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The Effects Of The Introduction Of No Child Left Behind On Selected Educational Demographics

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THE EFFECTS OF THE INTRODUCTION OF NO CHILD LEFT BEHIND
ON SELECTED EDUCATIONAL DEMOGRAPHICS

A Dissertation

Presented to

The College of Graduate and Professional Studies

Department of Teaching and Learning

Indiana State University

Terre Haute, Indiana

In Partial Fulfillment

of the Requirements for the Degree

Doctor of Philosophy

by

Angela Bright

May 2018

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Keywords: dropout rates, graduation rates, NCLB, special education

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ABSTRACT

Educators and the general public are often discouraged by grim reports by the media regarding our nation's standing with regard to education and the policies that attempt to improve that standing. This study examined (a) the percentage of students identified as needing special education, (b) graduation rates, and (c) dropout rates from a sample of state reported data before and after implementation of the No Child Left Behind Act (2002) to determine if the policy had an effect in these areas. Despite media assertions, no significant differences were found in these variables when comparing data from 2003–2004 and 2007–2008. It is suggested that future research be inclusive of students with disabilities who opt to use accommodations on statewide testing (Bielinski, Thurlow, Callender, & Bolt, 2001). Longitudinal studies are suggested to see if preschool attendance in public schools influences graduation rates or dropout rates. Additional factors that merit exploration include family dynamics, gender identity, school violence, or number of disciplinary referrals to number of students eating breakfast at school, faculty credentials, and faculty-to-student ratio.

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CHAPTER 1

INTRODUCTION

“The foundation of every state is the education of its youth” —Diogenes Laertius

The No Child Left Behind (NCLB) legislation was introduced by the administration of former United States President, George W. Bush. One of the main features of NCLB was that each state was required to test its students and report yearly progress to the nation (NCLB, 2001, Section 1116). Nearly every state in the country had administered statewide assessments for many years (Alcocer, n.d.). Therefore, this particular requirement of the NCLB legislation did not receive much rebuttal and was passed with bipartisan support (Chopin, 2013; Klein, 2015). What was not widely understood by legislators was that if test scores did not indicate Adequate Yearly Progress, schools could be put in a position of needing to compete for key resources (“Key Policy Letters,” 2002; Klein, 2015).

In state after state, legislatures, governors, and state boards, supported by business leaders, have imposed higher requirements in mathematics, English, science, and other fields. These new requirements have been accompanied by new tests by which the performance of both students and schools are to be judged (Hatch, 2015; Schrag, 2000). This level of accountability, combined with the advances in technology and the Internet, has increasingly placed schools under a public magnifying glass.

The NCLB Act has appeared to be one of the most publicly dissected pieces of educational reform in history. One can observe this by simply delving into the number of media reports or simply by entering it into any popular Internet search engine. For example, using the search term *No Child Left Behind* in the ERIC database and limiting the source to magazines generated 1,004 results. Using the search term *Goals 2000* in the same database generated 86 results. The public is clearly interested in this legislation.

Educational researchers brought attention to the fact that each state gave a different high stakes test, yet the states were ranked in order of scores (Ziegler, 2017). Logistically speaking, it would make little sense to rank states by test scores on nearly 50 different tests, but it would be more logical to administer the same exam in all states so that comparisons could be defensibly drawn. The NCLB reform, in addition to English/language arts and mathematics test scores, also required schools to report demographics such as the number of students with disabilities, dropout rates, and graduation rates (NCLB, 2002). However, a specific and methodical definition of these selected demographics was not in place, and states were allowed to determine the way in which they reported them (NCLB, 2002).

In addition to the variability in reporting the demographics, the media reported that this legislation increased the number of students with disabilities and the number of students who dropped out of school (Dean, 2016; Heckman & LaFontaine, 2010). The public, specifically politicians, also alleged that graduation rates decreased since the Bush administration implemented NCLB. This study was designed to determine if significant changes had in fact occurred in selected demographics since this reform began.

Research Questions

The study addressed the following research questions:

1. Is there a statistically significant difference in the percentage of identified students with disabilities in public schools before and after the implementation of NCLB?
2. Is there a statistically significant difference in the overall graduation rates of students with disabilities general education students in public schools before and after the implementation of NCLB?
3. Is there a statistically significant difference in the overall dropout rates of students with disabilities and general education students in public schools before and after the implementation of NCLB?
4. Is there a statistically significant difference in the English/language arts composite scores on statewide testing for students with disabilities and general education students in public schools before and after the implementation of NCLB?
5. Is there a statistically significant difference in the mathematics composite scores on statewide testing for students with disabilities and general education students in public schools before and after the implementation of NCLB?

Purpose of the Study

Educators have been and continue to be discouraged by the grim media reports about inadequate academic achievement in America's schools (Croft, Roberts, & Stenhouse, 2015; Johnson, Thurlow, Cosio, & Bremer, 2005). As mentioned before, NCLB seems to have placed schools under the most scrutiny of any former educational reform policy. This study sought (a) test scores in English/language arts, (b) test scores in mathematics, (c) graduation rates, (d)

dropout rates, and (e) percentages of students with disabilities to determine if NCLB had in fact made a statistically significant difference in today's schools during the time period examined.

Significance and Need for the Study

Many educational researchers have published articles, made presentations, conducted surveys, and completed observations to suggest that NCLB has made the most significant impact on education—more than any other educational reform in American history. For example, Yell, Drasgow, and Lowrey (2005) described NCLB as a powerful law that profoundly changed the way teachers worked with students. Following implementation of NCLB, some researchers reported that dropout rates had increased and that graduation rates had decreased (Lewis, 2007; Shriberg & Shriberg, 2006). However, there were possible alternative explanations for these changes, such as lowering the threshold for success and manipulating the educational path of students by reclassifying those who were likely to drop out (Kamenetz, 2015). Some suggested that too many students were being referred and subsequently identified for special education (Greene & Forster, 2002; Kamenetz, 2015). Public school teachers referred students in an attempt to *leave no child behind*. Teachers may also have been reluctant to slow down their delivery of instruction for struggling students when teaching the large amount of content required by the state standards, with hopes of increasing test scores (Baker et al., 2010). Teachers might have found that referring struggling students with possible learning difficulties, thus potentially increasing the class test scores, was a means to better evaluations or increases in merit raises (Baker et al., 2010, Darling-Hammond, 2012). Many teachers took the new expectations of accountability seriously (L. Gibson, personal communication, March 21, 2018).

Some teachers felt that tests were poor indicators of teacher effectiveness, and they might have been correct (Ballou & Springer, 2015; Lederman & Burnstein, 2006). There were some

indications that mathematics and English/language arts scores rapidly increased, perhaps of unethical behavior that will be further discussed in the literature review (Sparks, 2016).

Ironically, however, there was evidence that conflicted with this conclusion (Phelps, 2017).

Much speculation existed in the field of education as to the impact of NCLB on America's schools. This study examined special education identification, graduation rates, and dropout rates; and it attempted to study composite English/language arts and mathematics scores to find evidence of significant changes in light of conflicting educational research and media reports. This study examined those data in light of how they might inform current educational reform.

Students who have historically been marginalized by society due to disabilities, racial background, or poverty have made strides toward achieving social justice over the last two decades (Annie E. Casey Foundation, 2005; Caballero, 2014; Goggin, 2017; National Center for Education Statistics [NCES], 2016; United States Department of Agriculture, 2017). NCLB's educational accountability requirements of states and school districts should have closed the achievement gap between these vulnerable students and White, middle class students in the general education classroom. It is important to examine whether this is true.

Requiring states more specifically to report data for accountability should show areas of strengths and weaknesses for all students. However, the repercussions of schools showing lack of adequate yearly progress may hinder all efforts to improve postsecondary outcomes for some students. One example would be that teachers of disadvantaged populations were under the most pressure to raise their test scores and increase the progress made in their schools, yet they had the least funding and resources to do so (Cullen, Levitt, Robertson, & Sadoff, 2013; Kohn, 2000).

Additionally, graduation rates and dropout rates appeared to be mentioned more frequently since the enactment of NCLB. Although it may appear to some that they are directly correlated, it should be noted that changes in the way these numbers were reported have occurred with a new educational reform, the Every Student Succeeds Act (ESSA; Herman et al., 2017). The results of this study clarified the strengths and weaknesses of NCLB and are useful for informing current and future educational reform.

Definitions of Terms

Adequate yearly progress (AYP) is the ability of schools to reach the benchmark they have set for helping low-achieving students progress toward the standards required of all children (U.S. Department of Education [USDOE], 2009). If a particular school does not show an annual increase in achievement for a predetermined number of consecutive years, parents may choose to send their children to another local school that has shown acceptable gains in achievement.

Child with a disability is “a child who has intellectual disabilities, hearing impairments (including deafness), speech or language impairments, visual impairments (including blindness), serious emotional disturbance . . . orthopedic impairments, autism, traumatic brain injury, other health impairments, or specific learning disabilities; and who . . . needs special education and related services” (Individuals with Disabilities Education Act, 2010).

Creative problem solving (CPS) is a model that was developed by Osborne and Parnes in the 1950s to facilitate the creative process. It was further developed in the 1990s into a three-stage method of teaching critical thinking skills and metacognition. It includes the use of a facilitator, a resource team, and a teacher. Stage 1 is Exploring the Challenge. Stage 2 is Idea Generation. Stage 3 is Taking Action (Chant, Moes, & Ross, 2009).

Disaggregation refers to the various subgroups in data reported to the U.S. Department of Education by states if that subgroup is large enough for statistical reliability, as determined by the state (NCLB, 2002).

Dropout rates are the percentage of students who left school sometime between the start of the school year and the end of the school year without graduating. It excludes individuals who transferred to another school or were experiencing a temporary absence (NCES, 2007).

Every Student Succeeds Act is federal legislation that reauthorized the Elementary and Secondary Education Act of 1965 and replaced NCLB. It was signed by President Obama in 2015. It narrowed the scope of the federal government's role in education by shifting the responsibility for accountability to the states (ESSA, 2015).

Exceptionality refers to the areas of strengths and/or areas of needs in domains such as cognition, behavior, communication, language, physical health, mental health, or social functioning (Estell et al., 2008). The term dual exceptionality refers to the presence of strengths and needs in domains at both ends of the continuum (e.g., children who are gifted in one area and simultaneously have a disability in another area).

Extraneous variable refers to a variable that makes possible an alternative explanation of results; an uncontrolled variable (Fraenkel & Wallen, 2008).

Gifted and talented is defined by NCLB to mean children who “give evidence of high achievement capability in areas such as intellectual, creative, artistic, or leadership capacity, or in specific academic fields, and who need services or activities not ordinarily provided by the school in order to fully develop those capabilities” (Individuals with Disabilities Education Act, 2015, Part A). States have the authority to define this further (National Association for Gifted Children and The Council of State Directors of Programs for the Gifted, 2015).

Graduation rates are the percentages of students who graduated with a regular high school diploma in four years. This is a uniform measure used by all states and is included in NCLB to make interstate comparisons. The “adjusted” cohort graduation rate divides the number of graduating students by the number of students who entered the cohort four years earlier (USDOE, 2008).

Individuals with Disabilities Education Act (IDEA, 1990) is a law ensuring services to children with disabilities throughout the nation. It was signed by President George H. W. Bush in 1990, replaced the Education for All Handicapped Children Act, and was revised again in 2004. IDEA governs how states and public agencies provide early intervention, special education, and related services to more than 6.5 million eligible infants, toddlers, children, and youth with disabilities (USDOE, 2010).

No Child Left Behind Act was 2001 legislation signed by President George W. Bush. It reauthorized the Elementary and Secondary Education Act of 1975 and expanded the role of federal government in public education. It required standardized testing and required schools who did not make adequate yearly progress to take steps to improve (Klein, 2015).

Response to Intervention (RTI) is an approach to student learning that consists of at least three tiers of intervention, with each tier providing increasing the intensity of intervention (Preston, Wood, & Stecker, 2016). Although RTI is intended to assess and monitor the progress of all students, RTI involves identifying students early on who are struggling and targeting proactive interventions before students can fall too far behind (Averill & Rinaldi, 2011). RTI is comprised of (a) the application of research-based instruction, (b) assessment of the child’s response, and (c) use of the assessment data to inform instruction (Gartland & Strosnider, 2005).

Special education means “specially designed instruction, at no cost to parents, to meet the unique needs of a child with a disability, including instruction conducted in the classroom, in the home, in hospitals and institutions, and in other settings; and instruction in physical education” (Individuals with Disabilities Act, 2010).

Assumptions

Although each state may differ somewhat in how it reports required data to the USDOE (2002), it was assumed for the purpose of this study that states were provided with explicit guidelines on what they were required to submit annually. This would increase the validity and the reliability of the data collected, hence the outcome of this study. It was also assumed that students who are identified as needing special education have had an initial placement case conference and met federal and state guidelines for determining eligibility of a student with a particular disability and are receiving services. Lastly, other variables identified that are mandated by the USDOE were also assumed to meet criteria (2002).

Limitations

The percentage of students with disabilities between 1992 and 2001 increased from 10.6% to 12.3% or higher and continued to steadily increase to 13% by 2015 (Greene & Forster, 2002; NCES, 2017; Waitoller, Maggin, & Trzaska, 2017). However, it could be argued that more students were being identified in special education when they should not have been. Barrio (2017) and Ford (2012) suggested that English language learners were often disproportionately identified for special education.

Most states provided data that included only the percentage of students with disabilities and graduation rates. Very few states reported disaggregated test scores for general education students and students with disabilities, nor did they report English/language arts and mathematics

scores separately. The flexibility of both timeframe to implement the regulations of NCLB, and that with which data was reported to the NCES, made it impossible to carry out the study as intended (Stillwell & Sable, 2013).

Graduation rates, dropout rates, and the percentage of students with disabilities were reported. Test scores for general education students and students with disabilities were not disaggregated, which precluded finding answers to Research Questions 4 and 5. Some states reported test scores in terms of English language learners and all other learners. Other states reported test scores for English/language arts and mathematics but did not distinguish general education students from students with disabilities. Therefore, the scores submitted by each state were not comparable. In addition, the reliability of some scores is suspect because all states may not have accurately reported the data for English/language arts and mathematics (Bielinski, Thurlow, Callender, & Bolt, 2001; Swanson & Chaplin, 2003).

Delimitations

This study placed its greatest foci on students with disabilities and the most influential requirements of the accountability portion of NCLB, as test scores seem to be the largest recognizable factor to the progress or lack thereof in schools and evaluation of teacher efficacy. Teachers of students with disabilities in prekindergarten through 12th grade (P-12) appear to be the most affected by the majority of the components of this educational reform plan (Berry, 2011; Fisher, 2011).

The obvious limitation would be that not every state administers the same assessment instrument; which makes it difficult to place states in rank order for progress. However, what was found was that few states reported their disaggregated scores at all, making the study impossible to complete as originally proposed.

Another consideration is the sample and population used in this study. The individually selected states comprised the sample. They were randomly chosen, allowing results to be generalized to the entire United States. However, one could argue that comparing one state during two different years is not an accurate representation of the population. This is because the exact same students are not at the school for longer than a given number of years. Hence, to say that a particular state educational system did not make AYP two years in a row is not accurate because some new students entered the system and other students graduated. For this study, it can be assumed that this is true in every school and state sample, as well as the population.

CHAPTER 2

REVIEW OF THE LITERATURE

“Only the educated are free.” —Epictetus 55AD–135AD

It is the intent of this literature review to explore the strengths and weaknesses of NCLB, including historical perspectives that led to the reform and how it has affected public schools in America. It will begin with a discussion of the historical context, the academic achievement of U.S. students, special education, followed by an examination of graduation and dropout rates. This section will conclude with a review of English/language arts and mathematics performance and high-stakes testing.

Historical Context

Education has been a significant political issue in the United States for nearly 400 years, well before the country was named. In fact, public funding and pioneering of schools dates as far back as 1635 (Marley, 2004; National Geographic Society, 2013). Public schools were opened in the 1840s to serve as the “great equalizer” (Chopin, 2013, p. 27) for Americans. The 1950s was a significant time period for education that stimulated subsequent educational reform. In 1957, with the launch of Sputnik, the Russians demonstrated that their technological capability surpassed that of the United States (Howell, 2012; A. Powell, 2007). This alarmed the citizenry and leadership of the United States, promoting awareness of vulnerability to military attack (A. Powell, 2007). In this sociopolitical context, recognition emerged of the need for

educational reforms to prepare the populace to compete in a subsequent arms race (U.S. State Department Archives, n.d.). The media, in the post-Sputnik era, have often projected an image to the public that the United States educational system is subpar to many of its counterparts throughout the world (Anderson, Evans, Kozak, & Peterson, 1999; Christakis, 2017; Palkot, 2013). Since that time, many plans for reform have been developed by, presented to, and approved by Congress.

During the 1970s, most educational reforms supported minimum competency testing (Brookhart, 2013). In other words, students were deemed successful if they could perform on a test to demonstrate they knew basic concepts in core subjects, particularly mathematics and science. Many students were not being held to the highest standards but were only being challenged to meet the lowest standards (Marley, 2004; Tucker, 2015). The 1970s drew attention to educating students with disabilities mostly because of politics and legal issues (Gagnon, Steinberg, Crockett, Murphy, & Gaddis, 2013).

As a result of the poor performance of American students in the 1970s, the National Commission on Excellence in Education (1983), under the Reagan administration, published *A Nation at Risk*, a warning to the American people that the country's educational system was in serious need of reform (Ericsson, 2005). Evidence in *A Nation at Risk* was that "on 19 academic tests, American students were never first or second and, in comparison to other industrialized nations, were last seven times" (Boe & Shin, 2005, p. 689).

The publication of *A Nation at Risk* was the catalyst to educational reforms that promoted accountability for achievement (Moses & Nanna, 2007). These reforms included America 2000 and IDEA/P.L. 94-142, both under the G. H. W. Bush administration; Goals 2000 under the Clinton Administration (1994), 'NCLB under G. W. Bush', and ESSA under the Obama

administration. NCLB proposed to raise all students to a level of proficiency. Although this did not happen, NCLB has influenced student outcomes in important ways.

George H. W. Bush introduced America 2000, a strategic plan rather than a program, to achieve six national goals between 1991 and 2000 (USDOE, 1991). The language used made reaching these goals virtually impossible. For example, the goals “U.S. students will be first in the world in science and mathematics achievement,” “Every adult American will be literate . . .,” and “Every school in America will be free of drugs and violence . . .” (USDOE, 1991, p. 21) are idealistic and not likely to be realized. America 2000 aimed for greater school accountability and was opposed by both political parties because it called for voluntary statewide testing (Vinoviskis, 2015).

In 1994 during the Clinton administration, Goals 2000 was implemented, and like its predecessors, did not appear to make a substantial impact on the public school performance reports to the USDOE (Goals 2000, 1994; Rothstein, 1999; Vinoviskis, 2015). After much frustration and negative publicity, a new response was evolving to ensure that every student in America’s public schools would be educated sufficiently and only by the most highly qualified teachers (Brownell, Bishop, & Sindelar, 2018; Rothstein, 1999). Many educational organizations, in particular those that advocated for vulnerable populations such as students with disabilities, appeared to be hopeful that *no* child would be left behind (Pascopella, 2007).

Academic Achievement of U.S. Students

The Organisation for Economic Cooperation and Development (OECD) formed in 1961 to promote policies that aimed to increase stable economic growth, standards of living in member countries, and world trade (OECD & UNESCO Institute for Statistics, 2003). Every three years since 2000, the OECD has administered the Programme for International Student

Assessment (PISA) to evaluate the reading, mathematics, and science skills of 15-year-olds in member and nonmember countries around the world (Rindermann & Baumeister, 2014). PISA tests literacy and application of knowledge, rather than recall of curriculum content, in comparison with the Trends in International Mathematics and Science Study (TIMSS), which is curriculum-based (Rindermann & Baumeister, 2014). In 2015, 72 countries participated in the PISA testing (OECD, 2016). The United States ranked 25th in science, 24th in reading, and 42nd in mathematics (Jackson & Kiersz, 2016). Countries scoring in the top 10 in all three categories included Singapore (scored first in all categories), Hong Kong, Japan, Canada, China, Korea, and Estonia (OECD, 2016). Finland scored in the top 10 in reading and science (Jackson & Kiersz, 2016). It appeared that comparable to the findings in *A Nation at Risk*, the United States is still not among the world leaders in mathematics, science, and reading.

A strong correlation existed between countries' gross domestic products (GDPs) and their mean scores (OECD, 2016). The United States spent more money per student than many countries (OECD, 2012). Twelve percent of the variation between the countries' mean scores was predicted by GDP (OECD, 2016). However, many countries that performed at a level comparable to the United States spent much less (OECD, 2016.). For example, the United States spent over \$115,000 per student, but the Slovak Republic spent approximately \$53,000 per student and achieved comparable outcomes (OECD, 2016). The solution is clearly more complicated than indiscriminately increasing the expenditure per pupil.

A positive correlational relationship was present between income inequality and mean scores (OECD, 2016). The OECD reported that low socioeconomic level was a strong predictor of poor performance (OECD, 2016). Resources were concentrated in suburbs where wealthier students live (Garfinkel, Rainwater, & Smeeding, 2010). The OECD suggested that educational

policy could mitigate socio-economic background by allocating more resources to those schools and reducing social segregation within schools (OECD, 2016). The United States has made significant progress in narrowing the gap between rich and poor students (OECD, 2016; PBS Newshour, 2013) in a country where “the top 20% of the population earn about eight times as much as the bottom 20%” (OECD, n.d., para 2).

OECD also asserted, “There is no single factor that explains why some schools or some countries have better results than others” (OECD & UNESCO Institute for Statistics, 2003, p. 20). High performance was attributed to a combination of school resources, school policies, and classroom practices (OECD, 2003). In the United States, there was a strong correlation between economically disadvantaged schools and a “negative disciplinary climate” (OECD, 2016, p. 145). The extent of teacher shortages differed widely between poor and rich schools (OECD, 2012).

Students with disabilities in the juvenile justice system cannot be forgotten. These students, like all American students, are entitled to a free and appropriate public education (Gagnon et al., 2013). Gagnon et al. (2013) posited, “At least 56 lawsuits against JC [juvenile corrections] schools have focused on various aspects of the six principles of IDEA: (a) zero reject/child find; (b) nondiscriminatory testing; (c) individual education program (IEP); (d) least restrictive environment; (e) procedural due process; and (f) parent participation” (p. 97).

The NCLB policy has resulted in conflicting evidence regarding effectiveness (Ward, Johnson, & Branson, 2014). States and school districts are not uniform and may not be amenable to a one-size-fits-all approach to educational reform (Camera, 2018). Current U.S. Secretary of Education DeVos insisted that both Bush’s NCLB and Obama’s ESSA policies have failed to graduate students who are prepared (Camera, 2018). However, experts have asserted

that the approach common to both pieces of legislation that has been most successful was the push from the federal government to motivate states to make changes (Camera, 2018).

Special Education

Legislative milestones affecting children with disabilities such as The Rehabilitation Act of 1973, EHA, IDEA, etc. have taken place within a larger sociopolitical context. Legislation typically reflects the values of a society's culture, which evolves and changes over time. Laws related to education and disabilities cannot be examined separately from the major events of the times, such as eugenics, attitudes about intellectual disabilities, and civil rights.

The prevailing attitude toward children with intellectual disabilities in the early part of the 20th century was that they lacked human value. For example, the eugenics movement, which began in the United States at the turn of the 20th century, promoted the sterilization of people who were “feeble-minded” (Menzies, 1933, p.657). Eugenics was promoted not only by physicians and academics but became a social movement throughout middle-class America (Bouche & Rivard, 2014). The view of intellectual disabilities in the early 1900s favored nature over nurture, and society saw social problems of the day as solvable through surgical social control. There was concern for the expense of using taxpayer dollars to support people with intellectual disabilities who were not capable of self-sufficiency, and it allowed social problems to be explained by bad genes rather than structural inequalities or lack of adequate social policies (Cold Spring Harbor Laboratory Eugenics Archive, n.d.). The clear preference for non-disabled people was reflected in the “Fitter Family” and “Better Baby” contests in state and local fairs across the country (Cold Spring Harbor Laboratory Eugenics Archive, n.d.; PBS, n.d.). The eugenics movement is also alleged to have inspired Hitler's Final Solution and subsequent murder of people considered deficient by his standard, including primarily Jewish people, but

also people with disabilities (Krisch, 2014; United States Holocaust Memorial Museum, n.d.). Between 1940 and 1945, Hitler ordered and later secretly persisted with the murder of 200,000 people with disabilities (United States Holocaust Memorial Museum, n.d.). Intellectual disabilities were viewed as a genetic trait that made people inherently inferior. There was no illusion of equality with non-disabled people.

The second half of the 20th century saw significant changes in the lives of people with disabilities. *Brown v. Board of Education of Topeka* (1954) was a seminal event that inspired the disability rights movement, which led to legal protections of the rights of students to an education. In *Brown v Board of Education of Topeka* (1954) the U.S. Supreme Court found the doctrine of separate but equal to be inconsistent with the Fourteenth Amendment.

In these days, it is doubtful that any child may reasonably be expected to succeed in life if he is denied the opportunity of an education. Such an opportunity, where the state has undertaken to provide it, is a right which must be made available to all on equal terms. (*Brown v. Board of Education*, 1954, p. 493)

Although the decision referred to racial segregation, there were implications for segregation of children with disabilities.

In the early 1960s, President Kennedy created a 27-member panel on Mental Retardation to make recommendations for a federal response to the lack of services for people with intellectual disabilities. President Kennedy had a personal connection with this issue through his younger sister, Rosemary, who was born with an intellectual disability and was subsequently institutionalized (John F. Kennedy Presidential Library and Museum, n.d.). President Kennedy implemented many of the Panel's more than 100 recommendations through the Maternal and Child Health and Mental Retardation Planning Amendment to the Social Security Act (John F.

Kennedy Presidential Library and Museum, n.d.). Separate legislation enacted in 1963 increased funding for the preparation and training of special education teachers (John F. Kennedy Presidential Library and Museum, n.d.). Although there was no emphasis on equality of opportunity for children with intellectual disabilities, President Kennedy improved the ability of communities to offer special education, research, and community-based care. President Kennedy's sister, Eunice Kennedy Shriver, directed the Joseph P. Kennedy Jr. Foundation, which was dedicated to addressing intellectual disabilities. The importance of this issue to the Kennedy family raised the awareness of intellectual disabilities for the nation and portrayed people with intellectual disabilities as worthy of care and education.

The 1960s and 1970s saw social unrest in the United States, and people with disabilities joined African Americans and women in the Civil Rights Movement that emerged. All three groups fought for their respective equal standing in society and before the law. When President Nixon twice vetoed The Rehabilitation Act in 1971 and 1972, people with disabilities publicly protested by marching in Washington, D.C. (Georgetown Law Library, 2018). The law passed in 1973, and Section 504 of this law protected students with disabilities from legal discrimination in programs that received federal money from the Department of Education (USDOE Office of Civil Rights [OCR], 2015) and by 1975, students were guaranteed equal access to education by IDEA. Section 504 is civil rights legislation that overlaps with IDEA, but is not synonymous with it (Zirkel, 2017).

The Americans with Disabilities Act of 1990 further protected civil rights regardless of whether the public entity received federal financial assistance (USDOE OCR, 2015). Within the span of a century, people with disabilities had progressed from having no social value, to being worthy of treatment and education, to being legally entitled to civil rights.

Brown vs Board of Education (1954) asserted that equal access to education is guaranteed by the Fourteenth Amendment (Sprayberry, 2015). Excluding students from testing requirements and from typical graduation requirements could be seen as segregating students with disabilities from general education students, the very thing IDEA was intended to prevent (Sprayberry, 2015). The term *special education* also connotes a separate but equal approach, a philosophy discredited by the *Brown vs Board of Education of Topeka* (1954) decision. The U.S. Supreme Court wrote, “We conclude that, in the field of public education, the doctrine of ‘separate but equal’ has no place” (*Brown v. Board of Education of Topeka*, 1954, p. 495).

NCLB attempted to achieve, not equality of services provided, but equality of outcome. However, equal access to education, or even special education, has not resulted in equal outcome. According to NCLB, this equal outcome would be 100% of students reaching grade level competency by 2014. NCLB and its successor ESSA, are based on the premise that all students are capable of achieving a successful outcome. Successful outcome cannot be assumed to mean equal outcome. The assumption underlying NCLB is that schools are exclusively responsible for students’ test scores, and that if schools do not make adequate progress, as evidenced by students’ scores, they must make the changes necessary to improve (Weiner, 2005). General education students and students with disabilities contribute equally to a school’s AYP. Yet there are inherent disparities between students’ capabilities. A school that helps students with intellectual abilities make tremendous gains just short of achieving grade level is not celebrated when compared to a school that helps general education students make much smaller gains but achieve grade level, when the school is measured by the very definition of AYP.

Educational reform for students with disabilities was documented as early as the 1800s, due in part to societal changes and advances in medical studies (Spaulding & Pratt, 2015). However, the later 1800s until the 1950s were seemingly inconsistent perhaps due to what appeared to be a cycle of progression and regression in terms of serving students with disabilities. “In 1970, U.S. schools educated only one in five children with disabilities, and many states had laws excluding certain students from school, including children who were deaf, blind, emotionally disturbed, or mentally retarded” (USDOE, 2010, p. 3). Public Law 94-142 (1975), the Education for All Handicapped Children Act (EHA), positively affected children with disabilities across the nation by guaranteeing them an education (USDOE, 2010). Although Sam Kirk is typically credited as the first to use the term *learning disability* in 1963 (R. Thomas, 1996), passage of Public Law 94-142 was the first time that learning disabilities were officially recognized by the USDOE (Cullen Pullen, 2016).

Public Law 94-142 guaranteed that every student aged 3–21 was entitled to a free and appropriate public education (FAPE) and that each child would receive that education in the least restrictive environment (EHA, 1975). It protected the rights of children with disabilities, and it required effective efforts to educate them (EHA, 1975; USDOE, 2010). An amendment in 1986 required states to provide services to children from birth (USDOE, 2010). In the EHA legislation, schools were provided with a method for identifying students with learning disabilities called a *discrepancy approach* (Cullen Pullen, 2016). Educators noted the span between achievement and the potential for achievement (Cullen Pullen, 2016). It was left up to states to decide how much of a discrepancy indicated a learning disability (Cullen Pullen, 2016). The discrepancy approach of identifying children with learning disabilities was soon criticized as being inadequate and was referred to as a “wait-to-fail” model (Cullen Pullen, 2016, p. 30).

Previously enacted in 1990, EHA was amended in 1997 and again in 2004, when it was renamed IDEA (IDEA, 2004; USDOE, 2010). The amendment mandated that students with disabilities would participate in district assessments, would have the ability to participate in the general education curriculum to the greatest extent possible, and would be taught by highly qualified teachers as outlined in NCLB (Bouck, 2007; Bowen & Rude, 2006; Hurder, 2014; Smith, 2005).

In 1997, during the reauthorization process of IDEA, the National Joint Committee on Learning Disabilities (NJCLD) and other stakeholders advised the U.S. Office of Special Education Programs (OSEP) of two significant problems: (a) There was no system of early identification of children with specific learning disabilities (SLD), and (b) children with learning disabilities were not being identified accurately and were sometimes erroneously labeled as SLD due to poor instructional methods (Bradley, Danielson, & Doolittle, 2007; Werts, Lambert, & Carpenter, 2009). The OSEP responded with the Learning Disabilities (LD) Initiative, which invited stakeholders such as researchers, advocacy groups, educators, professional organizations, etc., to develop a shared understanding of SLD and procedures to identify them (Bradley et al., 2007).

The work and historical perspective of the LD Initiative led to the concept of Response to Intervention (RTI); Preston et al., 2016). This reflected a new paradigm in which the emphasis moved from an ineffective process to a focus on student outcomes (Bradley et al., 2007). RTI was a model of instruction intended not only to help all students achieve but to identify children with learning disabilities early in their education and before they have a chance to fall too far behind. Instruction for the entire classroom, small groups, and individuals was the premise for the model as this has been found to have been effective instruction (Schargel, 2008).

When IDEA was reauthorized, the law was changed to include RTI (Preston et al., 2016; Werts et al., 2009.) Although the law did not proscribe a particular model, the process for early and accurate identification of children with disabilities came to be known as RTI, a multi-tiered method of teaching all students (Bradley et al., 2007; Werts et al., 2009). The use of RTI's research-based strategies had the potential to substantially reduce the number of students in special education as its conception was built on a historical foundation that included behavioral interventions. Given it was to address behavioral concerns, some states use what has become named multitiered systems of support (MTSS) which incorporates positive behavioral intervention supports (PBIS) and tiered intervention, hence a term that combines RTI and PBIS (Stephan, Sugai, Lever, & Connors, 2015).

There was no single model of RTI associated with IDEA, but it usually consisted of at least three tiers (Cullen Pullen, 2016). Schools proceeded through three tiers of interventions before the multidisciplinary team conducted formalized testing to determine if a student should be placed into special education, which is considered Tier 4 in some districts (Preston et al., 2016). It was estimated that of the students referred from the general education classroom to Tier 2, nearly half demonstrated a need for more assistance than could be provided at the third tier and required evaluation for special education services (Bahr et al., 2006).

In Tier 1, teachers delivered evidence-based whole-group instruction in the general education classroom (Werts et al., 2009). Students who did not respond successfully to this tier of instruction were given more intense instruction such as extra time with the teacher, small group tutoring, or instruction using research based alternative methods. Another technique was the use of self-monitoring and accommodations for compensating for slowed auditory processing (Fuchs & Fuchs, 2007; Harris, Graham, & Adkins, 2015; Werts et al., 2009). For many students,

the Tier 2 level of intervention was sufficient to help them raise their levels of performance. Any students who were not successful at this level received the more individualized instruction of Tier 3. Students who were unsuccessful in Tier 3 could be referred for a comprehensive evaluation (Bradley et al., 2007; Werts et al., 2009).

A weakness of RTI was that it assumed competent instruction at Tier 1, which was not always the case (Cullen Pullen, 2016). Another point of concern was that some students might succeed at Tier 2 but never have the ability to achieve at Tier 1 in the whole-group setting, perpetually moving between the two tiers (Cullen Pullen 2016). RTI practices also addressed emotional and behavioral concerns that interfered with learning; however, research found that the degree of efficacy varied (Sanetti & Collier-Meek, 2015).

IDEA required the compilation of “relevant, functional, developmental, and academic information about the child, including information provided by the parent,” (Zirkel, 2007, p. 66) that may prove useful in determining eligibility for special education services. IDEA also stated that a child should not be identified as a special education student based solely upon a single score (Mele-McCarthy, 2007). Students with disabilities received services based upon individualized learning needs specified in individual education plans (IEPs). IEPs are legal contracts between the school district and the student, along with whomever has educational guardianship if the student is under 18. If a parent refused to provide consent for evaluation or identification of his or her child as a student with a disability, then a student would not receive services (Hyatt, 2007).

IDEA also stated that IEPs must contain the following:

- (a) information about the student’s level of educational performance; (b) a description of the ways in which the students’ disabilities adversely affected their involvement and

progress in the general education curriculum; (c) an outline of measurable annual goals, including academic and functional goals; (d) a statement indicating how annual goals would be measured and when reports would be provided; (e) an explanation of necessary educational services, including dates of commencement, duration, and frequency of services; and (f) specific information about accommodations and modifications in curriculum, instruction, and assessment to which students were entitled. (as cited by Ketterlin-Geller, Alonzo, Braun-Monegan, & Tindal, 2007, p. 195)

NCLB appeared to be consistent with IDEA, with regard to the assessment of academic progress of all students, including those with disabilities. However, it is unlikely that the legislators who authored IDEA would have supported educational reform that would prevent students with disabilities from graduating with a high school diploma based upon a single test or lack of receiving a waiver. This became a real possibility as a result of NCLB. Stakeholders who might have supported NCLB likely realized it had faults but were not able to offer solutions, such as collaboration between public schools and local universities to increase graduation rates, without concrete data rather than speculation (Domina & Ruzek, 2012; Rothstein & Jacobsen, 2006).

Preventing students from graduating from high school led to parents becoming dissatisfied and frustrated (Ward et al., 2014). Parents likely complained that their children did not receive an adequate education if the children were not able to pass the graduation requirement tests. Parents may also feel that their children are being discriminated against since they are not able to graduate due to failing a test that they are not capable of passing. (McDermott & McDermott, 2002; Sackel, 2006).

The perception that students were being held to unrealistic standards led to lawsuits and will likely lead to further litigation (Wrightslaw, 2004). During the 2001–2002 school year, P–12 spending was nearly \$433 billion (Mathis, 2003). Litigation by dissatisfied parents and students may create the need to divert valuable resources to fund legal defense. It is imperative that data be analyzed to determine if these billions of dollars of federal monies are truly being used to leave *no* child behind. One would speculate that these billions of dollars could prove more useful for other resources in the educational system. The Supreme Court, in the unanimous decision of *Endrew F. v. Douglas County School District* (2017), concluded that students with disabilities deserve an education that helps them grow and thrive, rather than the current standard of *de minimus* or minimum progress (DeVos, 2017). A unanimous decision suggested that partisan politics was not a significant influence.

From 1992 to 2001, the percentage of students with disabilities increased from 10.6% to 12.3% and has continued to grow (Greene & Forster, 2002). By 2015, the percentage had risen to 13% of all students in the public school system (NCES, 2017). It is not clear if this rise is due to students being inappropriately placed or if schools are placing lower performing students in special education as a method of getting them more individualized instruction and subsequently raising their schools' statewide test scores (Theoharis, Causton, & Tracy-Bronson, 2016). The NCLB legislation indicated that students with disabilities should be able to perform (with or without accommodations) at the same level as their peers. Ford (2012) discussed that the overrepresentation of some populations in special education occurred in high-incidence categories such as mild cognitive and emotional behavior disabilities.

The apparent increase in the number of students placed into special education has also caused a teaching shortage in that area. Nearly all 50 states report a shortage of special

education teachers (West & Hardman, 2012). Teachers may experience frustration over what they perceive to be excessive demands related to accountability. This frustration may influence their decisions to remain in the profession or influence the decisions of young adults who are considering the profession (Eslinger, 2012). The increased expectations placed on teachers may cause them to feel scrutinized and under pressure to produce high test scores, particularly teachers of students who are already well below grade level in their academic achievement and are unlikely to succeed on a grade-level test. Additionally, students with disabilities have sometimes played a role in a school not making AYP, simply by not being able to achieve on grade level on high-stakes tests. Under NCLB, these students are included in the expectation that all would achieve 100% proficiency by 2014 (Husband & Hunt, 2015; Purcell, East, & Rude, 2005; Rose & Gallup, 2004).

IDEA required that educators deliver the same standards-based instruction to both general education students and students with disabilities (Witzel & Riccomini, 2007). All teachers at the secondary education level were expected to be highly qualified in each content area they taught. However, secondary special education teachers were expected to be highly qualified in each content area they taught (Mason-Williams, 2015) in addition to their expertise in educating students with disabilities (Bouck, 2007; “Highly Qualified,” 2007; Purcell et al., 2005; Steinbrecher, McKeown, & Walther-Thomas, 2013). Special education teachers accounted for the largest percentage of teachers who were not considered Highly Qualified (“Highly Qualified,” 2007; Steinbrecher et al., 2013). If content area teachers were expected to be proficient in the many areas of disabilities of the students they were responsible for teaching, it seems likely that few of them would be considered Highly Qualified. It is plausible that this has caused discord between general and special education teachers, creating further stress and

result in widening the achievement gap between students with disabilities and their non-disabled peers in an area where there is already a widespread shortage of teachers (Smith, 2005). It is important to keep in mind that the definition of highly qualified varies among the states (Bouck, 2007; Steinbrecher et al., 2013). A shortage of highly qualified special education teachers was prevalent, particularly in high-poverty areas (Mason-Williams, 2015).

General education intervention (GEI) and creative problem solving (CPS) techniques were used for low achieving students, often those who likely had some sort of disability but were not yet placed into special education when determining eligibility (Finkel, 2011). For example, a student who was exposed to prenatal drug use and subsequently performed poorly in school may have a learning disability. The multidisciplinary team could suggest that although there is a correlation between prenatal drug exposure and cognitive functioning (Schweitzer et al., 2015), the student would not be referred for special education services due to the already overwhelming number of such students in the school. The multidisciplinary team may instead recommend the student receive further general education interventions in the classroom (Fuchs & Fuchs, 2007; Kame'enui, 2007).

There are some alarming clues that suggest the direction where education reform is currently headed in terms of students with disabilities. At her confirmation hearing, Education Secretary Betsy DeVos seemed unfamiliar with the federal protections of IDEA (Papenfuss, 2017). Attorney General Jeff Sessions, who now has the authority to uphold federal laws, reportedly criticized IDEA when he was a state senator, saying that it was a complex set of laws that created “special treatment for certain children” (Papenfuss, 2017, para 3). DeVos rescinded 72 memos and removed them from the USDOE’s website (Rueckert, 2017). These memos had provided regulatory guidance to schools and parents specific to the implementation of IDEA and

the Rehabilitation Act for students with disabilities (Rueckert, 2017). After reflection on her first year in the office, DeVos stated that civil rights laws and IDEA were critical priorities for the USDOE (Green, 2018).

Teachers' groups evaluated DeVos's first year in office and expressed their disappointment with "her [poor] performance protecting students' civil rights, ensuring educational equity and providing funding for students of color and low income students" (Toppo, 2018, para 1). DeVos articulated four goals for the Department of Education (Camera, 2017; Green, 2018), which are summarized following:

1. She continues to promote school choice for parents, and there was some fiscal support of this goal when the recent tax cut legislation authorized parents to use 529 funds to pay for private school tuition.
2. She supports a smaller Department of Education "footprint" and the elimination of regulations she feels are unnecessary, such as those that protect students with disabilities or victims of sexual assault.
3. She believes she is following the law in her approval of state plans under ESSA, although she has been accused of ignoring the needs of low performing students.
4. She has signaled a shift from preparing students for 4-year colleges to apprenticeships and vocational training programs.

Graduation Rates

In addition to improving test scores in a way that meets the standard of AYP, schools must also demonstrate an increase in graduation rates (Kim & Sunderman, 2005; USDOE, 2015). Graduation rates are typically based upon the percentage of students who pass a comprehensive examination (Hickcox, 2015). Preparing students to pass this comprehensive exam includes

making the curriculum more stringent and assessment more rigorous, which put students with disabilities at a disadvantage (Hickcox, 2015).

Graduation rates must be “disaggregated by race/ethnicity, income status, disability status, English proficiency, gender and migrant status” (Christle, Jolivet, & Nelson, 2007, p. 326). Some school personnel have indirectly suggested to low-performing students that the students should drop out, which inflated the graduation rates of the schools (Lewis, 2007; Shriberg & Shriberg, 2006). Even with the disaggregation mandates, the fact that some school personnel would suggest students drop out revealed an inconsistency in the reporting of graduation rates (Swanson & Chaplin, 2003). Students who were encouraged to drop out in order to increase graduation rates were referred to as “push outs” (Schargel, 2008, p. 65).

The National Education Association’s former President Reg Weaver recommended more focus be placed on graduation rates instead of test scores and recommended a requirement that students either graduate or achieve an equivalent outcome (Jehlen, 2007). Essentially, it could be deduced that graduation is synonymous with being awarded a diploma. Employers who required a diploma, as many still do, meant available jobs were not available to those students who did not graduate (Hickcox, 2015). Diplomas may not determine, with any amount of certainty, an individual’s performance on the job (Hickcox, 2015).

In addition to increasing graduation rates, requiring students either to graduate or to earn an equivalent diploma would likely decrease the dropout rates and possibly reduce crime rates and unemployment rates (Carter et al., 2005; Hickcox, 2015; Losen, 2005; Messacar & Oreopoulos, 2013; Stern, 2007). Many states began awarding some sort of diploma equivalent, such as a certificate of completion, to students who did not pass statewide testing but successfully completed course requirements (Hickcox, 2015). Increasing graduation rates by

awarding some type of diploma would also allow students to pursue further education at postsecondary institutions or join one of the U.S. Armed Forces.

Graduation rates have declined since 1984, but they have dropped significantly since the high-stakes testing mandate of NCLB (Shriberg & Shriberg, 2008). In fact, students who earned higher grades but performed poorly on high stakes exams were less likely to graduate than those who earned lower grades but did better on the exams. There is evidence that graduation requirement exams lowered graduation rates. NCES reported a decline in the graduation rates of each of the five states that required the exams between 1998 and 2001 (Perkins-Gough, 2005).

The American Educational Research Association has reported that nearly all experts in education agree that graduation should not be based upon a single test. A survey indicated that 78% of educators did not feel that high stakes testing would increase achievement (Marley, 2004). Many teachers felt that their professional expertise was not utilized when decisions were made about students graduating (Flores & Clark, 2003). It is possible that experts in education are not being heard. The American Psychological Association (APA; 2001) contended that high-stakes testing does identify whether a school is performing satisfactorily, but more research is likely needed on the use of accommodations by students with disabilities, dropout rates, and other variables that are influenced by the impact of NCLB. The first page of Ted Sizer's 2013 book published following his death opined that more focus should be placed on research-based learning strategies (Farnan, Hudis, & LaPlante, 2014).

Dropout Rates

More than one million students dropped out of America's schools each year throughout much of the Clinton presidency following the implementation of NCLB (Peters, 2007); however, dropout rates have been decreasing over the past several years (McFarland, Stark, & Cui, 2016).

It has been apparent for many years that the highest dropout rates have been found in schools with large numbers of disadvantaged students, frequently including a high percentage of African American and Hispanic students (DePaoli et al., 2015; Ketterlin-Geller et al., 2007; Samuels, 2007a; Shriberg & Shriberg, 2006). Additionally, a correlation has been found between schools with high dropout rates and high poverty rates, largely in urban areas (Muñoz, Fischetti, & Prather, 2014). In fact, the schools that accounted for nearly 80% of dropouts were found in only 15 states (Lewis, 2004; Shriberg & Shriberg, 2006). Clearly, there are factors beyond the classroom that influence students' decisions to drop out.

Familial, social, and community relationships, in addition to individual circumstances, can influence the decision of a student to dropout (Schargel, 2008). A U.S. Department of Labor report in 2014 reported that students who dropout are often unemployed or earn substantially less money than their educated peers if they are employed (McFarland et al., 2016). The annual median salary of those with any type of high school graduation diploma was nearly 40% higher than that of an adult who had dropped out (McFarland et al., (2016).

Dropouts have higher rates of incarceration, higher rates of illness, and dependence on public assistance such as Medicaid and Medicare for healthcare and other forms for living expenses and necessities (Garfinkel et al., 2010; McFarland et al., 2016). Not only does this have a negative effect on the students themselves, but on this country's economy due to these individuals' earning over \$600,000 less than those who did not dropout; and they are also paying substantially less in taxes (Christle et al., 2007; McFarland et al., 2016; Peters, 2007).

It is estimated that millions of dollars are spent in lost wages and prison costs or simply adverse postsecondary outcomes for those who drop out of school (Carter et al., 2005; Losen, 2005; Stern, 2007). An excessive number of those individuals living in residential facilities for

treatment of mental illnesses were found to have dropped out of high school (McFarland et al., 2016). However, insufficient research has been done to suggest strategies to decrease successfully the rate (Samuels, 2007a). The U.S. Senate Education Committee recommended funding to those schools with the highest dropout rates and to those who research interventions to decrease those rates (“Graduation Gap,” 2007; Hoff, 2007). Peters (2007) recommended that communities get involved in lowering the dropout rates. Teacher education programs considered taking measures to incorporate strategies within teacher preparation courses to decrease dropout rates (Farnan et al., 2014).

It has been suggested that academic performance during a student’s freshman year might indicate the likelihood of staying in school or dropping out (Easton & Allensworth, 2005; “Graduation Gap,” 2007; Schargel, 2008). In fact, students who earned at least the average amount of credits during their freshman years were more than three times as likely to graduate as those who did not (Easton & Allensworth, 2005; “Graduation Gap,” 2007). One such study, conducted by Johns Hopkins, reported an 85% probability to graduate for students who complete the freshman year in one year or less (Schargel, 2008).

Students may drop out in the 8th grade if they are in danger of grade-level retention due to test scores (Phillips, 2006). Students spend much of their instructional days on English/language arts and mathematics because those are areas in which students often lack skills and the two content areas comprise many high-stakes and standards-based tests. Consequently, students can become frustrated or disinterested, which can lead to lack of motivation, behavioral concerns, and dropping out (Cavanaugh, 2006). Aside from lack of personal influence, the home, school, and community environments are heavily influential in a student’s decision to drop out,

especially if one or both parents dropped out (Schargel, 2008). It was suggested that NCLB did not consider these environmental factors (Lagana-Riordan & Aguilar, 2009).

Dropout rates and graduation rates both factor into a school's accountability under NCLB. Schools were required to report graduation rates but were not required to report dropout rates, although many chose to do so (Swanson & Chaplin, 2003). States reported dropout rates differently because of the lack of a uniform definition (Christle et al., 2007; Lehr, Johnson, Bremer, Cosio, & Thompson, 2004). It is possible the lack of specificity for reporting dropout rates has caused concern about school accountability, but factors beyond the classroom have also influenced dropout rates. Dropout rates increased following implementation of NCLB; however, Klein (2016) speculated that rates may either be leveling out or even declining following ESSA. President Obama said in a 2010 speech that reducing the dropout rate is "an economic imperative if the United States is going to remain competitive in the global society" (as cited by Zeleny, 2010, para 10).

English/Language Arts and Mathematics

English/language arts has become a heavily emphasized content area with NCLB and ESSA (Penuel, Meyer, & Valladares, 2016). However, the reading level of composite tests is not always consistent with the test level. For example, one study of a reading ease scale showed that half of the reading passages were one grade level higher than the test level (Meek, 2006). Yet Meek (2006) found other discrepancies with mismatch of test reading passages and students' taking the test. Meek revealed that in California about one fifth of the participants were at least two grade levels higher than selected reading passages on the statewide test. Beyond these issues, requiring schools to disaggregate data, including scores of students with disabilities and

students with limited English proficiency, was intended to help schools identify if distinct populations were not achieving at an acceptable rate in English/language arts (Houston, 2007).

Teachers in the areas of English/language arts and mathematics have experienced substantial scrutiny and have been held highly accountable for the performance of their students (Marita & Hord, 2017; Witzel & Riccomini, 2007). Teacher education candidates enrolled in those majors should be made aware of the expectations that will be placed upon them immediately as they enter the field (Brookfield, 2017; Ericsson, 2005). Teachers must also use literacy skills in their respective content areas (C. Thomas & Wexler, 2007; Wilcox, 2006). This has become increasingly important as more content areas have been added to statewide testing as mandated by NCLB and ESSA. Increased emphasis on accountability for students being educated and assessed on grade level and college and career preparation has been amplified by ESSA even though it had been brought to public attention during the implementation of NCLB (Marita & Hord, 2017). Expecting students to develop higher-level critical thinking skills and the ability to creatively and effectively solve problems is necessary if they are going to contribute to the future welfare of society, but the current system puts educators under additional stress (Marita & Hord, 2017).

According to the National Assessment of Educational Progress's (NAEP) long-term trend data, there have been significant gains in overall mathematics test scores, but the increase tended to taper off when it approached the upper grade levels (Perie, Moran, & Lutkus, 2005). Students with intellectual disabilities often have problems with math concepts, particularly with word problems in early grades, which only worsens in the latter grades (Marita & Hord, 2017). This has been particularly noticeable in higher-order thinking and problem-solving tasks (Marita & Hord, 2017). Hence, mathematics has continued to be an area of distress for many teachers and

students alike (Marita & Hord, 2017). Mathematics teachers would likely benefit from additional curricular professional development to close the achievement gap between high-performing and low-performing students. Nearly 75% of teachers used an adopted textbook as a primary driving force in their instructional plans or use a test blueprint provided by one of the major testing companies such as Pearson (Farnan et al., 2014; Witzel & Riccomini, 2007). Teachers and others supporting instruction in districts might feel by doing this they have a form of documenting that they are teaching the material in which the district would be tested and that teaching was based upon standards. This is not to say that textbooks do not have any value as they have become larger, most likely to align with content standards (Schargel, 2008).

Ongoing professional development in content areas is required for nearly all teachers in some capacity, either for evaluation or license renewal purposes. However, one study reported that fewer than half of English/language arts and mathematics teachers received any professional development in their respective content areas (“Graduation Gap,” 2007). Many schools have emphasized use of the instructional day for teaching English/language arts and mathematics to fulfill AYP, at the expense of reducing instruction in other content areas (Cavanaugh, 2006; Jennings & Rentner, 2006; Rothstein & Jacobsen, 2006). Schargel (2008) said, “Knowing what not to teach is as important as knowing what to teach” (p. 38). This quote is meaningful when considering both the historical and the future contexts of how the instructional day should have its time allocated.

Research indicated that there is benefit from the inclusion of lower-achieving students in classrooms with general education students, or at least it does not seem to lessen achievement of either group (Bouck, 2007; Jellison, Draper, & Brown, 2017). Research has additionally shown that achievement gaps have existed not only using designation of students eligible to receive

special education services and general education but among students of all types (Schargel, 2008). Further making the point that achievement may be more related to history than inclusion is the fact that the achievement gap appeared to lessen during the 1970s and 1980s (Schargel, 2008).

High-Stakes Testing

The use of testing to make schools accountable for student learning would seem to make sense, but high stakes testing often does not. Requiring a specific test score to be promoted to the next grade or, in some cases, to graduate with a high school diploma has the potential to increase dropout rates and lower graduation rates (Johnson et al., 2005; Tavakolian & Howell, 2012). Most students who possessed high achievement skills were able to perform well on high stakes testing (Pazey, Heilig, Cole, & Sumbera, 2015). However, students who were below average, had disabilities, or were not able to pass the test were at a substantial disadvantage when a single, high-stakes testing outcome determined advancement or graduation with a diploma (Pazey et al., 2015). According to Kohn (2000) and Benner, Boyle, and Sadler (2016), when schools were compared, the variability in test scores was often indicative of the child's family structure, the level of education of the parent(s), the demographics of the community, and the poverty rate. Although these variables influence a school's AYP, collection of this data is not required (Coladarci, 2005; Lederman & Burnstein, 2006; Mele-McCarthy, 2007; Rose & Gallup, 2004). It would appear that contributing factors relevant to AYP outcomes are not always considered.

Kim and Sunderman (2005) reported that performance on testing could be considered the most critiqued issue in education in America in this century. Ravitch (2016) wrote in the title of a book that testing is "undermining" American education. Students with disabilities do poorly

on graduation requirement exams. For example, in New York, only 5.7% of students with disabilities were proficient in reading, and 10.6% were proficient in mathematics (Samuels, 2016). Similarly, only 6% of high school seniors with disabilities scored proficiently on the NAEP, a test that is often considered to be the gold standard for measuring achievement (Samuels, 2016, 2017). Even with this evidence, only 2–3% of students with disabilities can be considered for a different form of testing (Meek, 2006). The NCLB policy allowed for 3% to have alternative testing (1% is designated for those with severe cognitive disabilities and 2% is designated for those with mild cognitive disabilities) and were allowed to take a test at another level (Pascopella, 2007; Samuels, 2007b).

Researchers have focused on the impact of high-stakes testing, but there appears to be a lack of empirical research to support a negative impact, or even a positive one. States reported data differently, which could have influenced findings (Sparks, 2016).

Conclusion

The conflicting literature available regarding NCLB provides a challenge to education administrators who are looking for policy guidance. Much of the contradictory information appeared to be speculation and contained opinion without solid quantitative research to substantiate claims. This study appears to be unique in the fact that it contains statistical analysis from officially reported data. The methodology for carrying out the analysis is in the following chapter.

CHAPTER 3

METHODOLOGY

“The great aim of education is not knowledge but action.” —Herbert Spencer 1820–1903

This chapter describes the process used to complete this study. This chapter is organized into the following sections: (a) research statement and questions, (b) hypotheses, (c) description of sample, and (d) procedures.

Research Questions

The following research questions directed this study:

1. Is there a statistically significant difference in the percentage of students with disabilities in public schools identified before and after the implementation of NCLB?
 H_01 : There is no statistically significant difference in the percentage of students with disabilities in public schools identified before and after the implementation of NCLB.
2. Is there a statistically significant difference in the overall graduation rates of students with disabilities and general education students in public schools before and after the implementation of NCLB?
 H_02 : There is no statistically significant difference in the overall graduation rates of students with disabilities and general education students in public schools before and after the implementation of NCLB.

3. Is there a statistically significant difference in the overall dropout rates of students with disabilities and general education students in public schools before and after the implementation of NCLB?

H₀₃: There is no statistically significant difference in the in the overall dropout rates of students with disabilities and general education students in public schools before and after the implementation of NCLB.

4. Is there a statistically significant difference in the English/Language Arts composite scores on statewide testing for students with disabilities and general education students in public schools before and after implementation of NCLB?

H₀₄: There is no statistically significant difference in the English/Language Arts composite scores on statewide testing for students with disabilities and general education students in public schools before and after the implementation of NCLB.

5. Is there a statistically significant difference in the mathematics composite scores on statewide testing for students with disabilities and general education students in public schools before and after the implementation of NCLB?

H₀₅: There is no statistically significant difference in the mathematics composite scores on statewide testing for students with disabilities and general education students in public schools before and after the implementation of NCLB.

Description of Sample

The sample for a study is two-fold. One, the sample for a study should be selected from a population. Secondly, the results obtained from the sample of the study should be able to be generalized to the larger population (Gravetter & Wallnau, 2017). Samples can consist of different sizes depending on what is appropriate for the study. The sample for this study is

represented by student demographics reported in selected states with the intention of being able to be generalized to the students in the United States as a whole.

According to Fraenkel and Wallen (2008), the population for a study should be such that the data used for the sample provides ample information about each of the variables being researched. The population of a study should include every person or group of individuals to which the researcher wishes to generalize results (Gravetter & Wallnau, 2017). Although specific size is not required to be included in a population, study samples are often inclusive of many individuals or groups. The population for this study was comprised of secondary school students in the United States.

In order to obtain an appropriate sample to be representative of the population, the process of random sampling was used. Random sampling is done in a manner that provides each member of the population with the same opportunity to be selected. Random sampling also requires that the probability of being selected must remain constant, so sampling with replacement was used in this study (Gravetter & Wallnau, 2017). This type of random sampling is referred to as simple random sampling (Fraenkel & Wallen, 2008).

In this study, the population included public school data from each of the 50 states and the District of Columbia ($N = 51$). Three random samples of 17 ($n = 17$) were taken in an attempt to successfully obtain all data needed from a minimum of 15 of those states ($n = 15$). The data for the sample were collected from a combination of the individual State Departments of Education, the USDOE, and the NCES. The method used to obtain a random sample for this study is discussed in the data collection section.

Procedures

Data Collection

Random sampling for this study was accomplished by using a table of random numbers. One such table is found in Fraenkel and Wallen's *How to Design and Evaluate Research in Education* (2008). The states were numbered in alphabetical order and Washington, D.C., was issued number 51. The first nine states were designated as 01, 02, and so on, up to 09. Each number in the table was five digits in length. Beginning with the first number in the upper left column, any number with a 01 through 51 in its first two digits was listed in order 01–17, 18–34, and 35–51.

After the three groups of 17 were selected, the middle group was chosen for the study. Therefore, the states that were numbered 18–32 were chosen for the sample. Within this sample, data was available for 16 states, which met the study's required minimum of 15 states.

Demographic percentages were obtained for each of the states selected from the aforementioned random sampling. The data reported were disaggregated based upon each state's determination of its subgroups. The data were collected from the databases for the NCES and databases from individual State Departments of Education. In some instances, neither source provided precise nor sufficient data, and some State Departments of Education were contacted to request publicly available data. All data that were collected were available to the general public, therefore, the study was exempt from IRB approval, although approval was given to proceed. The data from each state were recorded into the SPSS software for analysis.

Data Analysis

Validity is present when inferences can be made based upon the results, meaning, and interpretation of collected data. For this study, I was concerned with criterion-related validity.

Criterion-related validity observes relationships or lack of relationships between two or more variables at different times. It can also be used to make predictions or inferences about the likelihood of future outcomes of variables if measured again (Fraenkel & Wallen, 2008).

Simplified validity determines if the study measures what the researcher intends for it to measure. This study analyzed individual state's selected demographic percentages to determine if a statistically significant difference appeared in the 2003–2004 and 2007–2008 school years.

A dependent t test was conducted for each variable. This analysis was appropriate for this study to compare means before and after the implementation of treatment, or in this case, mandated educational reform legislation. SPSS was used to analyze the difference between the means of three different variables for each state in the sample, before and after implementation of the legislation. Mean scores (X) are the sample means that are thought to be representative of the mean of the population (μ ; Gravetter & Wallnau, 2017).

A significance level threshold of .05 was used. A 5% probability that significance would be found when no significance was present, a Type I error. A finding with a p level of greater than .05 would not be considered statistically significant. A two-tailed test was used to include a finding in either direction. An alpha level (α) of .05 and a df of 15 in this study set the critical region to ± 2.145 (taken from a t -distribution statistical table).

CHAPTER 4

RESULTS

“If you do what you have always done, you’ll always get what you always got.”

—Henry Ford

It was anticipated that data necessary to compare the results of statewide testing of English/language arts or mathematics for general education students and students with disabilities would be available; however, it was not. Many individual schools or districts reported that they informally analyzed such data. A minute group of states reported passing rates for any group or subgroup for the designated 2003–2004 year, and in some cases, they reported the percentage of those who received special education services or a designated alternative assessment. However, states did not report scores specifically in English/language arts or mathematics. The same was found for 2007–2008. It appears that states considered graduation rates to be the percentage of students who passed statewide qualifying exams, and they did not collect the data necessary to answer this research question. It was expected that this data would be available based upon literature reviewed prior to carrying out the study. The following narrative explains how data was collected.

These states were randomly selected as the sample: Alabama, Connecticut, Illinois, Kansas, Kentucky, Maryland, Michigan, Mississippi, Nevada, North Carolina, North Dakota, Pennsylvania, Rhode Island, Utah, West Virginia, and Wisconsin. Initially, much of the data

needed to carry out the study were accessible through either State Departments of Education annual reports and websites and through contacting and searching through the public data sets from the NCES. This was indicated as the proposed method to obtain percentages; however, after months of failed attempts to collect disaggregated data for English/language arts and mathematics scores, multiple attempts were made to contact individual State Departments of Education and specific data experts at the NCES. It was during a lengthy phone conversation with an individual at the NCES that it was confirmed that there were insufficient data reported to adequately analyze and accept or reject the null hypotheses. The remaining hypotheses were addressed with the data available.

Percentage of Students with Disabilities

Hypothesis 1

It was hypothesized that there would be no significant difference in the percentage of students with disabilities in public schools identified before and after the implementation of NCLB. Results indicated there was no statistically significant difference in the percentage of students receiving special education services (SPED) after the implementation of the NCLB policy in 2003 (Table 1). The null hypothesis failed to be rejected.

Table 1

Comparison of Percentages of Students Receiving Special Education Services

Academic Year	Mean (<i>n</i> = 16)	<i>SD</i>	<i>t</i>	<i>p</i>
2003–2004	14.38%	2.61	1.615	.127
2007–2008	13.73%	1.93		

Graduation Rates

Hypothesis 2

It was hypothesized that there would be no significant difference in the overall graduation rates of students with disabilities and general education students in public schools before and after the implementation of NCLB. Results indicated there was no statistically significant difference in the graduation rates after the implementation of the NCLB policy in 2002 (Table 2). The null hypothesis failed to be rejected.

Table 2

Comparison of Graduation Rates

Academic Year	Mean (<i>n</i> = 16)	<i>SD</i>	<i>t</i>	<i>p</i>
2003–2004	84.52%	8.11	.475	.642
2007–2008	83.38%	7.59		

Dropout Rates

Hypothesis 3

It was hypothesized that there would be no statistically significant difference in the overall dropout rates of students with disabilities and general education students in public schools before and after the implementation of NCLB. Results indicated there was no statistically significant difference in the school dropout rates after the implementation of the NCLB policy in 2003 (Table 3). The null hypothesis failed to be rejected.

Table 3

Comparison of Percentages of Students Who Dropped Out

Academic Year	Mean (<i>n</i> = 16)	<i>SD</i>	<i>t</i>	<i>p</i>
2003–2004	3.62%	1.21	-.999	.334
2007–2008	3.84%	1.33		

English/Language Arts

Hypothesis 4

It was hypothesized that there would be no statistically significant difference in the English/Language Arts composite scores on statewide testing for students with disabilities and general education students in public schools before and after the implementation of NCLB. Insufficient data were available to test this hypothesis.

Mathematics

Hypothesis 5

It was hypothesized that there would be no statistically significant difference in the mathematics composite scores on statewide testing for students with disabilities and general education students in public schools before and after the implementation of NCLB. Insufficient data were available to test this hypothesis.

CHAPTER 5

DISCUSSION AND RECOMMENDATIONS

“It takes a village to raise a child.” —African Proverb

The purpose of this study was to examine key elements of the NCLB policy to determine if this highly publicized and subsequently scrutinized reform had a significant impact on specific variables. The intent behind NCLB was to ensure that disadvantaged students could receive the best education possible. Initially, some may have been optimistic that requiring unprecedented accountability would raise the academic standing of American schools in comparison with other developed nations. Educators were and continue to be distressed by the media’s reporting of the dismal academic achievement of students in American schools (Croft et al., 2015). This study intended to determine if improvement had occurred and if NCLB had an effect on school outcome measures.

Despite the attempt to narrow the achievement gap between special education students and general education students, the literature reports conflicting evidence. The necessary data were not available to reject the null hypotheses related to English/language arts and mathematics. Moreover, it cannot be concluded on the basis of this study that NCLB has reached its intended goal. In this study, no significant change was found in the number of students with disabilities, graduation rates, or dropout rates. The null hypotheses for these variables could not be rejected. Consequently, it cannot be concluded that NCLB has had any effect in the areas of students with

disabilities, graduation rates, or dropout rates. It seems that, as revealed in the literature review, the most important effect of NCLB was the pressure it exerted on states to recognize the need for accountability of student outcome measures.

Discussion

Education reform competes heavily with other legislative priorities, such as healthcare, immigration, and forms of public assistance. Information about statewide testing scores for English language learners, the number of students receiving free or reduced lunch, and data related to other selected groups appeared to be more readily available than for general education students and students with disabilities. This is important to note, given the large amount of funding that goes into special education services and statewide testing. It is not unreasonable to expect schools to be accountable to their constituents, given the financial resources that are provided for them.

As stated in Chapter 1, no previous reform appeared to gain the attention of Americans as much as George W. Bush's signing and implementation of NCLB. With bipartisan support, this educational reform was significant because it gave the federal government a larger role in the system of public education and diminished the role of states (Chopin, 2013). It required states to be accountable to the federal government for providing equitable education to enable every student to be successful and to document that success (Chopin, 2013). It also required states to make the necessary changes when they found that student outcomes were not satisfactory (Chopin, 2013).

The discussion will begin with a review of the research questions that guided this study and related findings, followed by an analysis of the selected variables, why they were considered

important, and implications for stakeholders. An independent samples t test was conducted for each variable in order to determine if significance was found between the means of those variables in data extracted before and after the onset of NCLB.

Question 1: Is there a statistically significant difference in the percentage of students with disabilities in public schools before and after the implementation of NCLB?

The goal of NCLB was to close the achievement gap and bring 100% of students to a level of proficiency. Results indicated there was no statistically significant difference in the percentage of students with disabilities who were therefore eligible for special education services after the implementation of the NCLB policy in 2002. Students with disabilities could be described as a vulnerable group of students who could easily be “left behind” without targeted intervention and support. However, Cummings and Bain (2014) found that a more egalitarian approach that did not emphasize streaming or transferring students with academic or behavior problems to alternative educational settings predicted higher reading scores. Cummings and Bain (2014) also discussed the example of Japan, which is considered to have a highly egalitarian approach to providing education. Japan consistently produces high scores on the OECD PISA testing (Cummings & Bain, 2014). However, the cultures of Japan and the United States are very different. Japan values collectivism over individual achievement yet the United States values rugged individualism over group outcome (Cummings & Bain, 2014). It is suggested that an egalitarian approach to education in the United States may not be easily achieved. Condron (2011), however, argued that egalitarian education, which PISA has shown to be correlated with higher achievement, is a realistic goal for an affluent society such as the United States. I would argue that although egalitarian education may be an honorable approach,

it is inconsistent with the competitive, individualistic culture of the United States and not likely to be implemented successfully.

The literature indicated that there was an increase in the number of students with disabilities (Greene & Forster, 2002; NCES, 2017), yet this study found no statistically significant increase. One possible explanation for this may be related to the earlier suggestion that students with disabilities are sometimes diverted from special education services because of a school's need to manage limited resources (Fuchs & Fuchs, 2007; Kame'enui, 2007). Although RTI was overtly intended to provide the least restrictive intervention necessary, its unintended effect has been to serve as a gatekeeping mechanism and limit the number of students who were referred for special education services (Kauffman, Hirsh, Badar, Wiley, & Barber, 2014).

Essentially, the RTI initiative is not altogether different from what was formerly called General Education Intervention (Preston et al., 2016). In RTI, general education classroom teachers are required to employ three or more stages (tiers) of interventions and collect comprehensive data on the efficacy of those interventions before beginning the process of obtaining parental consent and requesting a psychoeducational evaluation to determine eligibility as explained in the 2004 IDEA reauthorization (Wright, 2004). Zirkel and Thomas (2014) found that state requirements of the duration of interventions in each tier lacked uniformity, and the majority did not specify duration at all. In a survey of the laws of 27 states related to RTI implementation, only Oklahoma specified Tier 1 duration of four to six weeks; New York's guidelines recommended a Tier 1 duration of a year (Zirkel & Thomas, 2014). Duration of Tiers 2 and 3 ranged from six weeks to 16 weeks (Zirkel & Thomas, 2014). Zirkel (2012) found that the duration of each step contributed to the delay of initiating special education services. This

multi-step process is sometimes described as “red tape” by frustrated teachers who may see an inarguable need for more intensive services for some students (L. Gibson, personal communication, March 21, 2018).

The need for schools to tightly manage limited resources may also be related to the shortage of special education teachers (West & Hardman, 2012). The expectations of special education teachers, such as being certified as highly qualified in multiple content areas in which they teach and managing increased caseloads, are extremely high (Bouck, 2007; “Highly Qualified,” 2007; Purcell et al., 2005; Steinbrecher et al., 2013). Schools that do not have an adequate number of highly qualified special education teachers must necessarily limit the number of students with disabilities who receive special education. Limiting students’ access to special education through processes such as RTI is one way of coping with a shortage of special education teachers.

Question 2: Is there a statistically significant difference in the overall graduation rates of students with disabilities and general education students in public schools before and after the implementation of NCLB?

Results indicated there was no statistically significant difference in the graduation rates after the implementation of the NCLB policy in 2002. For many students, graduation is a necessary requirement for the next step in self-sufficiency. Independent living often hinges on high school graduation. Graduation allows students the choice of pursuing additional education at postsecondary institutions, engaging in skill apprenticeships, or joining the U.S. Armed Forces. The weekly earnings of students with a high school diploma far exceeds that of students without a diploma (Bureau of Labor Statistics [BLS], 2016). The BLS reported that the median weekly earnings for individuals with *no* high school diploma was \$504. By comparison, the

median weekly earnings for individuals *with* a high school diploma was \$692, an increase of nearly 40% (BLS, 2016). Similarly, the unemployment rate for individuals with and without a high school diploma was 5.2% and 7.4%, respectively (BLS, 2016). Outside the findings of this study, graduation rates have been found to have fluctuated because schools have been allowed to offer alternative statewide testing and to exempt some students altogether from testing (Meeks, 2006; Pascopella, 2007; Samuels, 2007b). Perhaps funding formulas could help to explain fluctuations in graduation rates. Clearly, graduation is an important element to students' future economic success. Schools are encouraged to remove barriers to graduation, such as threshold scores on high-stakes tests.

It was disappointing to read about leaders, such as those in Alabama, New York City, and Georgia, who admitted to reporting graduation rates inaccurately in order to falsely inflate the percentage (Carsen, 2016; Sparks, 2016). It is unknown if this activity is widespread or isolated. Inaccurate reporting of graduation rates could have affected this study's finding of no significant difference in graduation rates. The definition provided in Chapter 1 for graduation rates was used for this study, but a review of the literature, past and present, showed different understandings of what defined graduation rates. Having a definition of graduation rates that is shared by all states would help researchers to make accurate comparisons.

NCLB requires that states report graduation rates, but dropout rates do not have to be reported. This requirement puts pressure on states to report favorable graduation rates. An unintended consequence was that some graduate rates were manipulated so that a state could be portrayed more positively, as in the case of the Alabama, New York, and Georgia schools (Carsen, 2016; Sparks, 2016). It is to everyone's benefit, states and students, to increase graduation rates. If states cannot demonstrate improved educational outcomes in the form of

graduation rates, it raises the question of whether the expanded role of the federal government was effective or necessary, despite bipartisan support.

States have administered high-stakes testing to students to determine their readiness to graduate. For some students, particularly students with disabilities, high-stakes testing represents a demoralizing exercise in futility. Use of graduation requirement exams lowers graduation rates (Perkins-Gough, 2005); thus, it seems reasonable to consider practices and alternatives.

Students vary on test performance based on differences in reinforcements, the amount of time spent on learning test-taking strategies, and the amount of assistance with which they are provided during tests (Phillips, 2006). It is possible that requiring students with disabilities to meet the same standards as those without disabilities could affect student motivation, but that intended outcome would likely be difficult to measure. Students with disabilities should be encouraged to participate in the general education classroom to the extent they are able (Mele-McCarthy, 2007; Ysseldyke et al, 2004). It must also be determined if such participation is conducive to their postsecondary transition plans. Instruction and accommodations can have a direct impact on special education students' scores on high-stakes testing and on their likelihood of being presented with a high school diploma via a waiver process or certificate of completion (Ysseldyke et al., 2004).

Literature related to high stakes testing typically refers to its use in making important decisions, such as high school graduation. However, it is possible to maintain the requirement of high-stakes testing for the purpose of teacher and school accountability without it being related to high school graduation. For example, instead of using the results of a single test, a high school diploma could be made contingent upon the satisfactory completion of required classes. At the same time, high-stakes testing could be implemented with the consequence of it being tied

to AYP rather than student graduation. In other words, the consequence of high-stakes testing would be that of the school's, not of the student's.

Although student success is often defined in academic terms, schools do more than provide academic instruction. Consequently, student success could be defined in nonacademic terms, as well. For example, not only do schools transmit knowledge, they teach critical thinking, socialization, problem solving, responsibility, work ethic, and civic engagement. For students who find passing high stakes testing unrealistic, they could demonstrate their success in other ways.

Question 3: Is there a statistically significant difference in the overall dropout rates of students with disabilities and general education students in public schools before and after the implementation of NCLB?

Results indicated there was no statistically significant difference in the school dropout rates after the implementation of the NCLB policy in 2002. Dropping out of school has been a persistent concern for decades and predicts a bleak future for students (BLS, 2016; DePaoli et al., 2015). The literature indicated that students who dropped out had poorer health, higher unemployment rates, and a higher risk of incarceration (BLS, 2016; Messacar & Oreopoulos, 2013).

It would seem that dropout rates could be more difficult to report due to so many charter, magnet, and other start up schools, such as homeschooling and online learning programs. In those instances, students may have dropped out of their assigned public school but did not drop out as defined for reporting purposes. Additionally, many school corporations, especially larger ones, offered childcare for students who became parents during high school. Although students lived within the physical boundaries of a district, they may have been considered dropouts if they

left public school to pursue another educational option, such as general education diploma or online schooling. It is believed this was not a concern for the years chosen for this study because fewer educational alternatives existed during the timeframe in which data was collected. Klein (2016) suggested that dropout rates may be leveling out, and the finding of this research is consistent with that assertion. The explanation for that is unclear. It is speculated that the current, low unemployment rate means that fewer jobs are available to students without a diploma, and this is a disincentive to dropping out.

Question 4: Is there a statistically significant difference in the English/Language Arts composite scores on statewide testing for students with disabilities and general education students in public schools before and after the implementation of NCLB?

Insufficient data were available to test this hypothesis. This was extremely discouraging when collecting the data for this study. This disaggregated information was to be reported for both years being studied, and there were a few states that did, in fact, report this information for one or both years. Although English language learners' test scores were sometimes reported, the English/language arts portion of the tests were not.

Question 5: Is there a statistically significant difference in the mathematics composite scores on statewide testing for students with disabilities and general education students in public schools before and after the implementation of NCLB?

Insufficient data were available to test this hypothesis. Mathematics was a content area in which America has consistently scored below other nations. This was initially noted mostly publicly with the launch of Sputnik and appears to still be the case. An emphasis on mathematics is taking place from prekindergarten through college (P-16) and beyond in the United States as part of the science, technology, engineering, and mathematics (STEM)

initiatives (Association of American Universities, n.d; Raby, 2015). It was surprising to discover that states did not want to report the composite scores of students with disabilities as a potential means of justifying lower overall scores.

Recommendations for Further Research

Although the USDOE and the NCES have both developed more precise data collection methods due to advances in technology, the validity of data reporting would still be worth further investigation. Numerous websites and media outlets revealed that some states inaccurately reported data, either intentionally or unintentionally. For example, all 50 states and now U.S. territories, report data on October 1 of each academic school year. The NCES, among others, such as the National Center for Education Evaluation and Regional Assistance, collect and publish public schools' reports of performance indicators such as attendance rates, expenditures per pupil, qualifications/credentials of faculty, faculty to student ratios, and more disaggregated data within each district (Garrison-Mogren & Guttman, 2012). The range of data specifications now available for reporting should assist any future studies to better determine the significance of reforms from ESSA and whatever initiatives may emerge in years to come.

Historically, special education legislation is continually evolving and changing, and there is no reason to expect this to change. General education teachers are accountable to stakeholders, including students and parents, for demonstrating that evidence-based interventions within the general education setting on a primary, secondary, and tertiary level have occurred before consideration is given to evaluating a student for special education eligibility. Further research should be conducted to determine if this is in fact reducing the number of students identified as eligible for special education as has been suggested in the literature, or if it is only delaying the eligibility determination (Kauffman et al., 2014). Given the stigma of having an exceptionality,

some parents may be reluctant to offer consent for psychoeducational evaluations to be conducted, potentially at the expense of their children being labeled with an exceptionality. If parental reluctance is an issue, currently instituted interventions in the general education classroom would help to ensure children receive services most likely to assure their academic success.

Students with disabilities have been affected by education reform for almost 50 years. Teacher evaluations and raises are based largely upon statewide testing performance under NCLB and ESSA, and it is not surprising that a shortage remains of those willing to teach students with disabilities. Likewise, professional development opportunities are reportedly inadequate (Gagnon et al., 2013). Future researchers may want to survey the differences in state-required credentials to teach special education. Similarly, reevaluating the credentials required by states may reveal changes that could be made that would address the nationwide shortage of mathematics teachers, as reported by a national accrediting body for teacher education programs. It is possible that a replication study will find that data will become more readily available and will provide the results that were desired for this study, including implications of the ESSA.

The rapid increase in the number of children identified as eligible for receiving services for autism spectrum disorder (ASD) may also increase the percentage of students with disabilities. Some students with ASD have above average intelligence, so that could have the effect of increasing test scores. Although students diagnosed with ASD have often been grouped into another category of special education identification such as Other Health Impairment, that will not be the case in future research. Future research would likely increase the integrity of analysis of statewide test scores in light of the rapidly increasing prevalence of ASD and the tendency of these students to have high academic abilities, hence the potential to significantly

affect test scores. The review of literature revealed that most research done on ASD focused on increasing prevalence or behavioral interventions as opposed to academic achievement. Such understanding could assist Departments of Education in making informed decisions about how to support success for this growing population of students. The aforementioned factors led to this study of students with disabilities as a whole, as opposed to breaking the research into specific eligibility categories.

The question of inclusion of students with exceptionalities has been long debated, as has special education itself (Spaulding & Pratt, 2015). Exceptionalities include those with intellectual, behavioral, and physical disabilities, and students with high abilities, commonly referred to as gifted and talented. When considering inclusion of those with intellectual disabilities at the secondary level, some would challenge that the students with disabilities should be included in courses for the socialization benefits of being in class with their same-age peers, to increase the awareness of disabilities, or to reduce the perceived social stigma of students with disabilities (J.J.W. Powell, 2016). Others would argue that this slows the learning of the general education students (Kauffman & Badar, 2014). The last two research questions of this study could potentially have informed perspectives on inclusion had the data been available. Thus, further study of these is recommended.

Graduation definitions are now adapted to account for the increase in the number of charter schools and private school reporting. Definitions are also responsive to the realities of funding linked to graduation rates. However, many states do still implement statewide testing as a qualification for graduation; they have developed different forms of diploma tracks. The minimum requirement for employment after high school nearly always requires having a diploma, as evidenced by advertisements Monster.com or Indeed.com. Likewise, those pursuing

postsecondary education might be affected in their college choices according to whether, and which type of diploma was earned (Hickox, 2015). This can even be the case at what are commonly called open-enrollment institutions. The need for diploma tracks should be considered when future research is done on graduation rates. This study showed no significant change in graduation rates, yet literature suggests ongoing efforts to increase the rates. Postsecondary options and limitations for students should be further explored.

Dropout rates can be challenging to measure because of the growing trend of homeschooling and online learning. Some families choose this and others choose to be removed from school for many reasons. Given states are only permitted to administer alternative tests to a minute percentage of students with disabilities (Aron & Loprest, 2012), the reliability of this should be further researched. For example, designating one school to serve students with the most severe intellectual disabilities would absorb the permitted number of students who can be alternatively assessed. Whereas, if a school has higher-functioning students with specific learning disabilities versus those with more severe disabilities, they may opt to select the lowest-achieving among them for alternative testing. The reason this is relevant to dropout rates is because some schools encourage dropping out with the hopes that this will increase their statewide pass rates (Newsome, 2007; Vogell & Fresques, 2017). As mentioned in the discussion, further research could also address how those students who dropout to pursue other means of obtaining their high school education is measured and reported. Including dropout prevention in teacher preparation programs could also be considered and evaluated (Farnan et al., 2014).

English/language arts is exceptionally difficult to measure as the demographics vary significantly in our country. The unprecedented number of English language learners in today's

classrooms clearly affects test scores as these students are not necessarily eligible for special education or have other services available to assist them (Pease-Alvarez & Thompson, 2014). Likewise, the number of educators certified to teach English language learners varies greatly (More, Spies, Morgan, & Baker, 2016). Further research could reveal how this is being accommodated on statewide testing. This is especially important, as many states have now added science components to promote the emphasis on STEM fields in our country. If a language barrier exists, it could affect scores on more than just English/language arts and mathematics tests.

Much research has taken place and is continuing to take place in the STEM fields, but it is also noteworthy that the research appears to measure and largely emphasize gender as opposed to minorities and students with disabilities. Teacher education programs may also want to consider adding emphasis in their methods courses to raise achievement levels (Farnan et al., 2014).

Unfortunately, it appears that the creativity and academic freedom once afforded to teachers are now absent for the most part due to teaching to the test, hence allowing test companies to dictate the classroom curriculum (Farnan et al., 2014). ESSA does not promote a reduction in testing but does appear to afford individual states more ability to choose how and when to administer tests. Schulte and Stevens (2015) found that students with disabilities, who were primarily low-achieving students, were tested on grade level (NCLB, 2001); however, the majority of those students were well below their grade levels (Allor, Mathes, Roberts, Cheatham, & Al Otaiba, 2014). Students with disabilities at the secondary level scored more than one standard deviation below their nondisabled peers in both English and mathematics (Schulte & Stevens, 2015).

Not being able to earn a high school diploma like those who graduated prior to NCLB has affected students' postsecondary options. It reduced their acceptance rate into community colleges and decreased employment options for those available jobs requiring a high school diploma as a minimal qualification (Mader & Butrymowicz, 2014). Yet those who were skeptical of testing have offered few suggestions for another way to assess students (Backer & Lewis, 2015). It would behoove further researchers to determine if students with disabilities who participate in testing on grade level use the accommodations permitted to them.

Conclusion

This final chapter began with a brief overview of the purpose and need for the study. Research questions and findings were presented. The literature was reviewed and provided opportunities for discussion for not only this study but for future studies that investigate one or more of the variables examined in this research. Although statistical significance was not found when comparing data reported in 2002, after the implementation of NCLB, to 2007, it is possible the results from ESSA will differ.

In conclusion, the suggestions for further research on selected variables could be limitless because of the increase in available technology, the increased specificity of defining the data to be reported, and the ease by which it can now be accessed more quickly. It is also suggested that data collection be inclusive of students with disabilities who opt to use accommodations on statewide testing (Bielinski et al., 2001). Regardless of position, there is no question that education-related funding is a heavy burden on many. While government funded programs are available for birth to age three, most public schools have either added prekindergarten education, have participated in piloting prekindergarten classes, or have plans to add it to their schools. It will be interesting to see if this changes later outcomes by what is thought to measure

achievement at the earliest possible stage. Future research has the potential to conduct longitudinal studies to determine if preschool attendance in public schools influences any one of the variables studied in this research.

Lastly, our country is becoming more diverse, and future research must address this. It was not anticipated that while collecting data, the extent of literature that was sparsely available regarding disadvantaged students and English language learners, as well as students receiving free and reduced lunch. Future studies can delve into this information, but also consider many more factors ranging from family dynamics, gender identity, school violence or number of disciplinary referrals to number of students eating breakfast at school, faculty credentials, and faculty to student ratio. Each of these things has the potential to reveal significance on the variables that this study did not.

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