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REPRESENTATION OF STUDENTS WITH DISABILITIES IN CHARTER SCHOOLS  
COMPARED TO TRADITIONAL PUBLIC SCHOOLS

by

Brenda K. Smith

A dissertation proposal submitted in partial fulfillment  
of the requirements for the degree

of

DOCTORATE OF PHILOSOPHY

in

Disability Disciplines  
(Disability Studies)

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2022

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## ABSTRACT

Representation of Students with Disabilities in Charter Schools

Compared to Traditional Public Schools

by

Brenda K. Smith, MNR

Utah State University, 2022

Advisor: Dr. Keith Christensen

Department: Special Education and Rehabilitation Counseling

This study had three purposes: 1) Identify and analyze studies exploring representation of students with disabilities in charter schools compared to traditional public school districts (TPS). 2) Provide descriptive statistics for enrollment of students with disabilities in charter schools compared to TPS by determining enrollment rates by school type, disability type and grade level. 3) Compare outcomes on the Annual Performance Report (APR) between charter schools and TPS, reviewing relationships between enrollment rates of students with disabilities and APR outcomes.

The literature review found that research is needed for individual state and territory education systems to determine if students with disabilities are being equivalently served in charter schools, what factors affect enrollment of students with disabilities in charter schools, and how charter schools are implementing the requirements of federal special education law compared to TPS using the APR. The review of enrollment data found that charter schools do not enroll a significantly different percentage of students with disabilities than TPS. However, the range of representation showed some charter schools have very low enrollment of students with disabilities and may be seen as exclusionary settings. A trend was shown with charter schools enrolling fewer disability types with low general education classroom inclusion rates. This study

showed charter schools enroll a lower percentage of students with disabilities in grades K-2 and a higher percentage of students with disabilities in grades 7-12. For the analysis of APR outcomes, results included higher dropout rates of students with disabilities in charter schools, higher participation of students with disabilities in math/reading assessments at TPS, a smaller gap in math/reading proficiency between students with disabilities and all students in charter schools, higher inclusion rates of students with disabilities at charter schools, and higher parent involvement at charter schools. The APR analysis identified a need for additional research on assessment participation/proficiency and disability type/inclusion. Importantly, this study showed that comparing school types should not be done looking at aggregate data. Multi-level analysis is needed to disaggregate data and tell a story about where students with disabilities are being educated and how well they are receiving services across settings.

(176 Pages)

## PUBLIC ABSTRACT

### Representation of Students with Disabilities in Charter Schools

#### Compared to Traditional Public Schools

Brenda K. Smith

There is a perception that charter schools enroll a disproportionately lower number of students with disabilities than traditional public school districts (TPS). Coupled with this perception are antidotal stories of students with disabilities being turned away by charter schools during the enrollment process. This study sought to determine what research has been completed to compare enrollment of students with disabilities in charter schools to enrollment in TPS, complete data comparisons on an entire state education system to see what enrollment differences exist for students with disabilities in charter schools and TPS, and review federal reports regarding students with disabilities to determine if differences exist for implementation of special education law between charter schools and TPS. This research has societal benefits as it assists in determining if charter schools are equivalently learning environments for students with disabilities as far as access and outcomes. This study also provides a framework that can be replicated for any state-level education system for determining equivalency in access for students with disabilities in charter schools. The results of this study can be used to help state departments of education determine targeted training for charter schools or TPS on special education topics to increase equity across school settings. It can also be used at the state-level to help hone charter school legislation and regulations to ensure charter schools don't develop into separate education settings that demographically differ from TPS.

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## CHAPTER I

### INTRODUCTION

#### 1.1 Importance of the Problem

The Individuals with Disabilities Education Act (IDEA) provides for the free and appropriate public education of students with disabilities in public schools. Federal case law (*Brown v Board of Education (1954)*) has also decreed that educating minority populations, such as students with disabilities, in separate settings does not provide an equal education. Charter schools, as public education entities that receive government funding, have the same legal obligations to enroll students with disabilities as other traditional public school districts. There is a perception that charter schools enroll a disproportionately lower number of students with disabilities than traditional public school districts (TPS). This perception is concerning enough that several states have set up programs to monitor and educate charter school enrollment staff on their responses to parents of potential charter school students (National Center for Special Education in Charter Schools (NCSECS), 2016). Utah, the state in which this study will occur, does not have a program in place to monitor and educate charter school enrollment staff on their responses to parents of potential charter school students. If charter schools are enrolling students with disabilities at a lower rate than TPS, charter schools could be seen as an exclusionary setting that does not provide equal opportunities for students with disabilities despite federal legislation and case law that guarantees equal educational opportunities for students with disabilities across K-12 education settings.

According to the National Alliance for Public Charter Schools' 2020 Annual Report, 3.3 million students are currently educated in charter schools and the number of

charter schools have increased by three times since the 2005-06 school year (National Alliance for Public Charter Schools, 2020). The National Center for Education Statistics estimated 50.7 million students attended public schools in the U.S. during the 2019-2020 school year (*The NCES Fast Facts Tool Provides Quick Answers to Many Education Questions (National Center for Education Statistics), 2020*). Based on these numbers, approximately 6.5% of students in the U.S. attended a charter school during the 2019-2020 school year. Based on the growth of charter schools over the past few decades, 45 states and three territories have enacted laws to regulate charter schools (National Alliance for Public Charter Schools, 2020). While the percentage of students enrolled in charter schools in the U.S. is far from a majority, the expansion of charter schools and charter school legislation point to the need to ensure that charter schools are not evolving into separate education settings.

### **1.2 Context and Significance of the Problem**

The expansion of charter schools and their role in public education has been an education topic for many years. One topic of particular interest is the perception that charter schools enroll disproportionately fewer students with disabilities and may engage in practices where charter schools discourage students with Individualized Education Programs (IEPs) from enrolling in their schools. These practices are often referred to as creaming, cropping, or counseling out during enrollment and consist of charter school enrollment staff counseling parents of students with disabilities that the charter school would not be the best fit for their student or encouraging the enrollment of students with disabilities that require less accommodations and supports while discouraging the enrollment of students who require more accommodations and supports that require

greater resources and costs. This issue is of great importance because charter schools are given federal funding through State Education Agencies (SEAs) to provide public education services, including services for students with disabilities; and charter schools are accountable under federal legislation to provide the same services for students with disabilities as TPS. Federal laws that apply to students with disabilities include the Individuals with Disabilities Education Act 2004 (IDEA), Section 504 of the Rehabilitation Act (Section 504), and the Americans with Disabilities Act (ADA). Because of the perception that students with disabilities are enrolled in charter schools at a lower rate than their able-bodied peers, well designed studies are needed to provide evidence of the representation of students with disabilities in charter schools. Currently there are no systematic reviews of literature that describe what research has been completed on this topic and the reliability of those studies. As outlined in section 1.3, one purpose of this study is to complete a systematic review.

In looking at previous research, there is one study that sets a foundational concept for this study. Lacireno-Paquet et al. (2002) disaggregated charter school enrollment data and found that non market-oriented (non-profit) charter schools served the most students with disabilities, followed by TPS, and then market-oriented (for-profit) charter schools in Washington DC. Rapa et al. (2018) noted that nationwide students with disabilities make up 10.62% of charter school students, while students with disabilities represent 12.46% of students in LEAs ((Rapa et al., 2018). Lacireno-Paquet et al. (2002), provide a persuasive perspective on identifying schools by type and suggested that aggregate data regarding representation of students with disabilities in charter schools may mask differences between charter school types (Lacireno-Paquet et al., 2002).

Following the findings of Lacireno-Paquet et al. (2002), it might be expected that charter schools that have marketed themselves to families of students with disabilities will have a higher proportion of students with disabilities than charter schools that have not marketed themselves to families of students with disabilities and other TPS. Further data disaggregation should also be explored to determine the types of disabilities being represented in charter schools compared to TPS. Taking this a step further, it might also be expected that charter schools with a higher representation of students with disabilities will have set up an education system to promote the success of students with disabilities and implement the federal regulations that govern the education of students with disabilities with greater care. Exploration is needed to document enrollment gaps for students with disabilities between charter schools and TPS, determine what types of disabilities are being served in which settings, and determine if all educational environments serving students with disabilities are implementing the requirements of IDEA and promoting successful outcomes for students with disabilities. Basically, research is needed to determine who the students with disabilities are, where they are being educated, and how well those educational services are meeting the requirements of IDEA.

### **1.3 Research Questions**

This study has three purposes. The first is to identify peer-reviewed and self/third party studies exploring the representation of students with disabilities in charter schools and the proportionality of that representation in respect to TPS and provide an analysis of the validity and strength of the study designs employed in the studies. The second purpose is to provide descriptive statistics for the enrollment of students with disabilities



in Utah in charter schools compared to TPS by determining if there is a statistical significance between their rates of representation and the types of disabilities being served. The final purpose of the study is to compare performance on the Annual Performance Report (APR), a federally mandated report that describes how IDEA is being implemented, between charter schools with a high proportion of students with disabilities, charter schools with a low proportion of students with disabilities, TPS with a high proportion of students with disabilities, and TPS with a low proportion of disabilities.

Based on the purposes of the study, the following research questions will be answered:

1. To what extent do peer-reviewed and self/third party studies explore the representation of students with disabilities in charter schools and the proportionality of that representation in comparison to TPS?
2. To what extent is the enrollment representation of students with disabilities in Utah charter schools similar to the representation of students with disabilities in TPS based on the percentage of students with disabilities served in each, the types of disabilities being served, and the representation of students with disabilities across grade levels in each school type?
3. To what extent do Annual Performance Report (APR) indicators compare between Utah charter schools and TPS across and do relationships exist between rates of enrollment of students with disabilities and APR outcomes?

## 1.4 Definition of Key Terms

**Annual Performance Report (APR):** The APR is a requirement for all states under IDEA. It evaluates state efforts to implement the requirements of IDEA and describes how each state will improve. The APR process is overseen by the Office of Special Education Programs (OSEP), within the U.S. Department of Education. Each state also provides individual APR scores for each of its LEAs and charter schools.

**Charter School:** This is a school that receives federal funding, funneled through a SEA, but which is operated by a group or organization that is separate from the established state school system.

**Individualized Education Program:** According to IDEA, an IEP is a “written statement for each child with a disability that is developed, reviewed, and revised in a meeting in accordance” with IDEA (“Sec. 300.320 Definition of Individualized Education Program,”). The IEP must include a statement of the child’s present levels of academic achievement and functional performance, a statement of measurable annual goals, a description of how progress towards meeting the goals will be measured, a description of when reports on progress will be provided, a statement regarding the services, aids, and/or modifications that will be provided, an explanation of the extent, if any, to which the child will not participate with its nondisabled peers in the regular classroom, a statement of any accommodations needed for state and districtwide assessments or need for an alternate assessment, and the beginning date of services.

**Local Education Agency:** The public schools operating in accordance with statutes, regulations, and policies of the State Department of Education. LEA classification is determined by each state, with some states classifying charters as an individual LEA,

some states classifying charters as part of an existing LEA, and other states allowing charters to be their own LEA or be part of an existing LEA.

**State Education Agency:** The State Board of Education or other agency responsible for the State supervision of public elementary and secondary schools.

### **1.5 Summary**

This chapter provided an overview of the problem that this study will address, provided context for the problem, identified the purpose and research questions, and provided definitions of key terms. Chapter II provides a systematic review of relevant literature, including an overview of peer-reviewed, third party, and self-reporting articles regarding representation of students with disabilities in charter schools. This chapter will be presented as a publication. Chapter III describes the methodology used in this study, including an overview of the theoretical framework that informed the study approach, and presents findings from the data analysis. Chapters IV and V present the results of the study's second and third purposes as individual publications. Lastly, Chapter VI provides a summary and conclusions of the research as an integration of the study's three purposes.

## **CHAPTER II**

### **SYSTEMATIC LITERATURE REVIEW<sup>1</sup>**

In order to understand the current scope of equitable educational opportunities for students with disabilities in the U.S. in different school settings, it is important to review the current literature on the topic. This systematic literature review examines the existing research that explores the representation of students with disabilities in charter schools and the proportionality of that representation in comparison to traditional public school districts (TPS). This chapter is presented as a publication.

#### **2.1 Abstract**

The requirements of federal law relating to the education of students with disabilities applies to charter schools the same as it does for traditional public school districts (TPS). However, there is a perception that charter schools enroll students with disabilities at a lower rate than TPS. This is a systematic review of peer-reviewed and self/third-party reports that answers the question: What research exists that explores the representation of students with disabilities in charter schools and the proportionality of that representation in comparison to TPS? The methodology for this systematic review was based on the PRISMA statement for reporting systematic reviews. Conclusions from the systematic review included the limited amount of research on representation of students with disabilities in charter schools, the difficulty of comparing enrollment percentages between state systems with different charter laws, and the difficulty in determining what factors affect the enrollment of students with disabilities in charter schools.

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<sup>1</sup> Coauthor: Keith Christensen

## 2.2 Introduction

The Individuals with Disabilities Education Act (IDEA) provides for the free and appropriate public education of students with disabilities in all public schools in the least restrictive environment. Federal case law (*Brown v Board of Education (1954)*) has also decreed that educating minority populations, such as students with disabilities, in separate settings does not provide an equal education. Currently, the legal premise for equitable education for students with disabilities is being debated regarding public charter schools.

The charter school movement has been gaining momentum in the U.S. over the past 30 years and has recently become politicized as support for charters schools has become aligned with different political parties (Lancet et al., 2020). Charters schools are autonomous schools that began operation under the belief that parental choice in schools would drive market-based accountability, leading to “more innovative and effective learning environments” (Rhim & McLaughlin, 2007). Since the first charter school law was passed in Minnesota in 1991, 44 states, Washington D.C., and three territories have enacted charter school laws, which govern approximately 7,500 charter schools, educating 3.3 million total students, which equaled approximately 6.5% of the total student population during the 2020-2021 school year (*National Alliance for Public Charter Schools*, 2021). Each state and territory where charter school laws exist has its own legal system for authorizing and monitoring public education in charter schools, which can make comparing charter schools on a national scale difficult. For example, states can opt whether or not to classify charter schools as local education agencies (LEAs). This classification gives them full autonomy over special education assessments,

placements, and funding decisions. Some states elect to classify charter schools as LEAs, others pair charter schools with an existing LEA removing much of their special education decision making, and other states offer both options and charter schools' LEA status is determined at the time of authorization. For monitoring, all State Education Agencies (SEA) are required to monitor special education services, which they do by gathering Annual Performance Report data from each LEA and ensuring IDEA compliance is occurring. However, each state's monitoring system is unique. As may be guessed, these differences between states on charter school classification and monitoring of special education services can lead to differences for special education enrollment and services in charter schools, making direct comparisons of representation between states difficult.

However, as noted, special education services for students with disabilities are governed by federal legislation and legal precedence, which means services should be equivalent across state and school settings. Federal laws that apply to students with disabilities include the Individuals with Disabilities Education Act 2004 (IDEA), Section 504 of the Rehabilitation Act (Section 504), and the Americans with Disabilities Act (ADA). Because of this, charter schools, as public education entities that receive federal funding, have the same legal obligations to enroll students with disabilities as TPS regardless of differing state laws.

There is a perception that charter schools enroll a disproportionately lower number of students with disabilities than TPS and may actively discourage students with disabilities from applying to charter schools (National Center for Special Education in Charter Schools (NCSECS), 2016a). This perception is concerning enough that several

states have set up programs to monitor and educate charter school enrollment staff on their responses to parents of potential charter school students with disabilities (National Center for Special Education in Charter Schools (NCSECS), 2016b). If charter schools are enrolling students with disabilities at a lower rate than TPS, charter schools could be seen as exclusionary settings that do not provide equal educational opportunities for students with disabilities despite federal legislation and case law that guarantees equal opportunities for students with disabilities across PK-12 education settings.

A separate issue is the increasing number of specialized charter schools that have begun operating schools tailored to meet the needs of students with specific disabilities. These specialized charter schools add additional questions around the equivalent education of students with disabilities as they can be viewed as exclusionary settings where students with disabilities are not educated in the least restrictive environment with their non-disabled peers as required by IDEA. These charter schools also tend to skew comparisons of representation between charter schools and TPS by increasing the average rate of representation of students with disabilities in charter schools. As Rhim et al. (2019) stated, “The challenge before both the traditional public and charter school sectors is to ensure that the programmatic innovation and excellence provided by the best specialized schools exist without having specialized schools become the default or only option for students with disabilities” (p. 27).

According to the National Alliance for Public Charter Schools’ 2020 Annual Report, 3.3 million students are currently educated in charter schools and the number of charter schools have increased by three times since the 2005-06 school year (National Alliance for Public Charter Schools, 2020). The National Center for Education Statistics

estimated 50.7 million students attended public schools in the U.S. during the 2020-2021 school year (*The NCES Fast Facts Tool Provides Quick Answers to Many Education Questions*, 2020). Based on these numbers, approximately 6.5% of students in the U.S. attended a charter school during the 2020-2021 school year. While the percentage of students enrolled in charter schools in the U.S. is far from a majority, the expansion of charter schools and charter school legislation point to the need to ensure that charter schools are not evolving into separate education settings that exclude minority populations.

Because of the continued expansion of charter schools and their role in public education and the perception that students with disabilities are enrolled in charter schools at a lower rate than their able-bodied peers, well designed studies are needed to inform our understanding of the representation of students with disabilities in charter schools. Currently, there are no systematic reviews of literature that describe what research has been completed on this topic and the quality of those studies. The purpose of this article is to document a systematic review of literature to answer the question: What research exists that explores the representation of students with disabilities in charter schools and the proportionality of that representation in comparison to TPS?

### **2.3 Methodology**

The foundation of the methodology for this systematic review was based on the PRISMA statement for reporting systematic reviews and utilized the PICOS (population, interventions, comparator group, objective, and study design) criteria (Liberati et al., 2009). For this study, the criteria included: population, students with disabilities enrolled in PK-12 education in the United States; intervention, enrollment of students with



disabilities in public charter schools; comparator group, enrollment of students with disabilities in TPS; outcomes, determination of the representation of students with disabilities between charter schools and TPS; and study design, quantitative and mixed methods studies comparing enrollment of students with disabilities between charter schools and TPS.

### **Literature Search, Screening, and Coding Procedures**

For this study, students with disabilities were defined as students having an Individualized Education Program (IEP) under IDEA. Students receiving services for a disability under Section 504 were not included as most published studies do not include data on these students when determining enrollment rates of students with disabilities. IDEA was last reauthorized by Congress in 2004, and at that time, many reporting additions for states were added and revisions were made to the thirteen categorizations of disabilities students can receive services for. These revisions changed how states and territories tracked and reported data on how well IDEA is being implemented in all schools in their state or territory. Because of this, no literature published before 2004 was considered in this systematic review as it would have been framed under a different legal equity standard than what charter schools are held accountable for today.

Database searches were conducted using Education Source, ERIC, and PsycINFO. Education Source and ERIC were included as they focus on education research. Many assessments to determine if a student has a disability are conducted by school psychologists and this professional is instrumental in providing many services to students with disabilities. Because of this, PsycINFO was also selected as it is a top database resource for psychology research, which includes research on behavioral

sciences that touches on many disability topics.

Search terms used with each database included “students with disabilit\*” AND “charter school\*” AND “enrollment” OR “identif\*” OR “represent\*”. Abbreviated terms with asterisk were used to capture all configurations of terms such as: disability\* (disability or disabilities), school\* (school or schools), identif\* (identify or identification), and represent\* (represent, representative, and representation). The search terms were further refined by the study’s inclusion criteria, selecting options to only show results published between 2004 and 2021, articles published in English (the researcher’s primary language, and most likely given the U.S. context of charter school research), and results with the full text available to review. For the search in PsycINFO, the search was also further refined to exclude dissertations. PsycINFO was the only database that allowed for this refinement selection. Dissertations were excluded as they did not fit into the categories of peer-reviewed or self/third-party reports outlined in the following paragraph.

Because of the variety of literature on the topic, peer-reviewed, self-reports, and third-party reports were all included as options in the inclusion criteria. It was decided that as part of the study, separate analyses would be conducted for the peer-reviewed articles and the combined self/third-party reports. This allowed for the discussion to include a comparison of the reviews of peer-reviewed and non-peer-reviewed sources. Barnard-Brak et al. (2018) noted that while self/third-party reports provide useful information on the topic of charter school enrollment of students with disabilities, because the scholars writing the reports can be affiliated with organizations that promote and support charter schools, their reports may be influenced by confirmation bias. In

short, their “potential conflicts of interest can create a situation where scholars are seeking evidence (e.g. variables and samples) that confirm the agenda of these organizations” (p.18).

In summary, the eligibility requirements for inclusion in this review included:

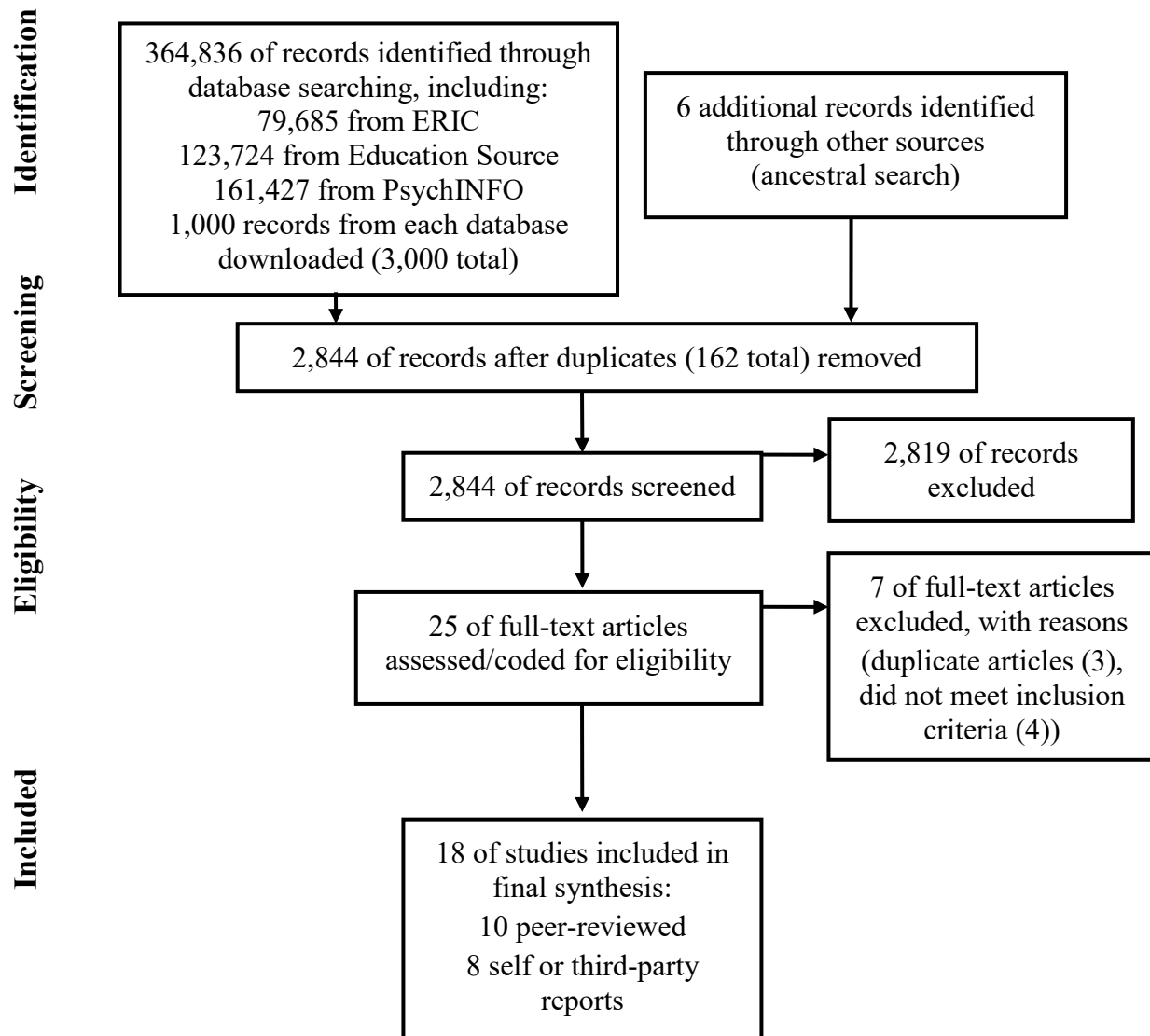
- Studies that are peer-reviewed, self-study, and third-party reports.
- Studies published since 2004 when IDEA was reauthorized and indicators were established to evaluate state efforts to implement the requirements of IDEA.
- Studies published in English (the researcher’s primary language and the primary language of research published in the U.S.).
- Studies based on representation of students with disabilities in charter schools in the U.S., because the study is premised on case law and legal requirements in the U.S. where charter schools have the same legal responsibilities to enroll students with disabilities as TPS.
- Studies employing quantitative or mixed methods analysis to determine representation of students with disabilities in charter schools.

As Figure 1 illustrates, the literature search process using Education Source, ERIC, and PsycINFO returned 364,839 journal articles. Because of the large number of articles returned, the researcher downloaded the first 1,000 articles returned for each database (3,000 total downloaded). The articles were screened using Zotero software for duplicates (162 removed), leaving 2,838 to be screened. The researcher screened the articles’ titles and abstracts for inclusion based on the eligibility requirements for inclusion. After the titles and abstracts were screened for the study’s inclusion criteria, 19 studies remained. The excluded studies included phrasing from the search terms in their

titles and abstracts but did not indicate in their titles and abstracts that they related to

**Figure 1**

*Flow Chart Illustrating Study Selection Results*



representation of students with disabilities in charter schools.

During full text coding, five of these articles were excluded because two were duplications of other identified articles and the other three did not meet the systematic review's inclusion criteria. Two of the three articles that were rejected for not meeting the inclusion criteria addressed alternative, but related topics, including how charter schools greet parents of students with disabilities (National Center for Special Education in Charter Schools (NCSECS), 2016a) and how special education funding affects TPS and charter schools (Marchitello et al., 2019). The third article that was rejected during full text coding was a short news article (Hehir, 2010). Following the full text review of the remaining 14 studies, an ancestral search was performed on the citations in those studies. A further six articles were identified for full text coding based on their titles and abstracts. Subsequently, four of those articles were included in the final synthesis with one excluded because it was a duplicate of a study in another article and one was excluded for not meeting the review's inclusion criteria. Following the full text review of the six articles identified in the ancestral search, an ancestral search was performed on the references in those studies and no further articles were found that met the inclusion criteria. In total after exclusions during the full text review, 18 studies (10 peer-reviewed and eight self/third-party reports) were included in the final synthesis.

During the full text review of the identified articles, the articles were coded to ensure they met the study's inclusion criteria. The coding form was created in Microsoft Excel with 17 data items collected for each article. Excel was the chosen software because it was familiar to the researcher and would increase efficiency in coding. The coding categories included: author's last name/year of publication, article title, research question(s), sample size, grade levels included in the study, location of the study, research design, sampling

technique, independent variable, dependent variable, data collection technique, threats to validity, data analysis methods, author's conclusions, methodological quality, and coder's notes.

### **Quality Assessment**

The researcher used a threats-to-validity approach to evaluate the quality of the coded studies (Cooper, 2017). This quality assessment was selected because the descriptive research designs employed in most of the identified studies did not allow for a meta-analysis or deep comparison of statistical methods employed by the studies. The threats-to-validity approach allowed "less-than-optimal designs" to be "triangulated so that strong inferences could result from multiple studies when the single 'perfect' study could not be performed" (Cooper, 2017, p. 164). Following this method, each article was reviewed for threats to internal, external, construct, and statistical validity. Based upon the threats to validity that were identified for each study, the researcher reviewed whether each article's conclusions could accurately be based upon their analysis or if there was an alternative explanation for the results. Following this, the researcher was able to rank articles from lower to higher quality and compare if lower quality studies had similar outcomes to higher quality studies. The researcher was also able to compare study quality between the peer-reviewed articles and the self/third-party articles. These comparisons allowed the research to triangulate results and conclusions from the various studies to see if conclusions from peer-reviewed articles and the self/third-party studies corroborated. Also, as part of the quality assessment, the articles were reviewed for any possible researcher biases that may have been present.

### **Data Analysis**

Due to the diversity of research meeting the inclusion criteria, a meta-analysis was not possible. Therefore, the researchers conducted a systematic literature review of the quality of the articles with inferences outlined from the synthesis of information. The synthesis of information included comparing and contrasting the articles' methods and results, critically evaluating the findings through the quality assessment, interpreting the study, and drawing conclusions.

## **2.4 Results**

The 18 studies that were selected for the review after the full text review and coding are outlined in Tables 1 and 2. The peer-reviewed articles are outlined in Table 1 and the self/third party report articles are outlined in Table 2. The researcher organized the articles chronologically to develop a historiography of the research conducted on representation of students with disabilities in charter schools. To maintain the focus of this review, the information reported in both tables are condensed to information and conclusions relating to the representation of students with disabilities in charter schools and do not report other conclusions the authors may have reported. For example, several of the studies reviewed English Language Learners and students with disabilities enrolled in charter schools and only the information from the articles on students with disabilities was reported.

### **Results from the Peer-Reviewed Studies**

Of the 10 peer-reviewed articles selected for the study, seven employed a quantitative research design and three employed a mixed methods research design. Excluding the interview data and document analysis employed in the mixed methods

**Table 1***Peer-Reviewed Reports Selected for the Study*

Author(s)/Year of Publication	Research Purpose(s) and/or Question(s)	Sample	Location	Data Collection and Analysis	Author Conclusions
Estes (2004)	Concerns voiced by legal analysts and advocates for students with disabilities regarding charters schools were reviewed, special education services in Texas charters were reported, and the validity of concerns regarding charter schools were examined.	N = 142 schools in the 1999-2000 school year was examined. Data was collected from the Texas Education Agency (TEA). Six structured interviews were conducted with charter school administrators. Interviewees were selected to represent a cross-section of the population and were based on a convenience sample of administrators within driving distance from the Dallas/Fort Worth metropolitan area.	Texas	Data collected from TEA were used to provide descriptive statistics on the representation of students with disabilities in charter schools in Texas. Qualitative analysis was completed by constructing data sets by combine grouped terms and entering them in a series of concept searches.	Lack of reported data prevented the determination of what extent students with disabilities are served in charter schools in Texas. For what data existed, 70% of charters enrolled fewer students with disabilities than the state average. Interviews showed that administrators wouldn't turn away a student with a disability as long as they could fit into the model and services offered at the school. Interviewees had a wide variability in special education expertise.
Arcia (2006)	Is segregation occurring in charter schools in a large urban district considering race/ethnicity, free/reduced lunch, English Language Learners, and students with disabilities?	N = 33 charter schools and 27 TPS from one large urban school district. Enrollment statistics were downloaded from the district at the end of the 2004-2005 school year.	Large urban district in Florida	All schools in one large, urban district were compared. Charters were compared to their geographically closest non-charter school. Comparisons were also completed with the district total. Chi-squared statistics were used to test for differences.	TPS were significantly more likely to compare to the district average of students with disabilities than charter schools - 16.5% of charter schools had student with disabilities enrollment comparable to the district average. Few TPS had comparable enrollment percentages to the district average. The author concluded that district averages are not an appropriate measure to gauge individual school enrollments.



Estes (2009)	<p>This study answers the question "To what extent are public charter schools fulfilling the mandates of law and providing their students with disabilities the education they deserve?". Presentation of updated, comparative data for Estes (2004).</p>	<p>N = 192 schools during the 2004-2005 school year. Data was collected from the TEA. Five structured interviews were conducted with charter school administrators. Interviewees were selected to represent a cross-section of the population and were based on a convenience sample of administrators within driving distance from the Dallas/Fort Worth metropolitan area.</p>	Texas	<p>Data collected from TEA were used to provide descriptive statistics on the representation of students with disabilities in charter schools in Texas. Qualitative analysis was completed by constructing data sets by combine grouped terms and entering them in a series of concept searches.</p>	<p>Representation of students with disabilities in charter schools increased to 12.5%, which is higher than the percentage of students with disabilities in TPS reported in the article at 11.55% for the study area. Responses to interview questions showed an increased understanding of IDEA.</p>
Wilkens (2011)	<p>Examination of access of student with disabilities to regular classrooms in charter schools compared to TPS.</p>	<p>All students in public schools from 2002-2007, N = approximately 25,000 students in charters and N = approximately 1,000,000 students in traditional schools, filtered to urban areas.</p>	Massachusetts urban areas	<p>Use of secondary data gathered by the Massachusetts Department of Education. The rate of student placement was determined, then was delineated based on disability type and compared to national placement rates for disability type.</p>	<p>Urban charters provided more regular classroom placement than TPS. Urban charter schools educated students with disabilities in separate classrooms at a significantly lower percentage than TPS. Urban charter schools enrolled significantly fewer students with low-inclusion disability types than traditional schools.</p>

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Wolf (2011)

This study involved two research questions: 1. Were students with disabilities admitted equally to charter schools and TPS in New Orleans? 2. How were the services for students with disabilities the same or different in charter schools and TPS?

N = 59 public schools: 33 TPS and 26 charter schools, serving 22,000 students. No information was provided on how the sample of parents and school administrators were selected for the qualitative phone interviews. A wide variety of reports, policies, and newspaper articles were examined without any information being given on how these were gathered/selected.

New Orleans -  
Recovery  
School  
District (RSD)

Phone interviews were conducted with parents and school administrators. The same questions were used for parents and school administrators. Interviewees were given a chance to review the interview notes. A wide variety of documents and newspaper articles were examined. Enrollment data and standardized test scores for all RSD schools were summarized. Interview summaries were reviewed for themes. Data summaries were also reviewed. No description was included of how the quantitative analysis of enrollment data occurred.

Conclusions for each research question include: 1. Students with disabilities were denied admission to charter schools. Traditional RSD schools enrolled an average of 10% of students with disabilities while charter schools had an average enrollment of 6%. 2. Charter schools had a lack of IDEA awareness and little existing special education support for students with disabilities.

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Zimmer and  
Guarino (2013)

Are charter schools  
more likely to push  
out low-achieving  
students than TPS.

Enrollment and  
achievement data from  
the 2000-2001 school  
year through the 2006-  
2007 school year was  
gathered from the school  
district.

An  
anonymous  
major urban  
district.

Use of secondary enrollment  
data. Descriptive statistics  
were used to examine the  
rate of students transferring  
out of schools. Linear  
probability analysis was  
conducted to indicate if a  
student exited via a  
nonstructural move.  
Sensitivity analysis was  
conducted to check the  
robustness of the study.

Low-performing students are more  
likely to transfer out of a traditional  
public school than out of a charter  
school. No evidence was found that  
charters schools are pushing out  
low-performing students.

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Winters (2015)	Identification of key factors that contribute to the gap in disability enrollment between charter schools and TPS during elementary school.	New York City enrollment data was used for the 2009-2010 and 2012-2013 school years. Denver enrollment data was used for the 2008-2009 and 2012-2013 school years.	New York City and Denver	Descriptive statistics were generated for the secondary data gathered from the two cities.	Enrollment gaps are due to students with a speech/language or specific learning disability (SLD) classification enrolling in higher numbers in TPS. Charter schools are less likely to classify a student as having a SLD. TPS are more likely to categorize a student with a disability. Students with disabilities are more likely to remain in a charter school than a traditional public school after their kindergarten year. Students without disabilities are more likely to transfer to a charter school, which decreasing the percentage of students with disabilities in charter schools and increases the percentage at TPS.
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Winters et al.  
(2017)

Does attending a charter school reduce the likelihood that students are newly classified as having a disability in primary grades? Is there a difference in relationship to disability classifications?

Enrollment data was used from fall 2012 to fall 2015 for Denver. This data included approximately 80,000 students, 9,000 of which attended charter schools. A sample of N = 12,000 total students was pulled from this data. Only students who had an IEP created after entering kindergarten were considered.

Denver

Descriptive statistics were generated for the data on disability classification and *t*-tests were used to measure differences between disability classifications in charter schools and TPS.

Attending a charter school reduces the likelihood that a student is classified as having a SLD. There is no evidence that charter school attendance reduces the probability of being classified as having a speech or language disability or autism. The author concluded that the gap in enrollment of students with disabilities between charter schools and traditional public school is due to the difference in classification rates in students with SLD.

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Barnard-Brak et al. (2018)	Examination of the number of students with disabilities enrolled in charter schools versus TPS. Identified and ranked states by degree of discrepancy in enrollment of students with disabilities between charter schools and TPS.	Utilized data from the Civil Rights Data Collection under the U.S. Department of Education from 2011-2012 and 2013-2014 on enrollment from 46 states and Washington DC. States without charter school laws were excluded from the data along with states that substantially changed their charter laws in between the years of data. N = 48,767,882 students at 88,487 schools for the 2011-2012 school year and 49,209,558 students in 88,950 schools for the 2013-2014 school year.	National	Data was omitted from charter schools designated as special education or alternative schools. Hierarchical linear modeling techniques were used. Variation was examined at the school and state levels.	Charter schools had a significantly lower percentage of students with disabilities for both years of data, with no statistically significant difference in the number of students with disabilities served by charter schools between the two data sets. Variation between states is consistent with findings from other studies. There is no pattern of enrollment of students with disabilities associated with state funding mechanisms for special education.
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Setren (2020)	<p>Effects of charter attendance on outcomes for students with disabilities were examined including the questions of: Who applies to charter schools? How does charter enrollment effect classification of students with disabilities? How does charter enrollment affect academic outcomes for students with disabilities?</p>	<p>N = approximately 18,000 students who applied to charter schools in Boston Public Schools during the 2003-2004 and 2011-2015 school years.</p>	Boston	<p>Enrollment application data was reviewed to generate descriptive statistics. No description of statistical analysis was given.</p>	<p>The percent of students with disabilities who applied to charter schools was comparable to the percent of students with disabilities at TPS. Students with disabilities are more likely to lose their disability classification and be in a more inclusive classroom, if they are enrolled in a charter school. The author suggests that the general charter school environment drives educational gains for students with disabilities.</p>
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**Table 2***Self/Third-Party Reports Selected for the Study*

Author(s)	Research Purpose(s) and/or Question(s)	Sample	Location	Data Collection and Analysis	Author Conclusions
Lake et al. (2012)	Provide context for New York required enrollment/retention targets for students with disabilities by describing the distribution of students with disabilities in charter schools and TPS.	N = 16 school districts with 1,561 TPS and 168 charter schools. Data was gathered from New York for the 2011-2012 school year. The sampled excluded specialized charter schools.	New York	Data from New York was used to provide descriptive statistics.	The statewide difference in charter school and traditional public school enrollment is too simplistic of a comparison. Charter middle/high school enrollments are indistinguishable from traditional public school enrollment of students with disabilities. Charter elementary schools showed under enrollment of students with disabilities. There is variation among charter school authorizers regarding student with disability enrollment. Research needs to be conducted as to why under enrollment exists in some charter schools.
Scott (US GOA) (2012)	Research questions included: How do enrollment levels of students with disabilities in charter schools and TPS compare and what is known about the factors that may contribute to any differences? How do charter schools reach out to students with disabilities and what special education services do charter schools provide? What role do Education, state education agencies, and	National data for the 2008-2009 and 2009-2010 school years were used. Site visits were conducted at 13 charter schools. Site visit locations were chosen by the number of charter schools in a state, based on a mix of LEA status for the charter schools and geographic diversity.	National	National data was used to provide descriptive statistics of student with disability enrollment in charter schools nationally and at the state level.	The proportion of charter schools that enrolled high percentages (8-12%) of students with disabilities was lower than TPS overall. When compared to traditional schools, a higher percentage of charter schools enrolled more than 20% students with disabilities. Charter schools advertised special education services, but faced challenges with serving severe disabilities due to resources. Charter schools enrolled a lower percentage of students with disabilities for each of the 13 disability classifications. Charter schools and TPS served a similar distribution of students with disabilities by disability type, however, some disabilities



	other entities that oversee charter schools play in ensuring students with disabilities have access to charter schools?				had higher/lower representation in charter schools.
Winters et al. (2013)	Ascertain why the disparity between charter schools and TPS in special education rates exists.	N = 25 elementary charter schools compared to all New York City traditional public elementary schools for the 2008-2009 school year through the 2011-2012 school year.	New York City	Data was used to provide descriptive statistics.	Students with disabilities, particularly autism or speech, are less likely to apply to charter schools. The enrollment gap between charter schools and TPS grows considerably as students' progress from kindergarten through 3rd grade due to charter schools not classifying as many students with disabilities as TPS. Non-disabled students transferring to charter schools further shrinks the enrollment rate of students with disabilities. Results suggest that charter schools aren't refusing to admit or pushing out students with disabilities. Charter schools classify fewer students with emotional disturbance and SLD than TPS.

Winters (2014)	Explains the disparity in enrollment of student with disabilities in charter schools compared to TPS in Denver.	Enrollment data from the 2008-2009 school year through the 2013-2014 school year was used.	Denver, CO	Data was used to provide descriptive statistics.	Gaps exist in enrollment of students with disabilities between charter schools and TPS. The gap is caused by the preference of students with disabilities for different school types, how schools classify and educate students, and the mobility of students with disabilities between school types. The gap begins in kindergarten and continues to increase through 8th grade. Students with disabilities are less likely to apply to charter schools in kindergarten and 6th grade, during gateway grades. Students with disabilities in TPS change schools more often than students with disabilities in charter schools. Efforts to address the gap by focusing on the counseling out of students with disabilities from charter schools are unlikely to be productive. Results compare to those in Winters (2013) conducted in New York City.
Rhim et al. (2015)	Research questions included: What proportion of students enrolled in TPS and charter schools have a disability? Where do students with disabilities spend their day? What percentage of the student population has been suspended or expelled from school? How relevant are specialized charter schools?	N = 81,881 TPS and 4,198 charter schools with data being gathered from the 2011-2012 Civil Rights Data Collection.	National	Data was used to provide descriptive statistics.	Charter schools had a lower percentage of students with disabilities than TPS. Students with disabilities in charter schools are in more inclusive settings. Charter schools and TPS have similar suspension/expulsion rates for students with disabilities Both charter schools and TPS expel students with disabilities at a higher rate than non-disabled students, with charter schools having a slightly higher rate of expulsion than TPS. Enrollment data from specialized charter schools show a higher enrollment proportion of students with disabilities.

Rhim and Kothari (2018)	<p>Research questions included: What proportion of students enrolled in TPS and charter schools have a disability? What is the profile of students with disabilities enrolled in charter schools? Where do students with disabilities spend their day? What percentage of the student population has been suspended or expelled from school? How prevalent are specialized charter schools?</p>	<p>N = 80,120 TPS and 4,871 charters with data being gathered from the 2013-2014 Civil Rights Data Collection.</p>	National	<p>Data was used to provide descriptive statistics.</p>	<p>The national average of students with disabilities increased across all school types from the previous report. Charter schools enrolled a lower percentage of students with disabilities than TPS. Charter schools that operate as their own LEA enrolled more students with disabilities than non-LEA charter schools. Charter schools enrolled a higher percentage of students with SLD and emotional disturbance than TPS. Charter schools enrolled lower percentages of students with developmental delays and intellectual impairments than TPS. Charter schools served approximately the same proportion of speech, other health impairment (OHI), and other disabilities as TPS. Charter schools that are part of an LEA enrolled a higher percentage of speech students than charter schools that are their own LEA. Charter schools served students with disabilities in more inclusive settings. Charter schools have similar suspension rates for students with disabilities as TPS and expel students with disabilities at a lower rate. Charter schools and TPS suspend/expel students with disabilities at a higher rate than non-disabled students. Enrollment data from specialized charter schools show a higher proportion of students with disabilities.</p>
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Rhim et al. (2019)	Examined the status of students with disabilities in charter schools compared to TPS according to enrollment, service provision, and discipline as well as documents the prevalence and focus of specialized charter schools.	N = 80,315 traditional schools and 5,548 charters with data being gathered from the 2015-2016 Civil Rights Data Collection.	National	Data was used to provide descriptive statistics.	A growing proportion of students in charter schools and TPS are being identified as having a disability. Enrollment of students with disabilities at TPS has increased more than the increase in enrollment at charter schools. Charter schools report higher enrollment percentages of students with autism and emotional disturbance. Charter schools that are an LEA enroll a larger proportion of students with disabilities than non-LEA charter schools. The popularity of specialized charter schools continued to grow.
Lancet et al. (2020)	Used national data and scholarly literature to show the complexity of enrollment of students with disabilities in charter schools. Examined enrollment data and factors that influenced access to charter schools.	Pulled data from the 2015-2016 Civil Rights Data Collection.	National	Provide descriptive statistics of enrollment of students with disabilities in charters nationally.	The proportion of students with disabilities enrolled in charter schools increased and enrollment differences were based on disability type. National averages mask significant variance between states. Enrollment rates of students with disabilities in charter schools depends on the evaluation/identification processes, LEA status/relationship, and oversight/accountability. Charter schools that are their own LEA enroll more students with disabilities than charter schools that are part of an LEA.

studies, all of the articles utilized secondary data gleaned from national school data reports or state/city/district education agencies. All of the studies stated a research purpose(s) or question(s) that related to representation of students with disabilities in charter schools. It should be noted that one of the studies (Wilkens, 2011), addressed the placement of students with disabilities in the regular classroom (or least restrictive environment) by charter schools compared to TPS, which the researcher felt was pertinent to the question of representation of students with disabilities in charter schools as several of the other articles reported the ability of charter schools to accommodate students with disabilities in the regular classroom without a disability classification. Also, Zimmer and Guarino (2013) addressed “low-achieving students” instead of students with disabilities. The researcher decided to include this article in the review, as the authors discussed the inclusion of students with disabilities in the label of “low-achieving students” and they determined whether or not charter schools were pushing these students out of their schools. While it was decided that studies published before the reauthorization of IDEA in 2004 would not be included in the study, it should be noted that Estes (2004), Wilkens (2011), Zimmer and Guarino (2013), and Setren (2020), all used student enrollment data gathered before 2004. While the reauthorization would not have impacted how enrollment data was obtained by education agencies, it would have impacted the determination of disability type and it is important to note this for these studies. However, they were included as their analysis and conclusions were made under the context of the reauthorization of IDEA in 2004 and their inclusion in this systematic review assists in establishing a historiography of the research on enrollment of students with disabilities in charter schools. Also, all but one of the peer-reviewed studies were also completed on a limited geographic scale, either for a certain school district, city, or state.

To assess the quality of the articles, a threats-to-validity approach was used to assess the construct, statistical, internal, and external threats to research validity for each article. Articles were also reviewed to note any researcher bias that may have been apparent. As previously noted, all of the peer-reviewed studies relied on secondary data, and in doing so, are open to any errors the primary data may have contained. For the purposes of this study, it was impossible to determine if any of the data was flawed and so no analysis was completed on the validity of study data. However, it should be noted that any study analyzing enrollment data that was not conducted by the school gathering the data will be forced to utilize secondary data. While this is a note of concern for the studies, it is not something that can be helped when considering this topic.

When reviewing for threats-to-validity, one article (Wolf (2011)) did not provide enough information to determine if there was construct validity and three articles (Wolf (2011), Winters (2015), and Setren (2020)) did not provide enough information to determine if there was statistical conclusion validity. Three articles (Estes (2004), Arcia (2006), and Estes (2009)) contained threats to statistical validity as they only used enrollment data from one school year. Since charter schools can have low total enrollment numbers, using multiple years of enrollment data would strengthen statistical validity by providing a more accurate picture of charter school enrollment. Nine of the 10 peer-reviewed articles contained external validity threats regarding population generalization, as they reviewed data limited to a single state, city, or school district. The differing laws between states regarding charter schools also makes it difficult to generalize study data between education systems. Only one article (Barnard-Brak et al. (2018)) utilized national data and was not deemed to have a population generalization validity threat. One article (Wolf (2011)) was noted as containing researcher bias as the author explained they had worked

**Table 3***Study Findings Regarding Enrollment Comparisons*

Articles that Indicated Students with Disabilities were Enrolled in Charter Schools at a Lower Rate than TPS	Articles that Indicated Students with Disabilities were Enrolled in Charter Schools at a Higher Rate than TPS	Article that Indicated Students with Disabilities were Enrolled in Charter Schools at a Similar Rate in Middle/High Schools and a Lower Rate in Elementary
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*Results from Peer-Reviewed Articles*

Estes (2004)	Arcia (2006)
Wolf (2011) (4%)	Estes (2009) (.95%)
Winters (2015)	
Winters et. al (2017) (3-4%)*	
Barnard-Brak et. al (2018) (2.4-2.6%)	

*Results from Self/Third-Party Reports*

Scott (2012) (3-3.6%)	Lake et al. (2012)
Winters et al. (2013) (3.4-3.9%)	
Winters (2014) (1.8-5.8%)*	
Rhim et al. (2015) (2.13%)	
Rhim and Kothari (2018) (1.84%)	

*Note: Percentages in parenthesis show the percentage of difference found in enrollment rates for students with disabilities in charter schools and TPS when they were reported. Some studies presented their findings as generalizations (i.e. 70% of charters were below the state/district average enrollment rate of students with disabilities compared to TPS) and percentages are not given for them in the table.*

*\*Winters et. al (2013), Winters (2014), and Winters et. al (2017) further disaggregated the gap by grade level and disability type to give a fuller description of the variance in the gap outside of the overall average.*

as a reform consultant in the study location and could not keep their experiences completely separate from their research. No threats to internal validity were identified.

Overall, the results of the peer-reviewed articles were mixed. As outlined in Table 3, five of the articles indicated that students with disabilities were enrolled in charter schools at a lower rate than the TPS in their data sets and two articles indicated that charter schools enrolled a higher percentage of students with disabilities compared to the TPS in their data set. It is important to note that the two studies that had findings showing that charter schools having a higher enrollment rate of students with disabilities had concerns for validity regarding statistical conclusion and external validity, which is outlined in Table 4. Conclusions that stood out from the studies include:

- District averages for students with disabilities are not an appropriate measure to gauge individual school enrollment of students with disabilities (Arcia, 2006).
- Charter schools place students with disabilities in the regular classroom (least restrictive environment) at a higher rate than TPS, but they enroll fewer disability types that have low regular classroom inclusion rates (Wilkins, 2011).
- In one study location, students with disabilities were being denied admission to charter schools (Wolf, 2011).
- Low-achieving students were more likely to transfer out of TPS than charter schools and there was no evidence that charter schools were pushing low-achieving students out of their schools (Zimmer & Guarino, 2013).



- The gap in enrollment rates between charter schools and TPS was due to the low enrollment of students with speech disabilities in charter schools and the lower identification rate of students with SLD by charter schools (Winters, 2015 and Winters et al., 2017).
- The number of students with disabilities applying to enroll in charters schools was similar to the rate of students with disabilities enrolling in TPS. However, charter schools are more likely to declassify a student with a disability and include them in the regular classroom (Setren, 2020).

### **Results from the Self/Third-Party Reports**

Seven of the self/third-party reports employed a quantitative research design and one report employed a mixed methods analysis by including site visits and interviews. Similar to the peer-reviewed articles, all of the reports utilized secondary data gleaned from national school data reports or state/city/district education agencies. All of the studies stated a research purpose(s) or question(s) that related to representation of students with disabilities in charter schools. It should be noted that many of the self/third-party reports not only proposed a research purpose(s) or question(s) that probed representation of students with disabilities in charter schools, but also included purposes or questions posed to explain why there was a difference in enrollment rates.

To assess the quality of the self/third-party reports, a threats-to-validity approach was used to assess the construct, statistical, internal, and external threats to research validity for each study. Reports were also reviewed to note any author bias that may have been apparent. As previously noted, all of the self/third-party reports relied on secondary data, and in doing so, are open to any errors the primary data may have contained. For the purposes of this study, it was

impossible to determine if any of the data was flawed and so no analysis was completed on the validity of study data. However, it should be noted that any report analyzing enrollment data that is not conducted by the school gathering the data will be forced to utilize secondary data. As previously noted, this is a point of concern for the reports, but it is not something that can be helped when considering this topic.

When reviewing for threats-to-validity, two reports (Scott (2011) and Winters et al. (2013)) did not provide enough information to determine if there was statistical conclusion validity. Three (Lake et al. (2012), Winters et al. (2013), and Winters (2014)) of the eight self/third-party reports contained external validity threats regarding population generalization, as they reviewed data limited to a single state, city, or school district. Five of the reports utilized national data and were not deemed to have a population generalization validity threat. Seven reports were noted as containing possible researcher bias as they were produced or funded by organizations promoting or supporting charter schools. The other report (Scott (2012)) was a federal report completed by the U.S. Government Accountability Office and was the only report not published or funded by an organization promoting or supporting charter schools. No threats to internal validity were identified.

Overall, the results of the self/third-party reports were more decisive regarding representation of students with disabilities in charter schools. As outlined in Table 3, five of the reports stated that students with disabilities were enrolled in charter schools at a lower rate than the TPS in their study location. One report noted that enrollment of students with disabilities at middle and high school charters were indistinguishable from TPS in their study location and that only charter elementary schools showed under enrollment of students with disabilities (Lake et al., 2012). Instead of spending time illustrating the data for the enrollment rates, many of the

reports devoted significant time further disaggregating enrollment data to determine why there was a gap in enrollment of students with disabilities between charter schools and TPS.

Conclusions that stood out from the reports included:

- Statewide differences in enrollment rates of students with disabilities at charter schools and TPS are too simplistic of a comparison. Variation among charter school authorizers may contribute to differences in enrollment rates (Lake et al., 2012).
- The proportion of charter schools that enroll high percentages (8-12%) of students with disabilities was lower than TPS overall. However, a higher percentage of charter schools (generally specialized schools), had a 20% or higher enrollment percentage of students with disabilities (Scott & US Government Accountability Office, 2012).
- Students with autism and speech disabilities are less likely to apply to charter schools. The enrollment gap between charter schools and TPS is due to charter schools not classifying as many students with disabilities as TPS. Students with disabilities are less likely to transfer out of charter schools than TPS and students without disabilities transfer to charter schools, further driving down the percentage of students with disabilities in charter schools (Winters et al., 2013).
- Efforts to address disproportionate representation of students with disabilities in charter schools that focus on charter schools counseling out students with disabilities are unlikely to be productive (Winters, 2014). This conclusion was due to the study's results showing that the disproportionate representation was due to student's preferences for school type, how charter schools classify students with disabilities, and the movement of students without disabilities between charter schools and TPS.

- Charter schools that operate as their own LEA enrolled more students with disabilities than non-LEA charter schools (Rhim & Kothari, 2018 and Lancet et al., 2020).
- Charter schools enrolled a higher percentage of students with SLD and emotional disturbance than TPS and a lower percentage of students with development delays and intellectual impairments. Charter schools enrolled students with disabilities in more inclusive settings (Rhim & Kothari, 2018).
- The popularity of specialized charter schools for students with disabilities continues to grow (Rhim et al., 2019).
- National enrollment averages mask significant variances between states. Enrollment rates of students with disabilities in charter schools depends on the evaluation/identification process, LEA status/relationship, and oversight/accountability of special education serves (Lancet et al., 2020).

### **Comparison of Studies Based on the Quality Assessment**

Another purpose of this systematic review was to compare if low quality studies had the same results as high-quality studies. Table 4 outlines how each study scored on the quality assessment. Due to the nature of the topic and the usage of secondary data to provide descriptive statistics in most of the studies, there were few factors to review in the threats-to-validity quality assessment. Studies that were deemed low quality, either lacked enough information to make a validity determination, had a population generalization threat to external validity, or only used one year of data. The three studies that only used one year of data were deemed to be the lowest quality. These studies reported results that included 70% of the charter schools in the study location enrolling fewer students with disabilities than the state average (Estes, 2004), TPS were significantly more likely to compare to the district average of students with disabilities than

charter schools (Arcia, 2006), and students with disabilities were represented in charter schools at a higher rate than the state average (Estes, 2009). All three of these articles were peer-reviewed and add to the mix of results for different study locations that speaks to how differing charter school laws affect enrollment of students with disabilities in charter schools.

**Table 4**

*Quality Assessment for Each Study*

Article	Construct Validity	Statistical Conclusion Validity	External Validity (Population)	Researcher Bias
Estes (2004)		X	X	
Arcia (2006)		X	X	
Estes (2009)		X	X	
Wilkens (2011)			X	
Wolf (2011)	O	O	X	X
Lake et. al (2012)			X	X
Scott (2012)		O		
Winters et al. (2013)		O	X	X
Zimmer & Guarino (2013)			X	
Winters (2014)			X	X
Rhim et. al (2015)				X
Winters (2015)			O	X
Winters et. al (2017)			X	
Barnard-Brak et. al (2018)				
Rhim & Kothari (2018)				X
Rhim et. al (2019)				X
Lancet et. al (2020)		O	X	X
Setren (2020)				

*X = Concern noted*

*O = Not enough information given to make a determination*

**Comparison of Peer-Reviewed and Self/Third-Party Reports**

While reporting on representation of students with disabilities in charter schools there were several differences between the two groups of literature. As noted earlier, many of the self/third-party reports not only proposed a research purpose(s) or question(s) that probed representation of students with disabilities in charter schools, but also included purposes or

questions that attempted to explain why there was a difference in enrollment rates. For example, the peer-reviewed articles stated questions around whether segregation was occurring in charter schools, if charter schools were meeting special education legal enrollment requirements, or if charter schools were pushing out students with disabilities. In contrast to this, the self/third-party reports stated questions around the disability classification distribution between charter schools and TPS and what factors contribute to differences in enrollment. Because of this, many of the self/third-party reports reported outcomes related to factors that contributed to the enrollment discrepancy between charter schools and TPS, such as the higher rate of inclusion of students with disabilities in the regular classroom in charter schools, the difference in disability types attending charter schools, and the lower classification rates of students with disabilities in charter schools.

Another difference between the peer-reviewed and self/third-party reports was the usage of national data. Only one of the peer-reviewed studies used a national data set while five of the eight self/third-party reports used national data. Many of the studies noted that national data could mask variances in the data and couldn't provide a direct comparison between charter schools and TPS because of the differences in state charter laws (Lancet et al., 2020). Because of this, many of the peer-reviewed studies focused on one education system (state, city, or district-level). However, the self/third-party reports that utilized national data focused on showing the complexity of the issue and the factors that affected the data. One explanation for this may be the easy availability of national data to the organizations that published the self/third-party reports.

Another variance between the peer-reviewed studies and self/third-party reports was the number of articles that stated that students with disabilities were under represented in charter schools. All of the self/third-party reports stated that students with disabilities were under

represented in charter schools while two of the peer-reviewed articles found that students with disabilities were more highly represented in charter schools. This difference may be attributed to the difference in data sets. The factors identified by several of the articles as affecting enrollment of students with disabilities in charter schools (LEA status, authorization process, disability classification rates, and monitoring of services) would be more apparent in localized studies than in aggregate national data.

Also, as noted previously, the results of the self/third-party reports were more decisive regarding representation of students with disabilities in charter schools. Five of the reports indicated that students with disabilities were enrolled in charter schools at a lower rate than the traditional public schools in their study location. This decisiveness may be due to the usage of national data in three of those studies. With the large sample prepared by the Office of Civil Rights, those studies could easily determine a total enrollment comparison and then delve into exploring reasons for the disproportionate representation. The other two studies also looked at larger educational systems (New York City and Denver, CO). With larger data compilations, the reports could more easily review the total enrollment comparison and then delve into further analysis by disability type or other factors. The peer-reviewed studies that looked at smaller, district-level systems had smaller samples of data to disaggregate and make determinations from.

The major similarity between the peer-reviewed articles and the self/third-party reports, was the emphasis on ensuring that students with disabilities were provided equal access to charter schools and that IDEA requirements be adhered to in all school settings. While the articles and reports differed on if there was disproportionate representation of students with disabilities and what factors contributed to it, all of the articles included discussion that

explained the need to educate students with disabilities in both charter schools and TPS and promote increased educational outcomes for those students.

## **2.5 Discussion**

As outlined in Table 3, the majority of the studies reviewed in this systematic review had findings that indicated students with disabilities were under-represented in charter schools or started with a statement that students with disabilities were under-represented in charter schools and further disaggregated the data to determine why the representation variance existed. Despite this fairly consistent result of lower enrollment rates of students with disabilities in charter schools, the existing research also suggests that it is difficult to holistically determine if students with disabilities are enrolled in charter schools more or less than TPS. The studies were also very careful in how they reported the representation of students with disabilities in charter schools. In most cases, the articles would report or state that students with disabilities were under-represented in charter schools in a certain geographic area, but then provided reasons for the gap in enrollment.

From what the research reports, enrollment of students with disabilities in charter school is based on how charter schools evaluate for and identify disabilities, the LEA classification of the charter school, and how the oversight and monitoring of special education programs is conducted at the school. Another issue when reviewing data on the enrollment of students with disabilities in charter schools, is whether or not specialized charter schools that operate under missions focused on serving students with disabilities are included or excluded from the data analysis. Nearly all of the studies reviewed in this paper did not indicate whether or not specialized charter schools were included in their data analysis. The inclusion of a specialized charter school with a student body consisting only of students with IEPs in a data set can skew



the data analysis. Because of these factors, the literature on enrollment of students with disabilities in charter schools clearly shows this is a nuanced issue that is as complex as the U.S. education system. There is no definitive answer as to whether or not students with disabilities are under or overrepresented in charter schools because of these confounding factors.

**Table 5**

*Quality Assessment for Each Study Compared to Reported Enrollment Results.*

Article	Total Validity Concerns	Found Charter Schools had Lower Enrollment Rates	Found Charter Schools had Higher Enrollment Rates	Found Similar Enrollment Rates
Wolf (2011)	4	X		
Winters et al. (2013)	3	X		
Lancet et. al (2020)*	3			
Estes (2004)	2	X		
Arcia (2006)	2		X	
Estes (2009)	2		X	
Lake et. al (2012)	2			X
Winters (2014)	2	X		
Winters (2015)	2	X		
Wilkens (2011)*	1			
Scott (2012)	1	X		
Zimmer & Guarino (2013)*	1			
Rhim et. al (2015)	1	X		
Winters et. al (2017)	1	X		
Rhim & Kothari (2018)	1	X		
Rhim et. al (2019)*	1			
Barnard-Brak et. al (2018)*	0	X		
Setren (2020)*	0			

*\*Study did not report enrollment comparison results.*

It is also interesting to note, how study quality related to the results of each study. Table 5 outlines the number of validity concerns for each of the study and if and what results were reported regarding enrollment of students with disabilities in charter schools compared to TPS.

Studies that determined that charter schools had lower enrollment rates for students with disabilities than TPS ranged between having zero and four validity concerns. All of studies that determined that charter schools had higher or similar enrollment rates of students with disabilities compared to TPS had two validity concerns. While it is difficult to make a solid determination regarding enrollment rates from this comparison because of the low number of studies available for comparison, study quality does not appear to affect the reported enrollment results for the studies.

One hypothesis that could be hazarded based upon the existing research, is that while students with disabilities are present in charter schools (and sometimes at comparable rates to traditional public school in the same geographic area), that the demographics of those students may not mirror the demographics of the of students with disabilities in TPS. Charter schools may be predisposed to attract and retain students with certain disability classifications and age groups as charter schools are more prolific for secondary grades (6-12) than elementary grades (pk-5). For examples, fewer students with speech disabilities may be enrolled in charter schools as the students are more likely to utilize speech services in elementary grades. Even charter schools that offer elementary grades, may enroll fewer students with speech disabilities if they don't offer preschool services when many students begin speech services and may be less likely to transfer from the traditional public school where they began preschool to a charter school for kindergarten (Winters, 2015).

One item that was clear across both the peer-reviewed studies and the self/third-party reports is that national data cannot provide direct comparisons between enrollment rates of students with disabilities in charter schools and TPS. The variance in state and territory charter laws greatly effects how charter schools enroll and provide services for students with disabilities.

So, while services for students with disabilities are mandated and monitored for compliance under federal legislation, the education systems set up and operated in each state and territory are diverse enough that any review of enrollment of students with disabilities in charter schools needs to be completed for specific state education systems. The variance between charter school laws between states and territories and its effects on special education is not a new idea in charter school research. However, it is clear from the results of this study that there is no published peer reviewed or self/third party reports that review representation of students with disabilities between charter schools and TPS at a state or territorial system level and this points to the needs for such analyses.

Taking this further, monitoring of enrollment rates and disability classifications should also be completed at the local level (school district and individual charter schools) to ensure that charter schools are providing enrollment and special education services for students with disabilities that are equivalent to those in the statewide education system they are located in. This would provide a more accurate analysis of charter school enrollment than simply reviewing national data and would allow states and school districts to ensure that special education services are equivalent and provide optimal outcomes for students with disabilities.

This monitoring and analysis could also include a review of outcomes of students with disabilities in charter schools and TPS. Because the foundational purpose of charter schools is to provide settings where parental choice drives accountability for student outcomes, leading to innovation and effective learning, if monitoring found that students with disabilities were achieving better outcomes in charter schools, those innovative and effective learning strategies could be promoted as teaching strategies for TPS as well. The reverse could also be done for TPS that have high outcomes for students with disabilities and the promotion of those methods in

charter schools.

A final discussion item is the sources sponsoring the self/third-party reports. It was noted earlier that self/third-party reports may have the potential for confirmation bias. However, the organizations publishing the self/third-party reports were reviewed and while there may be potential for some confirmation bias, the mission and vision statements of the organizations sponsoring the third-party reports address the support and equitable access of students with disabilities in charter schools. Three of the third-party reports were published by the Center on Reinventing Public Education (CRPR), an externally funded organization affiliated with the University of Washington. CRPR focuses on making public education more effective and has no stated preference for charter schools compared to traditional public schools. Four of the third-party reports were published by the National Center for Special Education in Charter Schools (NCSECS). NCSECS promotes vision and mission statements that promote equitable access for students with disabilities in charter schools. While there is potential for NCSECS to publish materials that bolster their vision and mission statements, all four studies published by them utilized national data from the Office of Civil Rights and provided a disaggregation of enrollment data that can be easily verified and provided a current picture report of enrollment of students with disabilities in charter schools. The one self-report used in this review was published by the United States Government Accountability Office (GOA). As the GOA is charged with providing fact-based, non-partisan information to Congress, its report was ruled out as containing confirmation bias.

## **2.6 Limitations**

Limitations to this systematic review include the inability to provide a meta-analysis or full review of the data used in the articles. This was due to the usage of secondary data to

produce descriptive statistics by all of the studies. This was because of the nature of reviewing school enrollment data and the fact that any study would be forced to utilize secondary data.

## **2.7 Implications for Research**

The opportunity for future research around representation of students with disabilities in charter schools is wide. As it enters its fourth decade, the charter school movement is still young, and research on its effects on U.S. educational systems and outcomes for students with disabilities is in its infancy. This systematic review found 18 peer-reviewed articles and self/third-party reports that reviewed representation of students with disabilities in charter schools, making it clear that not only more studies are needed, but well-designed studies are needed to understand the topic. Future studies can ensure they are well designed and have strong methodology by:

- Clearly stating if specialized charter schools are included or excluded from their data set and explaining their decision.
- Controlling for statistical conclusion validity by including multiple years of data in their analysis to ensure that relationships regarding enrollment and school type can adequately be established.
- Controlling for external population validity by utilizing a study design that incorporates data from an entire state or territory education system.
- Clearly stating any possible research biases, including the study funding by organizations that support charter schools.

As noted, there is a need for research on enrollment of students with disabilities in charter schools in all state and territorial education systems that have charter school laws. This research will help each state or territory identify if there is a significant difference in enrollment rates

between charter schools and TPS in their system, what factors may be influencing charter school enrollment of students with disabilities, and what policy or monitoring changes may need to be made to promote equivalent learning environments between charter schools and TPS.

Another future research need is an analysis of how well charter schools are implementing IDEA. Each state and territory is required to submit an Annual Performance Report (APR) that reports on how well they are implementing the requirements of IDEA. To prepare the report, each state and territory collects data from LEAs on how well they are implementing IDEA. Research could be conducted to see how charter schools that operate as an LEA perform on the APR data they submit to the state. This comparison could include comparisons between charter schools and TPS with high enrollment rates of students with disabilities and low enrollment rates of students with disabilities to see where students with disabilities are receiving special education services and how well they are being served.

## **2.8 Conclusion**

The current political climate has seemingly degraded the discussion around charter schools to a simple matter of favoring them and disfavoring them. However, it is very clear from the research reviewed in this systematic review that the matter is much more complicated than the perception that charter schools may be enrolling students with disabilities at a lower rate than TPS. With the differing charter school laws across the U.S., each state or territory that allows charter schools needs to examine their own system and review the factors that are affecting enrollment of students with disabilities in charter schools and ensure that their education system is providing equivalent education opportunities for all students. It is also clear that much more research is needed on the topic to not only gauge representation of students with disabilities in charter schools, but also review how charter schools are implementing IDEA compared to TPS.

## 2.9 Summary

This chapter provided a systematic literature review of the existing research that explores the representation of students with disabilities in charter schools and the proportionality of that representation in comparison to TPS. Research of both peer-reviewed and self/third-party reports were reviewed, assessed for threats to validity, and compared to provide comprehensive documentation of the existing literature on the topic. It is clear from the existing literature that research needs to be completed for each individual state and territory that has charter school laws to determine if students with disabilities are being equivalently served in charter schools within their system, what factors affect enrollment of students with disabilities in those charter schools, and how charter schools are implementing the requirements of IDEA. This need for further research is aligned with the second and third research questions that will be explored in Chapters III-V.

## **CHAPTER III**

### **METHODOLOGY**

#### **3.1 Overview**

Results from the systematic review of literature performed in Chapter II illuminated the need for high-quality research on the representation of students with disabilities in charter schools. That review made it clear that enrollment rates need to be performed on state-level systems because of the varying laws regarding charters school across U.S. states and territories. This study proposes to do this for the Utah state-level education system. The systematic literature review made it clear that enrollment rates of students with disabilities in charter schools depends on the evaluation/identification process, LEA status/relationship, and oversight/accountability of special education serves (Lancet et al., 2020). By focusing on the education system in Utah, this study will be able to review enrollment under the evaluation, identification, and oversight processes utilized in Utah, where charter schools are classified as their own LEA. Results from the systematic literature review also noted that there is no existing research comparing representation of students with disabilities in charter schools and TPS with how those schools are implementing the requirements of the Individuals with Disabilities Education Act (IDEA).

The systematic literature review outlined several threats to validity in a majority of the existing literature for statistical conclusion validity, external validity, and researcher bias. Statistical conclusion validity threats were noted as many studies utilized limited data (one or two school years of data) to determine enrollment rates for students with disabilities. This is problematic as charter schools generally have lower total enrollment numbers than TPS, which can cause great variability in their enrollment numbers from year to year. Because of this, multiple years of enrollment data is needed to establish a strong statistical conclusion for the



enrollment of students with disabilities in charter schools. External validity was a threat for many previous studies, as they were limited to analysis in one school district or urban area. As noted, studies are needed at level of an entire educational system. Research bias was noted as a concern for studies published as self/third party reports, as there was the possibility of confirmation bias in the studies published by organizations that support charter schools.

Also, noted as a need for well-designed studies in the systematic literature review was the need for studies to clearly explain if specialized charter schools were included or excluded in the data set. The inclusion of specialized charter schools with a very high rate of enrollment of students with disabilities can skew the overall percentage of students with disabilities in charter schools in an educational system making it appear that students with disabilities have a higher rate of enrollment across all charter schools in the system.

This chapter outlines the methods for a high-quality study that will address the validity concerns noted in the systematic literature review for existing studies and contribute additional research to the field regarding enrollment rates and implementation of IDEA. The completed study will include an outline of a template for how educational systems can be evaluated for representation of students with disabilities in charter schools.

**Quantitative Methods.** Johnson and Christensen (2017) succinctly defined quantitative research as “research that relies primarily on the collection of quantitative data” and emphasized that quantitative researchers work to move “from theory to hypotheses to data conclusions” (pages 18 and 658). Quantitative methods were selected for this study to allow the researcher to move from theories about representation of students with disabilities in charter schools being lower than representation of students with disabilities in traditional public school districts (TPS) to hypotheses regarding the types of students with disabilities represented in charter schools and

conditions affecting enrollment of students with disabilities in charter schools to evidence-based conclusions based on data reviewed and analyzed using methods that promote strong validity.

Additionally, results of the systematic review pointed to the need for further quantitative studies with strong validity via multiple school years' enrollment data. Because charter schools often have small enrollment numbers, using multiple school years' worth of data is necessary to provide strength and validity to study findings regarding representation of students with disabilities in charter schools. Following the addition of this dissertation research to this field of study, results may be further bolstered by the addition of qualitative or mixed-methods studies to further triangulate results with the phenomenological perspectives of parents of students with disabilities enrolled or attempting to enroll in charter schools.

Quantitative methods selected for this study include the production of descriptive statistics and correlation analyses. Descriptive methods were selected to describe the current status of representation of students with disabilities by school type. Producing descriptive statistics from school enrollment data is the most appropriate method that can be used to determine enrollment of students with disabilities in charter schools and TPS and delineate enrollment by other factors (such as disability type) for the purposes of this study. Correlational methods were selected to explore the statistical relationship between the variables of school type, school size, disability classification, and how well the requirements of IDEA are being implemented. Correlational methods are the most appropriate methods for this part of the study, as they will allow a determination to be made between variables, specifically between school type and enrollment of students with disabilities, school type and disability classification, and enrollment of students with disabilities and implementation of the requirements of IDEA. The combination of descriptive statistics and correlational analyses will allow the current status of

representation of students with disabilities to be described and allow for the exploration of the relationship between representation and equivalent outcomes for students with disabilities under federal legislation.

**Research Questions.** The first purpose of this study is to determine to what extent is enrollment of students with disabilities in charter schools similar to the enrollment of students with disabilities in TPS based on the percentage of students with disabilities served in each, the types of disabilities being served, and the representation of students with disabilities across grade levels in each school type. The second purpose of this study is to determine to what extent Annual Performance Report (APR) indicators compare between charter schools TPS and do relationships exist between rates of enrollment of students with disabilities and APR outcomes. The APR is a federally mandated report that describes how IDEA is being implemented.

### 3.2 Theoretical Framework

**Transformative Paradigm.** The proposed study is heavily influenced by the transformative paradigm, which “emerged as a way to bring visibility to members of communities who have been pushed to societal margins throughout history and to bring their voices into the world of research in order to enhance social justice” (Tashakkori and Teddlie, 2010). Students with disabilities were long denied equal access to education in the U.S. This has resulted in them becoming the most highly protected class of students. Even with this protection, research regarding equity issues for students with disabilities is needed and of great importance. The transformative paradigm pushes this by reflecting “the need for ethical choices in research to include the realization that discrimination and oppression are pervasive and that researchers have a moral responsibility to understand the communities in which they work in order to challenge societal processes that sustain the status quo” (Tashakkori and Teddlie, 2010). It was this

axiological assumption that prompted the researcher to explore the popularity explosion of charter schools and provide valuable data regarding the equivalency of access and inclusion for students with disabilities in charter schools.

**Social Model of Disability.** Intertwined with the transformative paradigm is the influence of the social model of disability on this study. The social model approach to disability is “informed by the idea that disability is centrally structured by social oppression, inequality and exclusion” (Thomas, 2004). Under this model, disability is defined by social and cultural constructs and differs across culture and time. The social model fits in with this study in that a student with an impairment does not have a disability unless they come in contact with an educational construct that denies them equal access to education. The social model informs the theoretical framework of this study as it prompts the dissolution of barriers to equal access to all education environments for students with disabilities.

### 3.3 Data Collection

**Description.** This study will be a secondary data analysis and no additional data will be created. Data selected for inclusion in this study was isolated to public charter schools and TPS operating in Utah. As previously noted, the variance in charter school laws between states and territories requires that representation be studied on the level of individual state education systems. Utah was selected as it is the education system most familiar to the researcher and the researcher has professional connections with the Utah State Board of Education (USBE) that facilitated the request for private agency data to supplement publicly available enrollment data.

**Data Obtainment.** Prior to collecting any data, this research proposal will be submitted to Utah State University’s Institutional Review Board (IRB). After obtaining IRB approval, the primary researcher will collect publicly available data from the USBE website and private data

from USBE. A request has already been submitted and approved by the USBE for the private data. This request was submitted in advance as the USBE data request process requires review by two different boards with a time span of at least two months between the request submission and notification of approval or denial of the request. The researcher worked with Dr. Keith Christensen and Dr. Susan Wagner to complete the form required for the request and was able to secure the sponsorship of Dr. Leah Voorhies, Utah State Director of Special Education, for the data sharing request. The researcher explained on the request form and via email to Dr. Voorhies that possession of the data cannot occur until the researcher has completed the proposal defense for this dissertation and obtained IRB approval.

Publicly available data that will be collected from the USBE website following IRB approval includes:

- Enrollment data for each charter school and traditional public school district from fall of 2013-fall of 2020.
- The Annual Performance Report for the entire state of Utah and each charter school and traditional public school district for 2016-2021.

Unsuppressed private data shared by USBE that will be collected following IRB approval includes:

- Enrollment data for each charter school and traditional public school by disability type for the 2018-2019 and 2019-2020 school years.
- Unsuppressed data for each charter school and traditional public school district for the following indicators of the APR: 1) Graduation Rates, 2) Dropout Rates, 3) Assessments for Reading and Math, 4) Suspension/Expulsion Rates, 5) Least Restrictive Environment, 6) Preschool Least Restrictive Environment, 7)

Preschool Outcomes, 8) Parent Involvement, 9) Disproportionate Representation by Inappropriate Identification, 10) Disproportionate Representation by Disability Category for Race and Ethnicity, 11) Evaluation Timelines, 13) Secondary Transition, and 14) Post-School Outcomes.

### **3.4 Measures by Study Question**

**Representation and Disability Type.** To determine to what extent the enrollment representation of students with disabilities in charter schools is similar to the representation of students with disabilities in TPS, general enrollment data and enrollment data disaggregated by disability type and grade level will be used. This will allow the researcher to determine how enrollment of students with disabilities in charter schools and TPS compare, and allow comparisons to be made when specialized charter schools that offer programs specifically for students with disabilities are include or excluded from the data set. Disaggregation will also occur to compare enrollment rates of students with disabilities by total school population. This will allow comparisons to be made between charter schools and traditional public school that have similar total enrollment numbers.

The usage of enrollment data from 2013-2020, will allow for a more longitudinal approach, which was lacking from all of the previous studies examined during the systematic review. This will assist in providing a stronger average computation for enrollment of students with disabilities for charter school with small school populations. This will increase the validity and quality of the study.

Additionally, unsuppressed private data shared by USBE for the 2018-2019 and 2019-2020 school years will be used to disaggregate enrollment data by disability type to help describe where students with different disability categories are being served. This will provide

information regarding the perception that charter schools may selectively enroll students with certain disability classifications more frequently than other disability classifications. This perception is particularly prevalent regarding disabilities that generally cost more money for charter schools to provide services for.

**Implementation of IDEA.** Because the impetus for this study is a focus on equivalent access to all educational settings for students with disabilities, it is necessary to not only look at enrollment data for charter schools and TPS, but also at how well these schools are implementing the requirements of IDEA, which guarantees equitable access. The APR was selected as a measurement for this study as it is required under the federal law that mandates a free and appropriate public education and access to the general education curriculum in the least restrictive environment for students with disabilities. Inclusion of the federal requirements as a measurement is appropriate as a comparison of where students with disabilities are being educated and how well IDEA is being implemented in their education environment. The APR measures outcomes for students with disabilities and compliance with the requirements of IDEA (“State Performance Plans/Annual Performance Reports (SPP/APR),”). For the APR, states collect data from all Local Education Agencies (LEA) (which in Utah includes charter schools and TPS) each year to produce a state APR. As part of this process, the state produces an APR for each LEA. The APR rates each state and LEA as meeting the requirements of IDEA, needing assistance, needing intervention, or needing substantial intervention. States that rank in needing substantial intervention for multiple years are at risk of losing federal funding for special education.

Following the creation of the descriptive statistics for the enrollment of students with disabilities in charter schools and TPS, data groupings will be formed for charter schools and

TPS that have high, average, and low enrollment rates of students with disabilities. This enrollment data combined with the private, unsuppressed data shared by USBE for each charter school and traditional public school district for the APR indicators will be compared to form possible correlation conclusions regarding rate of enrollment and implementation of IDEA. It is hypothesized that charter schools and TPS with higher enrollment rates of students with disabilities will show higher rates of meets requirements for APR indicators, and therefore, greater implementation of IDEA. This hypothesis is based on the idea that schools with a larger percentage of their student body having a disability classification would increase the focus of the school on meeting those student's needs, naturally leading to implementation of IDEA. This comparison will be disaggregated by the individual APR indicators to provide in depth comparisons of individual federal compliance and results measures. Overall, this measure will answer the third research question by determining if schools with higher enrollment of students with disabilities had better APR outcomes, how school types compared across APR indicators, and search for relationships between rates of enrollment of students with disabilities and APR outcomes.

### **3.5 Procedures**

**Data Collection and Storage.** All data for this study will be stored on Utah State University's BOX storage system, which is a secure data storage system. Additionally, back-ups of the data will be stored on a laptop with password-protection set up on each individual file. No student-level data will be collected. The unit of analysis will be at the charter school and traditional public school level. While the original data files will show the names of the individual charter schools and TPS, they will not be identified by name in any of the written chapters or articles generated by this study.



**Data Analysis.** Following the generation of descriptive enrollment statistics, which will control for variables by categorizing enrollment by school type, *t*-tests will be used to determine if there is a significant difference between enrollment of students with disabilities in charter schools and TPS. This analysis will be done both including and excluding specialized charter schools that solely service students with disabilities. Both types of schools will also be compared for significance to the state average of students with disabilities. Besides comparing enrollment between charter schools and TPS, comparisons will also be made based on school size. Representation of students with disabilities will be compared between charter schools and TPS that have similar total student enrollment numbers. Comparisons will also be made to determine if there is a significant difference between the types of disabilities represented in charter schools and TPS. Additional comparisons will also be computed based on grade level. Since charter schools enroll a variety of grade level combinations (i.e. K-12, K-5, K-8, middle or high school only) enrollment will be compared between charters schools and TPS based on grade level to determine if significant difference exist. Further data analysis will occur by using an ANOVA test to compare scores on each indicator of the APR based on categorization by school type and enrollment rates. APR scores will also be graphically described based on the charter school grade level representation in the data set. All statistical analysis will be completed using RStudio software.

**Researcher Bias.** The primary researcher acknowledges that she, as an adult with two children with identified disabilities enrolled in a traditional public school district in Utah, needs to be aware of her biases. Specifically, her biases include the knowledge that discrimination and oppression towards students with disabilities has been pervasive and her dedication to ensuring that students with disabilities are not treated as a secondary class of the student body and have

full access to the educational environment to promote postsecondary outcomes. To keep these biases in check, the primary research will utilize validity checks by debriefing with a secondary researcher (Dr. Susan Wagner) and her dissertation chair (Dr. Keith Christensen) who will ask critical questions during the data analysis and conclusions processes to ensure that results she is drawing from the data analyses are valid and not a result of her biases.

**Validity in Quantitative Research.** In quantitative research, “internal, external, construct, and statistical conclusion – are used to evaluate the validity of the inferences that can be made from the results of a study” (Johnson and Christensen, 2017). Validity checks will be built into this study in order to increase the quality of the study and its results. The validity checks will be based on the threats to validity noted in the systematic literature review for existing literature and on the recommendations outlined by Johnson and Christensen (2017), *Educational Research: Quantitative, qualitative, and mixed approaches*, for validity of quantitative research results. Validity checks for internal validity will include investigating relationship condition, temporal antecedence condition, and lack of an alternative explanation. In other words, the researcher will check to ensure that conclusions drawn regarding relationships in the data are not due to conditions other than school type. These checks will be utilized as comparisons are made between school type and enrollment of students with disabilities, disability types, representation by grade level, and implementation of IDEA. External validity will be address by ensuring population validity via the utilization of data from an entire education system, instead of a sampling of an education system. Statistical conclusion validity will be checked by the inclusion of multiple years of data to ensure relationships can be established between school type and enrollment of students with disabilities, disability types, and implementation of IDEA.

Major threats to validity that were identified in similar studies during the systematic review included statistical conclusion validity, external (population) validity, and researcher bias. This study aims to improve upon the research by avoiding or accounting for these threats to validity. Statistical conclusion validity was noted because many studies limited their analysis and conclusions to a single school year of data. Because many charter schools have small total enrollment numbers, changes between school years can lead to variability in results from data analysis. This study will use multiple years of enrollment data in order to improve statistical conclusion validity and draw evidence-based conclusions from the data analysis.

Another threat to validity in previous studies was the limitations of the study population to a single school district or urban area. This study will review an entire educational system, which will provide greater generalization of the results to other states that have charter school laws similar to Utah's. It should also be noted, that using urban and rural as variables for comparing charter schools and TPS was considered, but not selected for this study as the overwhelming majority of charter schools in Utah are located in urban areas.

Researcher bias has also been present in many of the previous studies on representation of students with disabilities in charter schools. This is primarily due to the number of studies conducted by researchers at organizations that support charter schools. This study has noted what biases the researcher maintains and will follow the previously mentioned process to avoid researcher bias. The researcher is also located at an independent university and is not employed or affiliated with an organization that promotes the growth or betterment of charter schools.

It must be noted that this study is limited by its use of secondary data. All studies reviewing enrollment of students with disabilities and reporting compliance with IDEA, must rely on data produced by charter schools and TPS. Unless a study is being conducted by the

charter school or traditional public school itself, secondary data must be utilized. There is not getting around this factor. With that, it is acknowledged that the results of this study will only be as valid as the secondary data from which it completes its analysis.

### **3.6 Results Reporting**

Following approval of this proposal, IRB approval, and data collection and analysis, results will be reported for this study. Chapters IV and V will present the results of the study's two purposes as individual publications. Lastly, Chapter VI will provide a summary and conclusion of the research as an integration of the study's purposes, which will include Chapter II, the systematic review. Included in Chapter VI will be an outline of how this study can be used as a template for how educational systems can be evaluated for representation of students with disabilities in charter schools.

## CHAPTER IV

### REPRESENTATION OF STUDENTS WITH DISABILITIES BY SCHOOL TYPE<sup>2</sup>

In order to understand the current scope of equivalent educational opportunities for students with disabilities in the U.S. in different school settings, a review of the representation of students with disabilities needs to be performed in individual state and territorial education settings based on school types. This study examines enrollment data for traditional public school districts (TPS) and charter schools in Utah and compares enrollment rates for students with disabilities between school types and disability type and grade levels. This chapter is presented as a publication.

#### 4.1 Abstract

The purpose of this study was to determine to what extent enrollment of students with disabilities in charter schools is similar to the enrollment of students with disabilities in TPS (TPS) based on the percentage of students with disabilities served in each, the types of disabilities being served, and the representation of students with disabilities across grade levels in each school type. Secondary enrollment data was used to generate descriptive statistics and complete correlation analyses. It was determined that charter schools as a whole do not enroll a significantly lower or higher percentage of students with disabilities, the inclusion of specialized schools serving students with disabilities can skew direct comparisons of enrollment between school types, charter schools are trending towards being inclusive environments for some disabilities while excluding others, some charter schools serving elementary age students may be under-enrolling students with disabilities while some middle/high school level charter schools have high enrollment of students with disabilities, and comparing enrollment between TPS and

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<sup>2</sup> Coauthor: Keith Christensen

charter schools is nuanced and should not be completed solely by reviewing aggregate enrollment data.

## 4.2 Introduction

The Individuals with Disabilities Education Act (IDEA) provides for the free and appropriate public education of students with disabilities in public schools. Federal case law (*Brown v Board of Education (1954)*) has also decreed that educating minority populations, such as students with disabilities, in separate settings does not provide an equal education. Charter schools, as publicly funded education entities have the same legal obligations to enroll students with disabilities as other traditional public school districts (TPS). There is a perception that charter schools enroll a disproportionately lower number of students with disabilities than TPS. If charter schools are enrolling students with disabilities at a lower rate than TPS, charter schools could be seen as an exclusionary setting that does not provide equal opportunities for students with disabilities despite federal legislation and case law that guarantees equal educational opportunities for students with disabilities across K-12 education settings.

Charters schools are autonomous schools that began operation under the belief that parental choice in schools would drive market-based accountability, leading to “more innovative and effective learning environments” (Rhim & McLaughlin, 2007). Since the first charter school law was passed in Minnesota in 1991, 45 states, Washington D.C., and three territories have enacted charter school laws (*National Alliance for Public Charter Schools*). According to the National Alliance for Public Charter Schools’ 2020 Annual Report, 3.3 million students are currently educated in charter schools and the number of charter schools have increased by three times since the 2005-06 school year (National Alliance for Public Charter Schools, 2020). The National Center for Education Statistics estimated 50.7 million students attended public schools

in the U.S. during the 2019-2020 school year (*The NCES Fast Facts Tool Provides Quick Answers to Many Education Questions* (National Center for Education Statistics), 2020). Based on these numbers, approximately 6.5% of students in the U.S. attended a charter school during the 2019-2020 school year. While the percentage of students enrolled in charter schools in the U.S. is far from a majority, the expansion of charter schools and charter school legislation point to the need to ensure that charter schools are adhering to federal requirements to provide special education services to students with disabilities. If charter schools are not enrolling students with disabilities in a similar manner as TPS, they could evolve into separate education settings where students with disabilities are not represented consistently.

Each state and territory where charter schools exist has its own legal system for authorizing and monitoring public education in charter schools, which can make comparing charter schools on a national scale difficult. For example, states can decide whether or not to classify charter schools as local education agencies (LEAs). This classification gives them full autonomy over special education assessments, placements, and funding decisions. Some states elect to classify charter schools as LEAs, while others pair charter schools with an existing LEA removing much of their special education decision making, or some states offer both options and charter schools' LEA status is determined at the time of authorization. For monitoring, all State Education Agencies (SEA) are required to monitor special education services, which they do by gathering Annual Performance Report data from each LEA and ensuring compliance with the IDEA is occurring. However, each state's monitoring system is unique. As may be guessed, these differences between states on charter school classification and monitoring of special education services can lead to differences in special education enrollment and services in charter schools, making direct comparisons of representation between states difficult.

However, as noted, special education services for students with disabilities are governed by federal legislation and legal precedence, which means special education services should be somewhat equivalent across state and school settings. Charter schools are given federal funding through State Education Agencies (SEAs) to provide public education services, including services for students with disabilities; and charter schools are accountable under federal legislation to provide the same services for students with disabilities as TPS. Federal laws that apply to students with disabilities include the Individuals with Disabilities Education Act 2004 (IDEA), Section 504 of the Rehabilitation Act (Section 504), and the Americans with Disabilities Act (ADA).

A separate issue is the increasing number of specialized charter schools operate to meet the needs of students with specific disabilities. These specialized charter schools add additional questions around the equivalent education of students with disabilities as they can be viewed as exclusionary settings where students with disabilities are not educated in the least restrictive environment with their non-disabled peers as required by IDEA. These charter schools also tend to skew direct comparisons of representation between charter schools and TPS by increasing the average rate of representation of students with disabilities in charter schools. As Rhim et al. (2019) stated, “The challenge before both the traditional public and charter school sectors is to ensure that the programmatic innovation and excellence provided by the best specialized schools exist without having specialized schools become the default or only option for students with disabilities” (p. 27).

The systematic literature review conducted prior to this study determined that current research reports enrollment of students with disabilities in charter school is based on how charter schools evaluate for and identify disabilities, the LEA classification of the charter school, and



how the oversight and monitoring of special education programs is conducted at the school (See Chapter II). That literature review also illustrated the importance of clearly delineating whether or not specialized charter schools were included in a study's data sample and analysis and showing how the inclusion of that data can impact the overall representation percentage of students with disabilities in charter schools in an education system. The literature review also concluded that studies examining the representation of students with disabilities in charter schools need to be conducted on the level of an entire state or territorial education system, because of the differing charter school laws across the nation, and include multiple school years of data to improve statistical conclusion validity. The perception that students with disabilities are enrolled in charter schools at a lower rate than their able-bodied peers combined with the paucity of well-designed studies in the existing literature point to the need for well-designed studies to provide evidence of the representation of students with disabilities in charter schools.

### **Research Purpose**

The purpose of this study is to determine to what extent enrollment of students with disabilities in charter schools is similar to the enrollment of students with disabilities in TPS in Utah based on the percentage of students with disabilities served in each, the types of disabilities being served, and the representation of students with disabilities across grade levels in each school type.

### **4.3 Methodology**

This study was conducted by secondary data analysis. Quantitative methods selected for this study included the production of descriptive statistics and correlation analyses. Descriptive methods were selected to describe the current status of representation of students with disabilities by school type and correlational analyses were selected to compare representation of students

with disabilities by school type and disability type and grade level. The combination of descriptive statistics and correlational analyses allowed the current status of representation of students with disabilities to be described and compared across school settings.

### **Data Collection**

Data selected for inclusion in this study was isolated to public charter schools and TPS operating in Utah. As previously noted, the variance in charter school laws between states and territories requires that representation be studied on the level of individual state education systems. This study was approved by the Utah State University Institutional Review Board (IRB).

Following IRB approval, publicly available data was collected from the Utah State Board of Education (USBE) website. This data included enrollment data for each charter school and traditional public school district from fall of 2013 thru the fall of 2020. Because charter schools generally have lower overall enrollment numbers than TPS, multiple years of enrollment data were used to establish strong connections between enrollment rates of students with disabilities and school type. This approach is important to promote statistical conclusion validity and should be used in any study analyzing enrollment of students with disabilities in charter schools.

A data sharing request was submitted and approved by USBE for additional private data to be included in this study. The private data that was obtained for this study included enrollment data for each charter school and TPS disaggregated by disability type and grade level for the 2015-2016, 2016-2017, 2017-2018, 2018-2019, and 2019-2020 school years. Again, multiple school years' data were utilized to better establish correlations between what students are being enrolled in which school types. The analysis by disability type was included to provide evidence

regarding the perception that charter schools may selectively enroll students with certain disability classifications more frequently than other disability classifications. This perception is particularly prevalent regarding disabilities that generally cost more money for charter schools to provide services for. The analysis by grade level was included because charter schools serve a variety of grade level combinations (i.e. K-5, 6-8, 9-12, K-12, etc.) and disaggregating and comparing enrollment by grade level allowed for exploration of how this may affect enrollment of students with disabilities.

All of the publicly available and private data was combined to show the total enrollment of all students, the total enrollment of students with disabilities, the types of disabilities enrolled, and grade levels of students with disabilities in each LEA. In Utah, charter schools are classified as their own LEA. Following this, each LEA was relabeled as either being a charter school or TPS. The eight years of publicly available data was used to determine overall enrollment rates for students with disabilities comparatively between TPS and charter schools. This larger sample was used for the overall enrollment percentage so enrollment trends could be examined and to add validity to statistical conclusions. The five years of private data was utilized to compare enrollment of students with disabilities by disability type and grade level and was the maximum amount of data available for these analyses.

Further identification was conducted to identified charter schools and TPS that were classified as specialized schools, offering services specifically for students with disabilities. To complete this identification, mission and vision statements for each charter school were reviewed on their website to determine if the charter school had a mission that focused on the education of students with disabilities. One charter school was identified as a specialized charter school with a mission to specifically provide education for students with disabilities. In addition, all TPS were

reviewed and one was identified as a specialized school, as it was established legislatively by the state to provide services for students with specific disabilities.

### **Data Analysis**

The combination of the data allowed descriptive statistics to be generated that described overall enrollment percentages for students with disabilities for all TPS and charter schools in Utah. The descriptive statistics for charter schools and TPS were generated both including and excluding specialized schools to illustrate the affect inclusion of specialized schools can have when showing enrollment percentages. Any study analyzing enrollment of students with disabilities in charter schools should clearly state whether or not specialized charter schools were included or excluded from the data. Descriptive statistics were also generated to show what types of disabilities were represented in charter schools and TPS and enrollment by grade levels for students with disabilities.

Following the generation of descriptive enrollment statistics, which controlled for variables by categorizing enrollment by school type, *t*-tests were used to determine if there was a significant difference between enrollment of students with disabilities in charter schools and TPS. This analysis was done both including and excluding specialized schools that solely service students with disabilities. Additionally, a Cohen's *d* analysis was conducted to determine the effect size of the analysis for the difference in enrollment between students with disabilities in charter schools and TPS. Additional comparisons were also computed based on disability type using ANOVA analysis methods and grade level using multi-level modeling. Multi-level analysis was selected to analyze the grade level data because of the mix of grade levels represented in charter schools. An ANOVA could not be run on this data because every charter school did not have data for all grades K-12. Rather the use of multi-level modeling for the grade

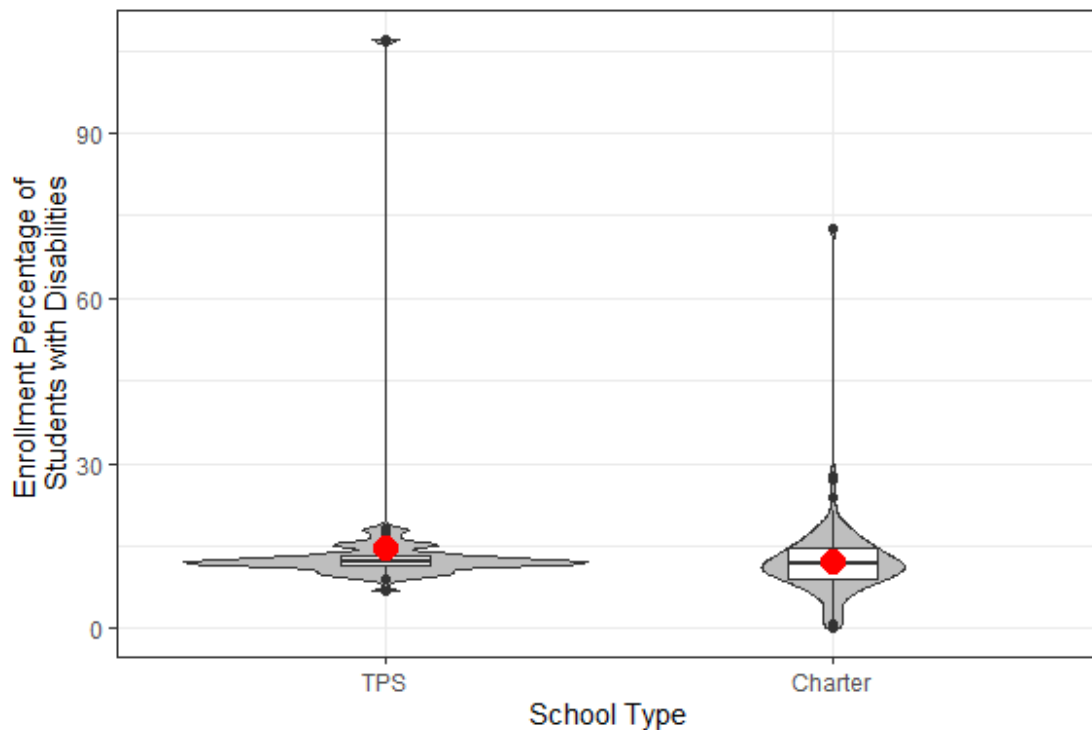
level data was necessary. All of these comparisons allowed for analyses to determine if there was a correlation between school type and representation of students with disabilities. Effect size analysis was also completed for the disability type and grade level analysis using Cohen's  $d$  and  $R^2$  with pairwise follow up using standard deviation of sum of variance comparison. All statistical analysis was completed using RStudio software.

#### 4.4 Results

The data analysis comparing enrollment between TPS and charter schools included a total of 164 LEAs consisting of 42 TPS and 122 charter schools across eight school years. Across all 164 LEAs enrollment of students with disabilities ranged from 0.15% to 100%. The enrollment range for TPS when the specialized school was included was 6.67% to 100%,  $M = 14.6$  (14.78),

#### Figure 1

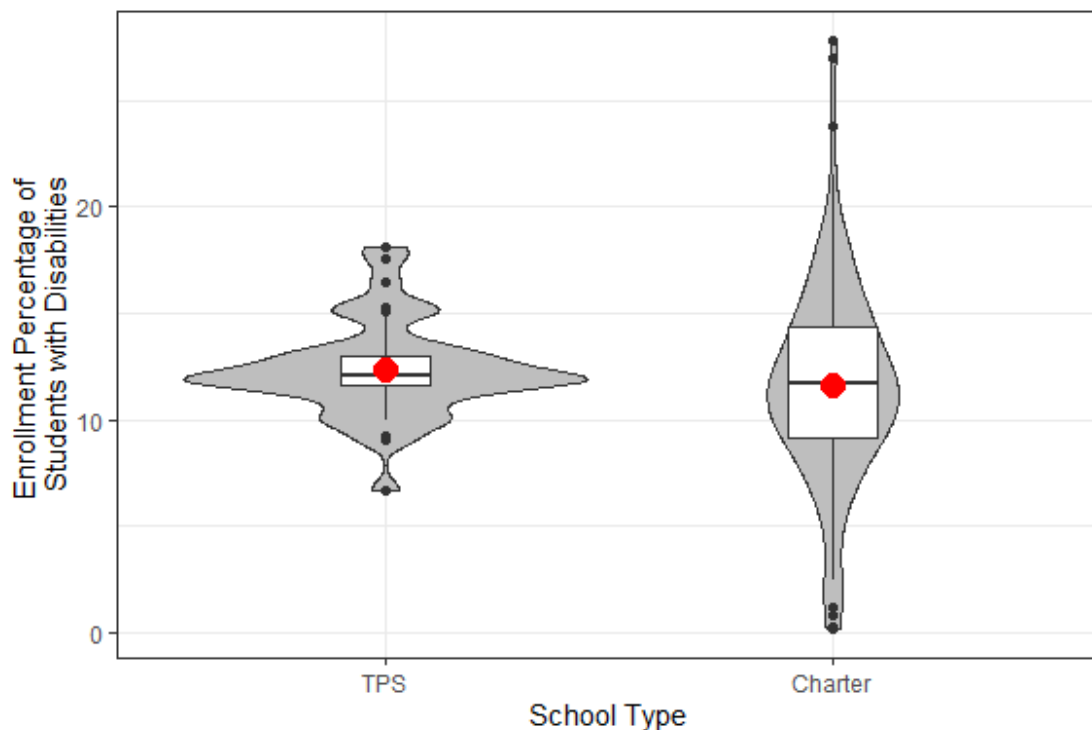
*Chart comparing mean and total enrollment of students with disabilities for TPS and charter schools when specialized schools are included in the data set.*



but dropped to 6.67% to 18.14%,  $M = 12.35$  (2.24) when the specialized TPS was excluded. The enrollment range for charter schools when the specialized school was included was 0.15% to 72.51%,  $M = 12.13$  (7.28), but dropped to 0.15% to 27.85%,  $M = 11.63$  (4.77) when the specialized charter school was excluded. Figure 1 shows a chart for mean total enrollment of students with disabilities for TPS and charter schools when specialized schools are included and Figure 2 shows a chart for mean total enrollment of students with disabilities for TPS and charter schools when specialized schools are excluded from the data set.

### Figure 2

*Chart comparing mean and total enrollment of students with disabilities for TPS and charter schools when specialized schools are excluded from the data set.*



To determine if there was a significant difference between enrollment of students with

disabilities in charter schools and TPS, analysis was completed excluding specialized schools. As is shown in Figures 1 and 2 and in the variance in standard deviations included above for the school types when this data is included or excluded, including specialized schools in the data set can skew comparisons of representation of students with disabilities between charter schools and TPS.

**Table 1**

*Descriptive statistics for the mean, standard deviation, minimum and maximum percentages of enrollment of students with disabilities by disability type in TPS and charter schools without the specialized school included.*

<b>Disability Type</b>	<b>Mean</b>	<b>SD</b>	<b>Minimum % Enrolled</b>	<b>Maximum % Enrolled</b>
TPS Autism	6.26%	2.02	2.55%	11.17%
Charter Autism	9.39%	7.21	0.00%	43.17%
TPS Emotional Disturbance	2.13%	1.10	0.38%	4.72%
Charter Emotional Disturbance	3.10%	2.70	0.00%	11.39%
TPS Speech/Language Impairment	22.54%	6.42	8.81%	40.80%
Charter Speech/Language Impairment	22.61%	15.44	0.00%	77.27%
TPS Deaf-Blind	0.06%	0.17	0.00%	0.94%
Charter Deaf-Blind	0.02%	0.13	0.00%	1.21%
TPS Development Delay	4.72%	2.26	0.00%	10.45%
Charter Development Delay	3.39%	3.76	0.00%	23.33%
TPS Hearing Impairment	0.62%	0.47	0.00%	3.48%
Charter Hearing Impairment	0.45%	0.81	0.00%	5.00%
TPS Intellectual Disability	4.62%	2.07	1.60%	12.19%
Charter Intellectual Disability	2.84%	3.67	0.00%	25.34%
TPS Multiple Disabilities	1.93%	0.85	0.00%	3.48%
Charter Multiple Disabilities	0.39%	0.68	0.00%	3.81%
TPS Other Health Impairments	7.33%	3.59	0.00%	18.39%
Charter Other Health Impairments	13.79%	7.66	0.00%	38.89%
TPS Orthopedic Impairment	0.24%	0.21	0.00%	0.90%
Charter Orthopedic Impairment	0.19%	0.56	0.00%	4.15%
TPS Specific Learning Disability	48.72%	8.97	30.73%	68.98%
Charter Specific Learning Disability	43.31%	14.67	2.50%	91.67%
TPS Traumatic Brain Injury	0.35%	0.36	0.00%	1.83%
Charter Traumatic Brain Injury	0.37%	0.78	0.00%	5.00%
TPS Visual Impairment	0.32%	0.41	0.00%	2.03%

Charter Visual Impairment	0.16%	0.42	0.00%	3.01%
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Using the data without specialized schools, Lavene's Test found there was no homogeneity of variance ( $p = .001$ ) for the enrollment data. Based on this, Welch's two sample  $t$ -test was completed to compare enrollment of students with disabilities between charter schools and TPS. There was not a significant difference between enrollment rates of students with disabilities between charter schools and TPS,  $t(144.03) = 1.28$ ,  $p = .20$ ,  $d = .19$  when specialized schools were excluded from the data set.

The data analysis comparing disability types represented in TPS and charter schools included a total of 156 LEAs consisting of 41 TPS and 115 charter schools across five school years. Table 1 provides descriptive statistics for the mean, standard deviation, minimum and maximum percentages of enrollment of students with disabilities by disability type in TPS and charter schools without the specialized schools included. Table 2 shows the mean annual percentage of enrollment across the 13 disability types for TPS and charter schools without the two specialized LEAs, along with the overall state average of enrollment of students with disabilities in each disability type.

Using Levene's Test, it was determined that the disability type variable was not normally distributed and homogeneity of variance failed ( $p < .05$ ). Based on this, a mixed design ANOVA was used to determine if there was a difference in representation of disability types between TPS and charter schools. The assumption of sphericity was violated, as determined by the Mauchly Test for Sphericity, so the Greenhouse-Geisser Correction was used to account for the violation of the sphericity assumption. Following this, it was found that disability type did moderate differences between TPS and charter schools with an overall mid-range effect size. ( $p = .004$ ,  $\eta_g^2 = .04$ ,  $\eta_p^2 = .04$ ).



**Table 2**

*The mean annual percentage of enrollment across the 13 disability types and by traditional public school or charter schools without the two specialized LEAs.*

<b>Disability Type</b>	<b>TPS</b>	<b>Charter</b>	<b>State Average</b>
Autism	6.36%	9.39%	8.04%
Emotional Disturbance	2.13%	3.10%	2.47%
Speech/Language Impairment	22.50%	22.60%	22.26%
Deaf-Blind	0.06%	0.02%	0.03%
Development Delay	4.72%	3.39%	4.48%
Hearing Impairment	0.62%	0.45%	0.63%
Intellectual Disability	4.62%	2.84%	4.40%
Multiple Disabilities	1.93%	0.39%	1.95%
Other Health Impairments	7.33%	13.80%	10.04%
Orthopedic Impairment	0.24%	0.19%	0.21%
Specific Learning Disability	48.70%	43.30%	44.93%
Traumatic Brain Injury	0.35%	0.37%	0.32%
Visual Impairment	0.32%	0.16%	0.29%

A post hoc pairwise test was used to determine which disability types had significantly different enrollment percentages between TPS and charter schools with their effect sizes. Significance was found for the variance between TPS and charter schools for autism ( $p = .01$ ) with charter schools having significantly higher enrollment, developmental delays ( $p = .03$ ) with TPS having significantly higher enrollment, emotional disturbance ( $p = .03$ ) with charter schools having significantly higher enrollment, intellectual disabilities ( $p = .00$ ) with TPS having significantly higher enrollment, multiple disabilities ( $p < .0001$ ) with TPS having significantly higher enrollment, other health impairments ( $p < .0001$ ) with charter schools having significantly higher enrollment, specific learning disability ( $p = .03$ ) with TPS having significantly higher enrollment, and visual impairments ( $p = .04$ ) with TPS having significantly higher enrollment. Table 3 summarizes the mean annual percentage of enrollment, significant  $p$  values across the 13

disability types by school type without the two specialized LEAs, and effect sizes. Most of the disability types that showed significance with the post hoc pairwise testing had small effect sizes, with only other health impairments and specific learning disabilities approaching medium effect sizes.

**Table 3**

*The mean annual percentage of enrollment, significant p values, and effect sizes across the 13 disability types by school type without the specialized LEAs. Percentages of the significantly higher school type are highlighted.*

<b>Disability Type</b>	<b>TPS</b>	<b>Charter</b>	<b>p Value</b>	<b>Effect Size (<i>d</i>)</b>
Autism	6.36%	9.39%	.01	.198
Emotional Disturbance	2.13%	3.10%	.03	.063
Speech/Language Impairment	22.50%	22.60%	.98	.005
Deaf-Blind	0.06%	0.02%	.17	.002
Development Delay	4.72%	3.39%	.03	.087
Hearing Impairment	0.62%	0.45%	.20	.011
Intellectual Disability	4.62%	2.84%	.00	.117
Multiple Disabilities	1.93%	0.39%	< .0001	.101
Other Health Impairments	7.33%	13.80%	< .0001	.424
Orthopedic Impairment	0.24%	0.19%	.54	.004
Specific Learning Disability	48.70%	43.30%	.03	.355
Traumatic Brain Injury	0.35%	0.37%	.90	.001
Visual Impairment	0.32%	0.16%	.04	.011

The data analysis comparing enrollment of students with disabilities by grade level in TPS and charter schools included a total of 156 LEAs consisting of 41 TPS and 115 charter schools across five school years. All TPS schools reported data for all grade levels. Because of the variation in grades served at charter schools, 82 reported enrollment for kindergarten, 81 reported enrollment for grades 1-4, 82 reported enrollment for grade 5, 87 reported enrollment for grade 6, 80 reported enrollment for grades 7-8, 66 reported enrollment for grade 10, 48 reported enrollment for grades 10-11, and 47 reported enrollment for grade 12.

Table 4 provides descriptive statistics for the mean, standard deviation, minimum and maximum percentages of enrollment of students with disabilities by grade level in TPS and

**Table 4**

*Descriptive statistics for the mean, standard deviation, minimum and maximum percentages of enrollment of students with disabilities by grade level in TPS and charter schools without the specialized school included.*

<b>Disability Type</b>	<b>Mean</b>	<b>SD</b>	<b>Minimum Percent Enrolled</b>	<b>Maximum Percent Enrolled</b>
TPS Kindergarten	11.54%	4.17	4.31%	22.51%
Charter Kindergarten	7.20%	4.25	1.60%	29.41%
TPS Grade 1	12.66%	4.10	4.98%	28.03%
Charter Grade 1	10.04%	4.60	3.80%	27.20%
TPS Grade 2	13.90%	4.57	5.04%	31.10%
Charter Grade 2	11.81%	4.08	5.40%	28.50%
TPS Grade 3	14.33%	3.54	6.48%	26.38%
Charter Grade 3	13.45%	4.23	3.36%	27.37%
TPS Grade 4	14.49%	3.13	7.77%	23.82%
Charter Grade 4	14.47%	4.38	5.63%	29.72%
TPS Grade 5	13.97%	3.27	6.62%	23.54%
Charter Grade 5	14.74%	4.75	6.41%	28.03%
TPS Grade 6	13.11%	2.83	7.32%	22.36%
Charter Grade 6	14.66%	5.14	2.63%	33.65%
TPS Grade 7	12.20%	2.51	6.75%	19.84%
Charter Grade 7	15.28%	6.65	0.00%	40.00%
TPS Grade 8	11.78%	2.63	6.73%	19.39%
Charter Grade 8	15.14%	6.84	0.00%	45.45%
TPS Grade 9	11.32%	2.45	6.59%	18.21%
Charter Grade 9	13.79%	6.79	0.00%	32.72%
TPS Grade 10	11.23%	2.44	7.00%	18.87%
Charter Grade 10	13.89%	7.26	0.73%	32.85%
TPS Grade 11	10.81%	2.37	5.36%	16.45%
Charter Grade 11	12.78%	6.80	0.49%	31.00%
TPS Grade 12	12.50%	2.45	6.39%	17.65%
Charter Grade 12	13.25%	7.41	0.52%	32.59%

charter schools without the specialized schools included. Table 5 shows the mean annual percentage of enrollment students with disabilities across the 13 grade levels and by TPS or

charter schools without the two specialized LEAs, along with the overall state average of enrollment of students with disabilities in each grade level.

**Table 5**

*The mean annual percentage of enrollment across the 13 grade levels by TPS or charter schools without the two specialized LEAs.*

<b>Grade Level</b>	<b>TPS</b>	<b>Charter</b>	<b>State Average</b>
Kindergarten	11.50%	7.20%	9.12%
Grade 1	12.70%	10.00%	10.43%
Grade 2	13.90%	11.80%	11.71%
Grade 3	14.30%	13.50%	13.18%
Grade 4	14.50%	14.50%	13.86%
Grade 5	14.0%	14.70%	13.69%
Grade 6	13.10%	14.70%	13.00%
Grade 7	12.20%	15.30%	12.14%
Grade 8	11.80%	15.10%	11.50%
Grade 9	11.30%	13.80%	9.06%
Grade 10	11.20%	13.90%	10.48%
Grade 11	10.80%	12.80%	10.11%
Grade 12	12.50%	13.30%	12.90%

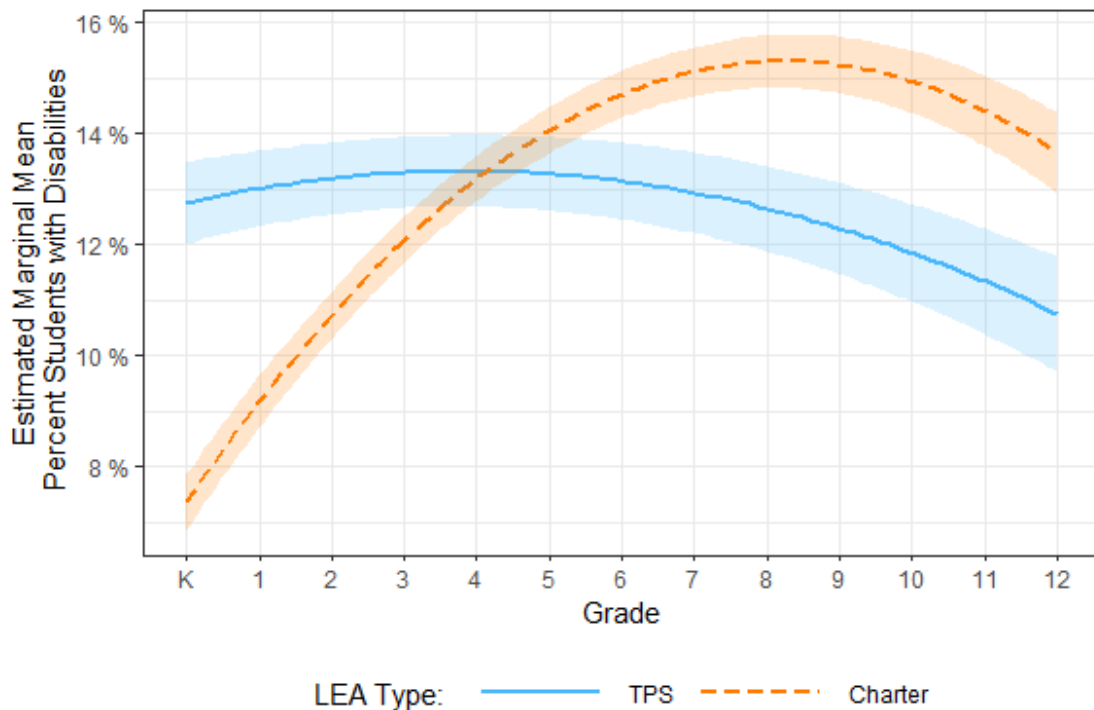
Multi-level modeling with random intercepts for intercepts and slopes was used to determine if there was a difference in representation of students with disabilities at different grade levels between TPS and charter schools. Figure 3 graphically compares the estimated marginal mean percent of students with disabilities between grade levels for TPS and charter schools and shows that charter schools enroll fewer students with disabilities than TPS in early elementary grades, but surpass TPS and enroll more students with disabilities in middle and high school grades.

Based on the results of the multi-level modeling and post hoc pairwise testing, significance was found for the variance between TPS and charter schools for kindergarten ( $p < .001$ ) with TPS having significantly higher enrollment, 1<sup>st</sup> grade ( $p < .001$ ) with TPS having significantly higher

enrollment, 2<sup>nd</sup> grade ( $p = .002$ ) with TPS having significantly higher enrollment, 7<sup>th</sup> grade ( $p = .02$ ) with charter schools having significantly higher enrollment, 8<sup>th</sup> grade ( $p = .004$ ) with charter schools having significantly higher enrollment, 9<sup>th</sup> grade ( $p = .003$ ) with charter schools having

### Figure 3

*Comparison of the estimated marginal mean percent of students with disabilities between grade levels for TPS and charter schools*



significantly higher enrollment, 10<sup>th</sup> grade ( $p = .004$ ) with charter schools having significantly higher enrollment, 11<sup>th</sup> grade ( $p = .008$ ) with charter schools having significantly higher enrollment, and 12<sup>th</sup> grade ( $p = .02$ ) with charter schools having significantly higher enrollment. Table 6 summarizes the mean annual percentage of enrollment, significant  $p$  values, and effect sizes across the 13 grade levels by school type without the two specialized LEAs. Overall effect sizes for the grade level multi-level modeling were  $R_c^2 = .802$  and  $R_m^2 = .131$ , with effect sizes for the post hoc pairwise testing ranging from medium to large for the grade levels showing

significant differences.

**Table 6**

*The mean annual percentage of enrollment, significant p values, and effect size across the 13 grade levels by TPS or charter schools without the two specialized LEAs. Percentages of the significantly higher school type are highlighted.*

<b>Grade Level</b>	<b>TPS</b>	<b>Charter</b>	<b>p Value</b>	<b>Effect Size (<i>d</i>)</b>
Kindergarten	11.50%	7.20%	< .001	1.080
Grade 1	12.70%	10.00%	< .001	.770
Grade 2	13.90%	11.80%	.002	.491
Grade 3	14.30%	13.50%	.12	.243
Grade 4	14.50%	14.50%	.86	.026
Grade 5	14.0%	14.70%	.31	.159
Grade 6	13.10%	14.70%	.06	.313
Grade 7	12.20%	15.30%	.02	.436
Grade 8	11.80%	15.10%	.004	.528
Grade 9	11.30%	13.80%	.003	.589
Grade 10	11.20%	13.90%	.004	.619
Grade 11	10.80%	12.80%	.008	.617
Grade 12	12.50%	13.30%	.00	.584

#### 4.5 Discussion

It is clear from the comparison of overall enrollment percentages of students with disabilities that charter schools as a whole do not enroll a significantly lower or higher percentage of students with disabilities than TPS when specialized schools are removed from the data set. It was clear from the mean, standard deviation, and range comparisons before and after specialized schools were removed from the TPS and charter school data sets that their inclusion can greatly skew comparisons between TPS and charter schools during analysis.

Of particular note in the comparisons of overall enrollment percentages of students with disabilities was the range of enrollment between TPS and charter schools, even when the specialized schools were excluded. TPS had a range of 6.67% to 18.14% ( $M = 12.35$ ) enrollment

while charter schools had a broader range of 0.15% to 27.85% ( $M = 11.63$ ). Considering these ranges, it is fair to state that while some TPS had lower than average enrollment of students with disabilities, there are charter schools that not only enroll a lower than average percentage of students with disabilities, but some have very low enrollment of students with disabilities and may be seen as exclusionary settings. This is problematic. When looking at charters as a whole in Utah, they appear to be equal in their enrollment of students with disabilities, but they need to be further examined on a school building level to ensure that there aren't charter schools with extremely low enrollment where students with disabilities are excluded from the curriculum.

When comparing enrollment between TPS and charter schools based on disability type, TPS enrolled significantly more students classified with developmental delays, intellectual disabilities, multiple disabilities, specific learning disabilities, and visual impairments. Charter schools enrolled significantly more students classified with autism, emotional disturbance, and other health impairments. This data is comparable to previous studies that found that charter schools enroll fewer students with disabilities that generally have lower rates of inclusion in the general education classroom (Wilkins, 2011), that charter schools classified or enrolled fewer students with specific learning disabilities (Winters, 2015 and Winters et al., 2017), and charter schools enrolled a higher percentage of students with autism and emotional disturbance (Rhim et al., 2019). This data differs from a previous study (Scott & US Government Accountability Office, 2012) that stated nationally charter schools enroll a lower percentage of students in each of the 13 disability classifications, but corroborates a more recent study (Lancet et al., 2020) that stated charter school enrollment of students with disabilities is based on disability type.

The results of this study combined with findings from previous studies show a trend in charter schools enrolling fewer students with low general education classroom inclusion rates

(intellectual disabilities and multiple disabilities) and students with specific learning disabilities, while they enroll higher percentages of students with autism and emotional disturbance.

Again, this is problematic. Charter schools are trending towards being inclusive environments for some disabilities, while excluding others. Many factors could play into this statistic. Charters generally only set up support structures for disabilities that exist in their student populations while TPS generally have a larger overall population of students with disabilities and have more supports and services set in place. Because of this, parents may opt to enroll their students who require more supports and services for their disabilities in TPS where services are already set up. Or as perceptions have stated charters could be discouraging enrollment of students with disabilities that have low inclusion rates. Whatever the case, additional research is needed to determine why gaps exist in enrollment for some disability types in charter schools and why some disability types (autism and emotional disturbance) have higher representation in charter schools.

The results of this study show that TPS enroll a significantly higher percentage of students with disabilities in grades K-2, while charter school enroll a significantly higher percentage of students with disabilities in grades 7-12. This result is comparable to the results of Winters (2014) which found that charters enrolled fewer students with disabilities in Kindergarten but enrolled more equivalent percentages of students with disabilities by middle school. Winters (2014) hypothesized that lower enrollment of students with disabilities in early grades is due to most charter schools not offering preschool services when many students with disabilities start receiving special education services. With this, many parents of students who receive special education services in preschool remain at the school where their student began services. It is difficult to determine if this is true for the Utah schools utilized in this dataset as



only one of the charter schools offered preschool services so no trend could be established. However, the results of this study do mirror what Winters (2014) discussed. Additionally, there are no existing studies that have shown charter schools enroll significantly higher percentages of students with disabilities in middle and high school grades. The results of this study show that additional research is needed to see if higher enrollment of students with disabilities by charter schools in middle and high school grades is a trend in other datasets and why parents of middle and high school students with disabilities may be enrolling their students at a higher rate in charter schools.

It is worth noting that for the data included in this study, more charter schools were represented that enrolled elementary age students than middle and high school age students. In fact, the number of charter schools with 12<sup>th</sup> grade students was nearly half that enrolling kindergarten students (47 compared to 82). This fluidity in the sample size needs to be noted when considering representation of students with disabilities by grade levels in charter schools. Overall, additional research is needed to explore the significant variance between early and later grade levels.

#### **4.6 Limitations**

The primary limitation to this study is its use of secondary data. The results of this study are only as accurate as the enrollment data provided by LEAs to the USBE. However, it should be noted that all studies analyzing enrollment of students with disabilities in charter schools rely on secondary data analyses, so it is believed that the results of this study are equitable to previously published studies on the topic. Indeed, this study focused on including many years of school enrollment data in order to provide additional statistical conclusion validity to its results beyond the one or two years of enrollment data that most published studies used for analyzing

enrollment of students with disabilities in charter schools compared to TPS.

#### **4.7 Implications for Policy, Practice, and Research**

Immediate recommendations apparent from this study point to the need for changes in policies and practices at the State Education Agency (SEA) level. The data showed that there are some charter schools with such low enrollment of students with disabilities that they are exclusionary settings. SEAs need to assess charter school enrollment of students with disabilities and address the school-level specific exclusionary enrollment practices that are leading to low enrollment of students with disabilities. Additionally, SEAs need to provide outreach to and monitoring of charter schools regarding their child find responsibilities at early grade levels to help them identify and enroll students with disabilities to ensure more equitable enrollment of students with disabilities in early elementary grades. This emphasis on child find responsibilities and enrollment of students with disabilities at charter schools for early elementary grade levels may also assist with the inequivalences noted in the disability types enrolled in charter schools as well. While the additional research outlined below can help hone SEA practices, immediate monitoring by SEAs will hold charter schools accountable for equivalent enrollment of students with disabilities in charter schools compared to TPS.

This study found several areas where additional research is needed to explore enrollment of students with disabilities in charter schools. First, additional data is needed to explore the variance in the range of representation of students with disabilities in charter schools compared to TPS. Specifically, a guide should be developed for state and territorial education agencies to assist them in examining the range of representation of students with disabilities and provide an outline of how charter schools with low representation of students with disabilities can be coached on their responsibilities under IDEA to enroll students with disabilities and increase

their representation in their school population. This guide could be included in special education policies as an assessment tool for gauging the equivalency of representation of students with disabilities in charter schools and inform state level practices around monitoring the implementation of IDEA.

Second, there is a need for additional research into the trend in data showing charter schools having a lower representation of students with developmental delays, intellectual disabilities, and multiple disabilities, while having a higher representation of students with autism and emotional disturbance. This research should include a mixed method analysis that includes interviews of parents of students with disabilities regarding their choices to enroll their student in TPS or charter schools. This kind of analysis could provide evidence as to why some disability types have high or low representation in charter schools. The results of that analysis could inform state and LEA level policies around identification and enrollment of students with disabilities and state-level monitoring practices.

Third, additional research is needed to explore the significant variance of enrollment of students with disabilities in TPS and charter schools between early and later grade levels. As shown in Figure 3, there is a significantly lower percentage of students with disabilities served in charter schools in grades K-2 and a significantly higher percentage served in grades 7-12. This research should include a mixed method analysis that includes interviews of parents of students with disabilities regarding their choices to enroll their student in TPS or charter schools at different age levels. The results of that analysis could also inform state and LEA level policies around identification and enrollment of students with disabilities.

#### **4.8 Conclusion**

This study illustrated that charter schools as a whole do not enroll a significantly lower or

higher percentage of students with disabilities than TPS when specialized schools are removed from the data set. It was clear from the data that the inclusion of specialized schools that specifically provided services to students with disabilities can greatly skew comparisons between TPS and charter schools and studies should be careful to state if they are included or excluded in enrollment comparisons and provide justification for their usage or omission from analysis. Another strong conclusion of this study was the range or representation of students with disabilities in charter schools. It was clear from the range of representation that there are charter schools that not only enroll a lower than average percentage of students with disabilities, but that some have very low enrollment of students with disabilities and may be seen as exclusionary settings.

In addition, a trend was shown with charter schools enrolling fewer students with low general education classroom inclusion rates (intellectual disabilities and multiple disabilities) and students with specific learning disabilities, while they enroll higher percentages of students with autism and emotional disturbance. Based on this trend, charter schools are trending towards being inclusive environments for some disabilities, while excluding others. Moreover, this study showed that charter schools enroll a significantly lower percentage of students with disabilities in grades K-2 and a significantly higher percentage of students with disabilities in grades 7-12. This shows that some charter schools serving elementary age students may be under-enrolling students with disabilities while some middle/high school level charter schools have high enrollment of students with disabilities. Again, this is creating environments where some charter schools are exclusionary environments for certain age levels of students with disabilities while other charter schools are trending towards being inclusive environments to the point of being lop-sided in exposing students with disabilities to their same age peers without disabilities.

Most importantly, this study shows that the issue of comparing enrollment between TPS and charter schools is a complex process and should not be done by looking at aggregate enrollment data. Multi-level analysis is needed to disaggregate the data and tell a story about who students with disabilities are and where they are receiving special education services.

#### **4.9 Summary**

This chapter provided a determination as to what extent enrollment of students with disabilities in charter schools is similar to the enrollment of students with disabilities in TPS in Utah based on the percentage of students with disabilities served in each, the types of disabilities being served, and the representation of students with disabilities across grade levels in each school type. Chapter V will follow up this determination with an analysis of how enrollment of students with disabilities in TPS and charter schools relates to their implementation of IDEA based on their Annual Performance Report results. Lastly, Chapter VI will provide a summary and conclusion of the research as an integration of the study's purposes, which will include Chapter II, the systematic review. Included in Chapter VI will be an outline of how this study can be used as a template for how educational systems can be evaluated for representation of students with disabilities in charter schools.

## **CHAPTER V**

### **IMPLEMENTATION OF IDEA BY SCHOOL TYPE<sup>3</sup>**

In order to understand the current scope of equivalent educational opportunities for students with disabilities in the U.S. in different school settings, a review of representation of students with disabilities needs to be performed in individual state and territorial education settings based on school types and how well those schools are implementing the Individuals with Disabilities Education Act (IDEA). This study adds to Chapter IV, which determined representation of students with disabilities based on school types, by comparing performance on the Annual Performance Report (APR) by degree of representation of students with disabilities by school type. The APR is a federally mandated report that describes how IDEA is being implemented. This study compares APR scores between charter schools and TPS based on their rate of enrollment for students with disabilities.

#### **5.1 Abstract**

The purpose of the study was to compare performance on the Annual Performance Report (APR), a federally mandated report that describes how well IDEA is being implemented, between charter schools and traditional public school districts (TPS) based on their enrollment rate of students with disabilities. Secondary enrollment data was used to generate descriptive statistics and complete correlation analyses. It was determined that charter schools have a small overall higher dropout rate for students with disabilities than TPS, charter schools have lower participation rates for students with disabilities in math and reading assessments than TPS, but have a smaller gap in math and reading proficiency rates between students with disabilities and all students against grade-level academic standards, charter schools have higher inclusion rates

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<sup>3</sup> Coauthor: Keith Christensen

for students with disabilities, and charter schools have higher parent involvement rates. Perhaps, most importantly, the study identified needs for additional research around assessment participation and proficiency, and disability type and least restrictive environment (LRE).

## 5.2 Introduction

The Individuals with Disabilities Education Act (IDEA) provides for the free and appropriate public education of students with disabilities in public schools. Federal case law (*Brown v Board of Education (1954)*) has also decreed that educating minority populations, such as students with disabilities, in separate settings does not provide an equal education. Charter schools, as public education entities that receive government funding, have the same legal obligations to enroll students with disabilities as other traditional public school districts (TPS). There is a perception that charter schools enroll a disproportionately lower number of students with disabilities than TPS. If charter schools are enrolling students with disabilities at a lower rate than TPS, charter schools could be seen as an exclusionary setting that does not provide equal opportunities for students with disabilities despite federal legislation and case law that guarantees equal educational opportunities for students with disabilities across K-12 education settings. Recent quantitative research from Smith and Christensen in 2022 (results of Chapter IV of this study) show that charter schools as a whole do not enroll a significantly lower or higher percentage of students with disabilities, but that charter schools are trending towards being inclusive environments for some disabilities while excluding others and that some charter schools serving elementary age students may be under-enrolling students with disabilities while some middle/high school level charter schools have high enrollment of students with disabilities. Federal laws that apply to students with disabilities include the Individuals with Disabilities Education Act 2004 (IDEA), Section 504 of the Rehabilitation Act (Section 504), and the

Americans with Disabilities Act (ADA).

Charters schools are autonomous schools that began operation under the belief that parental choice in schools would drive market-based accountability, leading to “more innovative and effective learning environments” (Rhim & McLaughlin, 2007). Since the first charter school law was passed in Minnesota in 1991, 45 states, Washington D.C., and three territories have enacted charter school laws (*National Alliance for Public Charter Schools*). According to the National Alliance for Public Charter Schools’ 2020 Annual Report, 3.3 million students are currently educated in charter schools and the number of charter schools have increased by three times since the 2005-06 school year (National Alliance for Public Charter Schools, 2020). The National Center for Education Statistics estimated 50.7 million students attended public schools in the U.S. during the 2019-2020 school year (*The NCES Fast Facts Tool Provides Quick Answers to Many Education Questions (National Center for Education Statistics)*, 2020). Based on these numbers, approximately 6.5% of students in the U.S. attended a charter school during the 2019-2020 school year. While the percentage of students enrolled in charter schools in the U.S. is far from a majority, the expansion of charter schools and charter school legislation point to the need to ensure that charter schools are not evolving into separate education settings and analysis is needed to determine how well IDEA is being implemented in charter schools.

Each state and territory where charter schools exist has its own legal system for authorizing and monitoring public education in charter schools, which can make comparing charter schools on a national scale difficult. For example, states can opt whether or not to classify charter schools as local education agencies (LEAs). This classification gives them full autonomy over special education assessments, placements, and funding decisions. Some states elect to classify charter schools as LEAs, others pair charter schools with an existing LEA removing



much of their special education decision making, and other states offer both options and charter schools' LEA status is determined at the time of authorization. For monitoring, all State Education Agencies (SEA) are required to monitor special education services, which they do by gathering Annual Performance Report (APR) data from each LEA and ensuring compliance with IDEA is occurring. However, each state's monitoring system is unique and if a charter school is not classified as its own LEA, its APR data is combined with the LEA it is attached too, moving monitoring of that charter school from the purview of the State Education Agency (SEA) to the LEA it is associated with. As may be guessed, these differences between states on charter school classification and monitoring of special education services can lead to differences for special education enrollment and services in charter schools, making direct comparisons of representation between states difficult.

A separate issue is the increasing number of specialized charters schools that have begun operating schools tailored to meet the needs of students with specific disabilities. These specialized charter schools add additional questions around the equivalent education of students with disabilities as they can be viewed as exclusionary settings where students with disabilities are not educated in the least restrictive environment with their non-disabled peers as required by IDEA. These charter schools also tend to skew comparisons of representation between charter schools and TPS by increasing the average rate of representation of students with disabilities in charter schools. As Rhim et al. (2019) stated, "The challenge before both the traditional public and charter school sectors is to ensure that the programmatic innovation and excellence provided by the best specialized schools exist without having specialized schools become the default or only option for students with disabilities" (p. 27).

Because the impetus for this study is a focus on equivalent access to all educational

settings for students with disabilities, it is necessary to not only look at enrollment data for charter schools and TPS, but also at how well these schools are implementing the requirements of IDEA, which guarantees equivalent access. The APR was selected as a measurement for this study as it is federally required under IDEA, which mandates a free and appropriate public education (FAPE) and access to the general education curriculum in the least restrictive environment (LRE) for students with disabilities. Inclusion of the federal requirements as a measurement is appropriate as a comparison of where students with disabilities are being educated and how well IDEA is being implemented in their education environment. The APR measures outcomes for students with disabilities and compliance with the requirements of IDEA and is used to gauge how state's will improve their implementation of IDEA ("State Performance Plans/Annual Performance Reports (SPP/APR),"). There is currently no published research using the APR as a measurement for how well charter schools are implementing IDEA compared to TPS. However, the APR is the tool the federal Office of Special Education Programs uses for measuring educational access for students with disabilities, which makes it an accessible tool for comparing equivalent access under IDEA between school types.

For the APR, states collect data from all LEAs (which in Utah includes charter schools and TPS) each year to produce a state APR. As part of this process, the state produces an APR for each LEA. The APR rates each state and LEA as meeting the requirements of IDEA, needing assistance, needing intervention, or needing substantial intervention. States that rank in needing substantial intervention for multiple years are at risk of losing federal funding for special education. The APR consists of measures of 17 Indicators which are:

1. Graduation – the percent of youth with Individualized Education Plans (IEPs) graduating with a regular diploma
2. Dropout – the percent of youth with IEPs dropping out of school
3. Assessments – participation and performance of students with disabilities in standardized assessments
4. Suspension/Expulsion – rates for students with IEPs
5. LRE – the percent of children age 6-21 removed from the regular classroom, served in public/private separate schools, residential centers, homebound, or hospitalized
6. Preschool LRE – the percent of preschool children with IEPs in settings with typically developing peers
7. Preschool Outcomes – the percent of preschool children with improved positive social-emotional skills, acquisition and use of knowledge and skills, and the use of appropriate behaviors
8. Parent Involvement – the percent of parents of children receiving special education services who report schools facilitated parent involvement
9. Disproportionate Representation – the percent of districts with disproportionality due to inappropriate identification
10. Disproportionate Representation by Disability Category – the percent of districts with racial and ethnic disproportionality in specific disability categories as a result of inappropriate identification
11. Evaluation Timelines – the percent of children who were evaluated within 60 days of parental consent for evaluation

12. Preschool Transition – the percent of children referred by Part C who were found eligible for special education services and have an IEP developed by their third birthday
13. Secondary Transition – the percent of youth age 16+ with an IEP with measurable, annual IEP goals with transition services
14. Post-School Outcomes – the percent of youth who had IEPs, are no longer in secondary school, and who have been employed, enrolled in postsecondary school, or both, within one year of leaving secondary school
15. Resolution Sessions – the percent of hearing requests resolved through resolution agreements
16. Mediation – the percent of mediations resulting in mediation agreements
17. State Systemic Improvement Plan (SSIP) – the SSIP is a comprehensive multi-year plan that focuses on improving results for infants, toddlers, children, and youth with disabilities

A systematic literature review conducted by Smith and Christensen in 2022 (See Chapter II) determined that current research reports enrollment of students with disabilities in charter schools is based on how charter schools evaluate for and identify disabilities, the LEA classification of the charter school, and how the oversight and monitoring of special education programs is conducted at the school. Smith and Christensen also illustrated the importance of clearly delineating whether or not specialized charter schools were included in a study's data analysis and showing how the inclusion of that data can impact the overall representation percentage of students with disabilities in charter schools in an education system. Smith and Christensen also concluded that studies examining the representation of students with disabilities in charter schools need to be conducted on the level of an entire state or territorial education

system, because of the differing charter school laws across the nation. Their literature review also determined that there is no existing published research on how charter schools are implementing IDEA based on APR data. Because of the perception that students with disabilities are enrolled in charter schools at a lower rate than their able-bodied peers and the paucity of well-designed studies in the existing literature, well-designed studies are needed to provide evidence of the representation of students with disabilities in charter schools and determine how enrollment rates of students with disabilities correlates to APR outcomes and the implementation of IDEA.

**Research Purpose.** The purpose of this study is to compare performance on the Annual Performance Report (APR), a federally mandated report that describes how well IDEA is being implemented, between charter schools and TPS and explore if relationships exist between rates of enrollment of students with disabilities and APR outcomes.

### **5.3 Methodology**

Quantitative research methods were utilized for this study to conduct a secondary data analysis. Quantitative methods selected for this study included the production of descriptive statistics and correlational analyses. Descriptive methods were used in Chapter IV to describe the current status of representation of students with disabilities by school type and correlational analyses were utilized to compare representation of students with disabilities by school type, disaggregated by disability type and grade level. The descriptive statistics generated in Chapter IV were used in this study to form correlational conclusions regarding the rate of enrollment of students with disabilities and implementation of IDEA.

#### **Data Collection**

Data selected for inclusion in this study was isolated to public charter schools and TPS

operating in Utah. As previously noted, the variance in charter school laws between states and territories requires that representation be studied on the level of individual state education systems. Prior to collecting any data, this study was approved by the Utah State University Institutional Review Board (IRB) Protocol #12288.

Following IRB approval, publicly available data was collected from the Utah State Board of Education (USBE) website. This data included enrollment data for each charter school and TPS from fall of 2013 thru the fall of 2020.

A data sharing request was submitted and approved by the Utah State Board of Education (USBE) for additional private data to be included in this study. The private data obtained for this study included unsuppressed data for each charter school and traditional public school district for the following indicators of the APR: 1) Graduation Rates, 2) Dropout Rates, 3a) Math Assessments – participation rate of students with disabilities math, 3a) Reading Assessments - participation rate of students with disabilities English language arts, 3b) Math Assessments – proficiency rate for students with disabilities against grade level academic achievement standards in math, 3b) Reading Assessments – proficiency rate for students with disabilities against grade level academic achievement standards in English language arts, 3c) Math Assessments – proficiency rate for students with disabilities against alternate academic achievement standards in math, 3c) Reading Assessments – proficiency rate for students with disabilities against alternate academic achievement standards in English language arts, 3d) Math Assessments – gap in proficiency rates for students with disabilities and all students against grade level academic achievement standards for math, 3d) Reading Assessments – gap in proficiency rates for students with disabilities and all students against grade level academic achievement standards for English language arts, 5a) Least Restrictive Environment – percent of students with disabilities served in

the regular classroom 80% or more of the day, 5b) Least Restrictive Environment – percent of students with disabilities served in the regular classroom less than 40% of the day, 5c) Least Restrictive Environment – percent of students with disabilities served in separate schools, residential facilities, or homebound/hospital placements, and 8) Parent Involvement. Data was not gathered for all indicators as data for those excluded indicators for the entire state are generally low and would be too minuet to establish comparisons at the LEA level. Indicator 17 was not utilized because it consists of a written systemic improvement plan for the entire state and there is no LEA data for comparison. Because charter schools often have small rates to report on the APR (under 10 students in some categories), this data is not reported on the public APR. Because of this, the unsuppressed, private data was requested in order to aggregate the small rates into the total results for charter schools on the APR.

### **Data Analysis**

All of the publicly available and private data was combined to show the total APR outcomes reported on each APR Indicator for all LEAs during the period for which data was available (2016-2020). Each LEA was designated as either being a charter school or TPS. Data analysis occurred using multi-level modeling to compare scores on each indicator of the APR based on categorization by school type and enrollment rates for students with disabilities. Effect size analysis was also completed for the APR outcomes analysis using Cohen's  $d$  and  $R^2$  with pairwise follow up using standard deviation of sum of variance comparison. All statistical analysis was completed using RStudio software.

### **5.4 Results**

The data analysis comparing APR scores and enrollment of students with disabilities between TPS and charter schools included a total of 156 LEAs consisting of 41 TPS and 115

**Table 1**

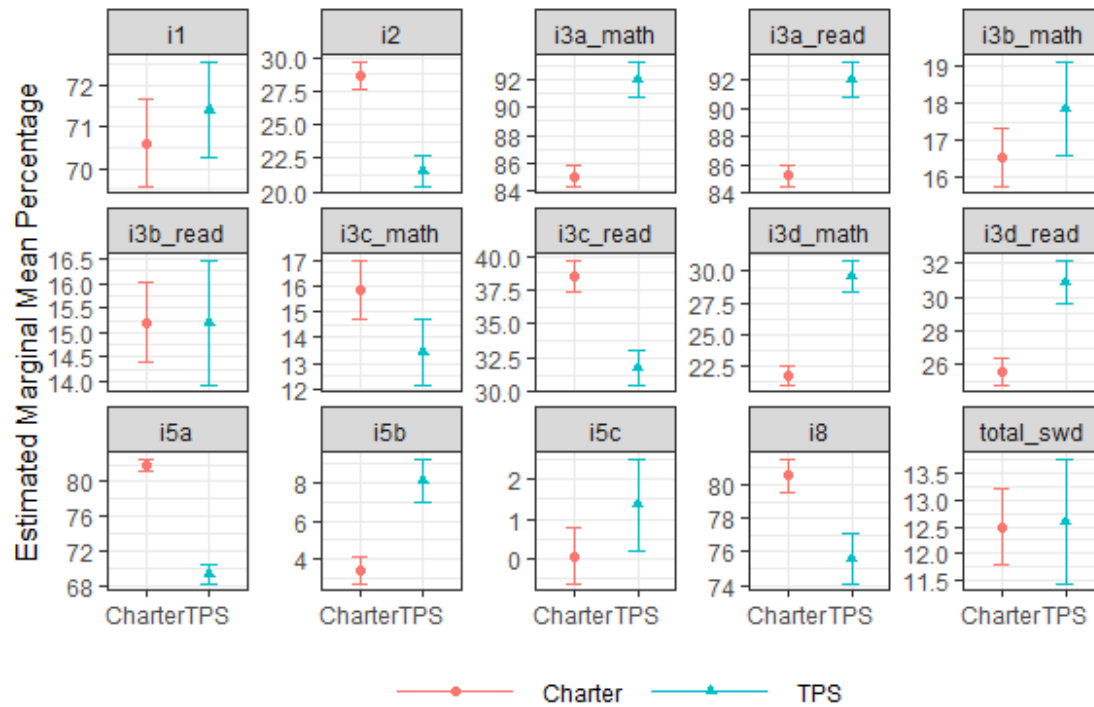
*Descriptive statistics for the mean, standard deviation, and minimum and maximum percentages of APR scores by indicator in TPS and charter schools without the specialized schools included, along with data on the enrollment of students with disabilities in each school type.*

<b>Disability Type</b>	<b>Mean</b>	<b>SD</b>	<b>Minimum Reported Score</b>	<b>Maximum Reported Score</b>
TPS Indicator 1	71.42%	16.27	0.00%	96.67%
Charter Indicator 1	69.97%	33.95	0.00%	100.00%
TPS Indicator 2	21.52%	14.74	0.00%	100.00%
Charter Indicator 2	28.03%	33.94	0.00%	100.00%
TPS Indicator 3a Math	92.02%	9.28	21.43%	100.00%
Charter Indicator 3a Math	85.14%	16.64	0.00%	100.00%
TPS Indicator 3a Reading	92.05%	9.98	14.29%	100.00%
Charter Indicator 3a Reading	85.27%	16.52	15.00%	100.00%
TPS Indicator 3b Math	17.85%	6.73	0.00%	37.50%
Charter Indicator 3b Math	16.62%	13.73	0.00%	80.00%
TPS Indicator 3b Reading	15.20%	9.32	0.00%	100.00%
Charter Indicator 3b Reading	15.28%	13.57	0.00%	100.00%
TPS Indicator 3c Math	13.51%	12.01	0.00%	57.14%
Charter Indicator 3c Math	16.28%	28.76	0.00%	100.00%
TPS Indicator 3c Reading	31.82%	18.95	0.00%	100.00%
Charter Indicator 3c Reading	39.00%	37.70	0.00%	100.00%
TPS Indicator 3d Math	29.61%	6.54	1.96%	43.98%
Charter Indicator 3d Math	21.84%	12.72	-17.37%	90.00%
TPS Indicator 3d Reading	30.88%	7.13	-9.80%	42.37%
Charter Indicator 3d Reading	25.62%	12.81	-60.00%	77.34%
TPS Indicator 5a	82.02%	16.60	0.00%	97.96%
Charter Indicator 5a	81.79%	13.13	33.33%	100.00%
TPS Indicator 5b	8.13%	5.03	0.00%	21.42%
Charter Indicator 5b	3.48%	7.68	0.00%	100.00%
TPS Indicator 5c	1.36%	2.14	0.00%	8.81%
Charter Indicator 5c	0.15%	0.70	0.00%	9.09%
TPS Indicator 8	75.65%	11.41	26.67%	100.00%
Charter Indicator 8	80.65%	15.80	0.00%	100.00%
TPS Enrollment	12.60%	2.51	6.50%	24.71%
Charter Enrollment	12.61%	5.19	0.24%	32.42%



**Figure 1**

*The estimated marginal mean percentage of scores across the APR indicators for TPS and charter schools without the two specialized LEAs.*



charter schools across five school years. All TPS schools reported data for all APR indicators used in the analysis. Because of the variation in grades served at charter schools and reporting requirements, 67 charter schools reported on Indicators 1 and 2, 114 reported on Indicators 3a and 3b, 66 reported on Indicator 3c for math, 63 reported on Indicator 3c for reading, 114 reported on Indicator 3d for math and reading, 115 reported on all sections of Indicator 5, and 115 reported on Indicator 8. All TPS reported APR scores for all five years of data used. Only 96 of the 115 charter schools reported data for all five years of the data used. In all data analysis, specialized schools serving students with disabilities were excluded because of how these schools can skew comparisons between TPS and charter schools. The data set included one specialized charter school and one specialized TPS. Table 1 provides descriptive statistics for the

mean, standard deviation, minimum and maximum percentages of APR scores by indicator in TPS and charter schools without the specialized schools included, along with data on the enrollment of students with disabilities in each school type. Figure 1 shows the estimated marginal mean percentage of scores across the APR indicators for TPS and charter schools without the two specialized LEAs.

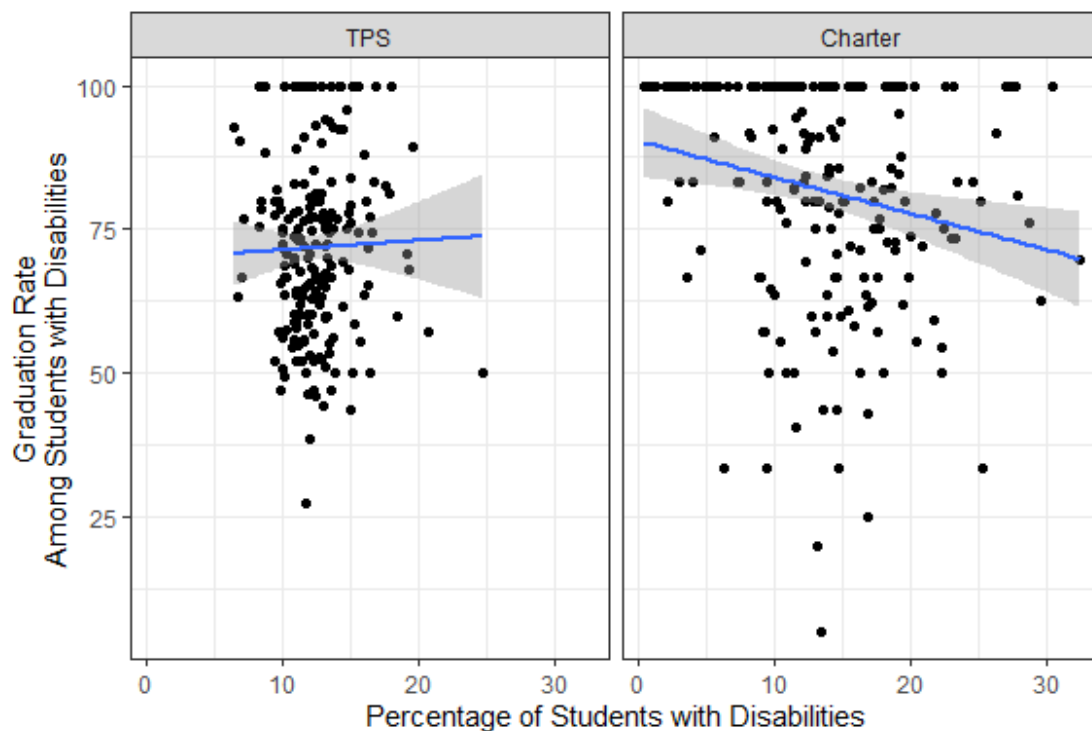
Based on the results of the multi-level modeling and post hoc pairwise testing, significance was found for the variance between TPS and charter schools for Indicator 2 ( $p < .001$ ,  $d = .458$ ) with charter schools having significantly higher dropout rates for students with disabilities, Indicator 3a Math ( $p < .0001$ ,  $d = .445$ ) with TPS having a significantly higher percentage of students with disabilities participating in math assessments, Indicator 3a Reading ( $p < .001$ ,  $d = .438$ ) with TPS having a significantly higher percentage of students with disabilities participating in reading assessments, Indicator 3c Reading ( $p < .0001$ ,  $d = .437$ ) with charter schools having a significantly higher percentage of students with disabilities who are proficient on reading assessments, Indicator 3d Math ( $p < .0001$ ,  $d = .502$ ) with TPS having a significantly higher gap in proficiency rates between students with disabilities and all students against grade-level academic achievement standards, Indicator 3d Reading ( $p = .0004$ ,  $d = .341$ ) with TPS having a significantly higher gap in proficiency rates between students with disabilities and all students against grade-level academic achievement standards, Indicator 5a ( $p < .0001$ ,  $d = .808$ ) with charter schools having a significantly higher percentage of students with disabilities served in the regular classroom 80% or more of the day, Indicator 5b ( $p = .0005$ ,  $d = .303$ ) with TPS having a significantly higher percentage of students with disabilities served in the regular classroom less than 40% of the day, and Indicator 8 ( $p = .006$ ,  $d = .318$ ) with charter schools having a significantly higher percentage of parents of students with disabilities reporting their

child's school facilitated their involvement in their child's special education services. Overall effect sizes for the grade level multi-level modeling were large ( $R_c^2 = .813$  and  $R_m^2 = .806$ ).

Following the comparison of APR scores between TPS and charter schools, multi-level modeling analysis was completed for each indicator to review possible correlations between each APR Indicator, school type, and the rate of representation of students with disabilities. This analysis was completed to determine if APR scores improved as the percentage of students with disabilities increased across school settings.

## Figure 2

*The graduation rate of students with disabilities compared to the percentage of students with disabilities represented in each LEA, categorized by TPS and charter schools.*



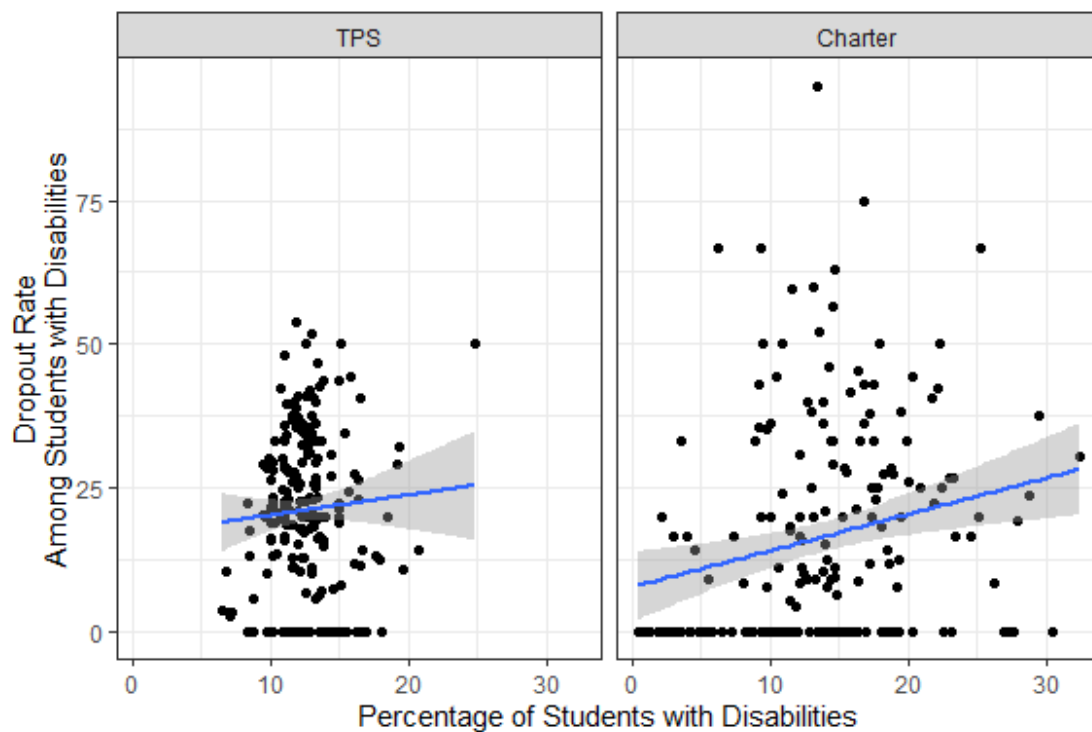
## Indicator 1 – Graduation Rates

For Indicator 1 – graduation rates, there was no statistical significance in the difference of rates between TPS and charter schools. However, as illustrated in Figure 2, the rate of graduation

for TPS slightly increased as the percentage of students with disabilities increased in LEAs, and in charter schools the graduation rate declined more steeply as the percentage of students with disabilities increased in LEAs. While statistical significance did not exist in the multi-level modeling for the relation in graduation rates and representation of students with disabilities, there was a trend in the five years of data for charter schools having decreased graduation rates as the percentage of students with disabilities rose. As evidenced in Figure 2, graduation rates are much more clustered for TPS with a much wider variance in charter schools. Using multi-level modeling, no statistical significance was found for graduation rates between TPS and charter schools when comparing each year of data for LEAs with similar percentages for enrollment of students with disabilities.

### Figure 3

*Dropout rates of students with disabilities compared to the percentage of students with disabilities represented in each LEA, categorized by TPS and charter schools.*

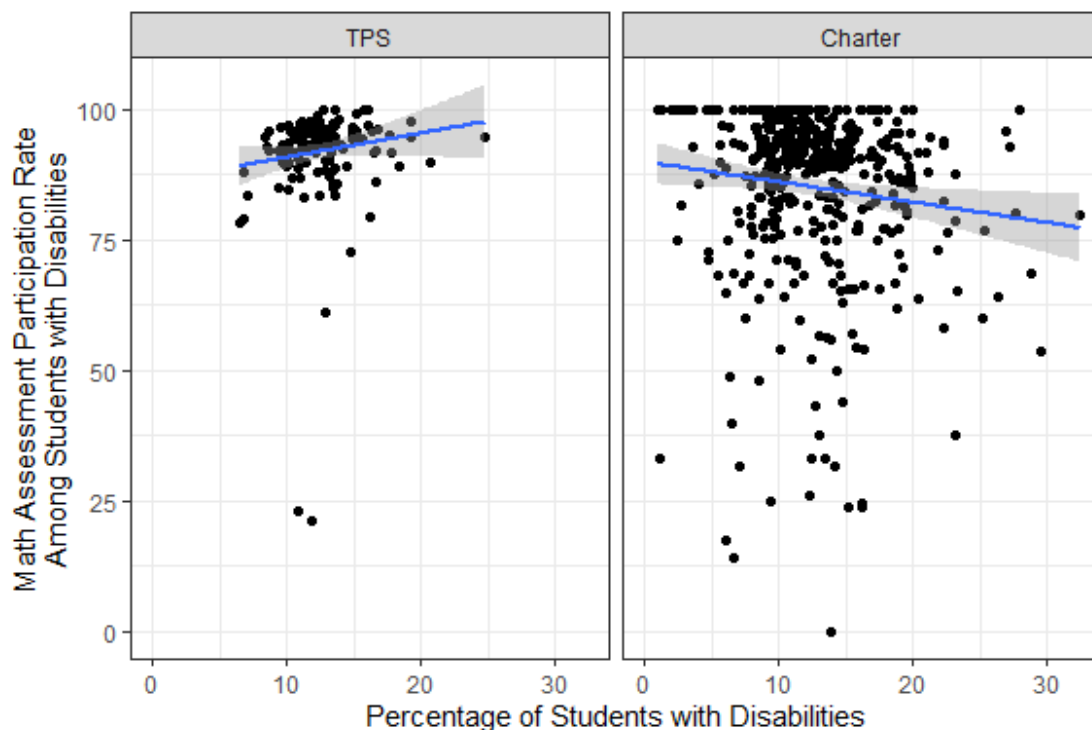


## Indicator 2 – Dropout Rates

For Indicator 2 – dropout rates, charter schools had a significantly higher rate than TPS. Figure 3 illustrates that for both TPS and charter schools, the dropout rate of students with disabilities increased as the enrollment percentage of students with disabilities increased. Also, a tighter cluster of dropout rates is seen for TPS, while charter schools have a wider variance of dropout rates. Using multi-level modeling, statistical significance was found for charter schools having a lower dropout rate than TPS when comparing each year of data for LEAs with similar percentages for enrollment of students with disabilities ( $p = .02$ ). However, there was not a significant difference in dropout rates when yearly data was compared between all charter schools and TPS regardless of their percentage of enrollment of students with disabilities,

### Figure 4

*Math assessment participation rates for students with disabilities compared to the percentage of students with disabilities represented in each LEA, categorized by TPS and charter schools.*



illustrating that only the five-year aggregate data showed significance between charter schools and TPS.

### **Indicator 3a Math – Assessment Participation Rates**

For Indicator 3a – math assessment participation rates for students with disabilities, TPS had a significantly higher percentage of students with disabilities participating in math assessments than charter schools. Figure 4 illustrates that for TPS, the rate of math assessment participation increased as the percentage of students with disabilities increased, while in charter schools, the rate of math assessment participation decreased as the percentage of students with disabilities increased. Also, a tighter cluster of participation rates is seen for TPS, while charter schools have a wider variance of math assessment participation. Using multi-level modeling, statistical significance was found for charter schools having a lower math assessment participation rate for students with disabilities than TPS when comparing each year of data for LEAs with similar percentages for enrollment of students with disabilities ( $p = .001$ ).

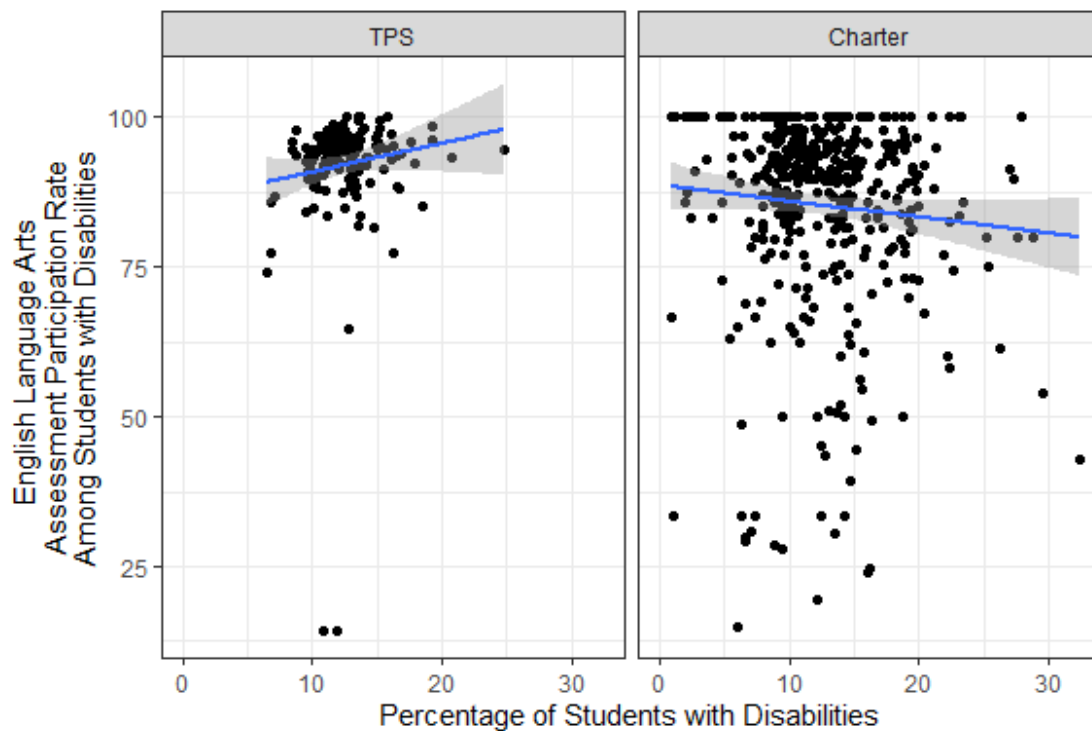
### **Indicator 3a Reading – Assessment Participation Rates**

For Indicator 3a – reading assessment participation rates for students with disabilities, TPS had a significantly higher percentage of students with disabilities participating in reading assessments than charter schools. Figure 5 illustrates that for TPS, the rate of reading assessment participation increased as the percentage of students with disabilities increased, while in charter schools, the rate of reading assessment participation decreased as the percentage of students with disabilities increased. Also, a tighter cluster of participation rates is seen for TPS, while charter schools have a wider variance of reading assessment participation rates. Using multi-level modeling, statistical significance was found for charter schools having a lower reading assessment participation rate for students with disabilities than TPS when comparing each year

of data for LEAs with similar percentages for enrollment of students with disabilities ( $p < .05$ ).

### Figure 5

*Reading assessment participation rates for students with disabilities compared to the percentage of students with disabilities represented in each LEA, categorized by TPS and charter schools.*



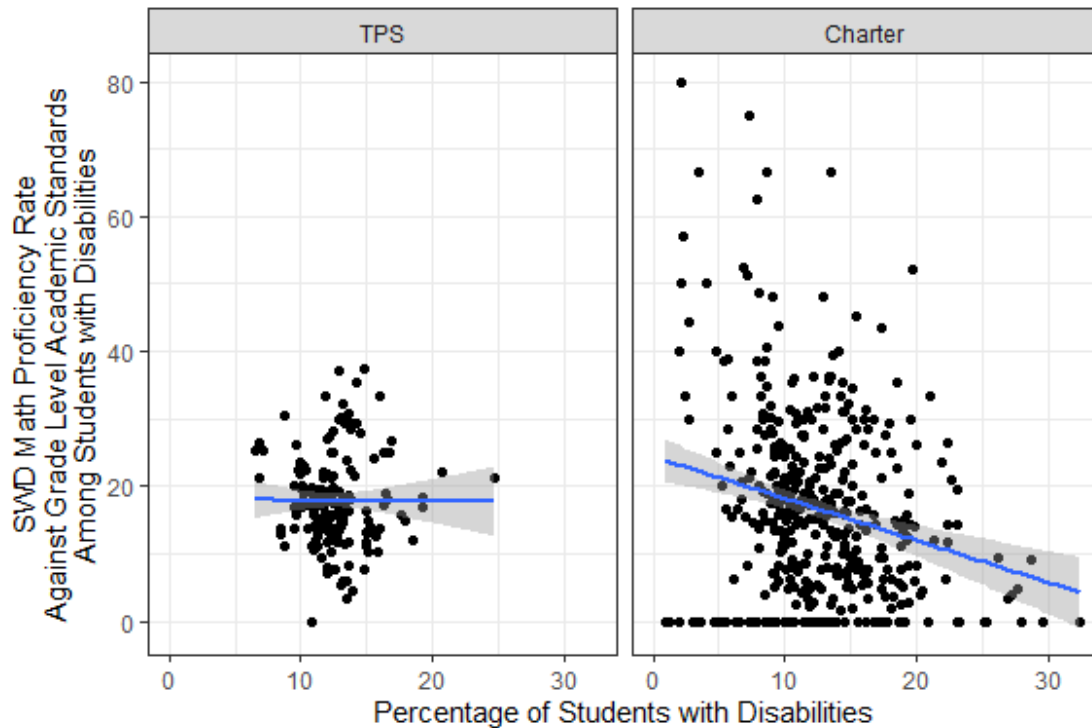
### Indicator 3b Math – Proficiency Rates Compared to Grade Level Standards

For Indicator 3b – math proficiency rates for students with disabilities compared to grade level standards, there was no statistical significance in the difference of rates between TPS and charter schools. Figure 6 illustrates that for TPS, the math proficiency level of students with disabilities stayed relatively the same as the percentage of students with disabilities increased, while in charter schools, the math proficiency rate generally decreased as the percentage of students with disabilities increased. Also, a tighter cluster of proficiency rates is seen for TPS, while charter schools have a wider variance of math proficiency rates. Using multi-level modeling, no statistical significance was found for math proficiency rates between TPS and

charter schools when comparing each year of data for LEAs with similar percentages for enrollment of students with disabilities.

**Figure 6**

*Math proficiency rates for students with disabilities compared to the percentage of students with disabilities represented in each LEA, categorized by TPS and charter schools.*



### **Indicator 3b Reading – Proficiency Rates Compared to Grade Level Standards**

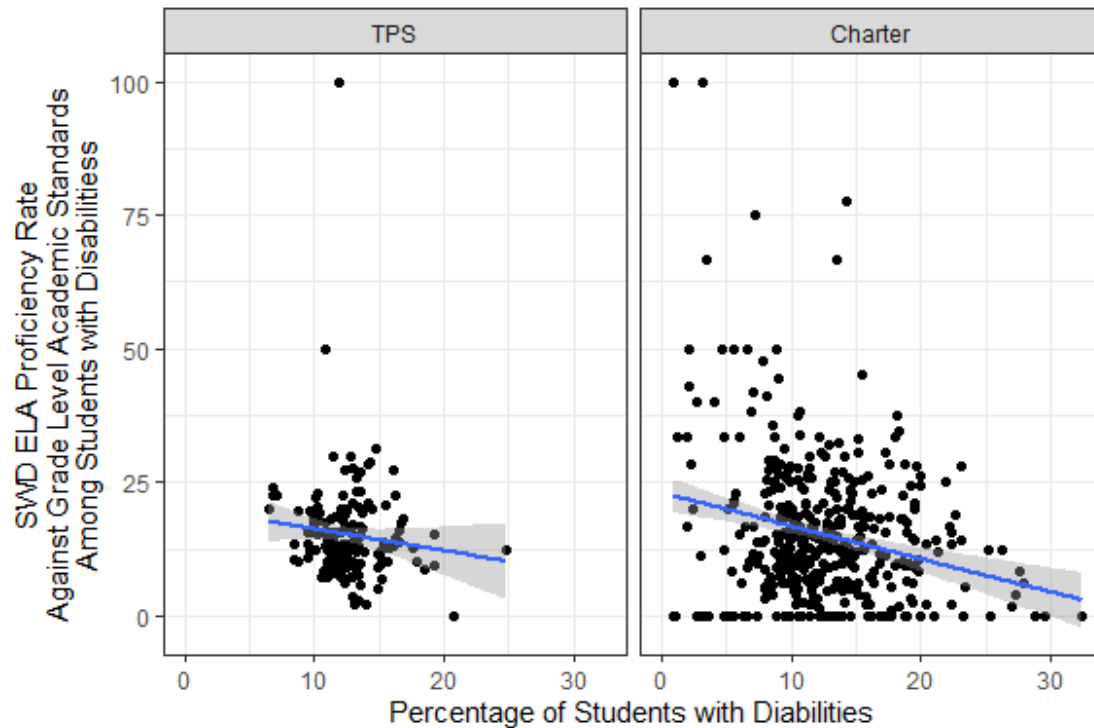
For Indicator 3b – reading proficiency rates for students with disabilities compared to grade level standards, there was no statistical significance in the difference of rates between TPS and charter schools. Figure 7 illustrates that the reading proficiency level of students with disabilities decreased as the percentage of students with disabilities increased for both TPS and charter schools. Also, a tighter cluster of proficiency rates is seen for TPS, while charter schools have a wider variance of reading proficiency rates. Using multi-level modeling, no statistical significance was found for reading proficiency rates between TPS and charter schools when



comparing each year of data for LEAs with similar percentages for enrollment of students with disabilities.

### Figure 7

*Reading proficiency rates for students with disabilities compared to the percentage of students with disabilities represented in each LEA, categorized by TPS and charter schools.*



### Indicator 3C Math – Proficiency Rates Against Alternate Academic Achievement

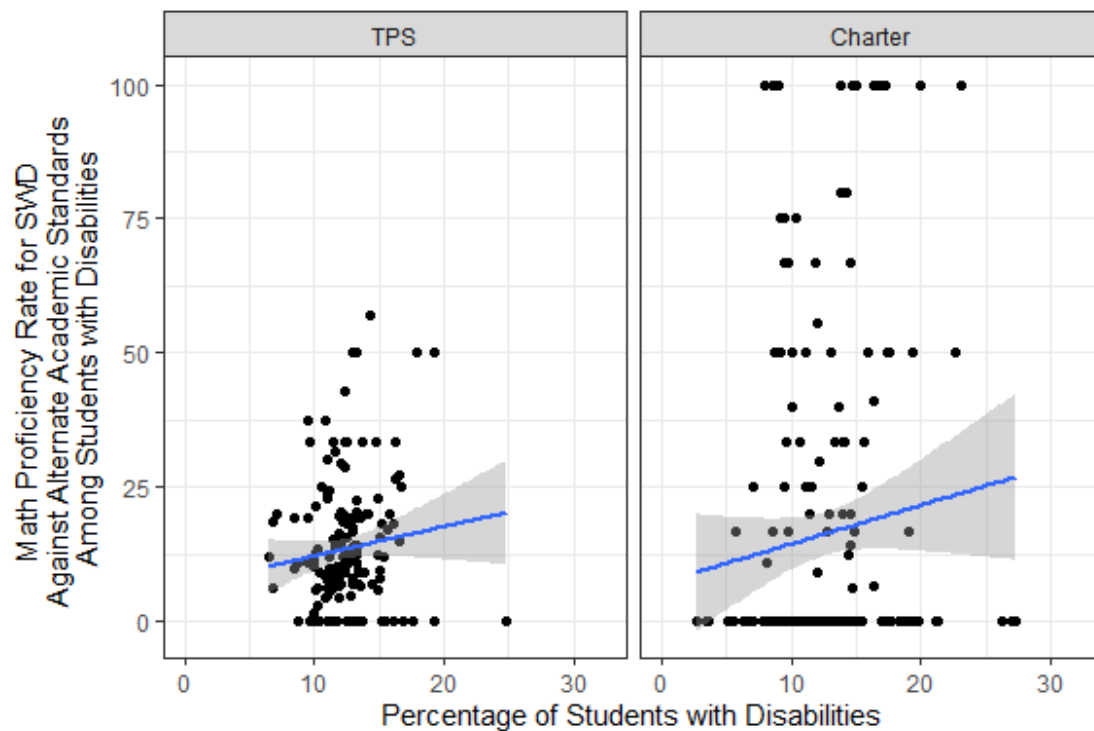
#### Standards

For Indicator 3c – math proficiency rates for students with disabilities against alternate academic achievement standards, there was no statistical significance in the difference of rates between TPS and charter schools. Figure 8 illustrates that the math proficiency level of students with disabilities against alternate academic achievement standards increased as the percentage of students with disabilities increased for both TPS and charter schools. Also, a tighter cluster of proficiency rates is seen for TPS, while charter schools have a wider variance of math

proficiency rates. Using multi-level modeling, no statistical significance was found for math proficiency rates for students with disabilities against alternate academic standards between TPS and charter schools when comparing each year of data for LEAs with similar percentages for enrollment of students with disabilities.

### Figure 8

*Math proficiency rates for students with disabilities against alternate academic achievement standards compared to the percentage of students with disabilities represented in each LEA, categorized by TPS and charter schools.*



### Indicator 3C Reading – Proficiency Rates Against Alternate Academic Achievement

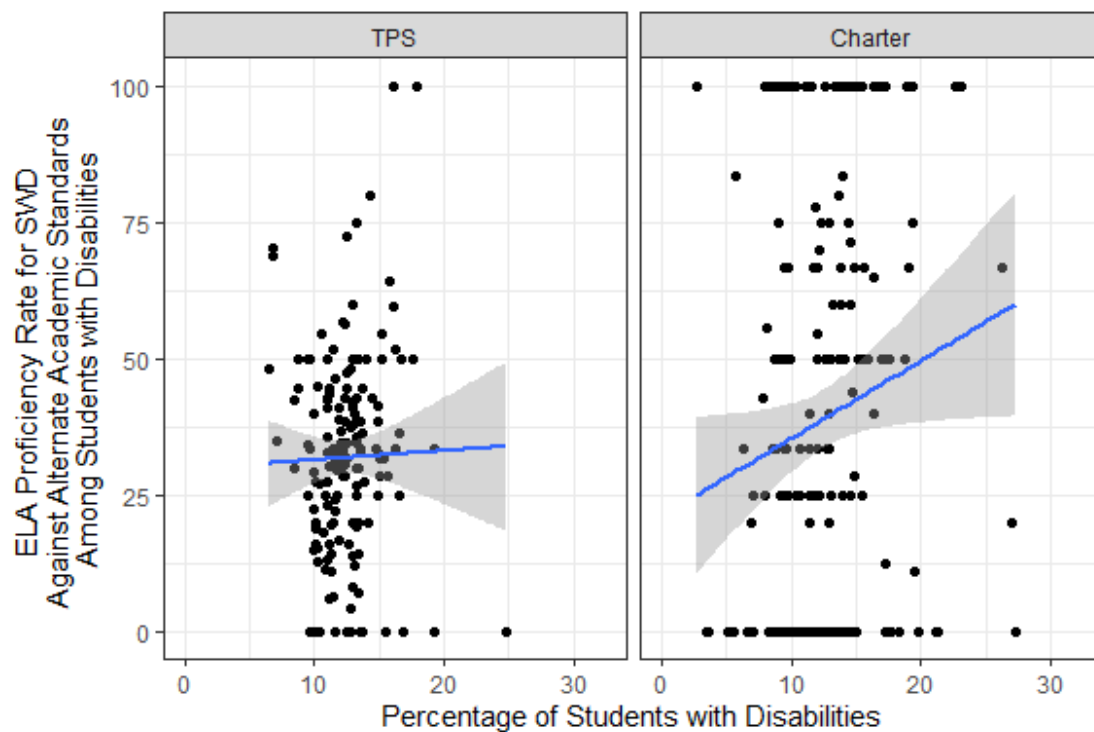
#### Standards

For Indicator 3c – reading proficiency rates for students with disabilities against alternate academic achievement standards, there was statistical significance with charter schools having a significantly higher percentage of students with disabilities who are proficient on reading

assessments against alternate academic standards. Figure 9 illustrates that the reading proficiency level of students with disabilities against alternate academic achievement standards stayed relatively the same for TPS as the percentage of students with disabilities increased, while the reading proficiency increased in charter schools as the percentage of students with disabilities increased. Also, a tighter cluster of proficiency rates is seen for TPS, while charter schools have a wider variance of reading proficiency rates. Using multi-level modeling, no statistical significance was found for reading proficiency rates for students with disabilities against alternate academic standards between TPS and charter schools when comparing each year of data for LEAs with similar percentages for enrollment of students with disabilities.

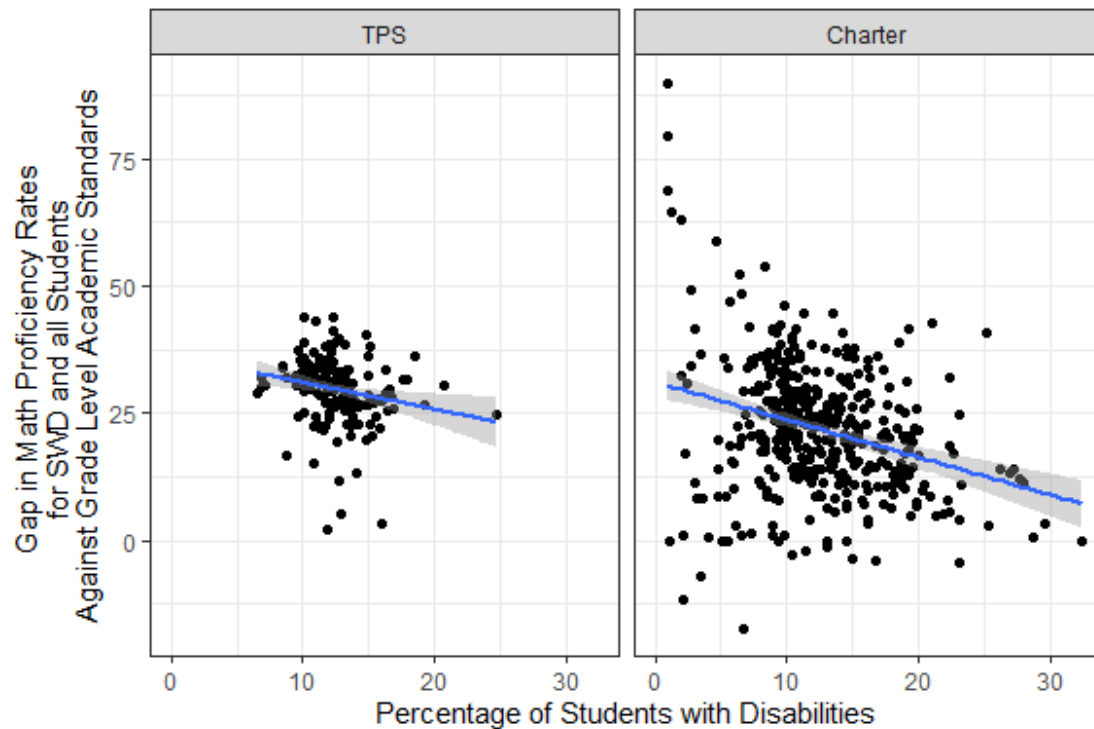
### Figure 9

*Reading proficiency rates for students with disabilities against alternate academic achievement standards compared to the percentage of students with disabilities represented in each LEA, categorized by TPS and charter schools.*



**Figure 10**

*Math gap in proficiency rates for students with disabilities and all students against grade-level academic achievement standards compared to the percentage of students with disabilities represented in each LEA, categorized by TPS and charter schools.*



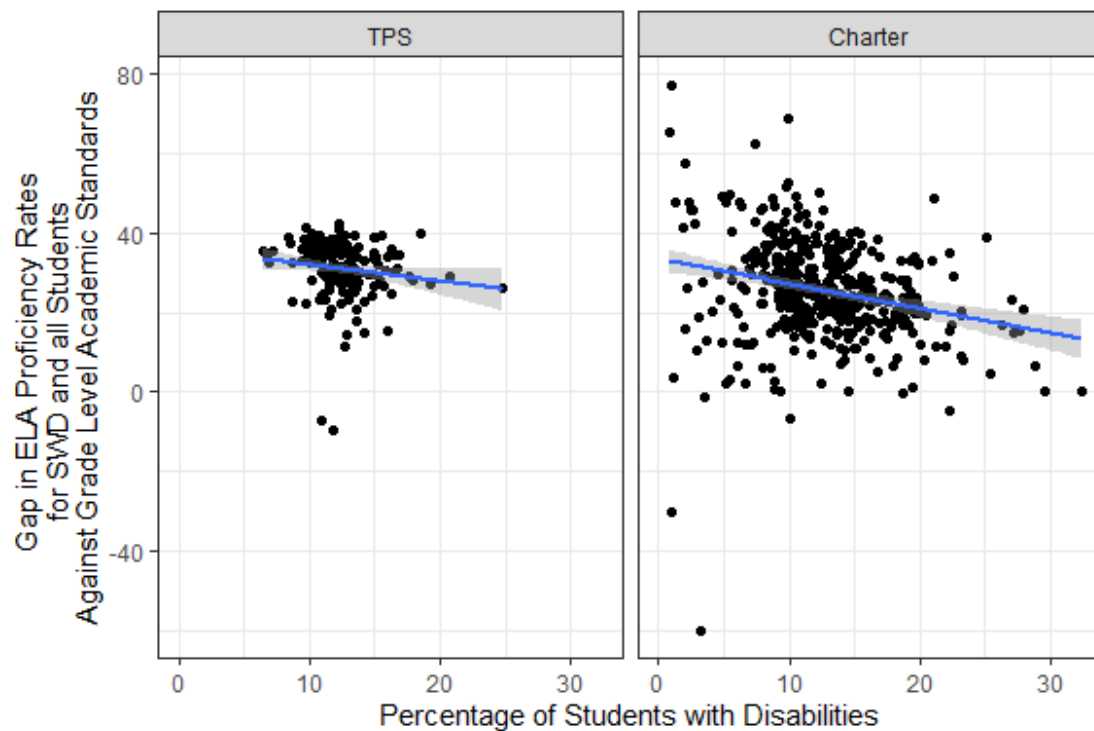
### **Indicator 3d Math – Gap in Proficiency Rates Against Grade Level Academic Achievement Standards**

For Indicator 3d – math gap in proficiency rates for students with disabilities and all students against grade level academic achievement standards, there was statistical significance with TPS having a significantly higher gap in proficiency rates between students with disabilities and all students against grade-level academic achievement standards. Figure 10 illustrates that gap in math achievement standards between students with disabilities and all students decreased for both TPS and charter schools as the percentage of students with disabilities increased. Also, a tighter cluster of gap rates is seen for TPS, while charter schools have a wider variance of gap

rates. Using multi-level modeling, no statistical significance was found for the gap in proficiency rates between students with disabilities and all students between TPS and charter schools when comparing each year of data for LEAs with similar percentages for enrollment of students with disabilities.

**Figure 11**

*Reading gap in proficiency rates for students with disabilities and all students against grade level academic achievement standards compared to the percentage of students with disabilities represented in each LEA, categorized by TPS and charter schools.*



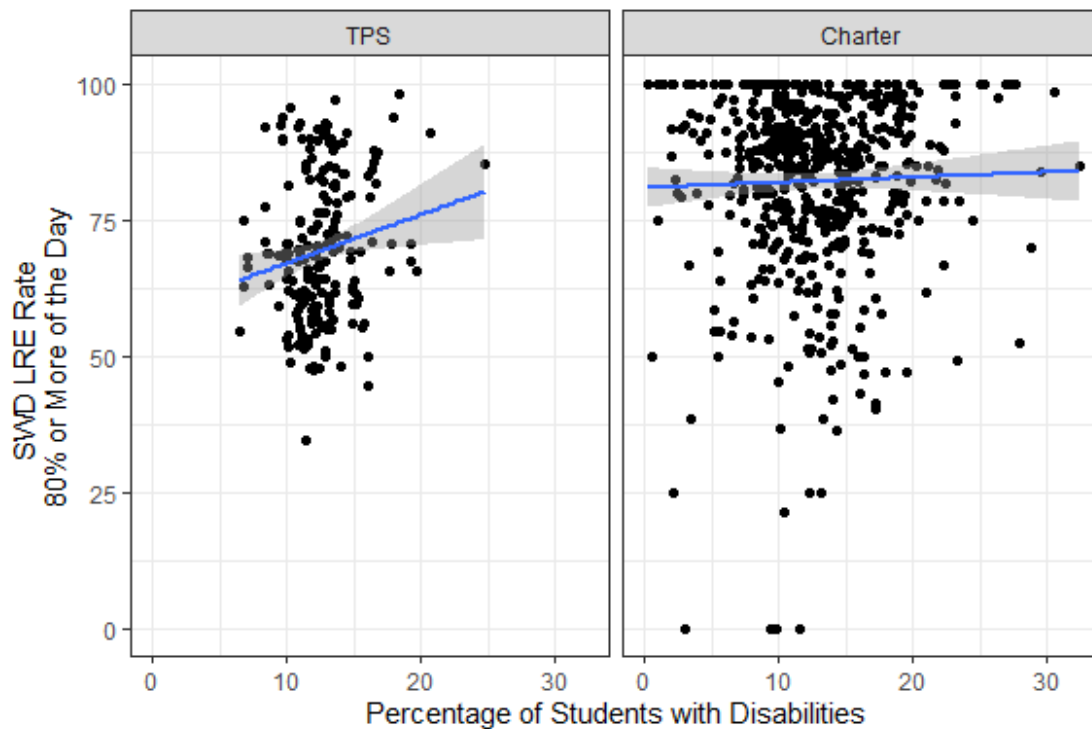
### **Indicator 3d Reading – Gap in Proficiency Rates Against Grade Level Academic Achievement Standards**

For Indicator 3d – reading gap in proficiency rates for students with disabilities and all students against grade level academic achievement standards, there was statistical significance with TPS having a significantly higher gap in proficiency rates between students with disabilities

and all students against grade-level academic achievement standards. Figure 11 illustrates that the gap in reading achievement standards between students with disabilities and all students decreased for both TPS and charter schools as the percentage of students with disabilities increased. Also, a tighter cluster of gap rates is seen for TPS, while charter schools have a wider variance of gap rates. Using multi-level modeling, statistical significance was found for the gap in proficiency rates between students with disabilities and all students with charter schools having a lower rate when comparing each year of data for LEAs with similar percentages for enrollment of students with disabilities ( $p < .05$ ).

### Figure 12

*Percent of students with disabilities served in the regular classroom 80% or more of the day compared to the percentage of students with disabilities represented in each LEA, categorized by TPS and charter schools.*



**Indicator 5a – Percent of Students with Disabilities Served in the Regular Classroom 80% or More of the Day**

For Indicator 5a – percent of students with disabilities served in the regular classroom 80% or more of the day, there was statistical significance with charter schools having a significantly higher percentage of students with disabilities served in the regular classroom 80% or more of the day. Figure 12 illustrates that as the percentage of students with disabilities increased, TPS had more students served in the classroom 80% or more of the day, charter schools stayed relatively the same. Also, a tighter cluster of rates is seen for TPS, while charter schools have a wider variance of rates. Using multi-level modeling, statistical significance was found for the percent of students with disabilities served in the regular classroom 80% or more of the day with charter schools having a higher rate when comparing each year of data for LEAs with similar percentages for enrollment of students with disabilities ( $p < .05$ ).

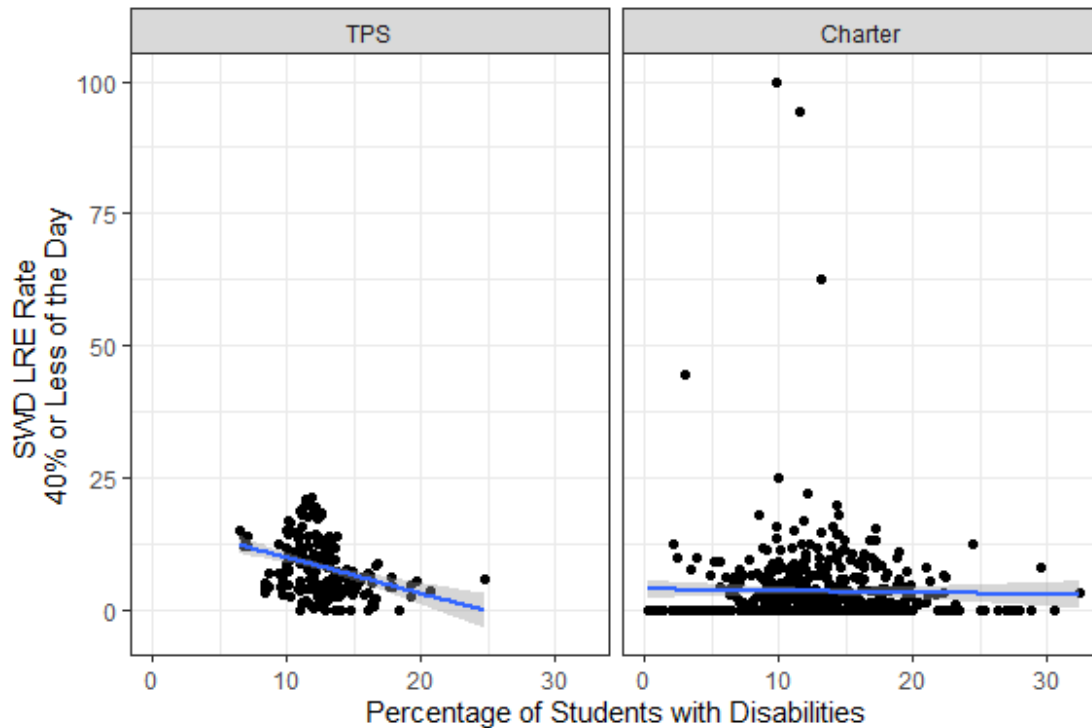
**Indicator 5b – Percent of Students with Disabilities Served in the Regular Classroom Less than 40% of the Day**

For Indicator 5b – percent of students with disabilities served in the regular classroom less than 40% of the day, there was statistical significance with TPS having a significantly higher percentage of students with disabilities served in the regular classroom less than 40% of the day. Figure 13 illustrates that as the percentage of students with disabilities increased, TPS had fewer students served in the regular classroom 40% or less of the day, while charter schools stayed relatively the same. Also, a tighter cluster of rates is seen for TPS, while charter schools have a wider variance of rates. Using multi-level modeling, statistical significance was found for the percent of students with disabilities served in the regular classroom 40% or less of the day with charter schools having a lower rate when comparing each year of data for LEAs with similar

percentages for enrollment of students with disabilities ( $p = .001$ ).

**Figure 13**

*Percent of students with disabilities served in the regular classroom less than 40% of the day compared to the percentage of students with disabilities represented in each LEA, categorized by TPS and charter schools.*



**Indicator 5c – Percent of Students with Disabilities Served in Separate Schools, Residential Facilities, or Homebound/Hospital Placements**

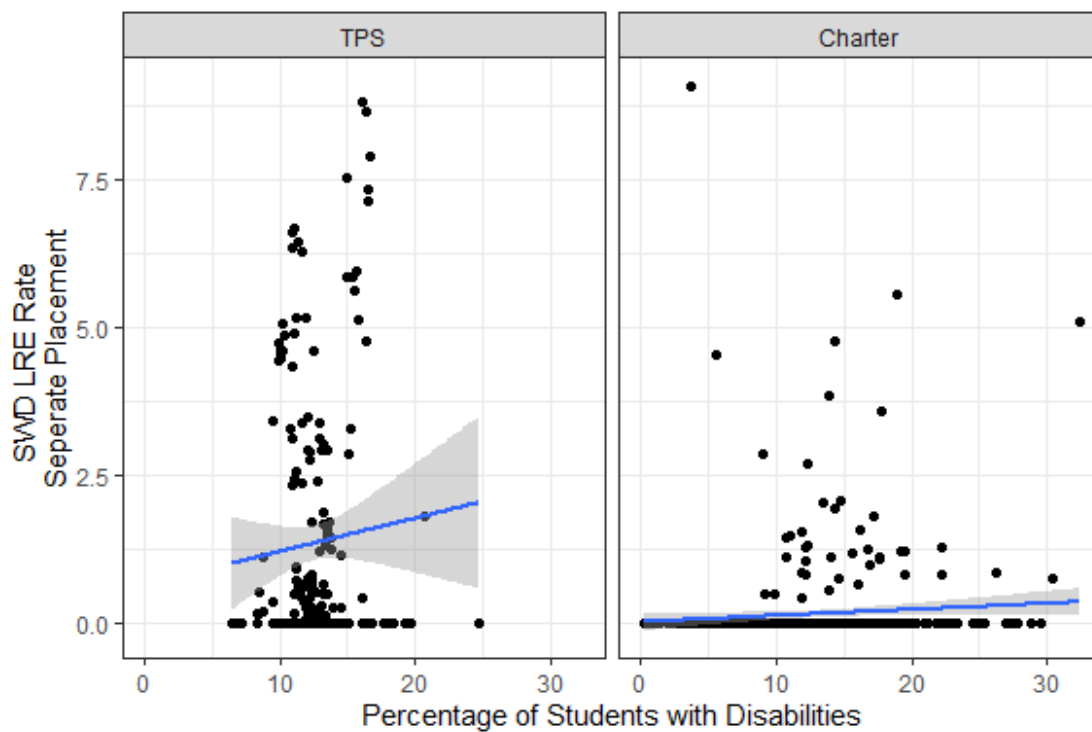
For Indicator 5c – percent of students with disabilities served in separate schools, residential facilities, or homebound/hospital placements, there was no statistical significance in the difference of rates between TPS and charter schools. Figure 14 illustrates that as the percentage of students with disabilities increased, TPS had more students served in alternative settings, while charter schools stayed relatively the same. Also, a tighter cluster of placement rates is seen for TPS, while charter schools have a wider variance of rates. Using multi-level



modeling, statistical significance was found for the percent of students with disabilities served in alternative settings with charter schools having a lower rate when comparing each year of data for LEAs with similar percentages for enrollment of students with disabilities ( $p < .05$ ).

#### Figure 14

*Percent of students with disabilities served in separate schools, residential facilities, or homebound/hospital placements compared to the percentage of students with disabilities represented in each LEA, categorized by TPS and charter schools.*



#### Indicator 8 – Parent Involvement

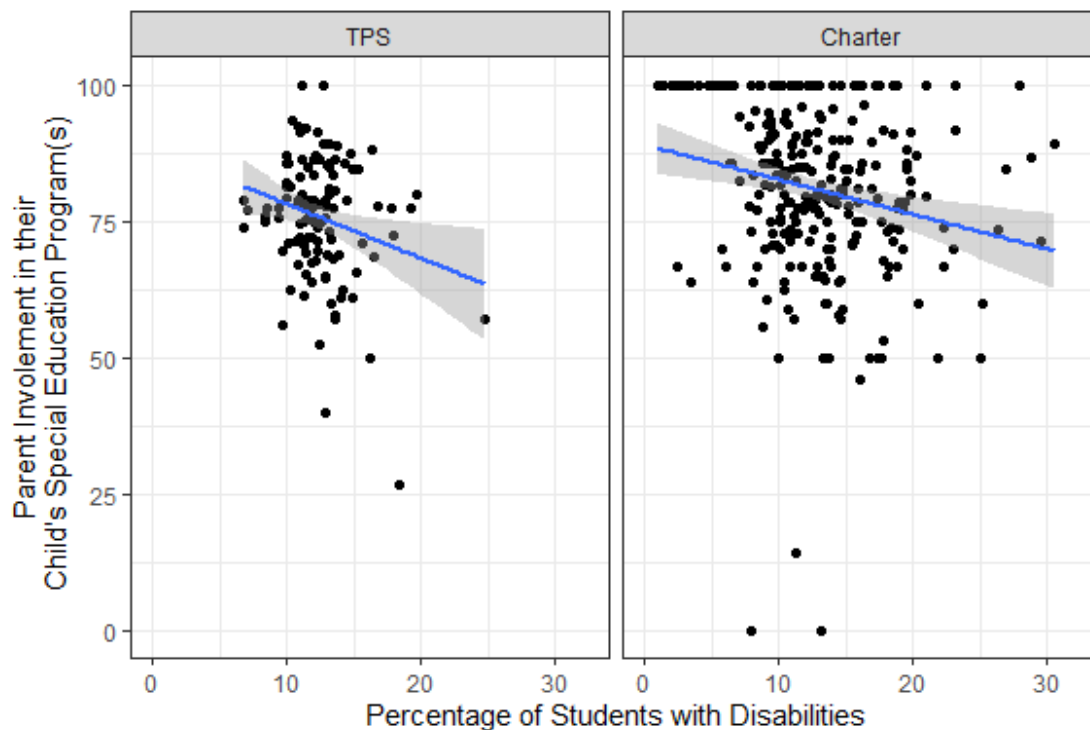
For Indicator 8 – parent involvement in their child’s special education services, there was statistical significance in the difference of rates between TPS and charter schools with charter schools having a significantly higher percentage of parents of students with disabilities reporting their child’s school facilitated their involvement in their child’s special education services.

Figure 15 illustrates that as the percentage of students with disabilities increased, both TPS and

charter schools had fewer parents reporting involvement in their child's special education programs. Also, a tighter cluster of involvement rates is seen for TPS, while charter schools have a wider variance of rates. Using multi-level modeling, statistical significance was found for the percentage of parents of students with disabilities reporting their child's school facilitated their involvement in their child's special education services with charter schools having a higher rate when comparing each year of data for LEAs with similar percentages for enrollment of students with disabilities ( $p = .04$ ).

**Figure 15**

*Percent of parents reporting their child's school facilitated their involvement in their child's special education services compared to the percentage of students with disabilities represented in each LEA, categorized by TPS and charter schools.*



## 5.5 Discussion

Of the analyzed APR measurements, significant differences were not found between charter schools and TPS for graduation rates, math and reading proficiency rates compared to grade level standards, and math proficiency rates against alternate academic achievement standards. Graduation rates are an important measurement leading to improved postsecondary outcomes for students with disabilities and knowing that charter schools and TPS are equivalent in this measure can assist in focusing on increasing rates across all school settings. With math and reading proficiency rates compared to grade level standards and math proficiency rates against alternate academic achievement standards also being similar between charter schools and TPS, it can also be concluded that students with disabilities are performing equivalently in both settings in these areas and one school type does not need coaching in these areas more than the other.

Of particular note from the results of this study are the variances in dropout rates for students with disabilities between charter schools and TPS. Charter schools have a significantly higher overall dropout rate for students with disabilities, and when comparing yearly data between TPS and charter schools between schools with similar percentages of enrollment of students with disabilities, charter schools have a significantly lower dropout rate than TPS. However, when comparing yearly data between all charter schools and TPS regardless of their percentage of enrollment of students with disabilities there was no significant difference. Based on this, charter schools overall have a higher percentage of students with disabilities dropping out, but when comparing schools with similar enrollment rates, charter schools have lower dropout rates, and yearly comparisons do not show any significant differences. These mixed results are important in telling the story of overall outcomes for students with disabilities in both TPS and charter schools. Overall, these mixed results relate that the difference in dropout rates between

charter schools and TPS, while significant for the five-year aggregate analysis, is small. While this significance shouldn't be discounted, it calls to the need to continuing comparing dropout rates between charter schools and TPS instead of calling attention to a dire discrepancy and need. In fact, greater attention should be paid to the data trend showing that both charter schools and TPS generally have higher dropout rates as the percentage of students with disabilities increases and assistance should be given to schools of both types with higher percentages of students with disabilities to assist them in decreasing dropout rates for students with disabilities.

Also, importantly, when reviewing both participation of students with disabilities in both math and reading assessments, TPS had both overall higher percentages of students participating in the assessments and higher percentages when comparing yearly data for TPS and charter schools with similar rates of enrollment of students with disabilities. Based on these results, it is clear that participation in both math and reading assessments is greater for students with disabilities in TPS. This is an important measure for showing inclusion of students with disabilities under IDEA standards. Participation in assessments by students with disabilities is an important measure for whether or not they have access to the general education curriculum and Section 300.160 of IDEA requires that states "must ensure that all children with disabilities are included in all general State and district-wide assessment programs" (IDEA, 2004). This is an important measurement for states to analyze to ensure that they are implementing IDEA with fidelity.

The lower participation rate of students with disabilities in assessments in charter schools could be due to several factors. One is that charter school administrators may not be aware of the requirements for students with disabilities to participate in assessments. A less benign factor could be that charter schools exclude students with disabilities from assessments in order to

market their school as one where students perform well on assessments. This factor has been postulated in antidotal accounts as a reason that charter schools do not want to enroll students with disabilities. The only way to know with certainty why charter schools have a significantly lower rate of students with disabilities participating in math and reading assessments would be to conduct qualitative interviews with administrators at charter schools where students with disabilities have low assessment participation rates. Regardless of the reason for the lower assessment rate, it is imperative that charter schools increase the rate of assessment participation for students with disabilities. This can be done through monitoring by the State Education Agency (SEA) combined with targeted support for charter schools with low assessment participation rates.

Following up on assessments, charter schools have both an overall smaller gap in math and reading proficiency rates between students with disabilities and all students against grade-level academic standards and a smaller gap when comparing yearly data between TPS and charter schools between schools with similar percentages of enrollment of students with disabilities. When analyzed alone, this data would show that students with disabilities at charter schools have more equivalent math and reading assessment scores when compared to all students than their TPS counterparts. However, when paired with the previous data showing that TPS have a higher percentage of students with disabilities participating in math and reading assessments, it questions whether enough students with disabilities are included in assessments in charter schools to contribute to the conclusions regarding the gap in proficiency rates between students with disabilities and all students. Because of this, proficiency rates may be higher for students with disabilities in charter schools because fewer students with disabilities are participating in assessments. Aside from that factor, charter schools may also have higher

proficiency rates for a variety of reasons including class sizes or instructional methods. Until assessment participation rates are more equivalent between charter schools and TPS, it would be difficult to form solid conclusions around whether or not students with disabilities in charter schools score better on math and reading assessments and why.

To shed additional light on this issue, additional multi-level modeling was conducted to compare math and reading assessment participation rates to math and reading proficiency scores. Statistical significance was found for participation rates of students with disabilities in state assessments when comparing each year of data for LEAs with similar gaps in math and reading proficiency rates between students with disabilities and all students against grade-level academic standards in math ( $p = .02$ ) and reading ( $p = .008$ ) with TPS continuing to have higher rates of participation of students with disabilities on state assessments when compared to charter schools with similar gaps in math and reading proficiency rates between students with disabilities and all students. This additional analysis suggests that proficiency rates of students with disabilities are similar between TPS and charter schools regardless of the rate of assessment. However, this additional analysis needs to be bolstered by future research that focuses solely on assessment participation rates and proficiency of students with disabilities by school type and disaggregates the data to further explore proficiency rates based on school settings.

Regarding least restrictive environment (LRE), charter schools have significantly more students with disabilities in the regular classroom 80% or more of the day, fewer students with disabilities served in the regular classroom 40% or less of the day, and a lower rate of students with disabilities served in alternative settings. Overall, this data shows charter schools to be more inclusive environments than TPS. However, missing from this data analysis is a comparison of LRE rates between school types and the types of disabilities being served there. In 2022, Smith

and Christensen (Chapter IV) highlighted a trend in charter schools enrolling fewer students with low general education classroom inclusion rates (intellectual disabilities and multiple disabilities). If charter schools are disproportionately enrolling students with disabilities with high general education classroom inclusion rates, they are going to have higher LRE rates, with few students being served in the regular classroom less than 40% of the day or being educated in alternative settings. Generally, charter schools are not equipped to provide services for disability types that require significant supports outside of the general education classroom or services in alternative settings. Charter schools only equip themselves with these services when they enroll a student that requires these services, while conversely, TPS, having larger populations of students, are set up to provide a more special education services and provide services in alternative settings. Because TPS are already set up to support students who require more services, they often end up enrolling those students and bearing greater expenses for special education services than charter schools. Because of this, the LRE indicators need to be coupled with breakdowns of enrollment by disability type to indicate whether or not charter schools are more inclusive or if they are exclusionary school settings for students with disabilities that require more supports and services outside of the general education classroom. There is room for additional research around LRE rates in charter schools compared to disability representation that explores if correlation exists between disability type and inclusion rates in charter schools. Smith and Christensen (Chapter IV) adequately described representation of students with disabilities by disability type in charter schools, however, future studies need to directly tie individual LEA disability type representation to the LEA's LRE rate. This type of research could illustrate if correlation exists and if the higher inclusion rates at charter schools are due to the types of disabilities being served there.

Overall, charter schools have significantly higher rates of parents of students with disabilities reporting their school facilitated their involvement in their child's special education services and the significance remains when comparing each year of data for LEAs with similar percentages for enrollment of students with disabilities. Parent involvement is an important part of IDEA, which aims to strengthen "the role of parents and ensuring families...have meaningful opportunities to participate in the education of their children (IDEA, 2004)." With charter schools' emphasis on parent choice, it is not surprising that parent involvement is rated more highly in charter schools than TPS. In fact, many charter schools require some form of parent participation at the school in order for their student to be enrolled. This participation could involve participating on school advisory boards, volunteering in the classroom, or committing to assisting their child with school work in the home. Also, the smaller school and classroom size of charter schools are conducive to encouraging parent involvement and foster better communication between school staff and parents. It is evident that most charter schools are building education cultures where parent involvement is valued. Because of the importance placed on parent involvement in IDEA, the practices charter schools are employing to foster parent involvement should not be ignored. These practices should be mimicked in TPS to increase parent involvement rates and build education cultures and systems that build home-school partnerships that increase outcomes for students with disabilities.

A final important discussion item for the comparison of APR scores and enrollment of students with disabilities in charter schools compared to TPS, is the variability of results seen in charter schools. For all of the APR indicators, a tighter cluster of APR results are seen for TPS, while charter schools have a wider variance of results. This finding is conclusive for both the APR results and enrollment of students with disabilities. TPS show more normative results with



a tight range of enrollment and results. Charter schools, however, are highly variable in enrollment rates and scores on APR indicators. Meaning, that some charter schools enroll adequate percentages of students with disabilities and have high or average scores on the APR while others are under enrolling students with disabilities and score very low on the APR. The low enrollment and scores of some charter schools are concerning and requires accountability for measurement of implementation of IDEA. All TPS and charter schools are monitored on APR compliance indicators under IDEA and the variability in results show that there are many charter schools that require additional monitoring and corrective action before it can be shown that they are implementing IDEA with fidelity.

### **5.6 Limitations**

The primary limitation to this study is its use of secondary data. The results of this study are only as accurate as the enrollment and APR data provided by LEAs to the USBE. However, it should be noted that all studies analyzing enrollment of students with disabilities and APR results rely on secondary data analyses, so it is believed that the results of this study are equitable to previously published studies on the topic of enrollment of students with disabilities in charter schools. Indeed, this study focused on including many years of APR and enrollment data in order to provide additional statistical conclusion validity to its results beyond the one or two years of enrollment data that most published studies used for analyzing enrollment of students with disabilities in charter schools compared to TPS.

### **5.7 Implications for Policy, Practice, and Research**

Immediate recommendations apparent from this study point to the need for changes in policies and practices at the State Education Agency (SEA) level. Charter schools with low assessment participation rates for students with disabilities need to be identified, targeted for

technical assistance to increase the rates, and continually monitored by the SEA to ensure that assessment participation rates increase. This immediate practice can assist charter schools in understanding the need to assess students with disabilities to assist in measuring their inclusion and provide measurements to ensure that students are making “progress appropriate in light of the child’s circumstances” as outlined in the *Andrew F. v. Douglas County School District (2017)* case. Additionally, this monitoring should tie student assessment participation rates to assessment proficiency scores for each charter school and weight the proficiency scores based on the assessment participation rates of students with disabilities. While the additional research outlined below can help hone SEA practices, immediate monitoring by SEAs will hold charter schools accountable for ensuring the participation of students with disabilities in assessments and provide essential data around inclusion rates and proficiency, all of which can lead to better postsecondary outcomes for students with disabilities.

Two main areas are highlighted in this study that call for additional research. The first is the analysis of inclusion rates in math and reading assessments compared to the gap in proficiency rates between students with disabilities and all students against grade-level academic standards. Additional research in this area will inform LEA practices around inclusion of students with disabilities in state assessments, and importantly, clarify whether or not charter school students with disabilities have higher proficiency rates on state assessments. If charter school proficiency rates are significantly higher because of significantly lower assessment participation rates, then research results can be used to foster policies and practices that increase assessment participation rates for charter school students with disabilities. If charter school assessment proficiency rates remain significantly higher regardless of state assessment participation rates, then charter school education practices that enhance proficiency rates can be

identified and integrated into instructional methods in TPS. Additional research should also factor in the disability types that are represented in TPS and charter schools and how the demographics of students with disabilities affects assessment participation rates.

The second additional research topic is a comparison of LRE rates between charter schools and TPS by disability type. This study has shown that charter schools have more inclusive LRE rates, but are enrolling disability types that require less supports outside of the general education classroom. This data suggests that LRE rates cannot be directly compared between charter schools and TPS. If charter school LRE rates correlate to the types of disabilities being served in charter schools, then it can be inferred that charter schools are not more inclusive educational environments for students with disabilities because they serve more inclusive disability types. However, if there is no correlation between disability type and LRE inclusion rates in charter schools, then charter school practices that enhance the inclusion of students with disabilities in the general education classroom can be identified and integrated into instructional methods in TPS.

## **5.8 Conclusion**

This study reached several important conclusions regarding the comparative results of implementation of IDEA between charter schools and TPS. Of note are the equivalent outcomes for students with disabilities at both TPS and charter schools on indicators for graduation rates and proficiency rates for students with disabilities against alternate academic achievement standards in math and reading. Other results include the overall higher dropout rates of students with disabilities in charter schools, the higher participation rates of students with disabilities in math and reading assessments at TPS, the smaller gap in math and reading proficiency rates between students with disabilities and all students against grade-level academic standards in

charter schools, the higher inclusion rates for students with disabilities at charter schools, and the higher parent involvement rates at charter schools. Perhaps, most importantly, is the identified need for additional research around assessment participation and proficiency and disability type and LRE. A final important conclusion of the study is the variability in APR scores seen in charter schools that reinforces the need for monitoring implementation of IDEA and providing support to individual charter schools that have low APR results to ensure they are equivalent learning environments for students with disabilities.

Most importantly, this chapter showed that the issue of comparing TPS and charter schools is a complex process and should not be done by looking at aggregate data. Some APR results by themselves illustrate one narrative, but when added together with other results or enrollment rates, tell another story. Multi-level modeling analysis is needed to disaggregate the data and tell a story about how well students with disabilities are receiving their federally mandated services in different settings.

It is important that comparisons on the implementation of IDEA be made between different educational settings and school types. Equivalent educational opportunities for students with disabilities are necessary to increase postsecondary outcomes for them. By monitoring implementation of IDEA, determinations can be made regarding equivalent access between TPS and charter schools to ensure all educational environments are providing required provisions to promote better outcomes.

## **5.9 Summary**

This chapter provided an analysis of how enrollment of students with disabilities in TPS and charter schools relates to their implementation of IDEA based on their APR results. Lastly, Chapter VI will provide a summary and conclusion of the research as an integration of the

study's purposes, which will include Chapter II, the systematic review. Included in Chapter VI will be an outline of how this study can be used as a template for how educational systems can be evaluated for representation of students with disabilities in charter schools.

## CHAPTER VI

### SUMMARY AND EVALUATION TEMPLATE

This chapter provides a summary and conclusion of the research as an integration of the study's purposes, which includes Chapter II, the systematic review. Included in this chapter is an outline of how this study can be used as a template for how educational systems can be evaluated for representation of students with disabilities in charter schools.

#### 6.1 Summary

This study had three purposes. The first was to identify peer-reviewed and self/third party studies exploring the representation of students with disabilities in charter schools, the proportionality of that representation in respect to traditional public school districts (TPS), and provide an analysis of the validity and strength of the study designs employed in the studies. The second purpose was to provide descriptive statistics for the enrollment of students with disabilities in Utah in charter schools compared to TPS by determining if there is a statistical significance between their rates of representation and the types of disabilities being served. The final purpose of the study was to compare performance on the Annual Performance Report (APR), a federally mandated report that describes how IDEA is being implemented, between charter schools and TPS and review relationships between rates of enrollment of students with disabilities and APR outcomes.

Based on the purposes of the study, the following research questions were answered:

1. To what extent do peer-reviewed and self/third party studies describe the enrollment representation of students with disabilities in charter schools compared to TPS?
2. To what extent is enrollment of students with disabilities in charter schools

similar to the enrollment of students with disabilities in TPS in Utah based on the percentage of students with disabilities served in each, the types of disabilities being served, and the representation of students with disabilities across grade levels in each school type.?

3. To what extent do Annual Performance Report (APR) indicators compare between Utah charter schools and TPS and do relationships exist between rates of enrollment of students with disabilities and APR outcomes?

The following sections provided summaries of the conclusions of each chapter that answers each of these research questions, provides the overall conclusions to the study and provides a template for how educational systems can be evaluated for representation of students with disabilities in charter schools.

## **6.2 Chapter II – Systematic Review of Literature Conclusion Summary**

The systematic review of literature conducted in Chapter II on peer-reviewed articles and self/third party reports found that the majority of studies had findings that indicated students with disabilities were under-represented in charter schools or started with a statement that students with disabilities were under-represented in charter schools and further disaggregated data to determine why the representation variance existed. However, the research also suggested that it is difficult to holistically determine if students with disabilities are enrolled in charter schools more or less than TPS. This is because national data cannot provide direct comparisons between enrollment rates of students with disabilities in charter schools and TPS. The variance in state and territory charter laws greatly effects how charter schools enroll and provide services for students with disabilities and makes direct comparisons unreliable. The reviewed studies were also very careful in how they reported the representation of students with disabilities in

charter schools. In most cases, the articles would report or state that students with disabilities were under-represented in charter schools in a certain geographic area, but then provide reasons for the gap in enrollment.

The research also reported that enrollment of students with disabilities in charter school is based on how charter schools evaluate for and identify disabilities, the local education agency (LEA) classification of the charter school, and how the oversight and monitoring of special education programs is conducted at the school. All of these factors are determined at a state level and add to the justification for future studies being completed at the state systems level.

Another issue when reviewing data on the enrollment of students with disabilities in charter schools, is whether or not specialized charter schools that operate under missions focused on serving students with disabilities are included or excluded from the data analysis. Nearly all of the studies reviewed in this paper did not indicate whether or not specialized charter schools were included in their data analysis. The inclusion of a specialized charter school with a student body consisting mainly of students with IEPs in a data set can skew the data analysis.

Because of these factors identified during the literature review, Chapter II clearly concluded enrollment comparisons of students with disabilities between TPS and charter schools is a nuanced issue that is as complex as the U.S. education system. The current literature does not provide a definitive answer as to whether or not students with disabilities are overall under or overrepresented in charter schools because of the confounding factors. Based on this, Chapter II concluded that any review of enrollment of students with disabilities in charter schools needs to be completed for specific state education systems and specify whether or not specialized charter schools were included or excluded from the dataset and provide justification for the



choice. It was also concluded that future research needed to analyze of how well charter schools are implementing IDEA by comparing charter schools and TPS with high enrollment rates of students with disabilities and low enrollment rates of students with disabilities to see where students with disabilities are receiving special education services and how well they are being served. This final conclusion was based on the complete lack of studies review enrollment rates of students with disabilities by school type and implementation of IDEA based on APR results.

### **6.3 Chapter IV – Representation of Students with Disabilities Conclusion Summary**

Chapter IV illustrated that Utah charter schools as a whole do not enroll a significantly lower or higher percentage of students with disabilities than TPS when specialized schools are removed from the data set. It was clear from the data that the inclusion of specialized schools that specifically provided services to students with disabilities can greatly skew comparisons between TPS and charter schools and studies should be careful to state if they are included or excluded in enrollment comparisons and include justification for their usage or omission from analysis. Another strong conclusion of this chapter was the range or representation of students with disabilities in charter schools. It was clear from the range of representation that there are charter schools that not only enroll a lower than average percentage of students with disabilities, but that some have very low enrollment of students with disabilities and may be seen as exclusionary settings.

In addition, a trend was shown with charter schools enrolling fewer students with disability classifications that have low general education classroom inclusion rates (intellectual disabilities and multiple disabilities) and students with specific learning disabilities, while they enroll higher percentages of students with autism and emotional disturbance. Based on this trend, charter schools are trending towards being inclusive environments for some disabilities, while

excluding others. Moreover, this study showed that charter schools enroll a significantly lower percentage of students with disabilities in grades K-2 and a significantly higher percentage of students with disabilities in grades 7-12. This shows that some charter schools serving elementary age students may be under-enrolling students with disabilities while some middle/high school level charter schools have high enrollment of students with disabilities. Again, this is creating environments where some charter schools are exclusionary environments for certain age levels of students with disabilities while other charter schools are trending towards being inclusive environments to the point of being lop-sided in exposing students with disabilities to their same age peers without disabilities.

Most importantly, this chapter showed that the issue of comparing enrollment between TPS and charter schools is a complex process and should not be done by looking at aggregate enrollment data. Multi-level analysis is needed to disaggregate the data and tell a story about who students with disabilities are and where they are receiving special education services.

#### **6.4 Chapter V – Implementation of IDEA Conclusion Summary**

Chapter V reached several important conclusions regarding the comparative results of implementation of IDEA between charter schools and TPS. Of note are the equivalent outcomes for students with disabilities at both TPS and charter schools on indicators for graduation rates and proficiency rates for students with disabilities against alternate academic achievement standards in math and reading. Other results included the overall higher dropout rates of students with disabilities in charter schools, the higher participation rates of students with disabilities in math and reading assessments at TPS, the smaller gap in math and reading proficiency rates between students with disabilities and all students against grade-level academic standards in charter schools, the higher inclusion rates for students with disabilities at charter schools, and the

higher parent involvement rates at charter schools. Perhaps, most importantly, is the identified need for additional research around assessment participation/proficiency and disability type/LRE.

As in Chapter IV, this chapter showed that the issue of comparing TPS and charter schools is a complex process and should not be done by looking at aggregate data. Some APR results by themselves illustrate one narrative, but when added together with other results or enrollment rates, tell another story. Multi-level analysis is needed to disaggregate the data and tell a story about how well students with disabilities are receiving their federally mandated services in different settings.

This chapter also illustrated the importance that comparisons on the implementation of IDEA be made between different educational settings and school types. Equivalent educational opportunities for students with disabilities are necessary to increase postsecondary outcomes for them. By monitoring implementation of IDEA, determinations can be made regarding equivalent access between TPS and charter schools to ensure all educational environments are providing required provisions to promote better outcomes.

### **6.5 Overall Study Conclusions**

Overall, the systematic literature review in Chapter II clearly illustrated that enrollment comparisons of students with disabilities between TPS and charter schools is a nuanced issue that is extremely complex. The literature review pointed to the need for state or territorial systems-level analysis of enrollment percentages that clearly stated and explained if specialized charter schools were included or excluded from the study data. The literature review also exposed the lack of studies on how well IDEA is being implemented between TPS and charter schools.

In reviewing enrollment between TPS and charter schools, the complexity of the issue

was exposed and the justification for disaggregating enrollment data to tell the story of where students with disabilities are being educated was strengthened. Chapter IV revealed that in Utah, the inclusion of specialized schools in the data set greatly expands the range of enrollment for each school type and substantially increased the mean enrollment for TPS and charter schools. Overall when specialized schools were excluded, charter schools in Utah enrolled a smaller percentage of students with disabilities than TPS, although without statistical significance. The complexity of the issue was further exposed when enrollment data was disaggregated by disability type and grade level. This illustrated charter schools are exclusionary environments for some disabilities and grade levels, while being inclusionary to the point of being lop-sided in exposing students with disabilities to their same age peers without disabilities.

Data analysis on the APR data prompted two important topics for future research. The first is the analysis of inclusion rates in math and reading assessments compared to the gap in proficiency rates between students with disabilities and all students against grade-level academic standards for TPS and charter schools. With charter schools having a significantly lower percentage of students with disabilities participating in math and reading assessments, it is difficult to interpret the higher proficiency scores of charter school students with disabilities as a determination that charter school students with disabilities have better academic outcomes. This calls for additional research on why charter school students with disabilities participate in assessments at lower rates and how this rate affects the math and reading proficiency scores of students with disabilities in charter schools. The second topic for additional research is a comparison of LRE rates between charter schools and TPS by disability type. Charter schools were shown to have a significantly higher rate of inclusion for students with disabilities in the general education classroom. However, Chapter IV illustrated that charter schools enroll more

disability types with higher general education classroom inclusion rates. Based on this data, it is not clear that charter schools are generally more inclusive than TPS and additional research is needed to show if LRE rates are higher in charter schools because of the types of students with disabilities they are enrolling.

As a final conclusion to this study, it is important to reiterate the complexity of enrollment rates for students with disabilities between TPS and charter schools. Reviewing national or state/territory-level data doesn't tell the whole story of where and how well students with disabilities are being educated. Data must be disaggregated by disability type, grade level, and results/compliance measures in order to fully grasp the story of enrollment of students with disabilities and ensure equivalent educational opportunities for students with disabilities. This study has compiled data to tell Utah's story.

In Utah the data shows that some charter schools are exclusionary settings for students with disabilities. There are disability types that have low representation in either Utah charter schools or TPS. There are grade levels that have low representation of students with disabilities in either Utah charter schools or TPS. In Utah, students with disabilities aren't being assessed equitably in charter schools, but students in charter schools may score more equivalent on state assessments compared to all students. Utah charter schools have higher rates of inclusion of students with disabilities in the general education classroom, but this appears to be the result of charter schools serving fewer severe disability types. Finally, Utah TPS could learn from charter school practices that facilitate parent involvement.

### **6.6 Using this Study as a Template**

This study illustrated that comparing enrollment between TPS and charter schools is a complex process and should not be done by looking at aggregate enrollment data. Multi-level

modeling analysis is needed to disaggregate the data and tell a story about who students with disabilities are, where they are receiving special education services, and how well those services are meeting IDEA. It is hoped that this study can be used as template for evaluating other state/territorial education systems to determine representation of students with disabilities in charter schools compared to TPS. This study first utilized a systematic literature review that identified the current research on representation of students with disabilities in charter schools and outlined parameters that needed to be included in future research to strengthen the existing research with well-designed studies. This study was designed based on the needs identified in that systematic literature review. By doing this, this study can be used as a guide for additional enrollment analysis.


Table 1 provides the parameters of this study in a check list format that can be utilized by future studies comparing enrollment of students with disabilities in charter schools compared to TPS. Each item addressed in the checklist is described more fully in the following sections. It should be noted that this template encompasses a full disaggregation of representation of students with disabilities by several factors (disability type and grade level) and implementation of IDEA based on APR scores. It is expected that Table 1 could be used as a template and that additional factors for analysis could be added in (i.e. school size) or it could be shortened based on availability of data or outcomes needed from a data analysis.

### **Gather Enrollment Data**

Enrollment data should be gathered for the entire education system being surveyed. Most State Education Agency (SEA) provide publicly accessible enrollment data reports on their website. This data is generally broken down by LEA and provides demographic information regarding enrollment for each LEA such as enrollment totals for gender, race, disability, English

**Table 1**

*Checklist of steps to compare enrollment data for an education system between charter schools and TPS.*

Task	
1. Gather enrollment data for the entire education system for at least five complete school years. The data should be listed by LEA name and include: <ol style="list-style-type: none"> <li>a. LEA type (charter school or traditional public school)</li> <li>b. Total student enrollment</li> <li>c. Total enrollment of students with disabilities</li> <li>d. A breakdown of students with disabilities by disability type</li> <li>e. A breakdown of students with disabilities by grade level</li> <li>f. APR scores for each LEA</li> <li>g. Other areas identified for analysis</li> </ol>	
2. Organize data by LEA type and identify any specialized schools with mission statements that focus on the education of students with disabilities. All data analysis should be run with and without specialized schools included to show how their inclusion may or may not affect comparisons between TPS and charter schools. A justification for the inclusion or exclusion of specialized schools must be included with the results of the data analysis. After all LEAs are properly coded by school type and specialized schools are identified, the LEA name can be removed from the dataset, if needed for privacy reasons.	
3. Compare enrollment between TPS and charter schools by performing a <i>t</i> -test to see if there is a significant difference between enrollment between the two school types.	
4. Perform additional analysis based on the additional factors included in the data using ANOVA methods (disability type) or multi-level modeling (grade levels).	
5. Use multi-level modeling analysis to compare APR indicators between TPS and charter schools based on enrollment of students with disabilities to see how IDEA is being implemented across school types and representation levels.	
6. Use descriptive statistics and results of the data analysis to inform education laws and policies in the study area to encourage equivalent representation of students with disabilities across school types.	

language learners, and students receiving free and reduced lunch. If this information is not

publicly available for the educational system under review, a data sharing request may need to be submitted to the SEA. It is recommended that at least five years of enrollment data be utilized to strengthen the statistical conclusion validity of any results generated by the study. The purpose of using many years of data is to allow for a large enough N to provide statistical conclusion validity to any association of trends in the data being connected to school types. Also, because charter schools generally have lower total enrollment than TPS, several years of enrollment data should always be utilized to increase the power of the study. Utilizing multiple years of data will also allow for change across time to be noted and possibly correlated to changes in policies and practices. The data should be listed by LEA name and include:

- a. LEA type (charter school or traditional public school)
- b. Total student enrollment
- c. Total enrollment of students with disabilities
- d. A breakdown of students with disabilities by disability type
- e. A breakdown of students with disabilities by grade level
- f. APR scores for each LEA
- g. Other areas identified for analysis

### **Organize the Data**

The data should be organized by LEA type (TPS or charter school) and the list of LEAs should be reviewed in order to identify any specialized schools that market themselves or have mission statements directly related to the provision of services for students with disabilities. These schools generally have a very high enrollment rate of students with disabilities and can skew comparisons of representation of students with disabilities by school type. All data analysis



should be run with and without specialized schools included to show how their inclusion may or may not affect comparisons between TPS and charter schools. A justification for the inclusion or exclusion of specialized schools must be included with the results of the data analysis.

After all LEAs are properly coded by school type and specialized schools are identified, the LEA name can be removed from the dataset, if needed for privacy reasons. If the desired outcome of the review is strictly to compare enrollment rates of students with disabilities between TPS and charter schools, then including the name of each LEA in the dataset is not necessary. However, if an outcome of the study is to show where specific LEAs fall in the range of enrollment in their school type, then leaving the LEA name in may be important. Whatever the case, attention needs to be paid to whether or not the person/entity performing the data analysis is the owner of the data or whether or not they have a data sharing agreement in place with a SEA that allows for the identification of individual LEAs in the results report.

### **Comparing Enrollment**

At this point enrollment between TPS and charter schools can be compared. A *t*-test is recommended for the analysis to see if there is a significant difference between enrollment between the two school types. It is important to remember that the analysis should be run with and without specialized schools included. This will show whether or not the specialized schools are skewing the representation of one school type to appear more inclusive than the other. It is also important to include a justification for whether or not specialized schools were included or excluded in the final data analysis when presenting the results. A helpful tool in determining if specialized schools should be included in the data set is generating descriptive statistics that show the range of enrollment for each school type and the mean for the enrollment percentage with and without specialized schools. These descriptive statistics can illustrate how great the

difference is when specialized schools are included or excluded from the data set.

### **Additional Factor Analysis**

Additional analysis should be conducted on any additional factors gathered in the data set such as disability type or grade levels. It is recommended that an analysis of disability type be included in reviews of enrollment of students with disabilities to show who the students with disabilities are and where they are being educated. Previous studies ((Wilkins, 2011), (Winters, 2015), (Winters et al., 2017), (Rhim et al., 2019), and (Lancet et al., 2020)) have shown that charter schools enroll different disability types at different rates than TPS. This is important data to analyze as to determine if charter schools are exclusive settings for some disability types and over-representative for other disability types. An ANOVA analysis, coupled with post hoc pairwise testing can be used to compare disability types between TPS and charter schools and show which disability types have statistically significant enrollment rates in which school types.

It is also recommended that comparisons be completed by grade levels between TPS and charter schools. Based on individual state and territorial legislation, most charter schools are allowed to enroll a certain grade levels as approved in their charter. Based on this, some charter schools provide K-12 classes, while others focus on elementary grades, middle school grades, high school grades, or a combination of grade levels. Including grade level as a factor in enrollment analysis can provide additional data showing where students with disabilities are being educated based on their age. Because not all charter schools in the data set will have an enrollment percentage for each grade level, multi-level modeling with post hoc pairwise testing is recommended for this analysis to show which grade levels have statistically significant enrollment rates in which school types.

## **APR Analysis**

At this point, analysis of APR indicators can be completed. Because charter schools may not report data for each APR indicator based on the grade levels they serve, it is suggested that multi-level modeling with post hoc pairwise testing be used for this analysis to show which APR indicators have statistically significant responses for TPS/charter when combined with enrollment percentages of students with disabilities. Results of this analysis will illustrate how well IDEA is being implemented across school types and representation levels. Additional multi-level modeling can be used with enrollment percentages for each LEA as an additional factor to illustrate if correlation exists as APR results increase or decrease for TPS and charter schools as enrollment increases and decreases.

## **Informing Education Laws and Policies**

Not only is it important to evaluate state/territorial education systems to determine representation of students with disabilities in charter schools compared to TPS, but the evaluation can also be used to inform laws and policies around educating students with disabilities. Results from this analysis can be used to determine if funding is need for additional research. An example of this could be additional qualitative research where parents of students with disabilities are interviewed to determine why some disability types are over/under represented in charter schools. Results of this evaluation could also be used to inform state-level discussions around amending charter school authorization procedures. Or results could assist a SEA in developing policies or professional development around the identification of students with disabilities. For example, the results of this study point to the needs for the SEA in Utah to develop monitoring practices for Utah charter schools to ensure they are performing child find services to actively identify and enroll students with disabilities and provide support to charter

schools that have low assessment participation rates for students with disabilities to assist them in increasing their participation rates so that proficiency scores on assessments accurately depict the education of students with disabilities in charter schools.

There are a lot of ways this data could be used to not only provide a picture of where students with disabilities are being educated, but to also illuminate areas where small policy or practice changes can enhance equivalent representation of students with disabilities between TPS and charter schools. The point is to use this template to see where students with disabilities are being education (based on their disability type and grade level), look at how well they are being served (based on the APR indicators), and see what can be done to improve equity and implementation of IDEA across school settings to ensure that education systems are equivalent for students with disabilities.

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APPENDIX - A



RESEARCH SHARING AGREEMENT  
 UTAH STATE BOARD OF EDUCATION

PARTIES: This Research Sharing Agreement ("Agreement") is between the Utah State Board of Education, referred to as "State Entity" or "USBE", and the following primary "Researcher", each individually a "Party" and together the "Parties".

Brenda Smith, Graduate Student			LEGAL STATUS OF RESEARCHER	
Name of Researcher			Sole Proprietor	<input type="checkbox"/>
Utah State University			Non-Profit Corporation	<input type="checkbox"/>
Name of Entity			For-Profit Corporation	<input type="checkbox"/>
6896 Old Main Hill			Partnership	<input type="checkbox"/>
Address			Government Agency	<input checked="" type="checkbox"/>
Logan	UT	84341	Brenda.smith@usu.edu	435-797-9033
City	State	Zip	Email	Phone
www.usu.edu				
Website				
Dr. Leah Voorhies			801-538-7898	Leah.voorhies@schools.utah.gov
USBE Sponsor Name			Sponsor Phone	Sponsor Email

AGREEMENT PERIOD: Effective Date: 8/1/21 Termination Date: 3/30/22 unless terminated early or extended in accordance with the terms and conditions of this agreement. Renewal options (if any): \_\_\_\_\_.

- ATTACHMENT A: State of Utah Standard Terms and Conditions for Research
  - ATTACHMENT B: Scope of Research
  - ATTACHMENT C: Additional Scopes of Research if applicable
  - ATTACHMENT D: Curriculum Vitae for external researcher(s)
- Any conflicts between Attachment A and the other Attachments will be resolved in favor of Attachment A.**

Each signatory below represents that he or she has the requisite authority to enter into this Agreement.

IN WITNESS WHEREOF, the Parties sign and cause this Agreement to be executed.

PRIMARY RESEARCHER OR ENTITY SIGNATORY

*Dr. Keith Christensen* 4-19-21  
 Researcher's signature Date

Dr. Keith Christensen, Dissertation Chair, IRB PI  
 Type or Print Name and Title

UTAH STATE BOARD OF EDUCATION

Dickson, Sydnee Digitally signed by Dickson, Sydnee Date: 2021.09.08 12:24:07 -06'00'  
 Sydnee Dickson, Ed.D. Date  
 Utah State Superintendent of Public Instruction

Sydnee Dickson, State Superintendent  
 Type or Print Name and Title

USBE Contact Person	Telephone Number	Fax Number	Email
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**ATTACHMENT A: STATE OF UTAH STANDARD TERMS AND CONDITIONS FOR RESEARCH**

1. **DEFINITIONS:** The following terms shall have the meanings set forth below:
  - 1.1. "**Authorized Persons**" means Researcher's employees, officers, partners, Subcontractors or other agents of Researcher who require access to Data and who have a legitimate educational interest in the education records to enable the Researcher to perform its responsibilities under this Agreement.
  - 1.2. "**Agreement Signature Page(s)**" means the State of Utah cover page(s) that the State Entity and Researcher signed.
  - 1.3. "**Data**" includes Student Personally Identifiable Information and Educator Data, and may also include Confidential Information. "**Data Steward**" means the entity responsible for combining two Data sets from different sources, and managing the resultant Data set. If a USBE Data system is being used, then USBE is the Data Steward. If another entity is doing the calculations or derivations, then that entity becomes the Data Steward.
  - 1.4. "**Destroy**" means to remove Data such that it is not maintained in retrievable form and cannot be retrieved in the normal course of business.
  - 1.5. "**Educator Data**" includes, but is not limited to, the educator's name; any unique identifier, including social security number; and other information that, alone or in combination, is linked or linkable to a specific educator.
  - 1.6. "**Incident**" means the potentially unauthorized access to Data that Researcher believes could reasonably result in the use, disclosure or theft of Data within the possession or control of Researcher or Researcher's Subcontractors.
  - 1.7. "**Metadata**" includes all information created manually or automatically to provide meaning or context to other data.
  - 1.8. "**State Entity**" means the department, division, office, bureau, agency, or other organization identified on the Agreement Signature Page(s).
  - 1.9. "**State of Utah**" means the State of Utah, in its entirety, including its institutions, agencies, departments, divisions, authorities, instrumentalities, boards, commissions, elected or appointed officers, employees, agents, and authorized volunteers.
  - 1.10. "**Student Personally Identifiable Information**" or "**PII**" has the same meaning as that found in U.C.A § 53E-9-301, and includes both direct identifiers (such as a student's or other family member's name, address, student number, or biometric number) and indirect identifiers (such as a student's date of birth, place of birth, or mother's maiden name). Indirect identifiers that constitute PII also include metadata or other information that, alone or in combination, is linked or linkable to a specific student that would allow a reasonable person in the school community, who does not have personal knowledge of the relevant circumstances, to identify the student with reasonable certainty.
  - 1.11. "**Subcontractors**" means any person or entity that will receive Data from Researcher shared as part of this agreement.
  - 1.12. "**Targeted Advertising**" means advertising to a student or a student's parent by Researcher if the advertisement is based on information or Data Researcher collected or received under this Agreement.
2. **GOVERNING LAW AND VENUE:** This Agreement shall be governed by the laws, rules, and regulations of the State of Utah. Any action or proceeding arising from this Agreement shall be brought in a court of competent jurisdiction in the State of Utah. Venue shall be in Salt Lake City, in the Third Judicial District Court for Salt Lake County.
3. **LAWS AND REGULATIONS:** At all times during this Agreement, Researcher and all research shall comply with all applicable federal and state constitutions, laws, rules, codes, orders, and regulations, including applicable licensure and certification requirements.
4. **RECORDS ADMINISTRATION:** Researcher shall maintain or supervise the maintenance of all records necessary to properly account for Researcher's performance under this Agreement. These records shall be retained by Researcher for at least six (6) years after termination of this Agreement, or until all audits initiated within the six (6) years have been completed, whichever is later. Researcher agrees to allow, at no additional cost, the State of Utah, federal auditors, State Entity staff, or their designees, access to all such records during normal business hours and to allow interviews of any employees or others who might reasonably have information related to such records. Further, Researcher agrees to include a similar right of the State to audit records and interview staff in any subcontract related to performance of this Agreement.
5. **CONFLICT OF INTEREST:** Researcher represents that none of its officers or employees are officers or employees of the State Entity or the State of Utah, unless disclosure has been made to the State Entity.
6. **INDEPENDENT CONTRACTOR:** Researcher and Subcontractors, in the performance of this Agreement, shall act in an independent capacity and not as officers or employees or agents of USBE.

**7. NON-FINANCIAL UNDERSTANDING:**

- 7.1. This Agreement is a non-financial understanding between USBE and Researcher. No financial obligation by or on behalf of either of the Parties is implied by a Party's signature at the end of this Agreement.
- 7.2. The terms of any financial liability that arises from Data processing activities carried out in support of the responsibilities covered herein must be negotiated separately and to the mutual satisfaction of the Parties.
- 7.3. The legal authority for Data sharing for specified purposes conveyed by this Agreement cannot be used to support a subsequent claim of implied agreement to financial obligation.

8. **COST (OPTIONAL):** Researcher agrees to pay fees in the amount of \$ \_\_\_\_\_ for the preparation or delivery of the research Data (this payment may be required in advance). Payment shall be made to:
9. **RESEARCHER RESPONSIBILITY:** Researcher is solely responsible for fulfilling the Agreement. Researcher shall be the sole point of contact regarding all contractual matters. Researcher must incorporate Researcher's responsibilities under this Agreement into every subcontract with its Subcontractors. Moreover, Researcher is responsible for its Subcontractors compliance under this Agreement.
10. **INDEMNITY:** Researcher shall be fully liable for the actions of its agents, employees, officers, partners, and Subcontractors, and shall fully indemnify, defend, and save harmless the State Entity and the State of Utah from all claims, losses, suits, actions, damages, and costs of every name and description, including but not limited to any loss of Data and claims arising out of any data breach, arising out of Researcher's performance of this Agreement caused by any intentional act or negligence of Researcher, its agents, employees, officers, partners, or Subcontractors, without limitation; provided, however, that the Researcher shall not indemnify for that portion of any claim, loss, or damage arising hereunder due to the sole fault of the State Entity. The parties agree that if there are any limitations of the Researcher's liability, including a limitation of liability clause for anyone for whom the Researcher is responsible, such limitations of liability will not apply to injuries to persons, including death, or to damages to property
11. **EMPLOYMENT PRACTICES:** Researcher agrees to abide by any other laws, regulations, or orders that prohibit the discrimination of any kind by any of Researcher's employees.
12. **AMENDMENTS:** This Agreement may only be amended by the mutual written agreement of the Parties, which amendment will be attached to this Agreement. Automatic renewals will not apply to this Agreement, even if identified elsewhere in this Agreement.
13. **DEBARMENT:** Researcher certifies that it is not presently nor has ever been debarred, suspended, proposed for debarment, or declared ineligible by any governmental department or agency, whether international, national, state, or local. Researcher must notify the State Entity within thirty (30) days if debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in any contract by any governmental entity during this Agreement.
14. **TERMINATION:** This Agreement may be terminated, with cause by either Party, in advance of the specified expiration date, upon written notice given by the other Party. The Party in violation will be given ten (10) days after written notification to correct and cease the violations, after which this Agreement may be terminated for cause immediately and subject to the remedies below. This Agreement may also be terminated without cause (for convenience), in advance of the specified expiration date, by the State Entity, upon thirty (30) days written termination notice being given to the Researcher. The Parties may terminate this Agreement, in whole or in part, at any time, by mutual agreement in writing.
- 14.1. Following the termination of this Contract, USBE reserves the right to request a complete and secure (i.e. encrypted and appropriately authenticated) download file of all data, including, but not limited to, all Data, schema and transformation definitions, or delimited text files with documented, detailed schema definitions along with attachments in its native format. After USBE has been provided and confirmed as acceptable a complete download, or declines a download and requests immediate destruction, Contactor shall Destroy all Data collected, generated, or inferred as a result of this Contract. Should USBE not request a complete download, Contractor shall Destroy the Data immediately after thirty (30) days post termination of the Contract. The Contractor shall notify USBE in writing of the date upon which all of the Data is destroyed.
15. **CHANGES IN LAW:** Upon thirty (30) days written notice delivered to the Researcher, this Agreement may be terminated in whole or in part at the sole discretion of the State Entity, if the State Entity reasonably determines that a change in Federal or State legislation or applicable laws materially affects the ability of either Party to perform under the terms of this Agreement.
16. **RESERVED.**
17. **PUBLIC INFORMATION:** Researcher agrees that this Agreement shall be a public document and may be available for public and private distribution in accordance with the State of Utah's Government Records Access and Management Act (GRAMA). Researcher gives the State Entity and the State of Utah express permission to make copies of this Agreement in accordance with GRAMA. The State Entity and the State of Utah are not obligated to inform Researcher of any GRAMA requests for disclosure of this Agreement.

- 18. INDEMNIFICATION RELATING TO INTELLECTUAL PROPERTY:** Researcher will indemnify and hold the State Entity and the State of Utah harmless from and against any and all damages, expenses (including reasonable attorneys' fees), claims, judgments, liabilities, and costs in any action or claim brought against the State Entity or the State of Utah for infringement of a third party's copyright, trademark, trade secret, or other proprietary right. The Parties agree that if there are any limitations of Researcher's liability, such limitations of liability will not apply to this section.
- 19. OWNERSHIP IN INTELLECTUAL PROPERTY:** The State Entity and Researcher each recognizes that each has no right, title, or interest, proprietary or otherwise, in the intellectual property owned or licensed by the other, unless otherwise agreed upon by the Parties in writing.
- 20. ASSIGNMENT:** Researcher may not assign, sell, transfer, subcontract or sublet rights, or delegate any right or obligation under this Agreement, in whole or in part, without the prior written approval of the State Entity.
- 21. REMEDIES:** Any of the following events will constitute cause for the State Entity to declare Researcher in default of this Agreement: (i) Researcher's non-performance of its contractual requirements and obligations under this Agreement; or (ii) Researcher's material breach of any term or condition of this Agreement. The State Entity may issue a written notice of default providing a ten (10) day period in which Researcher will have an opportunity to cure. Time allowed for cure will not diminish or eliminate Researcher's liability for damages. If the default remains after Researcher has been provided the opportunity to cure, the State Entity may do one or more of the following: (i) exercise any remedy provided by law or equity; (ii) terminate this Agreement; (iii) impose liquidated damages, if liquidated damages are listed in this Agreement; (iv) debar/suspend Researcher from receiving future contracts from the State Entity or the State of Utah.
- 22. FORCE MAJEURE:** Neither Party to this Agreement will be held responsible for delay or default caused by fire, riot, act of God, and/or war which is beyond that Party's reasonable control. The State Entity may terminate this Agreement after determining such delay will prevent successful performance of this Agreement.
- 23. PUBLICITY:** Researcher shall submit to the State Entity for written approval all advertising and publicity matters relating to this Agreement. It is within the State Entity's sole discretion whether to provide approval, which approval must be in writing.
- 24. INSURANCE:**
- 24.1.** Researcher shall obtain and maintain, and ensure that each Subcontractor shall obtain and maintain, at a minimum, insurance as specified in this section at all times during the term of this Contract. All insurance policies required by this Agreement shall be issued by insurance companies with an AM Best rating of A-VIII or better.
- 24.2.** Researcher shall maintain Protected Information Liability insurance covering all loss of Data and claims based on alleged violations of privacy rights through improper use or disclosure of protected information with minimum limits of \$1,000,000 each occurrence and \$2,000,000 general aggregate.
- 24.3.** USBE shall be named as additional insured on all commercial general liability policies required of Researcher and Subcontractors. Coverage required of Researcher and each Subcontractor shall be primary over any insurance or self-insurance program carried by Researcher or USBE.
- 24.4.** The above insurance policies shall include provisions preventing cancellation or non-renewal, except for cancellation based on non-payment of premiums, without at least 30 days prior notice to Researcher. Researcher shall forward such notice to the USBE's contact as listed in the Agreement within 7 days of Researcher's receipt of such notice.
- 24.5.** All insurance policies secured or maintained by Researcher or its Subcontractors in relation to this Agreement shall include clauses stating that each carrier shall waive all rights of recovery under subrogation or otherwise against Researcher or USBE, its agencies, institutions, organizations, officers, agents, employees, and volunteers.
- 24.6.** If Researcher is a "public entity" within the meaning of the Governmental Immunity Act of Utah, U.C.A. § 63G-7-101 et. seq. (the "GIA"), Researcher shall maintain, in lieu of the liability insurance requirements stated above, at all times during the term of this Agreement such liability insurance, by commercial policy or self-insurance, as is necessary to meet its liabilities under the GIA. If a Subcontractor is a public entity within the meaning of the GIA, Researcher shall ensure that the Subcontractor(s) maintain at all times during the terms of this Agreement, in lieu of the liability insurance requirements stated above, such liability insurance, by commercial policy or self-insurance, as is necessary to meet the Subcontractor's obligations under the GIA.
- 24.7.** Researcher shall provide to USBE certificates evidencing Researcher's insurance coverage required in this Agreement within 7 Business Days following the Effective Date. Researcher shall provide to USBE certificates evidencing Subcontractor insurance coverage required under this Agreement within 7 Business Days following the Effective Date, except that, if Researcher's subcontract is not in effect as of the Effective Date, Researcher shall provide to USBE certificates showing Subcontractor insurance coverage required



under this Agreement within 7 Business Days following Researcher's execution of the subcontract. No later than 15 days before the expiration date of Researcher's or any Subcontractor's coverage, Researcher shall deliver to USBE certificates of insurance evidencing renewals of coverage. At any other time during the term of this Agreement, upon request by USBE, Researcher shall, within 7 Business Days following the request by USBE, supply to USBE evidence satisfactory to USBE of compliance with the provisions of this section.

- 24.8.** The State reserves the right to require higher or lower insurance limits where warranted. Failure to provide proof of insurance as required will be deemed a material breach of this Contract. Researcher's failure to maintain this insurance requirement for the term of this Agreement will be grounds for immediate termination of this Agreement.
- 25. WORK ON STATE OF UTAH OR ELIGIBLE USER PREMISES:** Researcher shall ensure that personnel working on State of Utah premises shall: (i) abide by all of the rules, regulations, and policies of the premises; (ii) remain in authorized areas; (iii) follow all instructions; and (iv) be subject to a background check, prior to entering the premises. The State of Utah or Eligible User may remove any individual for a violation hereunder.
- 26. WAIVER:** A waiver of any right, power, or privilege shall not be construed as a waiver of any subsequent right, power, or privilege.
- 27. SUSPENSION OF WORK:** Should circumstances arise which would cause the State Entity to suspend Researcher's responsibilities under this Agreement, but not terminate this Agreement, this will be done by formal written notice pursuant to the terms of this Agreement. Researcher's responsibilities may be reinstated upon advance formal written notice from the State Entity.
- 28. CHANGES IN SCOPE:** Any changes in the scope of the services to be performed under this Agreement shall be in the form of a written amendment to this Agreement, mutually agreed to and signed by both Parties, specifying any such changes, fee adjustments, any adjustment in time of performance, or any other significant factors arising from the changes in the scope of services.
- 29. DISPUTE RESOLUTION:** Prior to either Party filing a judicial proceeding, the Parties agree to participate in the mediation of any dispute. The State Entity, after consultation with Researcher, may appoint an expert or panel of experts to assist in the resolution of a dispute. If the State Entity appoints such an expert or panel, State Entity and Researcher agree to cooperate in good faith in providing information and documents to the expert or panel in an effort to resolve the dispute.
- 30. ORDER OF PRECEDENCE:** In the event of any conflict in the terms and conditions in this Agreement, the order of precedence shall be: (i) this Attachment A; (ii) Attachment B; (iii) Agreement Signature Page(s); (iv) the State of Utah's additional terms and conditions, if any; (v) any other attachment listed on the Agreement Signature Page(s); and (vi) Researcher's terms and conditions that are attached to this Agreement, if any. Any provision attempting to limit the liability of Researcher or limit the rights of the State Entity or the State of Utah must be in writing and attached to this Agreement or it is rendered null and void.
- 31. SURVIVAL OF TERMS:** Any terms that by their nature would survive the expiration of, completion, or termination of this Agreement shall survive.
- 32. SEVERABILITY:** The invalidity or unenforceability of any provision, term, or condition of this Agreement shall not affect the validity or enforceability of any other provision, term, or condition of this Agreement, which shall remain in full force and effect.
- 33. ERRORS AND OMISSIONS:** Researcher shall not take advantage of any errors and/or omissions in this Agreement. Researcher must promptly notify USBE of any errors and/or omissions that are discovered.
- 34. ENTIRE AGREEMENT:** This Agreement constitutes the entire agreement between the Parties and supersedes any and all other prior and contemporaneous agreements and understandings between the Parties, whether oral or written.
- 35. CONFIDENTIALITY GENERAL PROVISIONS:**
- 35.1.** This Agreement applies to all Data sharing between Researcher and USBE. Specific Data to be shared are outlined in the Attachments, along with the purpose of Data sharing, Data ownership and conditions and/or regulations governing the usage of the shared Data, requirements for shared data retention/destruction, and Party processes for implementing these actions.
- 35.2.** USBE and Researcher enter into this Agreement to share and exchange Data for the purposes of conducting studies for, or on behalf of, educational agencies or institutions to develop, validate, or administer predictive tests; administer student aid programs; or improve instruction.
- 35.3.** This Agreement will be reviewed, updated, and approved on an annual basis.
- 35.4.** USBE reserves all right, title, and interest, including all intellectual property and proprietary rights, in and to system data, Data, and all related data and content.
- 35.5.** Researcher, as USBE's agent, shall comply with all applicable laws and regulations including but not limited to FERPA, the Utah Family Education Rights and Privacy Act, Utah Code § 53E-9-2 ("UFERPA"),

and the Individuals with Disabilities Educational Act, 30 U.S.C. §1400 et seq. and 34 C.F.R. Part 300 ("IDEA").

- 35.6.** Any terms that by their nature would survive the expiration of, completion, or termination of this Agreement shall survive.
- 35.7.** Researcher shall, upon written request, permit USBE or its designated representatives to perform an assessment, audit, examination, or review of all of Researcher's sites and environments in order to confirm Researcher's compliance with this Contract; associated Researchers or Scopes of Work; and applicable laws and regulations.
- 35.8.** During the term of this Contract, if USBE requests the Destruction of PII collected, generated or inferred as a result of this Contract, Researcher shall Destroy the information within five (5) calendar days after the date of the request. Researcher shall provide USBE with written confirmation of the date the data was Destroyed.
- 35.9.** USBE retains the right to use the established operational services to access and retrieve Data stored on Researcher's infrastructure at its sole discretion.
- 36. DATA ACCURACY:**
- 36.1.** The Data provided are the best and most complete documentation available. USBE does not ensure 100% accuracy of all records and fields. Some data fields, including those that are not used, may contain incorrect or incomplete Data. USBE and Researcher will report any systematic problems with the Data to the data owner. Data that has been manipulated or re-processed by either USBE or Researcher is the responsibility of that Party.
- 37. ACCESS TO DATA:**
- 37.1.** Researcher shall limit access to Data to Authorized Persons only and shall require a non-disclosure agreement be signed by all Authorized Persons prior to being granted access to Data.
- 37.2.** Researcher shall maintain past and current lists of all Authorized Persons, maintain each non-disclosure agreement, and shall permit inspection of the same by USBE upon request.
- 37.3.** Researcher shall maintain an audit trail for the duration of this Agreement, which reflects the granting and revoking of access privileges to Authorized Persons. A copy of this audit trail may be requested by USBE from Researcher at any time and shall be provided within 10 days of the USBE request.
- 37.4.** Researcher shall have strong access controls in place. Researcher shall disable and/or immediately delete unused and terminated Authorized Persons' accounts and shall periodically assess account inactivity for potential stale accounts.
- 37.5.** Researcher shall provide annual, mandatory privacy and security awareness and training for all Authorized Persons, maintain past and current lists of Authorized Persons that have completed training, and permit inspection of the same by USBE upon request.
- 38. USE AND DISCLOSURE OF DATA:**
- 38.1.** Researcher shall not collect, use, or share Data beyond the purposes set forth in the Attachments.
- 38.2.** Researcher shall share Data only for the purposes stated in the Attachments and then only with the Authorized Persons stated in the Attachments.
- 38.3.** If Researcher seeks to publicly release Data, Researcher must aggregate the Data by totaling the Data and reporting it at the group, cohort, school, school district, region, or state level. Researcher shall, upon request of USBE, provide USBE with a document that lists the steps and methods the Researcher shall use to de-identify the information. Any Data that is publicly released without being redacted using the methods in this Section shall be considered an Incident. The following methods shall be used on any aggregated reports:
- 38.3.1.** Aggregate data shall be reported publicly only if there is a sufficient number of individuals represented in any demographic or subgroup so that an individual cannot be identified.
- 38.3.2.** Aggregated reports shall redacted using complementary suppression methods that remove the risk of Data being identifiable using simple mathematics or formulas.
- 38.3.3.** Aggregated reports shall be redacted to remove identifiability risks caused other prior releases of aggregate data by Researcher.
- 38.4.** Researcher shall not use Data for the purposes of Targeted Advertising.
- 38.5.** Researcher shall not sell or otherwise monetize Data except Data transferred through the purchase of, merger with, or otherwise acquisition of Researcher provided that all Parties remain in compliance with this Agreement.
- 39. DATA LINKAGE:**
- 39.1.** If Researcher will link USBE's Data with Data from another source, the result could be a new data set with potentially unique regulations and conditions governing its use. Prior to linking the Data, Researcher will provide detailed information to USBE outlining the Data being linked and the other sources for Data.

- 39.2. The Data Steward will classify the linked data based on security or privacy risks. This could include evaluating the method of release, on the likelihood of identifying individuals from the linked Data, if linking the Data will violate any laws or regulations, or if the new data set meets the original request.
- 39.3. Based on the results of the risk assessment, USBE may refuse to provide Researcher with some or all of the requested Data in its sole discretion in order to mitigate any risks identified.
- 39.4. Should USBE consent to the Data being linked, the Data Steward shall apply additional constraints as necessary to the usage of the new data set.
- 39.5. Detailed information on the Data being linked, the other sources of Data, and any additional constraints shall be documented in the Attachments.

**40. SECURITY AND PROTECTION OF DATA:**

- 40.1. Researcher shall notify USBE if there are any material changes that will negatively affect the system where all Data are stored and maintained.
- 40.2. If Researcher is given Data as part of this Agreement, the protection of Data shall be an integral part of the business activities of Researcher to ensure that there is no inappropriate or unauthorized use of Data. Researcher shall safeguard the confidentiality, integrity, and availability of Data.
- 40.3. Researcher shall comply with and protect and maintain Data using methods that are at least as good as or better than that established in the State of Utah's Department of Technology Policies (<https://dts.utah.gov/policies>).
- 40.4. Researcher shall only transmit or exchange Data via secure means (ex. HTTPS or FTPS). Researcher shall not use, store or process Data on any unencrypted portable or laptop computing device or any portable storage medium.
- 40.5. Researcher shall store and maintain all Data in data centers located in the United States.
- 40.6. Researcher shall permit its employees and Subcontractors to access Data remotely only via a secured manner, such as Virtual Private Networks (VPN).
- 40.7. Researcher shall store all Data, as well as any backups made of that Data, in encrypted form using no less than 128 bit key and include all Data as part of a designated backup and recovery process.
- 40.8. Researcher shall enforce strong password protections on all devices and networks with access to or that store Data.

**40.9.** Researcher shall maintain data only until such time that the data is no longer needed (Term Expiration) or upon early termination of this Agreement (with Cause), whichever occurs first. At that point, the data will be destroyed within 30 days by the party holding the data, except for disclosed information possessed by any court. Researcher shall certify to USBE in writing that the data has been destroyed.

**41. INCIDENTS:**

- 41.1.** If Researcher becomes aware of an Incident involving Data by either Researcher or any of Researcher's Subcontractors, Researcher shall notify USBE within one (1) calendar day and cooperate with USBE regarding recovery, remediation, and the necessity to involve law enforcement, if any.
- 41.2.** Researcher shall produce a written remediation plan that includes information about the cause and extent of the Incident and the actions Researcher will take to remediate the Incident and to reduce the risk of incurring a similar type of Incident in the future. Researcher shall present its analysis and remediation plan to USBE within ten (10) calendar days of notifying USBE of an Incident. USBE reserves the right to adjust this plan, in its sole discretion. If Researcher cannot produce its analysis and plan within the allotted time, USBE, in its sole discretion, may perform such analysis and produce a remediation plan, and Researcher shall reimburse USBE for the reasonable costs thereof.
- 41.3.** In the event of an Incident, Researcher shall provide USBE or its designated representatives with access seven (7) days a week, twenty-four (24) hours a day, for the purpose of evaluating, mitigating, or resolving the Incident.
- 41.4.** Unless Researcher can establish that Researcher or any of its Subcontractors is not the cause or source of the Incident, Researcher shall be responsible for the cost of notifying each person whose personal information may have been compromised by the Incident.
- 41.5.** Disclosure of Data by Researcher or any Subcontractor for any reason may be cause for legal action by third parties against Researcher, the State, or their respective agents. Researcher shall indemnify, save, and hold harmless the State, its employees, and agents against any and all claims, damages, liability, and court awards including costs, expenses, and attorney fees incurred as a result of any act or omission by Researcher, or its employees, agents, Subcontractors, or assignees pursuant to this Contract. Notwithstanding any other provision of this Contract, Researcher shall be liable to the State for all direct, consequential and incidental damages arising from an Incident caused by Researcher or its Subcontractors.

## ATTACHMENT B SCOPE OF RESEARCH

### 1. **PROJECT TITLE:** Dissertation on Representation and Outcomes of Students with Disabilities Across School Types

**PURPOSE:** My dissertation topic examines two areas: (1) how does the identification rate of students with disabilities (SWD) vary by charter schools/school districts in Utah; and (2), how do charters/districts with high/mid/low identification rates perform on the federally required Annual Performance Report (APR) indicators? I am approaching the study from an equity lens, in that students with disabilities should have access and be included in all educational settings. My hypothesis is that charter schools that have high identification rates of SWD will have better APR outcomes than charters with low identification rates because they have encouraged enrollment of SWD and developed their programs around the needs of those students. I also want to examine the performance of non-charters with low and high identification rates as a way of “anchoring” the charter data.

All the data I need is not publically available given various suppression rules. The APR indicator data elements I want for each local education agency (LEA) for each of the 2018-19 and 2019-20 school years include:

1. PreK-12 Enrollment
2. Prek-12 SWD count
3. Indicator 1
4. Indicator 2
5. Indicator 3C reading
6. Indicator 3C math
7. Indicator 4
8. Indicator 5A
9. Indicator 6
10. Indicator 7
11. Indicator 8
12. Indicator 9
13. Indicator 10
14. Indicator 11
15. Indicator 13
16. Indicator 14

Dr. Susan Wagner, Data Driven Enterprises, is a contractor through a contract between USBE and TAESE/USU and provides data analysis for USBE's APR. Dr. Wagner is on my dissertation committee and mentioned that she has some of this data available already. I am asking for permission for Dr. Wagner to provide the LEA-level data she has to me and to help me with the analyses on this data. Any data she does not have, I will request that USBE provide it. Any data I use would be subject to USU's IRB process and all applicable data security protocols will be followed. I want to emphasize that I don't want student-level data. My unit of analysis will be the LEA. No individual LEA will be identified by name in my report. Most of the statistics presented will be an aggregate of the LEA-level scores (e.g., the average graduation rate of SWD of charter schools with high identification rates compared to that of charter schools with low identification rates).

I know this is a lot to ask, and I don't want to cause any extra work on USBE's part that will not be beneficial to USBE. The benefit to USBE is that I would share all of my work with USBE. This study will show USBE the extent to which identification rate and type of LEA impacts the outcomes of SWD. An open invitation would be extended to USBE staff to my dissertation defense and I'd be more than happy to provide USBE with a copy of the dissertation and data analysis reports upon completion as well.

2.

**3. ROLES:**

3.1. Researcher's Data Steward: Brenda Smith and Dr. Susan Wagner

3.2. USBE's Data Quality Manager: Aaron Brough

3.3. Authorized Persons: Brenda Smith and Dr. Susan Wagner

**4. DELIVERY:** 8/1/21

**5. DATA:**

Data (Data and other information requested)	Source System	USBE Owner
1. PreK-12 Enrollment 2. Prek-12 SWD count 3. Indicator 1 4. Indicator 2 5. Indicator 3C reading 6. Indicator 3C math 7. Indicator 4 8. Indicator 5A 9. Indicator 6 10. Indicator 7 11. Indicator 8 12. Indicator 9 13. Indicator 10 14. Indicator 11 15. Indicator 13 16. Indicator 14	<b>2018-19 Annual Performance Report</b>	<b>Dr. Leah Voorhies</b>
1. PreK-12 Enrollment 2. Prek-12 SWD count 3. Indicator 1 4. Indicator 2 5. Indicator 3C reading 6. Indicator 3C math 7. Indicator 4 8. Indicator 5A 9. Indicator 6 10. Indicator 7 11. Indicator 8 12. Indicator 9 13. Indicator 10 14. Indicator 11 15. Indicator 13 16. Indicator 14	<b>2019-2020 Annual Performance Report</b>	<b>Dr. Leah Voorhies</b>

- 6. OUTPUT:** The percentages of SWD will be compared using *t*-tests to determine if there is a significant difference between representation of SWD in charter schools and school districts. Both types of schools will also be compared for significance to the state average of SWD. Besides comparing identification rates between charter schools and LEAs, comparisons will also be made based on school size. Representation of SWD will be compared between charter schools and LEAs that have similar total student identification rates. Both charter schools and school districts will be categorized based on high/mid/low representation of SWD.

Annual Performance Report (APR) scores will be sorted and categorized by charters schools that had a high/mid/low rate of representation of SWD and school districts with a high/mid/low rate of representation of SWD. Once enrollment data is compiled to determine the representation of students with disabilities, the variability will determine the representation categorization breakup of schools considered as having high, low, or average (mid) representation of students with disabilities. The scores on each indicator of the APR will be compared across the determined categorizations of school types using an ANOVA test.

- 7. DATA LINKAGE:** All data that I receive and use will be aggregate LEA-level data. None of this data will be linked to a specific student or educator.
- 8. DURATION OF STUDY:** The study referenced in this Appendix will end in December 2021 with my dissertation defense. I'm requesting the data sharing agreement extend to March 30, 2022 to ensure that all follow up revisions required by my dissertation committee are completed.
- 9. RESEARCH QUESTIONS:** (1) how does the identification rate of students with disabilities (SWD) vary by charter schools/school districts in Utah; and (2), how do charters/districts with high/mid/low identification rates perform on the APR indicators?
- 10. VARIABLES OF INTEREST:** School type (charter school or school district) and charter school and school district performance on the APR.
- 11. ANALYTIC APPROACH:** *t*-tests and an ANOVA will be used as described in #6.

## APPENDIX – B

# Brenda K. Smith

Utah State University | Center for Technical Assistance for Excellence in Special Education  
6896 Old Main Hill, Logan, UT 84322 | w 435-797-9033, c 435-764-8471 | Brenda.Smith@usu.edu

## CURRENT POSITION

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Program Coordinator – The Center for Technical Assistance for Excellence in Special Education (TAESE) at the Institute for Disability Research, Policy & Practice at Utah State University.

## EDUCATION

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<b>Ph.D.</b> (In Progress)	<b>Ph.D. Disability Disciplines, Disability Studies Specialization, 2022</b> Utah State University, Logan, UT Advisory: Dr. Keith Christensen
<b>MNR</b>	<b>Masters of Natural Resources, Restoration Ecology Certificate, 2011</b> Case Study: <a href="#">Land Use Decision Making in Smithfield, Utah</a> University of Idaho, Moscow, ID Advisory: Dr. Lauren Fins
<b>BS</b>	<b>B.S. History Teaching, Minor: Political Science Teaching, 2006</b> Utah State University, Logan, UT

## EMPLOYMENT HISTORY

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2013 - Present	<p><b>Program Coordinator, Center for Technical Assistance for Excellence in Special Education (TAESE), Utah State University</b></p> <ul style="list-style-type: none"> <li>➤ <i>Coordinate work between program staff and support staff</i></li> <li>➤ <i>Supervise support staff including recruitment and hiring efforts</i></li> <li>➤ <i>Edit and prepare grant/contract proposal submissions</i></li> <li>➤ <i>Coordinate several projects including Indicator 8 and 14 parent surveys for many states, Nebraska special education stakeholder meetings, school district and state level program evaluations, and webinars for school district directors of special education in several states</i></li> <li>➤ <i>Provide stakeholder facilitation for various state clients as requested</i></li> </ul>
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## CERTIFICATIONS

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- **Utah Regional Leadership Education in Neurodevelopmental Disabilities (URLEND) –** Completed the interdisciplinary training requirements for URLEND program certification (2021)
- **Technology of Participation Strategic Planning –** Completed ToP Strategic Planning certification in methods for effective organizational strategic planning (2019)
- **Technology of Participation Virtual Facilitation Methods -** Completed ToP Virtual Facilitation Methods certification in virtual meeting facilitation (2018)
- **Technology of Participation Facilitation Methods -** Completed ToP Facilitation Methods certification in meeting facilitation, consensus workshops, and action planning facilitation (2016)

## Publications

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- **Smith, B.K.,** Sheen, J., & Christensen, K. (2020). [Activism among college students with disabilities and the move beyond compliance to full inclusion](#). *Review of Disability Studies* 16(2-4).
- Whicker, J.J., **Smith, B.K.,** & Munoz, K. (2020). [Parent and professional perceptions and feedback on the content of an eHealth hearing aid learning series for parents of children who are deaf or hard-of-hearing](#). *Perspectives*. [https://doi.org/10.1044/2020\\_PERSP-20-00093](https://doi.org/10.1044/2020_PERSP-20-00093).
- Whicker, J.J., Thomas, F., Currier Kipping, K.R., Jones, K.T., **Smith, B.K.,** & Munoz, K. (2019). Vocational Rehabilitation: Educational audiologists' knowledge, attitudes, and referral practice patterns. *Journal of Educational, Pediatric, and (Re)habilitative Audiology*, 24, 1-8.

## Presentations

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- **Smith, B.K.** (2020). Parent involvement in rural special education during the 2017-18 school year and improvement strategies. Breakout session presented at the annual meeting of the American Council on Rural Special Education (ACRES). San Antonio, TX.

## Poster Presentations

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- Maldonado, A.F., Campagna, A.X., **Smith, B.K.,** Blanca, H., Glotzbach, K., Hogan, W., Smith, A., Winter, S., & Campbell, K. (2021, November). Equity in Accessibility of an Educational Tool for Children with Congenital Heart Defects from Diverse Backgrounds. Presented virtually at the 10<sup>th</sup> Annual Scientific Sessions of the Cardiac Neurodevelopment Outcome Collaborative. Salt Lake City, UT, United States.

## Awards

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- 2019 Center for Persons with Disabilities Spirit of Service Award