ISSUES WITH CAREER AND TECHNICAL EDUCATION AND DIPLOMA OPTIONS IN THE UNITED STATES: A DEEPER LOOK INTO GEORGIA

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ABSTRACT: Throughout the Unites States, diploma options and graduation paths vary from state to state. The most common diploma option nationwide is the College Preparatory diploma. In an examination of diploma options and graduation requirements across the nation in 2007, Johnson, Thurlown, and Schuelka reported that all states offered a standard diploma to both students with and without disabilities, eleven states offered a Special Education diploma and three states offered an Occupational diploma, to students with disabilities only. Prior to 2008, the state of Georgia was one of many states offering several standard diploma options, called tiered diplomas. However, at the end of 2007, the State cited the need for all students to follow a rigorous academic path throughout high school, regardless of their post high school intentions. The purpose of this paper is to discuss the disparity between federal legislation of Career and Technical education (CTE) and actual practice as well as to examine the effects of the removal of the tiered diploma options for students in Georgia. A mixed methods design was used to collect and present data. Descriptive statistics were used to report student graduation rates for students with and without disabilities under the different graduation rules. A survey given to Georgia educators regarding the effects of streamlining diploma options was analyzed. Results and implications from this study are presented.

Keywords: diploma, technical, vocational, Georgia, students with disabilities

INTRODUCTION

ISSUES WITH CAREER TECHNICAL EDUCATION AND DIPLOMA OPTIONS IN THE UNITED STATES

High school graduation is one of the most discussed topics in education throughout the world. The United States has been responsively developing and implementing educational reforms since the early 1900s based on the needs of an evolving and growing economy. However, the impacts of these reforms on student achievement are often overlooked. Decades of legislation centered on technical education and post-secondary outcomes in the state of Georgia have resulted in our students being left with inadequate diploma options during their high school career. Specifically, these academic boundaries have limited students with disabilities who lack either the desire, or ability, to attend a four-year institution. Options, such as a *Technical Preparatory (Technical Prep)* diploma, that allow students with disabilities to capitalize on their unique strengths, interests, and abilities are imperative for their secondary and post-secondary success. This research aims to examine the unintended consequences created by the ever-changing policies and legislation centered on CTE at the national level and discuss the trickle-down effect of those consequences on students in the state of Georgia.

THE EVOLUTION OF VOCATIONAL EDUCATION IN THE UNITED STATES

The Smith-Hughes Act (PL 65-347) of 1917 was one of the first pieces of legislation advocating for vocational education in high school curriculum. This law provided over a million dollars for state vocational education and sought to ensure that vocational education: (1) provided meaningful curriculum for all individual students, (2) provided opportunities to prepare all students for life and work, (3) encouraged a different learning process through the idea of learning by doing, and (4) introduced the idea of an education being a functional tool for students (Friedel, 2011). In 1929, Congress passed the George Reed Act (PL 70-702), expanding vocational education, agriculture, economics and increasing federal funding of those programs. Occupational education became a buzz word between the 1940s and the 1960s, when a nationwide interest in educating students with significant disabilities began taking shape. Funding continued to increase through the George-Ellzey Act of 1934 (PL 73-245), the George-Deen Act of 1936 (PL 74-673), and the George-Barden Act of 1946 (PL79-586). Efforts

centralized on functional, vocational, and social skills in order to help these students become serviceable members of their local communities and ultimately of society. Teachers began creating lesson plans that quickly spread across the nation leading to public interest and eventually public awareness (Neubert, 1997). States began adopting curriculum and the numbers of students with severe disabilities increased in the public schools increased due to occupational education (Neubert, 1997).

By the 1960s and 1970s, the interest shifted from "training" students with severe disabilities to educating them and facilitating their transition into the workplace. With this focus on preparation for the workplace, an awareness also shifted from students with low-incidence disabilities, those that occur less frequently, to students with high-incidence disabilities, those that occur more frequently. Examples of low incidence disabilities include visual and hearing impairments, physical disabilities, severe autism, and moderate to severe intellectual disabilities. High incidence disabilities such as learning disabilities, attention deficit disorders, and speech impairments are seen more often.

Education was seen as a means to an end and legislation shifted to having an "equal emphasis on education for living and education for making a living" (Rich, 2010, para. 4). The ultimate goal of education emphasized the final product, which the government viewed as skilled workers. The Vocational Education Act of 1963 (PL 88-210) authorized federal funds to build and establish vocational education schools, expand research, and provide training. It also introduced the idea of students working to earn money to help pay for their education, creating work study programs. During the mid-1980s and 1990s, all vocational legislative efforts were directed at increasing academic rigor, graduating all students, and successfully transitioning students into post-secondary options (Neubert, 1997). The Carl D. Perkins Act of 1984 (PL 98-542) refocused the goals of The Vocational Education Act of 1963, and its successive amendments to include the needs of a growing and demanding economy. Areas of trade and curriculum within vocational education were expanded to incorporate the instruction of sought-after skills, to increase the economic value of graduates (Friedel, 2011). The Perkins Act was reauthorized with the Perkins Vocational and Applied Technology Act of 1990 (PL 101-392) and then again in 1998 with the Perkins Vocational and Technical Education Act (PL 105-332), titled Perkins II and Perkins III, respectively.

Even with the promising legislation born through a governmental push to increase student achievement and state accountability, (1) public education problems were perceived as systematic (Cobb & Johnson, 1997; Thurlow & Johnson, 2000), (2) "falling behind" other countries in *A Nation at Risk: The Imperative for Educational Reform* (National Commission on Excellence in Education, 1983), (3) "falling short" of providing opportunities for all U.S. children in *The Forgotten Half: Pathways to Success for America's Youth and Young Families* (Grant Foundation, 1988), and (4) not preparing students for the labor market in The Secretary's Commission on Achieving Necessary Skills (U.S. Department of Labor Secretary's Commission on Achieving Necessary Skills: SCANS, 1991). Federal and state education reforms such as the School to Work Opportunities Act of 1994, Goals 2000: Educate America Act of 1994, and the Improving America's Schools Act of 1994 promoted comprehensive strategies and reforms that stress high academic and occupational standards and influenced special education programs (Johnson, Stodden, Emanuel, Lueking, & Mack, 2002).

More notably, the Individuals with Disabilities Education Act (IDEA) was passed in 1990, reauthorizing and renaming the originally passed law, the Education for All Handicapped Children Act (PL 94-142) passed in 1975. In 2004, President George W. Bush reauthorized The IDEA to align closer with the standards put forth by the No Child Left Behind Act (NCLB), which he signed into law in 2002. The NCLB Act pushed for accountability and improved student outcomes to help close the achievement gaps between groups of students. The purpose of the NCLB act was "to ensure that all children have a fair, equal, and significant opportunity to obtain a high-quality education and reach, at a minimum, proficiency on challenging state academic achievement standards and state academic assessments" (NCLB, 2002). As part of the requirements of IDEA, the document addressed significant changes regarding the education of students with disabilities. Specifically, there was a change in the definition of "transition services" for a child with a disability, defining it is a coordinated set of activities that:

> Is defined to be within a results-oriented process, that is focused on improving the academic and functional achievement of the child with a disability to facilitate the child's movement from school to post-school activities, including post-secondary education, vocational education, integrated employment (including supported employment); continuing and adult education, adult services independent living, or community participation; is based on the individual child's needs, taking into account the child's strengths, preferences, and interests; and includes instruction related services, community experiences, the development of employment and their post-school adult living objectives, and if appropriate, acquisition of daily living skills and functional vocational evaluation [34 CFR 300.43 (a)] [20 U.S.C. 1401(34)] (U.S. Department of Education, 2007).

The reauthorization of the IDEA in 2004 focused on providing students with disabilities access to higher expectations through general education curriculum in the regular classroom to the maximum extent possible. This reauthorization required, among others, that states provide a free appropriate public education (FAPE) to all children with disabilities in the state, and establish a goal for providing full educational opportunities to all children with disabilities, along with a time-table for accomplishing that goal.

The reauthorization of the Perkins Act in 2006, known as Perkins IV, brought about a change in terminology from "Vocational" to "Career and Technical Education" (CTE), and also brought a greater focus on academic rigor and achievement within the CTE classrooms to prepare students for the careers of the twenty-first century. This was the first federal law of its kind to bridge the gap between secondary and post-secondary institutions, aligning expectations and curriculum and requiring reciprocal relationships between the agencies. Perkins IV also reflected the recent NCLB (2002) legislation by (1) demanding increased accountability for all stakeholders and (2) requiring detailed data reporting and promising consequences for districts who fail to demonstrate performance on core indicators, such as proficiency on industry recognized technical assessments in CTE coursework. It was at this time that many states, including Georgia, began to make major changes regarding the education of all students that would have lasting effects.

GEORGIA DIPLOMA HISTORY

Some of the earliest documented graduation requirements in the state of Georgia date back to 1984 (Georgia Rule 160-4-2-.30, Georgia DoE). According to those Georgia Rules, state supported high schools were required to offer three diplomas to all students, *General Education (Gen Ed), College Preparatory* (*College Prep*), and *Vocational Preparatory* (*Vocational Prep*) (Georgia Rule 160-4-2-.30, Georgia DoE). The *Vocational/Technical* (later changed from "Vocational" to "Technical" in accordance with Perkins IV) *Prep* diploma was available to students until 2011 in Georgia (Friedel, 2011). In addition to required academic courses, students pursuing the *Technical Prep* diploma were required to earn four credits in classes under the vocational/technical category, such as Business Education, Computer Education, Home Economics, Cooperative Vocational Education (CVE), Coordinated Vocational Academic Education (CVAE), or a Trade & Industry Area (Georgia Rule 160-4-2-.30, Georgia DoE). This focus on technical classes was an advantage to most students with disabilities, especially students with mild disabilities who can potentially demonstrate average or slightly below average academic achievement based on their unique disability characteristics, functioning, and demographics (Wagner, Newman, Cameto, & Levine, 2006). The *Technical Prep* diploma held students to different standards by requiring them to focus their efforts on both CTE and academic classes. In their annual report from 2007, the Georgia Department of Education (GADOE) noted the largest enrollment numbers of Career, Technical, & Agricultural Education (CTAE) in the program areas of business and computer science, architecture, construction, communication and transportation, and family and consumer Science (GADOE, CTAE Annual Report, 2007). In these career-focused classes, students learned hard skills they would need to work in their chosen career, also known as technical skills. This focus allowed students with disabilities to graduate with the necessary skills to join the workforce with knowledge and experience under their belt or successfully gain entrance into a technical or trade school. These crucial graduation requirements, which were the crux of the *Technical Prep* diploma would soon be an expectation of the past.

Current Diploma in Georgia

In 2007, the Georgia Board of Education joined 29 other states in the American Diploma Project Network (ADP) under the umbrella of Achieve, Incorporated (GADOE, 2010). Achieve, Inc. is an education reform organization leading a national paradigm shift focusing on college and career readiness by funneling all students through the same rigorous academic coursework, regardless of post high school graduation plans. Georgia joined this coalition with the hopes that raising standards would generate graduates more capable of achieving long-term success in college and in the workforce (GADOE, 2010). It is the belief of both Achieve, Inc. and the State of Georgia that students will "achieve what is expected of them" and that a single diploma option is the vehicle through which this success will be attained (Georgia Department of Education, 2010, p. 7). As a result, the 2007-2008 entering freshman class in Georgia was only offered a College Prep diploma boasting one common set of increased rigor academic course work requirements for all students. It was this "college for all" movement that marked the fundamental shift away from vocational education being graduation requirements in the state of Georgia. Johnson, Thurlow, and Schuelka (2012) pointed out in their Technical Report 62 that the overwhelming focus on being college-ready could potentially direct attention away from students who may not be able to make the transition from high school to college. In Georgia, an average of 36% of students with disabilities graduated with a Technical Prep diploma and 14.75% graduated with a College Prep diploma from 2008-2011 (GADOE, 2017). With the elimination of the Technical Prep diploma, the graduating classes of 2012 and beyond were left with only one option.

The College Prep diploma in Georgia consists of a rigorous academic workload designed to prepare students to enter a four-year college after high school. Students pursuing this diploma are required to earn 23 credits in academic and elective areas (Table 1). Although, foreign language is not currently a high school graduation requirement, students are required to complete two sequential years of a foreign language in order to meet university admissions requirements. Districts in Georgia also have the option of offering students more rigorous diplomas such as the International Baccalaureate Diploma Programme (IBDP) or the International Baccalaureate Career-Related Programme (IBCP), which are globally recognized high school diplomas that strictly prepare high school students for university studies. In order to offer IB degrees, schools must apply and complete an authorization process through a rigorous certification program hosted by the International Baccalaureate Organization (IBO) (IBO.org).

Current Career, Technical and Agricultural Education Options

Currently, the College Prep diploma does not require students to earn any credits in CTAE classes to graduate. Beginning with the cohort class of 2008 (graduating class of 2012), students were required to fulfill three units of their choice in the areas of foreign language, fine arts, or career tech classes (Georgia Rule 160-4-2-.48, Georgia DoE). As a part of this change, the state rolled out "Career Clusters" and "Pathways" and marketed the initiative to the public as the alternative to the *Technical Prep* diploma. However, this is not a separate track or diploma option for students. This is simply a series of extra-curricular courses that a student may choose to focus on within the *College Prep* diploma. For a student to be considered a Career Pathway completer, they must successfully complete all of the graduation requirements of the *College Prep* diploma.

Table 1. Graduation Requirements From 1993 Through 2016

Required Areas of Study	**General Diploma**						**College Prep Diploma**						**Vocational/Tech Prep Diploma**					
	< 93	93-94	95-97	98-02	02-08	08-16	< 93	93-94	95-97	98-02	02-08	08-16	< 93	93-94	95-97	98-02	02-08	08-16
ELA	4	4	-	-	-	-	4	4	4	4	4	4	4	4	4	4	4	-
Math	2	3	-	-	-	-	3	3	3	4	4	4	2	3	3	3	3	-
Science	2	3	-	-	-	-	3	3	3	3	3	4	2	3	3	3	3	-
Social Studies	3	3	-	-	-	-	3	3	3	3	3	3	3	3	3	3	3	-
Foreign Language	n/a	n/a	-	-	-	-	2	2	2	2	2	**	n/a	n/a	n/a	n/a	n/a	-
Health & PE	1	1	-	-	-	-	1	1	1	1	1	1	1	1	1	1	1	-
Business, Computer Tech, Voc Ed, Fine Arts, ROTC, Home Economics	1	3	-	-	-	-	1	1	1	1	1	**	1	1	1	1	1	-
Vocational/ CTAE	n/a	n/a	-	-	-	-	n/a*	n/a*	n/a*	n/a*	n/a*	3	4	4	4	4	4	-
Other/Electives	8	4	-	-	-	-	2	4	4	4	4	4	4	2	2	3	3	-
Total Minimum	21	21	-	-	-	-	21	21	21	22	22	23	21	21	21	22	22	-

** Area of Study combined with the 3 Vocational/CTAE units.

* Students who complete the CP requirements may also receive a Vocational Endorsement (<93-97) or Dual Seal (98-08) with 4 Vocational/CTAE units

Within those 23 credits required for graduation, three units in a progressive sequence of CTAE courses chosen by the student that align to his or her interests and post-secondary goals must be successfully completed. Completing a progressive sequence requires three successful years of course work in one career cluster. For example, if a student enrolled in Law Enforcement Services as a freshman/sophomore, they would take Intro to Law and Public Safety their freshman year, followed by Criminal Justice Essentials their sophomore year, and then Criminal Investigations their junior year. By the student's junior/senior year, upon successful completion of three sequential years of the [cluster title] pathway, their knowledge is then assessed by an End of Pathway Assessment (EOPA), which is in compliance with Perkins IV's core indicator of performance (GADOE, Georgia End of Pathway Assessment Guidance, 2016). Depending on the pathway, students have the opportunity to earn industry-validated credentials while still in high school.

Preparing and certifying students in a pathway is designed to address the need for both college and career readiness through "graduating students from high school with the academic skills, hands-on experience in real work environments, and intensive career guidance required to succeed in college, employment, and life-long learning" (GADOE, 2012, p.18). Industry certification standards are developed collaboratively by the Georgia Department of Education Program Specialists, state-level business associations, and input from CTAE instructors throughout the state. After initial certification, pathways go through a re-certification process every five years. Georgia makes the certification process open to districts and state officials decide which pathways will be industry certified. Districts are allowed to choose when they will initiate the certification process (GADOE, Business and Computer Science Industry Certification Process, 2012).

THE ICEBERG EFFECT

The Iceberg Theory, or the "theory of omission" was a style of writing coined by Ernest Hemingway in his early career. This style of writing emphasized current events without mentioning the underlying implications or interpretation (Trodd, 2007). Building on this theory, the Horace Mann League of the U.S.A. and the National Superintendents Roundtable released *The Iceberg Effect* in 2015, presenting an international comparison of performance indicators within school achievement with aspirations to illustrate a more holistic image of the inner workings of education. Floating above the water and visible to all are Student and System Outcomes, while below the surface lie Inequity & Inequality, Support for Schools, Support for Young Families, and Social Stress & Violence. This report stresses the importance of looking beneath the "scorecard" of results into the underlying factors as a necessary step to establish authentic accountability (The Iceberg Effect, 2015).

Building on these foundations, there is little doubt that educational reforms and state rulings regarding curriculum and graduation requirements have all been developed, adopted, and implemented with the best intentions in mind. Over the last few decades, those intentions to redesign an educational system that will adequately prepare all students for college and career readiness have resulted in students being tracked into one path to graduation, the *College Prep* diploma.

As a result, decisions made by policy makers at the federal and state levels have left students with disabilities in Georgia with limited options during their high school careers (see Figure 1). While opportunities for our lower preforming students have diminished to a single choice, options for academically advanced students have risen to an all-time high with the growing trends of Magnet Schools, IB World Schools, and Charter Schools. The iceberg effect of streamlining diplomas is one which attempts to visually emphasize the populations who are served and benefit the most from current diploma options and secondary opportunities available at public schools in Georgia. The *College Prep* diploma & *IB* diploma options benefit a small percentage of highest achieving students as depicted in the visible piece of the iceberg. Perhaps the biggest tragedy of all is the disappearance of the average student, who, under the new graduation rules, might be graduating but are not successful in post-secondary outcomes, seen as the water line which disappears amongst its counterparts. Although 60% of the 2012 cohort of Georgia high school graduates enrolled in a post-secondary institution, only 40% of those students completed one year of coursework within two years of enrollment (GOSA, 2017). The *College Prep* diploma discounts almost half of students with disabilities (56.56% graduation rate among students with disabilities in 2016) due to rigorous coursework requirements, which is depicted by the bottom chunk of the iceberg below the surface, not visible to the public or policy makers when making educational reform decisions. Students with disabilities in the Georgia cohort class of 2012 represented 5.3% of all graduates and of those graduates only 40.1% were enrolled in a post-secondary institution after graduation.

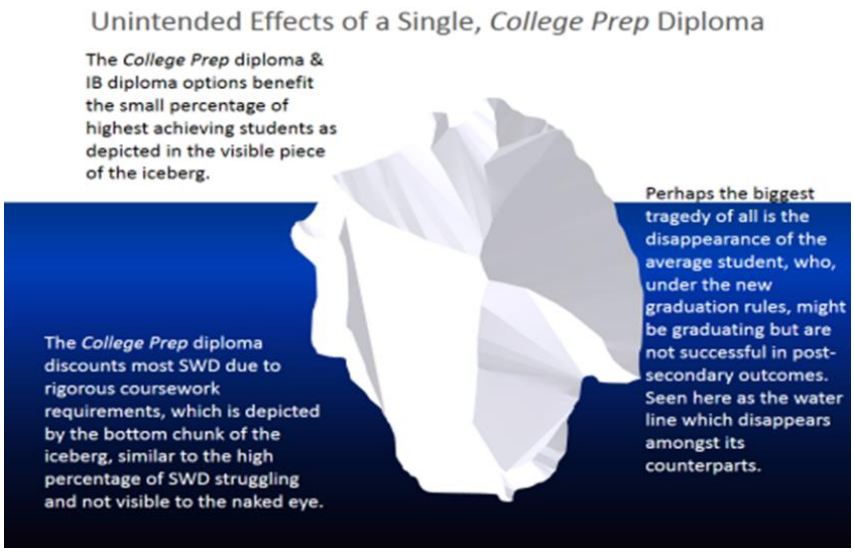


Figure 1. The Iceberg Effect Resulting from a Single Diploma

All high school students, including those with disabilities, are forced to progress through their high school career as if they are all going to four-year universities with intentions of earning a bachelor's degree. Holding all students accountable to the same graduation requirements and not offering them a vocational option has resulted in many students with disabilities either dropping out or earning a certificate of attendance. In 2017, GOSA reported 3,594 students with disabilities and 16,833 students without disabilities as dropouts during the 2015-2016 school year in Georgia, 3.4% and 15.8% respectively.

METHODS

The purpose of this study was to investigate the inconsistency of between CTE legislation and current practices, as well as to examine the effects of the removal of the tiered diploma options in Georgia. More specifically, the researcher team wanted to investigate the differences in the number of students with disabilities who received a *Technical Prep* diploma compared to other types of diplomas in Georgia high schools over the past decade and assess the effects of the removal of the *Technical Prep* diploma option for students with disabilities. A mixed methods design was chosen to collect and present data. Phase one examined statewide and national data to compare effects on graduation rates for students with disabilities across diploma types for the graduating years spanning from 2004 through 2016 to discover any potential effects of streamlining diploma options in Georgia. Phase two utilized a survey to collect perceptions of Georgia educators regarding the removal of diploma options. The research questions were:

1. Is there a difference between the percentage of special education students who received a Technical Prep diploma versus other diploma types in the years 2004-2011?
2. What are the effects of streamlining diploma options for Georgia high school students with disabilities as perceived by Georgia educators?

Data Sources

Phase one data was collected via statewide and national data sites such as gosa.georgia.gov, ga.doe.org, nces.ed.gov, eddataexpress.ed.gov. Data was also retrieved from data specialists employed at the Georgia Department of Education (GADOE) and the Governor's Office of Student Achievement (GOSA, 2017). All data regarding diploma types issued to Georgia high school graduates was obtained from the GADOE in the Exiting Credentials spreadsheet provided to the researcher by a data specialist with the state. State graduation rates were obtained from the GOSA website contained in a graduation rate document and national graduation rates were collected from the National Center for Education Statistics (NCES).

Instrumentation

Phase two consisted of a participant survey. A thorough search of EBSCO was conducted to locate a survey which had been designed and executed regarding educators' perceptions of the removal of the tiered diploma. No such survey examining educators' perceptions regarding diploma type, graduation rates, or any combination of the two

topics could be located, so a survey was developed by the researcher. The research team developed the survey questions with similar structure to those which were found in multiple peer-reviewed journals using a Likert scale (Dodson, 2015). The survey was conducted through Google Forms, an online tool provided by Google Docs. Google Docs is in compliance with all applicable FERPA laws, and state laws/regulations for privacy. Survey responses were anonymous, contained no identifiable information, and responses are stored in a worksheet that can only be accessed through a Google account login by two of the researchers. All survey questions were to ascertain the Educators' perceptions of the removal of the tiered diploma options, possible effects of that removal, and perceptions of Career Pathways.

The first section of the survey contained operational definitions to familiarize the participants with key vocabulary used in the wording of the survey questions. A demographics section was designed to collect information about the participants such as age, gender, race, years and grade levels taught, highest degree earned, number of years' experience teaching students with disabilities, and administrative experience. Nine survey questions based on a Likert Scale measure (1-strongly disagree, 2-disagree, 3-neutral, 4-agree, 5-strongly agree) required the participant to rate their perception of each survey questions. Question number ten asked the participant to mark a check beside the group of students (all students, gifted, and all thirteen disability categories were listed) they felt could benefit from having the option of graduating with a *Technical Prep* diploma. The final question was one open-ended response asking the participant to list as many current Career Pathways with which the participant was familiar. This question was designed to gauge the familiarity of Georgia educators with the Career Pathway options currently available in high schools throughout the state. Finally, participants were encouraged to provide any additional comments they had on the subject matter in space provided at the end of the survey.

During Phase two, surveys were sent to district and state employees over a secure network and via district and state email addresses. The survey itself neither requested nor collected any identifiable data of the participants, including their email address or IP address. Email addresses were kept confidential and not attached to the participant's response Google Forms responses were stored in a worksheet that was only accessed through a Google account login. The transmission of data used Secure Sockets Layer (SSL) to encrypt the data during transport. The data is as secure as most other systems which take survey data and store it. Once in storage, responses were kept on a secure flash drive and were only transmitted through a secure University issued email address.

Data Screening

Surveys were sent to educators who are currently employed, previously employed, or retired from a Georgia school system. Surveys were sent to the employees' district issued email address where applicable. Retired employees received the survey via personal email address. All of the data received was screened to eliminate responders who have no experience teaching in Georgia or those who were not certified employees.

Data Collection Procedure

For Phase one of the study, all data obtained were either secured on an encrypted, password protected computer, or locked in a secure location. Furthermore, all identifiable information was removed from the data before given to the researcher. Raw numbers were transferred into tables or graphs to offer visual depictions of potential trends or changes over time. The researcher was in contact with several state employees both at the GADOE and the GOSA throughout the data collection process. Initial data regarding graduation rates was found on the official websites of the GADOE and the GOSA; however, the data on graduation rates readily available to the public on the GADOE website only dated back to the 2011-2012 school, which was the first-year graduation rates were calculated using the ACGR or Cohort method. In order to obtain previous years, a data request was submitted to a Data Specialist at the GADOE. Via this initial request, graduation rates were obtained dating back to 2004 on state and district levels for all students and subgroups. Data readily available for downloading on the GOSA website dated back to the 2010-2011 school year. The data available on GOSA was far more extensive than graduation rates, offering information such as statewide assessments scores, attendance data, information about district personnel, drop-out rates, and enrollment data, to name a few. Data crucial for this research was found in a document titled High School Completers. This document contained information about numbers of diploma types issued to Georgia high school graduates, including *College Prep, Technical Prep, Dual Seal, Special Education, and Certificate of Attendance*. A data request was also submitted requesting the High School Completers document for previous years dating back as early as 2001 to the GOSA data specialist, but no data was ever received by the researcher. This led to another data request being submitted to the GADOE requesting data detailing the diploma type breakout. Once the state confirmed they had this data, it was sent to the researcher. This data kept by the GADOE was titled Exit Credentials of High School Graduates, was broken down by race/ethnicity and gender,

and was available on the state and district levels. Further data was requested regarding the diploma type breakouts of students with disabilities and was received shortly after the request. Data on national graduation rates was obtained via an internet search, downloaded, and collected from the National Center for Education Statistics (NCES), the United States Department of Education (USDOE), and the Education Data Express website provided by the USDOE.

RESULTS AND FINDINGS

For Phase one, in order to investigate the research question, "Is there a difference between the percentage of special education students who received a *Technical Prep* diploma versus other diploma types in the years 2004-2011?" a Mann-Whitney two-sample test was used to determine if the was a statistical difference between the percentage of students receiving a technical diploma and the combined percentage of students receiving college prep and dual diplomas. Alpha levels were set at 0.05 prior to conducting the study. Significant results were obtained and indicated that the percentage of special education students graduating with diplomas was greater for those with *Technical Prep* diplomas (Mdn = 12.5) than for those receiving college prep and dual diplomas combined (Mdn = 4.5), $z = -3371$, $p = 0.001$.

Phase two survey results showed most respondents fell into the age range of 36-40 at 18.8% or into the age range 51-55 at 15.6%. The majority of respondents were female and Caucasian at 88.2% and 83.6%, respectively. Respondents were well rounded in their total years of experience as an educator with 50.8% falling into the 6-20 years of experience teaching. Half of the respondents indicated between 6 and 20 years' experience teaching students with disabilities, 87.9% experience teaching at the high school level, and 22.1% experience as an Administrator. Regarding their own education, 50.7% of respondents hold a Master's, 38.8% hold a Specialist, and 26.9% have earned a Doctorate degree. Nearly 83% of respondents are certified in a core content area and 49% are certified in Special Education.

To answer the second question, "What are the effects of streamlining diploma options for Georgia high school students with disabilities as perceived by Georgia educators?", respondents overwhelmingly agreed that the students would benefit from having the option of graduating with a *Technical Prep* diploma option. *Technical Prep* diploma option adequately prepared students with disabilities to enter into technical colleges, community colleges, and/or the work force, 76.1% of respondents either agreed or strongly agreed. When asked if a reinstatement of the *Technical Prep* diploma option with reduced graduation requirements (1 less math and science) would be beneficial to students with disabilities 88.2% of respondents agreed or strongly agreed. When asked if it is realistic for all students to be college ready and required to earn a *College Prep* diploma, 61.8% of respondents strongly disagreed.

DISCUSSION

The goal of this research was to present an analysis of historical and current CTE federal legislation, review current practices at both the national and state levels, and examine data on graduation rates and diploma counts in Georgia to discover any unintended outcomes of the disparity between legislation and practice. The quantitative portion of this research was designed to specifically examine the effects of streamlining diploma options in Georgia on students with disabilities and answer the following question.

1. What are the effects of streamlining diploma options for Georgia high school students with disabilities on graduation rates?
2. What are the effects of streamlining diploma options for Georgia high school students with disabilities as perceived by Georgia educators

The data in Table 3 shows the numbers of diplomas issued in Georgia between the years of 2008 and 2011. These numbers and their corresponding percentages in Table 4 speak volumes about how many students, both with and without disabilities, were taking advantage of the *Technical Prep* diploma during the years of 2008-2011. Between the years of 2008-2011, an average of 36% of students with disabilities graduated with a *Technical Prep* diploma and 14.75% graduated with a *College* Prep diploma from 2008-2011 (GADOE, 2017). Along with this data showing that the *Technical Prep* diploma was benefiting students with disabilities, Georgia educators voiced their strong agreement that all students would benefit from having diploma options, such as the *Technical Prep* diploma.

Harvey (2001) emphasized that in order to keep students with disabilities enrolled in school and learning, educators need to be teaching them skills that will give them the competitive edge when they graduate and seek to gain employment. He stresses the importance of coaching and guiding students with disabilities through a successful pathway to achieve their post-secondary transition goals through vocational-technical education. The American

Institute for Research (AIR) recommends that states provide multiple pathways to post-secondary high school success (Brand, Valent, & Browning, 2013). Perhaps the answer lies in reintroducing a *Technical Prep* diploma as one meant for students whose endeavors do not include attending a four-year university or obtaining a bachelor's degree. Results from this research show that educators in Georgia strongly believe that the *Technical Prep* diploma adequately prepares students with disabilities to enter a technical school, community college, or into the workforce. In keeping with the current trends of increased accountability and academic achievement, could reintroducing a new and improved *Technical Prep* diploma track with increased rigor within the CTAE, built in work experience, equal collegiate opportunities for graduates, and an intentional focus on career readiness be a viable solution to the low number of students with disabilities who graduate? Vocational programs who utilize programs that put students to work during their high school years have better post-secondary outcomes for students. Research shows that students with disabilities are more likely to gain employment after graduation if they have work experience during high school (National Collaborative on Workforce and Disability for Youth, 2011).

If policy makers view the *Technical Prep* diploma as one that speaks to the lower achieving students, those with disabilities, or simply those who could not or had no interest in attending college, how is it acceptable to discount those populations by eliminating the only option those students had to study applicable coursework and graduate adequately prepared for multiple post-secondary outcomes? Significant results were found in the data analysis of diploma counts that showed more students with disabilities were graduating with the *Technical Prep* diploma than with *College Prep* or *Dual* diplomas. Was the removal of the *Technical Prep* diploma simply an over-reaching, overgeneralization of the concept that by raising the bar, all students will achieve? The Obama administration placed heavy emphasis on increasing graduation rates in the United States, even setting the goal of boasting the highest graduation rates in the world by the year 2020. Researchers have to ask the question, what does it say about the *College Prep* diploma if 100% of high school graduates can achieve it successfully? Robert J. Samuelson, a veteran columnist for the Washington Post, has argued that the movement "cheapens" four- year degrees and stigmatizes those who choose another path (Samuelson. 2012). Policy makers want the ultimate goal to be 'college for all' but is college for all students? It is absolutely an ideal notion, but not a realistic one. Results from the survey conducted in this research shows that educators in Georgia do not believe that it is realistic for all students to graduate from high school being college ready. Scott Carlson (2016) interviewed several key players in the areas of secondary, post-secondary, and workforce training, including Anthony P. Carnevale, director of the Georgetown University Center on Education and the Workforce, Mary Alice McCarthy, a senior policy analyst at New America, and Shaun R Harper, a professor at Pennsylvania State University, asking them all the question, is 'college for all'? The article presented several cruxes in post-secondary outcomes including the "cultural marginalization" (Carlson, 2016) of career and technical education, tracking in America, and inadequacies in transferring credits from technical colleges to four-year institutions. With opportunities for students to achieve beyond what is expected of them in high school, there should be equal supports and opportunities for those students who struggle with those same expectations. Offering a diploma designed to capitalize on individual strengths those struggling students has shown positive outcomes in the past and could be the vehicle by which overall graduation rates increase. Georgia educators strongly believe that not only would a reinstatement of the *Technical Prep* diploma would be beneficial to students with disabilities, but that all students would benefit from having diploma options such as the Technical Prep diploma.

Table 3. Graduation Rates on National and State Levels

Year	**National**		**Georgia**	
	All	SPED	All	SPED
2004	74.3	A	65.4	28.6
2005	74.7	A	69.4	29.4
2006	73.2	A	70.8	32.4
2007	73.9	A	72.3	32.9
2008	74.9	A	75.4	37.7
2009	75.5	A	78.9	41.4
2010	74.7	a	80.8	44.4
2011	79	59	80.9	43.3
2012 [a]	80	61	69.7	35.2
2013 [a]	81	61.9	71.8	35.2
2014 [a]	82	63.1	72.5	36.5
2015 [a]	83.2	64.8	78.8	54.3
2016 [a]	b	b	79.39	56.56

Table 4. Percentage of Georgia Diploma Types Issued

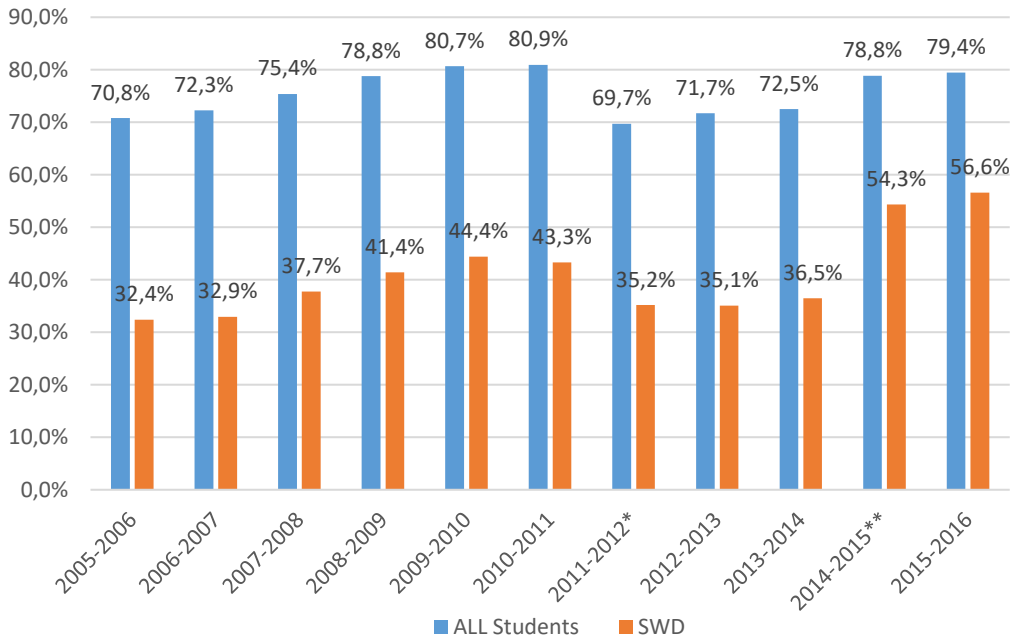
Year	All Students				Students with Disabilities					
	College Prep	**Tech Prep**	**Dual**	**Total**	**College Prep**	**Tech Prep**	**Dual**	**SPED**	**Cert of Attend**	**Total**
2008	49%	23%	21%	90,789	13%	35%	4%	39%	9.1%	8,028
2009	49%	23%	22%	93,790	14%	37%	6%	35.6%	8%	8,116
2010	51%	21%	22%	96,871	15%	38%	6%	33%	7.8%	8,215
2011	52%	19%	22%	98,823	17%	34%	6%	31.4%	11.4%	8,226

Most recently, President Trump signed an Executive Order titled, *Buy American and Hire American*. When the President spoke to a crowd in Kenosha, Wisconsin on April 18, 2017, he announced that Education Secretary Betsy DeVos "is working to ensure that our workers are trained for the skilled technical jobs that will, in the future, power our country" and told the American people that vocational education would play a prominent role in his administration (Trump, April 18, 2017). With this call for vocational education to be brought back to the forefront, it is possible for educational reforms to come full circle and once again face adjustments based on the current economic needs of our nation.

LIMITATIONS

This research presents graduation rates spanning from 2004-2016 and it cannot be ignored that the state utilized two different graduation rate calculation methods during that span of time (<1993-2011 AFGR, 2012-2016 ACGR), which makes comparisons between the two methods difficult. As a secondary method for examining graduation outcomes, diploma counts (number of diplomas issued) were also considered when attempting to formulate an answer to the research questions. Figure 2 is a visual representation of graduation rates in the state of Georgia students with and without disabilities for the years 2005-2015. The noticeable drop in 2011-2012 is likely due to the switch from the lever proxy rate to the cohort method to calculate graduation rates. This new method reflected a more accurate portrayal of the overall students in each cohort (total number of students graduating in four years) by considering transfers, deaths, and emigrations into the calculation. This drop can also be seen in Table 2 under the *all* column below the Georgia heading for the year 2012. The 6.3% increase in the graduation rate from 2013-3014 to 2014-2015 was likely due to the state's decision to remove the assessment portion of the graduation requirements, as seen Figure 2. Beginning with the 2015 graduates (2011 cohort), students were no longer required to pass the Georgia High School Graduation Tests (GHSGT) to receive their diploma. You can also see this dramatic increase in diplomas issued on Table 3 under the certificate of attendance (CA) column and on Table 2 under the All and SPED columns under the Georgia heading for the year 2015.

Although the survey was developed based upon similar researched qualitative studies, the survey was not tested for validity and reliability. Some of the respondents noted that a few of the survey questions were confusing. Two respondents left comments questioning if the meaning of a rating of three was "do not know" or "unknown". This was not clearly defined by the researcher in the directions and Google Forms did not display descriptions of values in the entire Likert scale (1-strongly disagree, 2-disagree, 3-neutral, 4-agree, 5-strongly agree) which may have led to confusion. Further item development is needed to produce a valid and reliable survey. Survey questions should be recalibrated and placed through reliability and validity tests with scientific principles guiding the analysis.



*New Cohort Graduation Rate
**Elimination of GHSGT

Figure 2. Graduation Rates in Georgia 2006-2016

CONCLUSION

This research is aimed to provide policy makers and educational leaders with informed data that demonstrates the value of technical education in public schools. The current versions of CTE have far surpassed antiquated social constraints with the implementation of the broadminded Career and Clusters Pathways that are not adequately utilized in the school system and do not provide a clear and alternate education path for students. in Students with disabilities need increased support and accountability to be successful in these pathways. The assumption that all students should, and are capable, of going to a 4-year college is an out dated thought of education reform. This goes against long standing federal legislation from the Smith-Hughes Act of 1917 to IDEA which has established standards for supporting students with disabilities through education and service delivery systems in a variety of settings.

As more initiatives are released at the federal level and education reforms are adopted at the state level, such as the streamlining of diplomas and the elimination of the GHSGT, more research needs to focus on investigating associations between these reforms and changes in graduation rates among students with disabilities. With an overwhelming focus on graduation rates trending in education, the reflection process of any newly implemented initiative demands attention. Research that examines the intended and unintended results of education reforms could lead to the caliber of effective and responsive policy changes required by such a dynamic and evolving economy, like the one in the United States of America.

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