-15 years ($p > .05$), 16-20 years ($p > .05$), 21-25 years ($p > .05$), and 26 or more years ($p > .05$). Results from a Levene’s test of homogeneity of variances also indicated a non-significant result ($p > .05$). Since the assumptions of a one-way between groups ANOVA were met,
this type of statistical test was conducted to determine the differences between
background of the school and the perceived levels of preparedness from task four. Results
of the ANOVA indicated mean differences in years of work experience outside of
education: 0-5 years (M = 17.57, SD = 3.87), 6-10 years (M = 14.50, SD = 6.50), 11-15
years (M = 17.21, SD = 5.06), 16-20 years (M = 15.76, SD = 3.25), 21-25 years (M =
18.50, SD = 4.09), and 26 years or more (M = 16.64, SD = 4.57) but no significant results
were found in levels of preparedness $F(5, 63) = .997, p = .427$.

An effect size using Cohen’s $d$ and eta squared ($\eta^2$) was determined in addition to
the one-way ANOVA to test for practical significance (Rojewski, 1999). The effect size
was derived using the output provided by SPSS using the equation found in figure 1. The
effect size was calculated by dividing 97.24 by 1325.91 for a $\eta^2$ of 0.07, 95% CI [15.77,
17.89] indicating a small effect size (Cohen, 1988).

**Anecdotal evidence provided via e-mail**

Participants also emailed the researcher further detailing their experiences related
to levels of preparedness in addition to completing the questionnaire. Participating via e-
mail was not included in the scope of the research study, and is included only as
anecdotal evidence. Themes from the e-mails from some of the participants included: a)
not having enough time to complete all requirements RESA, b) how time-consuming
RESA was perceived to be from task one through task four, c) the difficulty behind
interpreting the requirements of each task, and, d) career and technical teachers not
perceiving the RESA was designed for them as alternatively-licensed lateral-entry
teachers.
The first theme expressed by participants who e-mailed the researcher was not having enough time to complete all of RESA. Some teachers expressed that the RESA was seen more as a burden and took time away from their other duties. They negatively viewed RESA as a process that needed to be completed and did not improve their teaching, and preparing for it was seen as another “chore”. One teacher remarked that, “I have never done so much time-consuming work that did not really relate to the job. It was more of a writing process than a teaching process” indicating preparing to write for the RESA was seen as more important than the RESA itself. Another teacher indicated that, “What I can tell you about the RESA was it took away from my focus on teaching my first years on the job. It also added a great deal of unnecessary stress on myself”, which also affected perceived levels of preparedness.

Another theme that was expressed through e-mail was the perceived difficulty in not being prepared to interpret the requirements for each task associated RESA. Some of the participants acknowledge the restraints felt by just trying to prepare for each task of RESA but first needing to interpret the procedures and guidelines of each task before even getting started. One teacher stated in email that, “It was more of a writing process than a teaching process. There was 1 question (if I can recall correctly) that was about 150 words total and it asked for a response of 150 words or less” and another teacher remarked that:

did I mention their rules are crazy! I was dis-qualified on one segment of my last submission due to a simple clerical error. I mistakenly switched data for mid and high achieving students and was dis-qualified. If this was a student that we teach we certainly would not just fail them, we may take away some points
Anecdotal evidence indicated that teachers perceived themselves to not as prepared to interpret all requirements of each task of RESA.

An additional theme related to perceptions of preparedness included alternatively-licensed teachers perceptions as though RESA was not designed for them but instead for only traditionally-licensed teachers. One teacher expanded on the perceived differences in preparing for RESA between traditionally- and alternatively-licensed career and technical teachers when the teacher stated that, “for Career and Technical Education, RESA is a skewed process, which resulted in legislation that did away with RESA as an instrument for testing in CTE Schools”. Another teacher echoed the same perceived perceptions of unpreparedness when the teacher stated that, “Many CT [career and technical education] teachers and organizations spoke out against the RESA and lobbied for there to be a different form of assessment than the RESA for CT teachers”. Alternatively-licensed career and technical education teachers additionally articulated through e-mail feedback that perceptions of preparedness were lower since they had more constraints (i.e. coursework, preparing to teach, evaluations) in comparison to their traditionally-licensed counterparts.

Even though teachers felt unprepared with certain aspects of the RESA itself, they did specify that their college/university programs were preparing them to teach. One teacher noted that he or she was ready to begin a career in education and that the teacher, “felt very prepared and supported to enter the classroom and begin teaching”. The teacher felt that coursework and the experiences within the college/university licensure program prepared the teacher for a career as a teacher, but not necessarily perceptions of being
prepared to complete RESA. Another quote from a teacher related similar perceptions of preparedness and preparation from college courses provided by college/university program when the teacher stated that, “TRUST the schools that that the teacher is working for, I can only imaging the time and cost of the RESA program”.

**Summary**

Survey research in the form of questionnaire sent via was used to gather data related to perceived levels of preparedness on each task of RESA. Results from the study were analyzed using both parametric and non-parametric statistical tests to answer the research questions related to self-perceived preparedness levels of the participants according to each task. Data were first analyzed for missing/incomplete data using SPSS and reported in table form. Descriptive statistics were presented including mean, standard deviation, median, and a frequency of percentages table related to each question from each scale. A Bonferroni correction was used to decrease the likelihood of committing a Type I error so the alpha level was set *a priori* to .0083 as six different tests were conducted on each dependent variable related to levels of preparedness. Assumptions of a parametric test were also verified before performing any parametric testing, and if outliers, a non-normal distribution, or homogeneity of variances were detected non-parametric statistical tests were conducted in lieu of parametric testing. No significant ANOVA results were discovered and no post-hoc tests were conducted; also, effect sizes were included when performing ANOVA statistical testing. Anecdotal evidence received in the form of e-mails from participants were included in the study and reported for themes.
Chapter 5: Summary, Conclusions, Recommendations, and Implications

Statement of the problem

The purpose of this descriptive research study was to describe the self-perceived levels of preparedness of alternatively-licensed career and technical education teachers who completed the Resident Educator Summative Assessment among demographic variables. Establishing baseline data was conducted to measure the levels of preparedness among all four tasks of RESA to determine how each group varied among demographic variables including career and technical content area, gender, type of school, background of school, and number of years of work experience outside of education. No data currently exists describing the levels of preparedness of alternatively-licensed career and technical education teachers who completed a performance-based assessment for licensure considerations in the state of Ohio.

Method

The target population for this research study was all alternatively-licensed career and technical education teachers who completed the Resident Educator Summative Assessment during the school years of 2013 – 2014, 2014 – 2015, and 2015 – 2016. A questionnaire was designed and validated to describe the perceptions of preparedness among all four tasks of RESA according to demographic variables. Principles from Dillman’s Tailored Designed Method (2014) were adhered to throughout the data.
collection process, and data was collected via e-mail during the months of April and May, 2017. Lists of teachers who completed their licensure programs at a college/university provider of alternative career and technical education were provided to the researcher, and publically-available data in the form of teachers’ email addresses was used to distribute the questionnaire to the target sample.

Research questions were analyzed through descriptive and inferential statistics. Percentages and frequencies of percentages for each research question were analyzed. Assumptions were first verified before conducting any statistical testing. Parametric statistical tests in the form of an independent samples t test or a one-way analysis of variance (ANOVA) between groups were used to analyze the data. Non-parametric statistical tests in the form on Mann-Whitney U and Kruskal-Wallis H test were also used to analyze the data. Effect sizes were calculated only after performing parametric statistical tests.

**Findings from descriptive statistics**

The school years of 2013 – 2014, 2014 – 2015, and 2015 – 2016 were all included in the study. During the school year of 2015 – 2016, participants indicated the largest percentage (61.45%) completing RESA in comparison to the previous two years. Participants with a career and technical content background of Health Occupations and Human Services (37.14%) was the highest accounted for CTE group in the study, with the career and technical content areas of Business, Marketing, Finance, and Information Technology and Trade and Industry being the second largest groups (27.14%) accounted for in the study. The gender of the participants was almost evenly distributed in the study.
with males accounting for 52.9% of the participants and females accounting for 47.1% of the participants. Participants with a high school diploma/GED (30.43%) accounted for the highest percentage of degree level earned in the sample, with a Bachelor’s degree (24.64%) and Associate’s degree (23.19%) being the next most likely degree level earned. Participants who worked at a career center (55.07%) accounted for the highest percentage at type of school, with high school (34.78%) and corrections facility (7.25%) being the next most accounted for type of school. None of the participants worked at a charter school, and one participant did mark other: write in and wrote “compact school” as a type of school. Participants who worked at a background of school described as rural (53.62%) accounted for the highest percentage, followed equally by suburban and urban (both reported 23.19%) background of the school. Participants with 16-20 years of work experience outside of education (24.64%) were the highest percentage accounted for in the sample, with 11-15 and 21-15 years of work experience outside of education (20.29%) being the most reported percentage of work experience outside of education.

**Summary of results: Research question one**

A total of 74 teachers were included in the data analysis for the first research question. Assumptions were first verified through a visual inspection of a boxplot for significant outliers, a Shapiro-Wilk test for normality, and a Levene’s test for homogeneity of variances. If all assumptions were met then parametric statistical testing was performed; if one or more violations were discovered then non-parametric statistical testing was performed or a Welch’s ANOVA was interpreted. The first research question asked, *What are the differences in self-perceived levels of preparedness of each content*
area career and technical teacher completing the first instructional cycle task of RESA among demographic variables?

Each teacher’s career and technical education content area had four different categories including Agriculture and Environmental Systems, Business, Finance, Marketing, and Information Technology, Health Occupations and Human Services, and Trade and Industry. An ANOVA was performed to describe levels of preparedness on task one with each teacher’s career and technical content area. Results indicated that there were not statistically significant mean differences in levels of preparedness among a teacher’s career and technical content area on task one. A small effect size was also derived.

Gender had two different categories including male and female. The categorical variable of gender in describing levels of preparedness on task one was analyzed with a Mann-Whitney U test. Results of the Mann-Whitney U test indicated that there were not statistically significant differences between gender and levels of preparedness on task one. No effect size was calculated.

Degree level had four different categories including high school diploma/GED, Associate’s degree, Bachelor’s degree, and Advanced degree. Degree level in describing levels of preparedness on task one was analyzed using a Kruskal-Wallis H test. Results of the Kruskal-Wallis H test determined that degree level was non-significant when describing levels of preparedness on task one. No effect size was calculated.

School type was re-coded for analysis by combining middle school (n = 1) with those who responded that they teach at a high school (n = 24) to create a new variable of
middle school/high school for school background (n = 25). The same procedure was conducted for the group of Other: Write in as compact school was chosen (n= 1) which was combined with the category of career center (n = 38) to create a new category of career center/compact school (n = 39). The category of charter school (n = 0) was excluded from analysis since none of the participants reported working at a charter school. Altogether, the categorical variable of school type had three different categories including middle school/high school, career center/compact school, and corrections facility. The categorical variable of school type in describing levels of preparedness on task three was analyzed with a Kruskal-Wallis H test. Results indicated that there were not statistically significant mean differences in levels of preparedness among school type on task three. No effect size was calculated.

Background of the school had three different categories including suburban, urban, and rural. Background of the school in describing levels of preparedness on task one was analyzed with a one-way between groups ANOVA. Results indicated that there were not statistically significant mean differences in levels of preparedness among background of the school on task one. A small effect size was also derived.

Years of work experience had six different categories including 0-5 years of work experience outside of education, 6-10 years of work experience outside of education, 11-15 years of work experience outside of education, 16-20 years of work experience outside of education, 21-25 years of work experience outside of education, and 26 or more years of work experience outside of education. Years of work experience outside of education and describing levels of preparedness on task one was analyzed with a one-way between
groups ANOVA. Results indicated that there were not statistically significant mean differences in levels of preparedness among years of work experience outside of education on task one. A small effect size was also derived.

**Summary of results: Research question two**

A total of 74 teachers were included in the data analysis for the second research question. Assumptions were first verified through a visual inspection of a boxplot for significant outliers, a Shapiro-Wilk test for normality, and a Levene’s test for homogeneity of variances. If all assumptions were met then parametric statistical testing was performed; if one or more violations were discovered then non-parametric statistical testing was performed or a Welch’s ANOVA was interpreted. The second research question asked, *What are the differences in self-perceived levels of preparedness of each content area career and technical teacher completing the formative and summative assessment task of RESA among demographic variables?*

A one-way ANOVA between groups was performed to describe levels of preparedness on task two with each teacher’s career and technical content area. A Welch’s ANOVA was interpreted since there was a violation in establishing homogeneity of variances. Results indicated that there were not statistically significant mean differences in levels of preparedness among a teacher’s career and technical content area on task two. A small effect size was also derived.

An independent samples *t* test was performed to describe levels of preparedness between gender on task two. Results of the independent samples *t* test indicated that there
were not statistically significant mean differences in levels of preparedness between gender on task two.

A one-way ANOVA between groups was performed to describe levels of preparedness on task two among degree levels. Results indicated that there were not statistically significant mean differences in levels of preparedness among degree level on task two. A small effect size was also derived.

School type was re-coded for analysis by combining middle school (n = 1) with those who responded that they teach at a high school (n = 24) to create a new variable of middle school/high school for school background (n = 25). The same procedure was conducted for the group of Other: Write in as compact school was chosen (n= 1) which was combined with the category of career center (n = 38) to create a new category of career center/compact school (n = 39). The category of charter school (n = 0) was excluded from analysis since none of the participants reported working at a charter school. Altogether, the categorical variable of school type had three different categories including middle school/high school, career center/compact school, and corrections facility. The categorical variable of school type in describing levels of preparedness on task three was analyzed with a Kruskal-Wallis H test. Results indicated that that there were not statistically significant mean differences in levels of preparedness among school type on task three. No effect size was calculated.

A one-way ANOVA between groups was performed to describe levels of preparedness on task two among background of the school. Results indicated that there
were not statistically significant mean differences in levels of preparedness among background of the school on task two. A small effect size was also derived.

A one-way ANOVA between groups was performed to describe levels of preparedness on task two among years of work experience outside of education. Results indicated that there were not statistically significant mean differences in levels of preparedness among years of work experience outside of education on task two. A small effect size was also derived.

**Summary of results: Research question three**

A total of 74 teachers were included in the data analysis for the third research question. Assumptions were first verified through a visual inspection of a boxplot for significant outliers, a Shapiro-Wilk test for normality, and a Levene’s test for homogeneity of variances. If all assumptions were met then parametric statistical testing was performed; if one or more violations were discovered then non-parametric statistical testing was performed or a Welch’s ANOVA between groups was interpreted. The third research question asked, *What are the differences in self-perceived levels of preparedness of each content area career and technical teacher completing the second instructional cycle task of RESA among demographic variables?*

A Kruskal-Wallis H test was performed to describe levels of preparedness on task three with each teacher’s career and technical content area. Results indicated that there were not statistically significant mean differences in levels of preparedness among a teacher’s career and technical content area on task three. No effect sizes were calculated.
A Mann-Whitney $U$ test was performed to describe levels of preparedness on task three between gender. Results indicated that there were not statistically significant mean differences in levels of preparedness between gender on task three.

A one-way ANOVA between groups was performed to describe levels of preparedness on task three among degree level. Results indicated that there were not statistically significant mean differences in levels of preparedness among degree level on task three. A small effect size was also derived.

School type was re-coded for analysis by combining middle school ($n = 1$) with those who responded that they teach at a high school ($n = 24$) to create a new variable of middle school/high school for school background ($n = 25$). The same procedure was conducted for the group of Other: Write in as compact school was chosen ($n = 1$) which was combined with the category of career center ($n = 38$) to create a new category of career center/compact school ($n = 39$). The category of charter school ($n = 0$) was excluded from analysis since none of the participants reported working at a charter school. Altogether, the categorical variable of school type had three different categories including middle school/high school, career center/compact school, and corrections facility. The categorical variable of school type in describing levels of preparedness on task three was analyzed with a Kruskal-Wallis H test. Results indicated that that there were not statistically significant mean differences in levels of preparedness among school type on task three. No effect size was calculated.

A Kruskal-Wallis H test was performed to describe levels of preparedness on task three among background of the school. Results indicated that that there were not
statistically significant mean differences in levels of preparedness among background of the school on task three. No effect size was calculated.

A Kruskal-Wallis H test was performed to describe levels of preparedness on task three among years of work experience outside of education. Results indicated that there were not statistically significant mean differences in levels of preparedness among years of work experience outside of education on task three. No effect size was calculated.

**Summary of results: Research question four**

A total of 72 teachers were included in the data analysis for the fourth research question. Assumptions were first verified through a visual inspection of a boxplot for significant outliers, a Shapiro-Wilk test for normality, and a Levene’s test for homogeneity of variances. If all assumptions were met then parametric statistical testing was performed; if one or more violations were discovered then non-parametric statistical testing was performed or a Welch’s ANOVA between groups was interpreted. The fourth research question asked, *What are the differences in self-perceived levels of preparedness of each content area career and technical teacher completing the communication and professional growth task of RESA among demographic variables?*

A Kruskal-Wallis H test was performed to describe levels of preparedness on task four with each teacher’s career and technical content area. Results indicated that there were not statistically significant mean differences in levels of preparedness among a teacher’s career and technical content area on task three. No effect sizes were calculated.
A Mann-Whitney $U$ test was performed to describe levels of preparedness on task four between genders. Results indicated that there were not statistically significant mean differences in levels of preparedness between genders on task three.

A one-way ANOVA between groups was performed to describe levels of preparedness on task four among degree level. Results indicated that there were not statistically significant mean differences in levels of preparedness among degree level on task four. A small effect size was also derived.

School type was re-coded for analysis by combining middle school ($n = 1$) with those who responded that they teach at a high school ($n = 24$) to create a new variable of middle school/high school for school background ($n = 25$). The same procedure was conducted for the group of Other: Write in as compact school was chosen ($n = 1$) which was combined with the category of career center ($n = 38$) to create a new category of career center/compact school ($n = 39$). The category of charter school ($n = 0$) was excluded from analysis since none of the participants reported working at a charter school. Altogether, the categorical variable of school type had three different categories including middle school/high school, career center/compact school, and corrections facility. The categorical variable of school type in describing levels of preparedness on task three was analyzed with a Kruskal-Wallis H test. Results indicated that there were not statistically significant mean differences in levels of preparedness among school type on task three. No effect size was calculated.

A one-way ANOVA between groups was performed to describe levels of preparedness on task four among degree levels. Results indicated that there were not
statistically significant mean differences in levels of preparedness among degree level on task four. A small effect size was also derived.

A one-way ANOVA between groups was performed to describe levels of preparedness on task four among years of work experience outside of education. Results indicated that there were not statistically significant mean differences in levels of preparedness among years of work experience outside of education on task four. A small effect size was also derived.

**Summary of results: Anecdotal evidence**

Anecdotal evidence provided from participants in the form of written e-mails to the researcher were analyzed for themes. Providing anecdotal evidence was not a requirement of the study, but the evidence was included in the data analysis to further provide data regarding levels of preparedness while completing each task of RESA. Some of the themes that were derived included perceptions of being less prepared due to a limited amount of time to get all tasks completed, perceptions of being less prepared because of how time-consuming they perceived the RESA process to be in its entirety, preparing to interpret all the requirements for each task, and perceptions related to lower levels of preparedness since the RESA was perceived to be created for traditionally-licensed teachers and less for alternatively-licensed teachers, especially those with a career and technical background.
Conclusions, Recommendations, and Implications

Conclusion #1: Reported self-perceptions of preparedness among career and technical content areas

Results of the study indicated that describing levels of preparedness among a teacher’s career and technical content area did not produce a significant result statistically indicating similar levels of preparedness across all four categories of that variable. There were mean differences in perceived levels of preparedness among all career and technical content areas, but results were non-significant.

Recommendations from conclusion #1

Since there were mean differences among participants on each task associated with RESA among each categorical variable, a recommendation is to have alternatively-licensed career and technical education teachers complete tasks that mimic RESA earlier in the Resident Educator program. Participants may have increased levels of preparedness for each task before attempting all four tasks of the RESA if they have time to practice tasks before attempting a performance-based assessment for advancing licensure. It is recommended that tasks be collaborative in nature with mentors and completed during year one and year two of the Resident Educator program to increase feelings of perceived preparedness before completing RESA.

Implications from conclusion #1

If the Resident Educator program is updated for those teachers who hold alternative licensure in career and technical education, then a shift towards a greater focus on mentoring during the first two years and completing the performance-based
assessment during the last two years of the program. Mentors would require more in time in working with teachers who are alternatively-licensed in career and technical education. Mentoring has been shown to have a positive impact for new alternatively-licensed career and technical education teachers (Briggs, 2008; Isaacs et al., 2007), and more one-on-one mentoring during the first two years of the Resident Educator program will require a change in how years one and two currently operate.

**Conclusion #2: Reported self-perceptions of preparedness among other demographic variables**

Further results of the study indicated that differences in perceived levels of preparedness among demographic variables (including gender, degree level, school type, background of the school, and years of work experience outside of education) among all four tasks of RESA did not produce any statistically significant results concluding that there was not much of a difference statistically among the groups. Effect sizes were categorized as small, but only are to be interpreted as a rule of thumb and a small effect size should not be treated as inconsequential (Coe, 2002; Cohen, 1988).

**Recommendations from conclusion #2**

One recommendation is to allow participants more time to complete a performance-based assessment to advance licensure. Instead of completing a performance-based assessment in its entirety during year three, participants can complete it over year three and year four. Giving participants more time to complete a performance-based assessment could increase levels of preparedness since they would have two school years to complete it. Participants may have an increase in self-efficacy.
when completing each task of the performance-based assessment, which in turn increase perceived levels of preparedness according to social cognitive career theory (Lent, Brown, & Hackett, 1994).

**Implications from conclusion #2**

If participants are given more time to complete a performance-based assessment for licensure, then that may affect perceived levels of preparedness. Participants may perceive themselves to be more prepared to complete tasks of which require them to make instructional- and pedagogical decisions, and still complete all requirements of a residency program in four years. Participants may also have an increase in levels of perceived preparedness as they complete a performance-based assessment that was designed specifically for the field of alternative licensure in career and technical education.

**Conclusion #3: Percentages and Frequencies of Percentages**

Conclusions using Table 4.11 from chapter four and the percentages and frequencies of percentages across all categorical variables indicate varying levels of preparedness among the participants. For task one, the first instructional cycle, approximately 23% of the participants indicated perceptions of being unprepared whereas approximately 26% of participants indicated perceptions of being prepared. The other approximately 51% indicated a combination of perceptions of being unprepared on some parts of task one and perceptions of being prepared for other parts of task one.

For task two, formative and summative assessment, approximately 23% of the participants indicated perceptions of being unprepared whereas approximately 19% of respondents indicated perceptions of being prepared. The other approximately 58%
indicated a combination of perceptions of being unprepared on some parts of task two and prepared for other parts of task two.

For task three, the second instructional cycle, approximately 15% of the participants indicated perceptions of being unprepared whereas 26% of the participants indicated perceptions of being prepared. The other approximately 28% indicated a combination of perceptions of being unprepared on some parts of task three and perceptions of being prepared on other parts of task three.

For task four, communication and professional growth, approximately 22% of the participants indicated perceptions of being unprepared whereas approximately 28% of respondents indicated perceptions of being prepared. The other approximately 50% indicated a combination of perceptions of being unprepared on some parts of task four and perceptions of being prepared on other parts of task four.

**Recommendations from conclusion #3**

Creating a succinct version of task two: *Formative and Summative Assessment* is a recommendation for a performance-based assessment for alternatively-licensed career and technical education teachers. Results of the study indicated that task two had the lowest reported perceptions of being prepared (19%). Narrowing the scope of a task related to formative and summative assessment may increase levels of perceived preparedness.

Another recommendation is to have participants complete only one instructional cycle. Results of the study indicated that levels of perceived preparedness related to perceptions of being unprepared decreased by 8% between the first and second
instructional cycles (23% from the first instructional cycle to 15% for the second instructional cycle) and the levels of perceptions of preparedness related to perceptions of being prepared did not change between the first and second instructional cycles (remained at 26% for both instructional cycles).

**Implications from conclusion #3**

If participants complete a succinct task of formative and summative assessment, then they may perceive themselves to be more prepared for this type of task as part of a performance-based assessment. If a new task related to formative and summative assessment is created, then teacher educators from colleges/university that offer alternative licensure in career and technical education can play an integral role since they are familiar with the field. Research has indicated that the needs of career and technical education teachers are different from other content areas (Pinchak & Berns, 2014), with the needs of alternatively-licensed teachers in career and technical education teachers are also uniquely different from traditionally-licensed career and technical education teachers (Duncan, Cannon, Kitchel, 2013). With the needs of alternatively-licensed career and technical teachers being different, teacher educators can take that into consideration when designing an assessment for advancing licensure. Teacher educators, in collaboration with other stakeholders such as representatives from the Ohio Department of Education, can help to create a new task that is uniquely suited for teachers who are alternatively-licensed in career and technical education.
Conclusion #4: Frustrations with RESA and overall preparedness

Anecdotal evidence suggested that participants were frustrated with the entire RESA process such as how time consuming it was perceived to be and interpreting the directions and requirements for each task.

Recommendations from conclusion #4

One recommendation is related to social cognitive career theory and the influence of outcome expectations and goals, and ways in which to increase a positive perception of preparedness. Some participants approached the perceived barriers associated with RESA including certain frustrations and perceived inadequacies but that did not impact their levels of preparedness among demographic variables. This influences outcome expectations and the preparedness levels of participants completing each task of RESA according to the tenets of social cognitive career theory (Lent, Brown, & Hackett, 1994). Also, accomplishing a goal of overcoming a major hindrance (such as the fours tasks of RESA) can lead to a better chance at perceived success in a new career field (Lent, Brown, & Hackett, 1994). A recommendation of ways to alleviate these frustrations that impacted perceived levels of preparedness is to allow more choices when it comes to demonstrating competence related to making instructional and pedagogical decisions. Instead of having just four tasks the Ohio Department of Education could provide a list of options of tasks that alternatively-licensed career and technical education teachers could complete by providing evidence and reflecting on teaching on a performance-based assessment relevant to how they are completing their teaching licensure requirements.
It is also recommended that university faculty in conjunction with the Ohio Department of Education also serve as assessors of the performance-based assessment instead of using assessors provided by Educopia. Outcome expectations and goals would be positively impacted and increase levels of perceived preparedness since some flexibility would be available to alternatively-licensed career and technical education teachers to advance their licensure.

**Implications from conclusion #4**

If frustrations are alleviated by creating a performance-based assessment specific to the field of alternative licensure in career and technical education, then participants may feel more prepared to complete such an assessment. Stakeholders involved in the creation of a performance-based assessment would then need to create a list of options for alternatively-licensed career and technical education teachers to complete as well as scoring rubrics. A further implication would be having university faculty members and teacher educations involved in the assessing of a performance-based assessment. University faculty members can be trained on how to be assessors of the performance-based assessment, and work with teachers who do not perceive themselves to be prepared to complete the assessment on the first attempt.

**Conclusion #5: Participation in RESA**

Participation in RESA increased over the years when it was first implemented during the school year of 2013 – 2014 (n = 14) to the school year of 2015 – 2016 (n = 51). The majority of participants sampled in the research study completed the RESA after enhancements were made to the assessment.
Recommendations from conclusion #5

Levels of preparedness related to perceived preparedness may have increased as changes and enhancements were developed each year for both the Resident Educator program and also the Resident Educator Summative Assessment instrument and corresponding procedures handbook (Ohio Department of Education, 2016d). One recommendation is to include only the population of alternatively-licensed career and technical education teachers in the creation of a performance-based assessment for advancing licensure. A performance-based assessment should be designed and created specifically for the field of alternative licensure in career and technical education; this should be completed before it is fully implemented in a residency program.

Also, recommendations for enhancements for a performance-based assessment must come from alternatively-licensed teachers who have completed the performance-based assessment. It is further recommended that the teachers provide input and recommendations for modifications or enhancements to the performance-based assessment since they are the teachers who completed it. Alternatively-licensed teachers who completed the performance-based assessment can also provide clarity and insights related to perceived levels of preparedness on each task of the performance-based assessment.

Implications from conclusion #5

If alternatively-licensed career and technical education teachers who completed a performance-based assessment for licensure are an integral part of modifying or enhancing the assessment, then this can affect future participants perceived levels of
preparedness. Stakeholders involved in the creation of the actual assessment can make adjustments based on levels of perceived preparedness, and have data about which tasks participants are perceiving themselves to be most prepared for and most unprepared. If the pilot test of the performance-based assessment is used for only the population of alternatively-licensed career and technical education teachers, then those involved in the development of it will know how prepared these teachers are for the assessment before it is fully implemented.

**Further Research**

Further research related to this study can be considered in areas related to quantitative, qualitative, and mixed-method approaches and measure levels of preparedness when completing an assessment for licensure. Other research methodologies including qualitative research can be conducted in the forms of interviews or observations with a heterogeneous group of alternatively-licensed career and technical education teachers in regards to their levels of perceived preparedness. Both quantitative and qualitative research in the form of a mixed-method approach can also be used to derive levels of preparedness with the new performance-based assessment to discover how teachers are perceiving themselves to be as they complete a new assessment that is still performance-based to advance their license.

This study addressed those teachers who were still teaching and completed RESA, but further research can be conducted with teachers who may have left the teaching profession due to perceptions of being unprepared to pass RESA or not passing RESA on more than one attempt. Further research can be conducted to determine if perceived
levels of preparedness, especially perceptions of unpreparedness, negatively affected teachers to the point in which they quit the teaching profession altogether. Continuing to research levels of preparedness can help create interventions for highly-accomplished teachers who may have problems with completing a performance-based assessment for licensure before they leave the teaching profession.

**Summary**

Several conclusions from the study include perceptions of preparedness among a teacher’s career and technical content area not producing statistically significant mean differences indicating that teachers did not have significant mean differences when it came to levels of preparedness on each task, and the same result for other demographic variables. Percentages and frequencies of percentages indicated that participants felt the most prepared on task four (communication and professional growth) and most unprepared on task two (formative and summative assessment). Other conclusions included perceived frustrations with RESA, but that did not statistically significant mean differences among participants when it came to levels of preparedness on all four tasks. Participation in RESA also increased from the first year of its implementation (2013 – 2014) to the last year included in the survey (2015 – 2016) with most participants completing RESA after it had undergone enhancements. These continued enhancements may have affected levels of preparedness and assisting alternatively-licensed career and technical education teachers to feel more prepared on RESA in subsequent school years. Several recommendations include allowing alternatively-licensed career and technical teacher education teachers to complete parts of a performance-based assessment earlier in
the school year in lieu of all at once, creating an assessment that is specific to alternatively-licensed career and technical education teachers, allowing teacher educators from college/university providers of alternative licensure in career and technical education to have an integral part in creating a performance-based assessment, and creating a succinct task of formative and summative assessment. Implications included alleviating frustrations by involving those familiar with the field of alternative licensure in career and technical education in the creation of the performance-based assessment, having university faculty serve as assessors for the performance-based assessment, and designing a residency program that allows participants to complete smaller tasks in years one and two before completing all the tasks during year three. Further research can be conducted on the usage of performance-based assessment for advancing licensure in the form of both qualitative and quantitative methodologies.
References


Gliem, J., & Gliem, R. (2003). Calculating, interpreting, and reporting Cronbach’s alpha reliability coefficient for Likert-type scales. Midwest Research-to-Practice Conference in Adult, Continuing, and Community Education. Columbus, OH.


Lim, W., Stallings, L., & Kim, D. (2015). A proposed pedagogical approach for preparing teacher candidates to incorporate academic language in mathematics classrooms. *International Education Studies, 8*(7). http://dx.doi.org/10.5539/ies.v8n7p1


Appendix A: Ohio State Institutional Review Board Documentation
04/10/2017

Study Number: 2017EU235
Study Title: The SLP-Reported Perceptions of Levels of Preparedness of Alternately-Licensed Career and Technical Teachers in the State of Ohio Completing the Resident Educator Summative Assessment
Principal Investigator: Christopher Zikile
Date of determination: 04/10/2017
Qualifying exempt category: #2

Dear Christopher Zikile,

The Office of Responsible Research Practices has determined the above referenced project exempt from IRB review.

Please note the following about this determination:

- Retain a copy of this correspondence for your records.
- Only the Ohio State staff and students named in the application are approved as Ohio State investigators and/or key personnel for this study.
- Simple changes to personnel that do not require change to materials can be submitted for review and approval through Buck-IIR.
- No other changes may be made to exempt research (e.g., new recruitment procedures, advertisements, instruments, protocol, etc.). If changes are needed, a new application for exemption must be submitted for review and approval prior to implementing the changes.
- Records relating to the research (including signed consent forms) must be retained and available for audit for at least 5 years after the study is closed. For more information, see university policies, Institutional Data and Research Data.
- It is the responsibility of the investigator to promptly report events that may represent unanticipated problems involving risks to subjects or others.

This determination is issued under the Ohio State University’s ORIR Federalwide Assurance #000615378. Human research protection program policies, procedures, and guidance can be found on the ORIR website.

Please feel free to contact the Office of Responsible Research Practices with any questions or concerns.

Chef Petry
petry.4[ostu.edu]
(614) 688-0369
Appendix B: E-mail Script to Program Coordinators
My name is Jeremy Jeffery, and I am a PhD candidate in the department of Workforce Development and Education specializing in career-technical education at Ohio State University. I will soon be conducting research regarding the perceptions of alternatively-licensed career and technical education teachers who completed the Resident Educator Summative Assessment beginning with the school year 2013-2014 through 2015-2016 school years, and I was wondering if you or your department maintained a list of teachers who are alternatively-licensed in the field of career and technical education that I could anonymously survey for their perceptions? I would e-mail their school/work e-mail and provide a link to my questionnaire to measure their perceptions. I am currently going through my IRB protocol. I can be reached via e-mail at jeffery.29@osu.edu. Thank you for your time and any assistance.

Sincerely,

Jeremy
Appendix C: E-mail Script Inviting Participation in Feedback for Questionnaire
My name is Jeremy Jeffery, and I am a PhD student at Ohio State completing my dissertation over the perceptions of alternatively-licensed career and technical education teachers in the state of Ohio who have completed the Resident Educator Summative Assessment (RESA) as part of their licensing requirements. Using existing literature over my topic and also in consultation with my advisor, Dr. Christopher Zirkle, and other committee members, I have created a questionnaire that I would like to disseminate to the target population of alternatively-licensed career and technical education teachers to measure their levels of preparedness while completing each Task associated with RESA. I am contacting you to see if you would be able to help me with the face validity portion of validating my questionnaire by providing feedback? If so, please let me know by e-mail if you would like to participate, and I will respond with the questionnaire as well as a feedback form so that I can receive valuable feedback from you in moving forward with making sure that my questionnaire measures what is intended to measure. I can be reached via e-mail at jeffery.29@osu.edu should you have any questions about this. Thank you for your time and any additional assistance with my questionnaire.

Sincerely,

Jeremy
Appendix D: Feedback Form sent to Panel of Experts Evaluating Questionnaire
The Self-Perceived Perceptions of Preparedness of Alternatively-Licensed Career-Technical Teachers Completing the Resident Educator Summative Assessment in the state of Ohio

Feedback Form to establish face validity

Overview: The attached questionnaire is in draft-form right now, but the final version of this instrument will be used to collect data related to perceptions of levels of preparedness of alternatively-licensed career and technical teachers in the state of Ohio who have completed the Resident Educator Summative Assessment (RESA) as part of the Resident Educator program through the 2016 – 2017 school year. The questionnaire is on a Word document so that it can be easily edited and reviewed, but when it is sent to the target sample it will be filled out using Qualtrics. Please feel free to use “Comments” command in the Review tab of Word to leave any comments, suggestions, or feedback regarding each question of the questionnaire. Please fill out the following chart below when assessing each question on the questionnaire:

The research questions for this research study include:
1. What are the differences in self-perceived levels of preparedness of each content area career and technical teacher completing the first instructional cycle task of RESA among demographic variables?

2. What are the differences in self-perceived levels of preparedness of each content area career and technical teacher completing the formative and summative assessment task of RESA among demographic variables?

3. What are the differences in self-perceived levels of preparedness of each content area career and technical teacher completing the second instructional cycle task of RESA among demographic variables?

4. What are the differences in self-perceived levels of preparedness of each content area career and technical teacher completing the communication and professional growth task of RESA among demographic variables?

Definition of Terms
Criterion

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Each question adheres to the given criterion set forth in the box on the left-hand side.

**Rating**
Please rate each criterion with a number 1 through 4 using the following Likert-type scale:
- 1 = Strongly Disagree
- 2 = Disagree
- 3 = Agree
- 4 = Strongly Agree

**Questions not meeting standards**
Please let the researcher know if any question does not meet the standard set forth in the criterion. Please also leave any comments about any questions in general right on the questionnaire using the “Comments” command.

<table>
<thead>
<tr>
<th>Criterion</th>
<th>Rating (1-4)</th>
<th>Questions not meeting the standards (Please leave any comments right on the questionnaire itself)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Were all questions clear to the reviewer? Including:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Only one question is asked at a time.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• The participants can understand what is being asked.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• There are no double-barreled questions (two questions in one).</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Diction</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Questions are concise.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• There are no unnecessary words</td>
<td></td>
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</tr>
<tr>
<td><strong>Negative wording</strong></td>
<td></td>
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</tr>
<tr>
<td>• Questions are asked using the affirmative (e.g., Instead of asking, “Which methods are not used?”, the researcher asks, “Which methods are used?”)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Overlapping responses</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• No response covers more than one choice.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• All possibilities are considered.</td>
<td></td>
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</tr>
<tr>
<td>There are no ambiguous questions.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Balance</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
- The questions are unbiased and do not lead the participants to a response. The questions are asked using a neutral tone.

**Use of jargon and everyday language**
- The terms used are understandable by the target population.
  There are no clichés or hyperbole in the wording of the questions.

**Use of technical language related to research objectives**
- The use of technical language is minimal and appropriate.
- All acronyms are defined.

(adapted from Marilyn K. Simon with input from Jacquelyn White from *dissertation recipes*)
Appendix E: E-mail Script Inviting Teachers to Participate in Reliability Testing
Hello Teachers,

My name is Jeremy Jeffery, and I am working on research for a dissertation. My dissertation research is over the perceived levels of preparedness of teachers who are alternatively-licensed in the field of career and technical education completing each Task of the Resident Educator Summative Assessment (RESA). To establish reliability, I need to field test my questionnaire with teachers who have completed RESA and are traditionally licensed. I have included a link to my questionnaire which should take 10 minutes to complete. At your convenience would you please complete the questionnaire for reliability purposes?

Information collected in the questionnaire will remain completely anonymous and will be used for statistical calculations only.

If you would like to take part in the questionnaire please feel free to access it here: https://osu.az1.qualtrics.com/jfe/form/SV_ePyAhiVyuzy92PH

If you would like to participate, please complete this questionnaire by Friday, April 21.

Should you have any questions I can be reached via e-mail at jeffery.29@osu.edu.

Thank you for your help and any assistance!

Sincerely,
Jeremy Jeffery
Appendix F: E-mail Script For Each Round of Data Collection
Round 1 e-mail to target sample

Dear Teacher,

I am writing to let you know about an opportunity to participate in a research study about your perceptions of levels of preparedness when completing each task of the Resident Educator Summative Assessment (RESA). This study is being conducted by Jeremy Jeffery, a PhD candidate at Ohio State University under the guidance of Dr. Christopher Zirkle, a professor at Ohio State. The researchers are looking to describe your perceived levels of preparedness of each task of RESA and is designed to capture the perceived feelings of preparedness of attentively-licensed career and technical education teachers who completed RESA during the 2013 – 2014, 2014 – 2015, or 2015 – 2016 school years. No personal or identifying information will be requested, and results will only be used for research purposes; this study is not affiliated in any way with the Ohio Department of Education. All responses will remain anonymous. The research study should only take 10-15 minutes of your time.

If you are interested, please click on the link for the survey and additional information: https://osu.az1.qualtrics.com/jfe/form/SV_cCmK0leWPWo5XjD

You may opt out at any time. Participation is completely voluntary. If you would like to opt out of future contacts inviting participation from the researcher and remove yourself from participating in the study, please e-mail the researcher at jeffery.29@osu.edu.

If you have any questions, please do not hesitate to contact me at jeffery.29@osu.edu.

Thank you for your time.

Jeremy Jeffery
PhD Candidate, Educational Studies
The Ohio State University
Round 2 e-mail to target sample

Dear Teacher,

You were recently invited to participate in a research study over your perceptions of levels of preparedness after completing all four tasks of the Resident Educator Summative Assessment. This is being conducted as part of dissertation research by a graduate student at Ohio State.

***This would include even if you took RESA and may have to complete it more than one time***

If you have not already, please consider completing the questionnaire at: https://osu.az1.qualtrics.com/jfe/form/SV_cCmK0leWPWo5XjD as it should not take more than 10 minutes of your time. Please complete it by the end of the week on Friday, April 28.

If you have taken the survey I thank you for your time. If you started the survey and did not yet finish it please do soon as soon as possible.

You may opt out at any time. Participation is completely voluntary. If you would like to opt out of future contacts inviting participation from the researcher and remove yourself from participating in the study, please e-mail the researcher at jeffery.29@osu.edu.

If you have any questions, please do not hesitate to contact me at jeffery.29@osu.edu.

Thank you for your time. Have a good rest of your school year.

Jeremy Jeffery
PhD Candidate, Educational Studies
The Ohio State University
Dear Teacher,

I just wanted to briefly check-in with you if you have not already completed the questionnaire that I recently distributed. You were recently invited to participate in a research study over your perceptions of levels of preparedness after completing all four tasks of the Resident Educator Summative Assessment. The deadline to complete it has been moved to Friday, May 19, at 11:59 p.m. EST. Please consider completing as it should not take more than 10 minutes of your time and please complete it all in one setting.

This is being conducted as part of dissertation research by a graduate student at Ohio State. If you have not already, please consider completing the questionnaire at: https://osu.az1.qualtrics.com/jfe/form/SV_cCmK0leWPWo5XjD

Participation is completely voluntary and you may opt out at any time. If you have already completed the questionnaire then please disregard this e-mail correspondence. All responses will remain anonymous. If you would like to opt out of future contacts inviting participation from the researcher and remove yourself from participating in the study, please e-mail the researcher at jeffery.29@osu.edu.

If you have any questions, please do not hesitate to contact me at jeffery.29@osu.edu.

Thank you for your time.

Jeremy Jeffery
PhD Candidate, Educational Studies
The Ohio State University
Round 4 e-mail to target sample

Dear Teacher,

I just wanted to briefly once again check-in with you if you have not already completed the questionnaire that I recently distributed. You have been invited to participate in a research study over your perceptions of levels of preparedness after completing all four tasks of the Resident Educator Summative Assessment. The deadline to complete it has been moved to Friday, May 19, at 11:59 p.m. EST. Please consider completing as it should not take more than 10 minutes of your time and please complete it all in one setting.

This is being conducted as part of dissertation research by a graduate student at Ohio State. If you have not already, please consider completing the questionnaire at: https://osu.az1.qualtrics.com/jfe/form/SV_cCmK0leWPWo5XjD

Participation is completely voluntary and you may opt out at any time. If you have already completed the questionnaire then please disregard this e-mail correspondence. All responses will remain anonymous. If you would like to opt out of future contacts inviting participation from the researcher and remove yourself from participating in the study, please e-mail the researcher at jeffery.29@osu.edu.

If you have any questions, please do not hesitate to contact me at jeffery.29@osu.edu.

Thank you for your time.

Jeremy Jeffery
PhD Candidate, Educational Studies
The Ohio State University
Round 5 e-mail to target sample

Dear Teacher,

I just wanted to briefly once again check-in with you one last time if you have not already completed the questionnaire that I recently distributed. **New this time:** If you would like to provide written feedback (optional) over your preparedness of each task or a certain task of RESA please e-mail your response to the researcher at jeffery.29@osu.edu; all responses will be anonymous and used for researching purposes only.

You have been invited to participate in a research study over your perceptions of levels of preparedness after completing all four tasks of the Resident Educator Summative Assessment. **The deadline to complete it has been moved to Friday, May 19, at 11:59 p.m. EST.** Please consider completing as it should not take more than 10 minutes of your time and please complete it all in one setting.

This is being conducted as part of dissertation research by a graduate student at Ohio State. If you have not already, please consider completing the questionnaire at: [https://osu.az1.qualtrics.com/jfe/form/SV_cCmK0leWPWo5XjD](https://osu.az1.qualtrics.com/jfe/form/SV_cCmK0leWPWo5XjD)

Participation is completely voluntary and you may opt out at any time. If you have already completed the questionnaire then please disregard this e-mail correspondence. All responses will remain anonymous. If you would like to opt out of future contacts inviting participation from the researcher and remove yourself from participating in the study, please e-mail the researcher at jeffery.29@osu.edu.

If you have any questions, please do not hesitate to contact me at jeffery.29@osu.edu.

Thank you for your time.

Jeremy Jeffery  
PhD Candidate, Educational Studies  
The Ohio State University
Appendix G: Questionnaire Hosted on Qualtrics Used for Data Collection
“The Self-Reported Perceptions of Levels of Preparedness of Alternatively-Licensed Career and Technical Teachers in the State of Ohio Completing the Resident Educator Summative Assessment”

**General Overview:** Please take approximately 10-15 minutes to complete this questionnaire concerning your perceived levels of preparedness while completing each task of the Resident Educator Summative Assessment (RESA). Sections 1 through 4 are questions specific to each task of RESA that you will ask you about your perceived levels of preparedness; the last section is related to demographic information. Altogether, there are 4 sections covering each task associated with RESA and section 5 is a demographics section. All responses to the questions contained in this questionnaire will remain both confidential and anonymous, and will only be used by the researcher for analysis only.

*By clicking “Next” I confirm that I hold or have held a 4 Year Alternative Resident Educator License - Career Technical Workforce Development issued to me by the state of Ohio and completed my licensure requirements at one of the post-secondary providers of alternative licensure in career and technical education (The Ohio State University, University of Rio Grande, University of Toledo, or Kent State University)*

***Please also complete this survey all at once as you cannot go back and complete it***

[Consent form OSU](#)

Please select the year that you completed the Resident Educator Summative Assessment (RESA): ***If you did not complete RESA during one of the specified years below then please DO NOT continue with this questionnaire!***

- ☒ 2013 - 2014
- ☒ 2014 - 2015
- ☒ 2015 - 2016

**SECTION 1: FIRST INSTRUCTIONAL CYCLE TASK OF RESIDENT EDUCATOR SUMMATIVE ASSESSMENT**

**Directions for Section 1:** Please rate your perceptions of preparedness when completing the first instructional cycle Task of RESA. Please answer each question about your perceived level of preparation using the scale below when selecting your response:

1 = Very Unprepared  2 = Unprepared  3 = Prepared  4 = Very Prepared
Q5 How prepared did you feel to videotape your lessons?
- 1 = Very Unprepared
- 2 = Unprepared
- 3 = Prepared
- 4 = Very Prepared

Q7 How prepared did you feel to use technology to complete all requirements?
- 1 = Very Unprepared
- 2 = Unprepared
- 3 = Prepared
- 4 = Very Prepared

Q9 How prepared did you feel to integrate formative assessment into your instructional decisions?
- 1 = Very Unprepared
- 2 = Unprepared
- 3 = Prepared
- 4 = Very Prepared

Q11 How prepared did you feel with differentiating your Instructional strategies?
- 1 = Very Unprepared
- 2 = Unprepared
- 3 = Prepared
- 4 = Very Prepared

Q13 How prepared did you feel in creating rigorous learning outcomes?
- 1 = Very Unprepared
- 2 = Unprepared
- 3 = Prepared
- 4 = Very Prepared

Q15 How prepared did you feel to analyze and reflect on your chosen instructional strategies?
- 1 = Very Unprepared
- 2 = Unprepared
- 3 = Prepared
- 4 = Very Prepared
SECTION 2: FORMATIVE AND SUMMATIVE ASSESSMENT TASK OF RESIDENT EDUCATOR SUMMATIVE ASSESSMENT

Directions for Section 2: Please rate your perceptions of preparedness when completing the Formative and Summative Assessment Task of RESA. Please answer each question about your perceived level of preparation using the scale below when selecting your response:

1 = Very Unprepared  
2 = Unprepared  
3 = Prepared  
4 = Very Prepared

Q19 How prepared did you feel with your ability to connect learning goals with each formative assessment?
- 1 = Very Unprepared
- 2 = Unprepared
- 3 = Prepared
- 4 = Very Prepared

Q21 How prepared did you feel with your ability to connect all learning goals with the summative assessment?
- 1 = Very Unprepared
- 2 = Unprepared
- 3 = Prepared
- 4 = Very Prepared

Q23 How prepared did you feel to complete this task in the time you had to work on it?
- 1 = Very Unprepared
- 2 = Unprepared
- 3 = Prepared
- 4 = Very Prepared

Q25 How prepared did you feel create a formative assessment with a reflection piece for students?
- 1 = Very Unprepared
- 2 = Unprepared
- 3 = Prepared
- 4 = Very Prepared
Q27 How prepared did you feel with collecting evidence for each range of student’s ability?
○ 1 = Very Unprepared
○ 2 = Unprepared
○ 3 = Prepared
○ 4 = Very Prepared

Q29 How prepared did you feel interpreting the rubrics for each sub-section of the task?
○ 1 = Very Unprepared
○ 2 = Unprepared
○ 3 = Prepared
○ 4 = Very Prepared

SECTION 3: SECOND INSTRUCTIONAL CYCLE OF RESIDENT EDUCATOR SUMMATIVE ASSESSMENT

Directions for Section 3: Please rate your perceptions of preparedness when completing the second instructional cycle Task of RESA. Please answer each question about your perceived level of preparation using the scale below when selecting your response:

1 = Very Unprepared  2 = Unprepared  3 = Prepared  4 = Very Prepared

Q33 How prepared did you feel to videotape your lessons?
○ 1 = Very Unprepared
○ 2 = Unprepared
○ 3 = Prepared
○ 4 = Very Prepared

Q35 How prepared did you feel to use technology to complete all requirements?
○ 1 = Very Unprepared
○ 2 = Unprepared
○ 3 = Prepared
○ 4 = Very Prepared
Q37 How prepared did you feel to integrate formative assessment into your instructional decisions?
   - 1 = Very Unprepared
   - 2 = Unprepared
   - 3 = Prepared
   - 4 = Very Prepared

Q39 How prepared did you feel with differentiating your instructional strategies?
   - 1 = Very Unprepared
   - 2 = Unprepared
   - 3 = Prepared
   - 4 = Very Prepared

Q41 How prepared did you feel in creating rigorous learning outcomes?
   - 1 = Very Unprepared
   - 2 = Unprepared
   - 3 = Prepared
   - 4 = Very Prepared

Q43 How prepared did you feel to analyze and reflect on your chosen instructional strategies?
   - 1 = Very Unprepared
   - 2 = Unprepared
   - 3 = Prepared
   - 4 = Very Prepared

SECTION 4: COMMUNICATION AND PROFESSIONAL GROWTH TASK OF RESIDENT EDUCATOR SUMMATIVE ASSESSMENT

Directions for Section 4: Please rate your perceptions of preparedness when completing the Communication and Professional Growth Task of RESA. Please answer each question about your perceived level of preparation using the scale below when selecting your response:

1 = Very Unprepared  2 = Unprepared  3 = Prepared  4 = Very Prepared
Q47 How prepared were you to document an exemplary example of communication contact with parents and/or caregivers?
   ☑ 1 = Very Unprepared
   ☑ 2 = Unprepared
   ☑ 3 = Prepared
   ☑ 4 = Very Prepared

Q49 How prepared were you to read and interpret each sub-section of this Task?
   ☑ 1 = Very Unprepared
   ☑ 2 = Unprepared
   ☑ 3 = Prepared
   ☑ 4 = Very Prepared

Q51 How prepared were you to explain how professional development impacted your teaching?
   ☑ 1 = Very Unprepared
   ☑ 2 = Unprepared
   ☑ 3 = Prepared
   ☑ 4 = Very Prepared

Q53 How prepared were you to document your initiative and provide evidence to seek out professional development opportunities?
   ☑ 1 = Very Unprepared
   ☑ 2 = Unprepared
   ☑ 3 = Prepared
   ☑ 4 = Very Prepared

Q55 How prepared were you to make sure you submitted the correct examples of evidence per instructions for this Task?
   ☑ 1 = Very Unprepared
   ☑ 2 = Unprepared
   ☑ 3 = Prepared
   ☑ 4 = Very Prepared
Q57 How prepared were you to complete all requirements of this Task in the time you were allotted?
☐ 1 = Very Unprepared
☐ 2 = Unprepared
☐ 3 = Prepared
☐ 4 = Very Prepared

SECTION 5: DEMOGRAPHICS

Directions: For this section please answer each question at the time you were completing the Resident Educator Summative Assessment. This would include which career and technical content area was when you took the Resident Educator Summative Assessment (if it has since changed), your age at the time, the highest level completed, and the type of school where you taught.

Q59 Which content area do you hold career-technical education licensure when you completed RESA:
☐ Agriculture and Environmental Systems
☐ Business, Finance, Marketing, and Information Technology (including CTE content areas of Government and Public Administration, and Hospitality and Tourism (including culinary)
☐ Health Occupations and Human Services (including CTE content areas of Education and Training and Law and Public Safety)
☐ Trade and Industry (including CTE content areas of Arts and Communication, Education and Training, Engineering, Construction, Manufacturing, and Transportation Systems

Q60 What is your gender?
☐ Male
☐ Female

Q61 What is your age at the time when you completed RESA? _____________
Q62 What is the highest level of education you had completed at the time you completed RESA?
- High school diploma/GED
- Associate's degree
- Bachelor's degree
- Advanced degree (Master's, JD, MD, PhD, or other advanced degree)

Q63 At which type of school did you teach during the time you completed RESA?
- Middle school
- High school
- Career center
- Charter school
- Corrections facility
- Other: Please describe ________________

Q64 How would you describe the school district where you taught during the time you completed RESA?
- Rural
- Urban
- Suburban

Q65 How many years of full-time work experience do you have outside of education in the career-technical field that you are currently teaching?
- 0-5
- 6-10
- 11-15
- 16-20
- 21-25
- 26 or more
Appendix H: Data for Each Research Question
RESULTS OF RESEARCH QUESTION ONE

What are the differences in self-perceived levels of preparedness of each content area career and technical teacher completing the first instructional cycle task of RESA among demographic variables?

**Categorical variable: Each teacher’s career and technical content area and task one**

**ANOVA**

<table>
<thead>
<tr>
<th>Task One</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
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<tbody>
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**Categorical variable: Gender and task one**

**Test Statistics**

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<tr>
<td>Mann-Whitney U</td>
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<td>Wilcoxon W</td>
</tr>
<tr>
<td>Z</td>
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<td>Asymp. Sig. (2-tailed)</td>
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</table>

a. Grouping Variable: What is your gender?

**Categorical variable: Degree level and task one**

**Test Statistics**

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</thead>
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<tr>
<td>df</td>
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<tr>
<td>Asymp. Sig.</td>
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</table>

a. Kruskal Wallis Test

b. Grouping Variable: What is the highest level of education you had completed at the time you completed RESA?

**Categorical variable: School type and task one**
### ANOVA

**Task One**

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</table>

**Categorical variable: Background of school and task one**

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**Categorical variable: Years of work experience outside of education and task one**

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RESULTS OF RESEARCH QUESTION TWO

What are the differences in self-perceived levels of preparedness of each content area career and technical teacher completing the formative and summative assessment task of RESA among demographic variables?

Categorical variable: Each teacher’s career and technical content area and task two

Robust Tests of Equality of Means

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<th>Statistica</th>
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<th>df2</th>
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a. Asymptotically F distributed.

Categorical variable: Gender and task two

Independent Samples Test

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<th>t-test for Equality of Means</th>
<th>95% Confidence Interval of the Difference</th>
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195
Categorical variable: Degree level and task two

*ANOVA*

**Task Two**

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Categorical variable: School type and task two

*ANOVA*

**Task Two**

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Categorical variable: Background of school and task two

*ANOVA*

**Task Two**

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Categorical variable: Years of work experience outside of education
and task two

ANOVA
Task Two

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</table>
RESULTS OF RESEARCH QUESTION THREE

What are the differences in self-perceived levels of preparedness of each content area career and technical teacher completing the second instructional cycle task of RESA among demographic variables?

**Categorical variable: Each teacher’s career and technical content area and task three**

**Test Statistics\(^{a,b}\)**

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\(^{a}\) Kruskal Wallis Test
\(^{b}\) Grouping Variable: Which content area do you hold career-technical education licensure when you completed RESA:

**Categorical variable: Gender and task three**

**Test Statistics\(^{a}\)**

<table>
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<tr>
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<th>Task Three</th>
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</thead>
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<tr>
<td>Mann-Whitney U</td>
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</table>

\(^{a}\) Grouping Variable: What is your gender?
Categorical variable: Degree level and task three

ANOVA
Task Three

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<th>df</th>
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<th>F</th>
<th>Sig.</th>
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</thead>
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Categorical variable: School type and task three

Test Statistics\(^{a,b}\)

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<th>Sig.</th>
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<td>2</td>
<td>2.949</td>
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<td>.229</td>
</tr>
<tr>
<td>df</td>
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<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Asymp. Sig.</td>
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<td></td>
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a. Kruskal Wallis Test
b. Grouping Variable: New School Type
Categorical variable: Background of school and task three

Test Statistics\textsuperscript{a,b}

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</table>

a. Kruskal Wallis Test
b. Grouping Variable: How would you describe the school district where you taught during the time you completed RESA?

Categorical variable: Years of work experience outside of education and task three

Test Statistics\textsuperscript{a,b}

<table>
<thead>
<tr>
<th>Task</th>
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a. Kruskal Wallis Test
b. Grouping Variable: How many years of full-time work experience do you have outside of education in the career-technical field that you are currently teaching?
RESULTS OF RESEARCH QUESTION FOUR

*What are the differences in self-perceived levels of preparedness of each content area career and technical teacher completing the communication and professional growth task of RESA among demographic variables?*

**Categorical variable:** Each teacher’s career and technical content area and task four

### Test Statistics<sup>a,b</sup>

<table>
<thead>
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<th></th>
<th>Task Four</th>
</tr>
</thead>
<tbody>
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<td>Chi-Square</td>
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<tr>
<td>df</td>
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<tr>
<td>Asymp. Sig.</td>
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<sup>a</sup> Kruskal Wallis Test  
<sup>b</sup> Grouping Variable: Which content area do you hold career-technical education licensure when you completed RESA:

### Categorical variable: Gender and task four

**Test Statistics<sup>a</sup>**

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</table>

<sup>a</sup> Grouping Variable: What is your gender?

### Categorical variable: Degree level and task four

**ANOVA**

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<th>Mean Square</th>
<th>F</th>
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201
### Categorical variable: School type and task four

*Test Statistics*<sup>a,b</sup>

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a. Kruskal Wallis Test  
b. Grouping Variable: New School Type

### Categorical variable: Background of school and task four

*ANOVA*

**Task Four**

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<th>Mean Square</th>
<th>F</th>
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</thead>
<tbody>
<tr>
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### Categorical variable: Years of work experience outside of education and task four

*ANOVA*

**Task Four**

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</table>
Appendix I: Anecdotal Evidence Provided via E-mail from Participants
Email #1
Dear Student,
Everything you need to know about the "resa" and how people taking it feel about it can be found on Facebook "ohio resident educators & mentors"

Email #2
What I can tell you about the RESA was it took away from my focus on teaching my first years on the job. It also added a great deal of unnecessary stress on myself. My mentor had basis from the previous teacher and that added a great deal more stress. I have two master degrees and I don’t think while working two job and going to school for those I felt as stressed as RESA made me feel.

Email #3
I completed the survey for the RESA. I marked unprepared for many answers simply because the RESA on top of all we were doing with the Alt Res educator program was too much and took time away from applying what I had learned at __________ (university removed) to teach and assess more effectively.

I simply want to quantify and clarify that I attended the Alt Res educator at __________ (university removed) and felt very prepared and supported to enter the classroom and begin teaching. The issue is that career-tech teachers were double hit with the Alt Res program taking classes and being evaluated and then having to also participate in the RESA. This has recently changed and new Career-Tech teachers no longer need to participate in the RESA as part of moving from the 4 year Alt Res licensure to the 5 year professional license.

There was a disconnect with the RESA evaluation and how you run and manage a Career-Tech and work force development classroom. Granted good teaching practices and assessments are universal, but the approach of many of the RESA tasks and the conglomulated rubrics were confusing and many CT teachers felt like we were trying to fit a square peg into a round hole.

It is good that they have changed it that CT teachers in the Alt Res Ed program no longer need to participate in the RESA. CT teachers have professional industry experience and understand the value of ongoing self-assessment and best practices. The RESA was having a negative effect on CT teacher recruitment and performance.

Many CT teachers and organizations spoke out against the RESA and lobbied for there to be a different form of assessment than the RESA for CT teachers. The Alt Res program supported by __________ (university removed) and other universities is geared to industry professionals entering the field of education. The RESA is primarily designed to support recent college graduates new to teaching and new to entering the
workforce. Therein lies the disconnect between the RESA and the Alt Res Ed programs and why CT teachers typically felt “unprepared” for the RESA.

**Email #4**

I do have a few comments to add to the survey. Firstly, for Career and Technical Education, RESA is a skewed process, which resulted in legislation that did away with RESA as an instrument for testing in CTE Schools. Second, RESA rules are just simply CRAZY. For instance, our mentors role is primarily for "emotional support". They cannot read, proofread, or give advise on specific questions related to RESA. Third, did I mention their rules are crazy! I was dis-qualified on one segment of my last submission due to a simple clerical error. I mistakenly switched data for mid and high achieving students and was dis-qualified. If this was a student that we teach we certainly would not just fail them, we may take away some points, etc.. I called RESA help desk to complain, and they said yes there is a note of the switch.... we see what you did, but sorry.

**Email #5**

So my take on the RESA process. I have never done so much time consuming work that did not really relate to the job. It was more of a writing process than a teaching process. There was 1 question (if I can recall correctly) that was about 150 words total and it asked for a response of 150 words or less. In case you are wondering I did pass in my 1st attempt, so I am not speaking because I am bitter, I really think this program is too time consuming on unrelated writing tasks especially for a newer teacher.

TRUST the schools that the teacher is working for, I can only imaging the time and cost of the RESA program.