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The Specifics of Specific Learning Disability: An Analysis of State-Level Eligibility Criteria and Response to Intervention Practices

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The Specifics of Specific Learning Disability: An Analysis of State-Level Eligibility Criteria and Response to Intervention Practices

by

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Table of Contents

List of Tables

List of Figures

Abstract

The field of specific learning disability (SLD) in the United States has changed considerably since reauthorization of the Individuals with Disabilities Act (IDEA; (§3007); State Education Agencies (SEAs) have been transitioning away from the severe discrepancy model of SLD identification and towards a Response to Intervention (RTI) model (Hauerwas et al., 2013). This study aimed to review SLD practices in the United States through the analysis of SEA documents and to evaluate the progress made since the reauthorization of IDEA. The aim of the current study was to provide a snapshot of 1) how SEA regulations defined SLD; 2) when SEA documents were last updated; 3) what SLD identification procedures were outlined in SEA regulations; and 4) which SEAs included RTI best practice elements (universal screening, progress monitoring, fidelity practices) in both regulation and guidance documents. The research methodology utilized in this study included a descriptive analysis to examine and understand individual SEAs' regulations and guidelines regarding SLD identification and RTI. Results indicated that SLD and RTI regulations and guidelines have changed considerably since the last reviews (Hauerwas et al., 2013; Maki et al., 2015). The definitions of SLD provided in regulation documents varied between SEAs, but the majority adopted the federal definition with no changes. The most recent research of Hauerwas et al. (2013) served as a baseline for analyzing when SEA documents were last updated; three-quarters of collected regulation and guidance documents have either been updated or added since the Hauerwas et al. collection date of 2011. Analysis of SLD regulation documents indicated that approximately one quarter of SEAs required the sole use of RTI for SLD identification. Lastly, both regulation and guidance documents were analyzed for RTI best

practices; language regarding progress monitoring was present in the vast majority of SEAs documents. Implications for policy, practice, and future research are discussed.

Chapter I: Introduction

In the 2019-2020 school year, Specific Learning Disability (SLD) made up 33% of all students aged 3-21 who received special education services in the United States (U.S. Department of Education, 2020). Comprising the largest category of identified disabilities, SLD makes up almost a quarter of a million students who are currently being served in this country (U.S. Department of Education, 2020). The process of identifying students with SLD remained relatively unchanged up until the reauthorization of the Individuals with Disabilities Education Act (IDEA) in 2004. It was this Act that allowed states and the District of Columbia (D.C.) the freedom to move away from the controversial severe discrepancy model of identifying SLD (§300.307[a][1]). For the purposes of this study, each of the 50 states and D.C. will be referred to from here on as State Education Agency (SEA). IDEA's reauthorization in 2004 was the result of years of research supporting a new process which reduced the number of overall students referred for special education evaluations while improving outcomes for all students (Ardoin et al., 2016). This process, which is referred to as Response to Intervention (RTI), is a research-based, tiered approach to intervention and progress-monitoring such that implementation is consistent and objective. Since 2004, many SEAs have been transitioning away from the discrepancy model of identification and towards an RTI framework (Hauerwas et al., 2013; Maki et al., 2015). Each SEA, however, has its own specific regulations as it pertains to SLD, its identification, and even its definition (Hauerwas et al., 2013). SEAs' educational autonomy has led to a wide variety of procedures that may or may not be based on current research best practices. The aim of the current study was to provide a snapshot of 1) how SEA

regulations defined SLD; 2) when SEA documents were last updated; 3) what SLD identification procedures were outlined in regulations; and 4) which SEAs included RTI best practice elements (universal screening, progress monitoring, fidelity practices) in both regulation and guidance documents.

Background

The modern history of SLD in the United States first began in the 1960s when the term "learning disability" was first coined by Samuel Kirk at a conference for children with disabilities. Soon after, in 1969, the first legislation explicitly including SLD was enacted, mandating remedial education for students who were identified with SLD (PL 94-142 1975; Bradley, et al., 2002). The Education for All Handicapped Children Act of 1975 included the first federal language for assessing SLD (PL 94-142 1975, p. 23). In this act, assessment guidelines were provided to identify SLD based on a severe discrepancy between IQ and achievement. The severe discrepancy model, also known as the IQ or achievement discrepancy model, became the sole method for SLD identification until the early 2000s (Reschly & Hosp, 2004). In 1990, PL 94-142 was renamed the Individuals with Disabilities Education Act (IDEA) and remained relatively unchanged until its 2004 reauthorization. Most notably, this reauthorization allowed SEAs to move away from the discrepancy model and included language supporting using RTI as an identification method.

As states began to adopt the RTI method for SLD identification, researchers started to notice that there was not one standard procedure that every SEA followed (Berkeley et al., 2009). Since 2009, there have been at least four research articles that have been published reflecting the current state of SLD practices in the United States (Hauerwas et al., 2013; Maki et al., 2015;

Zirkel & Thomas, 2010a, 2010b). A summary of these studies' findings are included in Chapter II.

Statement of the Problem

Since the reauthorization of IDEA in 2004, SEAs are not permitted to require sole use of the severe discrepancy model to identify SLD. Although not required by law, the IDEA (2004) regulations (§300.309) support the use of RTI based on the language to "use a process based on the child's response to scientific, research-based intervention…". Because of this change of federal language and the addition of numerous studies supporting the use of RTI components (Fuchs et al., 2001; Good & Jefferson, 1998; Marston et al., 1986; Tindal, 1993; Tindal & Marston, 1996), SEAs have been transitioning to include components of RTI in their own regulations and guidelines. As presented by several research studies (Hauerwas et al., 2013; Maki et al., 2015; Zirkel, & Thomas 2010a, 2010b), SEAs' transitions to an RTI framework for SLD identification have not been uniform. Some SEAs have taken longer to transition, and there are no SEAs that have identical language when it comes to the specifics of identification (Hauerwas et al., 2013). Because federal regulation does not require a specific tool for identifying SLD, SEAs are tasked with creating and implementing regulations and guidelines for their districts and schools to uphold.

SEAs' autonomy, combined with flexible federal language, has led to the existence of 51 (50 states plus D.C.) distinct SLD identification processes in the United States. As evident by research done by Maki et al. (2015), SEAs' regulations and guidance documents have changed considerably since the previous review on this topic. As of the date of the current study, the last research to summarize and evaluate SEAs' SLD practices was conducted eight years ago (Maki et al., 2015). The results from Maki et al.'s (2015) study showed large variability between SEAs

in both regulation and guidance documents. While Maki et al. study was published in 2015, the data collection was completed in 2013. They found 67% of SEAs allowed for use of a severe discrepancy model, whereas 16% of states required the sole use of RTI. There is currently a gap in the literature as it pertains to up-to-date information on how SEAs identify SLD and to what extent critical components of RTI are present in regulation and guidance documents. It is crucial that the field of school psychology stay abreast of the research-to-practice gap in light of how it may impact student outcomes. Therefore, the goal of this study is to update the literature on the current regulations and guidelines as it pertains to SLD and RTI in the United States.

Conceptual Framework

The conceptual framework for this study was derived, for the most part, from research on this same topic (Hauerwas et al., 2013; Maki et al., 2015; Zirkel & Thomas, 2010a, 2010b). These studies primarily utilized a descriptive research methodology in order to provide current SEA practices as it related to SLD and RTI. According to Gall et al. (2007), descriptive research design is defined as research that analyzes a sample or whole population by representing pieces of information quantitively in order to draw conclusions. In addition, descriptive studies are particularly valuable in distilling large amounts of data into meaningful patterns for analysis (Loeb et al., 2017). Given the current study's need to scan a large dataset across 51 SEAs and to describe it in a meaningful way to the field, a descriptive research design was employed.

Research Questions

The purpose of this study was to examine and compare SEAs' regulation and guideline documents as they pertain to SLD and RTI in the United States. Specially, the research gave an updated snapshot of SLD identification practices through a comparative lens of previous studies. Given this purpose, the current study's specific research questions were:

1. How is SLD defined and to what extent does each SEA definition differ from the federal definition?
2. When were SLD documents last updated?
3. What method(s) for SLD identification are required or allowed?
4. To what extent are three specific recommended approaches to SLD eligibility using RTI (Jimerson et al., 2016; Kovaleski et al., 2013) evident in SEA documents: universal screening, progress monitoring, and fidelity practices?

Definition of Key Terms

Specific Learning Disability (SLD). The most current federal definition of SLD is as follows:

> Specific learning disability means a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, that may manifest itself in the imperfect ability to listen, think, speak, read, write, spell, or to do mathematical calculations, including conditions such as perceptual disabilities, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia.
>
> (ii) Disorders not included. Specific learning disability does not include learning problems that are primarily the result of visual, hearing, or motor disabilities, of mental retardation, of emotional disturbance, or of environmental, cultural, or economic disadvantage. (34 CFR 300.8(c)(10))

Response to Intervention (RTI). RTI is a multi-level approach to identify and support students with academic difficulties through assessment and intervention (Buffman et al., 2009; Kovaleski et al., 2013). Under this approach, student outcomes are monitored after appropriate

and scientifically based instruction and interventions are put into place. Some of RTI's main components include early intervention/prevention, universal screening, evidence-based instruction, data-based decision making, frequent progress monitoring, and increasing levels of intervention (Jimerson et al., 2016)

Patterns of Strengths and Weaknesses (PSW). PSW is one way to determine special education eligibility, especially as it pertains to Specific Learning Disability. This method involves determining areas of cognitive strengths and weaknesses in psychological processing skills that are present in the student's current academic ability (Schultz et al., 2006).

Severe Discrepancy Model. Also referred to as the achievement-IQ discrepancy model, this is a way to identify SLD by comparing the difference between a child's IQ and academic achievement. Under this model, students were usually eligible for special education services if their achievement was significantly below their expected performance (IQ; Kovaleski et al., 2013).

Progress Monitoring. Progress monitoring is a system of brief, repeated assessments which provide information regarding current level of performance and the rate of improvement (Stecker et al., 2008). In education, progress monitoring occurs when there is a need to determine the effectiveness of instruction and/or interventions over time (Hixson et al., 2008). This monitoring usually takes the form of a measure that can be administered recurrently and is sensitive to change, such as CBM (Shinn, 2008).

Universal Screening. The practice of universal screening involves the administration of brief assessments to students usually three times per year (Hosp et al., 2016). These assessments are easily and quickly administered and scored (Hosp et al., 2016). This can include identifying

students who need additional support or estimating students' future performance on state assessments (Jenkins et al., 2007).

Fidelity. Fidelity, also known as integrity, is the extent to which an intervention is delivered as prescribed (Hosp et al., 2016).

Curriculum-Based Measurement (CBM). CBMs are tools to measure student achievement in academic skills such as reading, math, or writing (Deno, 1985). These brief measures are used by educators in order to help determine when a student needs additional support, or to monitor progress in an existing intervention (Fuchs, 2004). These measures are short, sensitive to change, and easy to administer (Deno, 1985).

Guidelines. Guidelines, for the purpose of this study, will refer to documents provided by the SEA that consist of a set of recommendations. The contents of these documents are suggestions and are not legally binding.

Regulations. Regulations, for the purpose of this study, will be defined as legally binding documents. Recommendations that are found within a regulation document are still considered required as they are in a legally binding document.

State Education Agencies (SEA). An SEA refers to the administrative and decision-making authority of all 50 states as well as the District of Columbia (DC; i.e., state boards of education, state departments of education). The term is used throughout this document in place of "state" to mean the 50 states plus DC.

Local Education Agencies (LEA). An LEA refers to the administrative and decision-making authority of a political subdivision of an SEA (i.e., city, county, district; U.S. Department of Education, n.d.).

Chapter II: Literature Review

In this chapter, the origins of SLD are discussed, including the history of its definition. In addition, the three major processes for identification are reviewed including the severe discrepancy model, PSW, RTI. Current best practices for the identification of SLD are presented and are central to this study's research questions. Lastly, the results from similar research studies are presented to capture changes over time.

Specific Learning Disability

Currently, the federal definition of SLD is as follows:

> Specific learning disability means a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, that may manifest itself in the imperfect ability to listen, think, speak, read, write, spell, or to do mathematical calculations, including conditions such as perceptual disabilities, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia.
>
> (ii) Disorders not included. Specific learning disability does not include learning problems that are primarily the result of visual, hearing, or motor disabilities, of mental retardation, of emotional disturbance, or of environmental, cultural, or economic disadvantage. (34 CFR 300.8(c)(10))

History of Specific Learning Disability

The foundations of learning disability began in the early 1800s when research was first conducted on the relationship between brain pathology and reading/listening behaviors (Bradley

et al., 2002). From there, subsequent seminal books and articles where published on reading disabilities. Between 1872 and 1904, case studies emerged on adults and children who had severe reading deficits. During this time, researchers coined the term "word-blindness" to specifically describe a congenital reading disability (Bradley et al., 2002).

In the 20th century, key figures in the United States contributed to reading disability research and thus its current state today. These individuals include Samuel Orton, Marion Monroe, and Samuel Kirk. Orton furthered European research in the United States and was the first to assert that IQ scores might not reflect true ability (Orton, 1925). Monroe led field research in the 1930s and tracked the progress of students with reading difficulties following remedial and intensive instruction. Most notably, Monroe introduced a way of identifying reading disability through finding a discrepancy between expected achievement and actual achievement as measured by a standardized test; this method, the severe discrepancy method, will be discussed in the next section of this chapter in more detail. Lastly, Kirk created an instrument which identified key psycholinguistic abilities and provided profiles of intra-individual differences. This test, known as the *Illinois Test of Psycholinguistic Abilities* (ITPA) was the first of its kind to pinpoint specific learning disabilities in children (Kirk & McCarthy, 1961; Bradley et al., 2002).

The term learning disability was first coined by Samuel Kirk at the 1963 conference entitled "Exploration into the Problems of the Perceptually Handicapped Child." This conference met with the goal of advocating and recognizing the need for services for children. Kirk's first definition of a learning disability, as cited in Speece and Hines (2008), is as follows:

> A learning disability refers to retardation, disorder, or delayed development in one or more of the processes of speech, language, reading, writing, arithmetic, or

> other school subjects resulting from a psychological handicap caused by a possible cerebral dysfunction and/or emotional or behavioral disturbances. It is not the result of mental retardation, sensory deprivation, or cultural or instructional factors. (p. 602)

This definition, in conjunction with Kirk and Bateman's (1962) article, created the foundation for what we now call the discrepancy model. In this practice of assessing for a learning disability, a determination is made if there is a significant difference between intellectual ability and academic achievement.

With a name, a definition, and a way to identify, learning disability became recognized at the national level. The first legislation passed that explicitly included children with learning disabilities was in 1969 and entitled The Children with Specific Learning Disabilities Act (Bradley et al., 2002). This act mandated remedial education for students who were identified with a specific learning disability (SLD) and sparked numerous others which all sought to advocate for the needs and rights of individuals with disabilities. This included the 1975 Education for All Handicapped Children Act (PL 94-142) which mandated free and appropriate education for all children with a disability. It also required students to be placed in the least restricted environment, given an individualized education program, and be provided nondiscriminatory assessment. In this Act, SLD is defined as: "A disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, which disorder may manifest itself in the imperfect ability to listen, think, speak, read, write, spell, ordo mathematical calculations" (PL 94-142 1975, p. 23). This landmark legislation served as the basis for all following amendments. In 1990, PL 94-142 was renamed the Individuals with

Disabilities Education Act (IDEA). In 1997, IDEA was reauthorized again but did not include changes to SLD definitions, guidelines, or identification procedures.

In 2004, the Individuals with Disabilities Education Improvement Act (IDEA-04, IDEA, 2004) was passed and marks the largest revision and reauthorization of IDEA since the law's inception. This revision included large changes for the field of SLD; the discrepancy model went from being mandatory for identification to being optional. The law states that schools "must not require the use of a severe discrepancy between intellectual ability and achievement for determining whether a child has a specific learning disability" and "must permit the use of a process based on the child's response to scientific, research-based intervention" ((§300.307[a][2–3]). This new approach for identification, RTI, will be discussed in later sections of this chapter. Although important for the evolution of SLD, the 2004 reauthorization brought ambiguity to what the best method for identification should be, leading to the inconsistency of identification methods across SEAs (Maki et al., 2015).

Specific Learning Disability Identification

Over the past 50 years, educators and researchers have debated over which method is best for identifying SLD in school-aged children (Jimerson et al., 2016; Kovaleski et al., 2013). Even though IDEA-04 makes it clear that RTI can be used and gives some guidelines for how to do so, it also allows for other identification methods. Currently, there are three common methods for the identification of SLD: Severe discrepancy, PSW and RTI (Lichtenstein, 2014; Maki et al., 2015).

Severe discrepancy. The severe discrepancy model, also known as the IQ or achievement discrepancy model, was the first method proposed by Kirk and Bateman (1962) for the purposes of identifying specific learning disabilities in children. It was also the sole model for identifying SLD until the reauthorization of IDEA in 2004. In 1976, the first guidelines for the identification of SLD were published in the Federal Register, 41 (USOE, 1976) to supplement SLD identification language of the Education for All Handicapped Children Act (EHA). The formalized severe discrepancy model was:

> A specific learning disability may be found if a child has a severe discrepancy between achievement and intellectual ability in one or more of several areas: oral expression, written expression, listening comprehension or reading comprehension, basic reading skills, mathematics calculation, mathematics reasoning or spelling. A "severe discrepancy" is defined to exist when achievement in one or more of the areas falls at or below 50% of the child's expected achievement level, when age and previous educational experiences are taken into consideration (p. 52405).

Immediately following publication of this guidance, there was a large amount of negative feedback regarding the aforementioned formula (Hosp et al., 2016). Due to this backlash, the formula was removed the following year in the *Federal Registrar, 42* (USOE, 1977), but the model remained in federal language, conceptually. That said, SEAs were left to create their own procedures for using the severe discrepancy model to identify SLD (Hosp et al., 2016). The language regarding SLD identification using a severe discrepancy model remained the same until the 1997 reauthorization of IDEA when the following was added:

> (a) A team may determine that a child has a specific learning disability if:

(1) The child does not achieve commensurate with his or her age and ability levels in one or more of the areas listed in paragraph (a) (2) of this section, when provided with learning experiences appropriate for the child's age and ability levels; and

(2) The team finds that a child has a severe discrepancy between achievement and intellectual ability in one or more of the following areas: (i) Oral expression; (ii) Listening comprehension; (iii) Written expression; (iv) Basic reading skill; (v) Reading comprehension; (vi) Mathematics calculation; or (vii) Mathematics reasoning. (§300.541)

Under the severe discrepancy model, data are collected on a student's intellectual abilities and in the specific academic area in which the child is struggling; intellectual ability, measured as IQ, is believed to represent learning potential (Sparks & Lovett, 2009). IQ and academic achievement are then compared for discrepancies. For example, if a student was found to have an average or above average IQ but below average achievement in reading, that student might be eligible for a SLD placement in reading. One of the issues with this identification method is that there are no federal guidelines as to how much of a discrepancy is needed for SLD to be determined (Miciak et al., 2016). This meant that SEAs created their own guidelines for determining the magnitude of discrepancy and therefore vast disparities existed across the country (Reschly & Hosp, 2004). Some types of discrepancies include grade level deviation, and standard score disparity. Reschly and Hosp (2004) reported that there was great variability in both, the methods used to determine discrepancy and the specific criteria for determination. For example, methods used to determine discrepancy varied - from using a regression prediction formula to using standard deviation magnitudes (Reschly & Hosp, 2004).

As early as 1967, Bereiter presented severe discrepancy reliability issues based on the confounding effects of potential measurement errors from each IQ and achievement. Again in 2005, Francis et al. found that the severe discrepancy model demonstrated poor reliability due to the dichotomous nature of specific cut points on which this model relies. MacMann and Barnett (1985) added to list of psychometric issues of this model by identifying three factors that impact reliability. These include 1) reliability of the difference between IQ and achievement, 2) the test that is selected, and 3) the specific cut points used for determination. In addition to this, the severe discrepancy model shows low stability of identification decisions over time (Francis et al., 2005). In terms of validity, two meta-analyses (Hoskyn & Swanson, 2000; Stuebing et al., 2002) investigated differences in behavior, cognition, and academics between two groups of struggling learners - those who were identified using this model and those who were not. The qualitative differences in both analyses were low in all areas, thus concluding that the severe discrepancy model may not identify all students who are struggling. Lastly, three studies have demonstrated that students identified with a discrepancy between IQ and achievement do not differ in treatment response (Francis et al., 1996; Stuebing et al., 2009; Vellutino et al., 2000). The research over the last 50 plus years has concluded that the reliability and validity of the severe discrepancy model is low and does not allow for accurate identification of students with SLD.

Pattern of Strengths and Weaknesses. Federal statues allow for the use of alternative methods of identification that are research-based. PSW became popular in the early 2000s and involves identifying a core cognitive processing deficit that is the source of the disability (Hale, et al., 2006). There are three main models of PSW that are currently used: the discrepancy/ consistency model (Naglieri, 1999), the concordance/disconcordance model (Hale & Fiorello, 2004), and the Cattell-Horn-Carroll (CHC) based model associated with the cross-battery

approach (Flanagan & Alfonso, 2011). All three models have similar fundamental components and rely on: uniformity between cognitive and academic deficits, and a severe discrepancy between cognitive strengths and weaknesses (Hale et al., 2006). When testing a student using PSW, one or more cognitive tests are given and then reviewed for apparent strengths and weaknesses. From this, a cognitive processing weakness is identified by examining if the student displays a pattern of low scores in a specific area (such as reading comprehension). In addition to this, one or more areas of processing strengths are identified that are unrelated to the achievement weakness. If it is calculated that the scores differ significantly between students' processing strength and their achievement weaknesses, then they could be eligible for SLD placement.

Despite numerous published articles on PSW, there are not currently any empirical studies that support its validity or reliability in SLD identification. Stuebing et al. (2012) used simulation techniques for all three models of PSW and found that the models were consistent in identifying students without SLD. Miciak et al. (2016) had similar findings; a low percentage of students who demonstrated insufficient response to intervention were identified with SLD based on two PSW models. When investigating the validity of PSW, Miciak et al. (2016) found no meaningful differences on academic measures between subgroups of students identified through PSW. Some studies (e.g., Hale & Fiorello, 2004; Naglieri, 2011) suggests that the information gathered in the PSW assessment process can be used to aid in intervention planning, but research refutes the dependability of this purpose (Fletcher, 2012; Kearns & Fuchs, 2013). Currently, there is no language in federal regulation that outlines specific practices for PSW, further widening the divide between proponents and opponents.

Response to Intervention. This model, to identify SLD, was adopted from the multitiered public health model and proved to have great efficacy in improving public health and quality of life between 1900 and 1990 (Jimerson et al., 2016). The multi-tiered approach rose as a solution to meet an abundance of health care needs with a scarcity of resources. A preventative process of organizing interventions from least to most demanding and exacting, the multi-tiered approach proved to be so successful that it was later adopted by the mental health care and later the education communities (Muñoz et al., 1996). The education community saw great promise in utilizing this model to identify and mitigate risk-factors in reading. Some of those early practices of the 1950s and 60s were the precursors to RTI (Eisenberg, 1959). Ultimately, it was prevention science that had the greatest influence on RTI research and practices (Jimerson et al., 2016).

RTI started gaining traction in schools during the late 1990's but it was not until 2004, and the reauthorization of IDEA, that RTI became a permissible method for SLD identification (34 CFR §300.309). SEAs that began implementing RTI in its early stages utilized a model which combined screening, progress monitoring, intervention, and data-driven decision-making. (Jimerson et al., 2016) As a result of school professionals' needs for more effective evaluation tools and methods, a plethora of research arose to support the implementation of RTI (Fuchs & Vaughn, 2012). RTI research has impacted SEAs' adopted curricula and assessments such that progress monitoring of skills and standards mastery as well as universal screening are commonplace (Kettler et al., 2014). Thus, RTI evolved as an identification model and to address academic and behavior concerns through the delivery of interventions (Vaughn et al., 2003).

National Joint Committee for Learning Disabilities (2007) asserts that early RTI literature highlighted two main approaches, the problem-solving model and the standard protocol. In the problem-solving model, evidence-based interventions are chosen and designed specifically for

each child through a decision-making team. This model follows a four-step process: (a) define the problem, (b) plan an intervention, (c) implement the intervention, and (d) evaluate the student's progress (Bender & Shores, 2007; Fuchs et al., 2003). In contrast, the standard protocol model involves matching a student to predetermined evidence-based interventions. The intervention content and length are the same across students with similar difficulties. Both of these models include progression through tiers of increasing intervention intensity in order to best match a student's needs. One of the main features of RTI is the continued collection of data in order to assess students' progress and learning (Jimerson et al., 2016). The most common model of RTI includes three tiers, where the first tier is aimed at preventing academic problems from surfacing (Reschly & Hosp, 2014). Tier I is intended to reach all students in general education through effective implementation of evidence-based instruction and curricula. Another goal of Tier I is to identify struggling students through universal screening practices. Early identification is key for ensuring the best academic outcomes (Kovaleski et al., 2013). In addition, the RTI process ensures that a student's underachievement is not due to lack of appropriate instruction.

When students do not respond adequately to Tier I universal practices, they are given more support through the implementation of Tier II services. Placing students in Tier 2 is determined through the collection and interpretation of data, and thus deeming them as needing more help in a specific academic area. The matching of appropriate interventions to an individual occurs through the problem-solving process described previously that involves dedicated school personnel analyzing the students' past data, environment, or personal attributes. The data that are collected is dependent on the individual student's goals but can include curriculum-based measurements (CBMs), permanent products, or teacher reports. It is recommended that data be

collected at least every other week during Tier II interventions (Christ et al., 2013; January et al., 2018). From this information, intervention progress is monitored and tweaked according to student success. Tier II interventions are often conducted in the classroom by the general education teacher with other students who are experiencing a similar academic concern (Balu et al., 2015). These small-group interventions can also take place outside of the classroom by an interventionist who pulls students out during a specified time. Evidence-based instruction is provided for three to five days per week for eight to 10 weeks (Hosp et al., 2016).

If Tier II data indicate that a student has not made progress, or is not making progress quickly enough, Tier III services are considered. In an RTI model, Tier III data should be tracked on a weekly basis and recorded in such a way that progress can be clearly determined. For example, if CBM data is collected on words read per minute, a teacher would record and graph the students' progress each week. Data is collected at least weekly and the student's current progress is compared to the predetermined goal (Christ et al., 2013; January et al., 2018). Often, data are digitally graphed, and a trend line is included in order to determine if the student's progress is sufficient given the current rate of progress and the date in which the goal should be met (Kovaleski et al., 2013; Silberglitt et al., 2016). A student receiving intensive interventions under Tier III would ideally be receiving one-on-one support five times per week for 45-90 minutes each day (Hosp et al., 2016; Kovaleski et al., 2013). Again, progress data is collected consistently to make a determination if the student is making expected gains. If after a set amount of time, a student is not making adequate projected progress, a referral for special education is made.

In schools which implement an RTI process for the purposes of determining SLD identification, students who are referred for academic difficulties usually go through the three

tiers before an identification can be made. This process ensures that all students are receiving the least intensive level of instruction for their needs before a learning disability is identified. If it is found that a student has not responded to research-based intensive interventions within a set amount of time, a determination for SLD can be made. Based on child-find laws, however, it is permissible that a student be assessed and identified for a disability at any time (34 CFR §300.11).

Response to Intervention Best Practices

The goal of RTI is two-fold: to improve outcomes for all students, and to use a student's response to intervention to determine special education eligibility (Fletcher & Vaughn, 2009). Both goals involve the main components of RTI, as outlined in the *Handbook of Response to Intervention* (Jimerson et al., 2016): universal screening, progress monitoring, and evidence-based instruction/intervention. In order for evidence-based intervention to improve outcomes for students, educators must implement them with fidelity (Sanetti & Kratochwill, 2009). Therefore, universal screening, progress monitoring, and fidelity practices should be evident in SEA regulation and guidance documents.

Universal Screening

Universal screening is one of the key components in an RTI framework (Batsche et al., 2005). The data collected for universal screening usually occurs three times per year and are able to be collected and analyzed quickly (Hosp & Ardoin, 2008). The importance of universal screening in an RTI framework for the identification of SLD is two-fold. First, when universal screening is provided to an entire school, collected data can indicate if the majority of students are responding appropriately to Tier I instruction; this information can ensure that general education instruction is meeting the needs of most students (Ardoin et al., 2016). This data also

allows struggling students' academic performance to be compared to other students receiving the same Tier I instruction (Ardoin et al., 2016). Secondly, the data collected from universal screening informs educators of which students are not responding to Tier I instruction and thus needing further supports (Ardoin et al., 2016). Although this data can be used as baseline, interim, or summative data, it should not be used for ongoing progress monitoring due to its lack of ability to measure changes over short intervals of time (i.e., fewer than two weeks; Ardoin & Christ, 2008). RTI and the use of universal screening practices allow implementation of interventions to struggling students, even before being identified with SLD (Vaughn & Fuchs, 2003).

Progress Monitoring

Stecker et al. (2008) argue that progress monitoring is one of the most important features when implementing RTI as it informs instructional decisions and provides data for SLD identification. Progress monitoring is a system of brief, repeated assessments which provide information regarding current level of performance and rate of improvement (Stecker et al., 2008). Rate of improvement is determined through the process of graphing data and adding a line of best fit (Ardoin et al., 2016). CBMs are most often used during progress monitoring, as they allow for brief and repeated assessments that are sensitive to change (Deno, 1985). As discussed earlier in this chapter, it is best practice to administer progress monitoring measures at least every other week in Tier II and at least every week in Tier III (Christ et al., 2013; January et al., 2018). This frequency of data collection allows educators to determine instructional and intervention needs of students in each Tier (Ardoin et al., 2016). Without this frequent progress monitoring, educators would not be able to accurately determine students' response to intervention and therefore the possible need for special education.

Fidelity Practices

In order for students to 1) accurately be identified for SLD and 2) demonstrate improved outcomes, the implementation of interventions depends highly on the extent to which they were implemented with fidelity (Sanetti & Kratochwill, 2009). Fidelity is also known as intervention plan integrity (IPI) and is defined as "the extent to which an intervention is implemented as intended" (Hosp et al., 2016, p. 107). Effective RTI implementation is contingent on the fidelity of treatment (Sanetti & Fallon, 2011). Not only is it important to implement interventions with fidelity, but RTI as a whole – reduced need for intensive interventions, improved student achievement, and reduction of special education referrals have all been shown to be the result of effective RTI implementation (Erchul & Ward, 2016). It is more common to see interventions not implemented with fidelity than it is to see treatment integrity (McIntyre et al., 2007). This presents the need for the measurement of fidelity across Tiers which can take the form of checklists or protocols (Kovaleski et al., 2013). In addition, it is recommended that trained staff members conduct intervention integrity checks as opposed to only teacher self-monitoring (Kovaleski et al., 2013).

Specific Learning Disability Practices over Time

Since the introduction of the 2004 reauthorization to IDEA and the increased popularity of RTI, numerous articles have come out highlighting SEAs' efforts to transition to an RTI model. Conducted between 2007 and 2013, each of these four studies act as a snapshot in time for the then-current SLD practices in the United States. The following section is a review of their main findings as they relate to this thesis' research questions.

December 2007

The first study to examine SLD practices following the 2004 reauthorization in America was by Berkeley et al. (2009). Specifically, this study aimed to examine how SEAs were progressing with the development and implementation of RTI after one year of IDEA-04 passing. Between August and December of 2007, the authors reviewed SEA websites and then verified the information collected via SEA representatives. In total, 15 SEAs were implementing RTI in some capacity; 22 were in the development phase (i.e. piloting, providing professional development, creating policies); 10 were still providing guidance to schools; and three were not in the process of developing a plan for RTI implementation. In the SEAs that were implementing RTI, 10 were using a blend of the problem-solving and standard protocol models; three were using exclusively the problem-solving model; and two the standard protocol model. Of the 10 SEAs that provided guidance to schools, each had disparate recommendations and despite evidence of their guidance, there were no SEAs that required RTI as an identification method. Thirty-seven SEAs indicated that RTI or severe discrepancy can be used in identifying SLD, while for two SEAs (Delaware, Georgia), RTI was the only option. Lastly, most SEA models do not include clear requirements for monitoring fidelity of treatment. The authors highlighted that even though SEAs adopted a three-tier model, they were not alike - particularly as it pertained to Tier III. They recommended that clarity be brought to the field so that teachers, practitioners, and stakeholders are all on the same page.

May 2010

In 2010, Zirkel and Thomas released their article synthesizing the standards for RTI in SEA laws as well as local educational agencies (LEA) guidelines as it relates to the SLD identification process. In their review, they addressed the following: 1) when did SEAs last

updated their laws; 2) which SEAs required/recommended RTI; 3) what core characteristics of RTI did SEAs require/recommend; 4) what criteria existed for duration, frequency, intensity, and progress monitoring of intervention; and 5) what criteria for referral were in place. The following results were collected on May 31, 2010. A total of 13 SEAs required RTI in some form and one (Iowa) was considered a hybrid model, requiring either RTI or another research-based option; seven of these 13 required RTI as the sole identification method. Ten SEAs required LEA implementation and one (Florida) recommended it. All but seven SEAs included the core characteristics of RTI into their guidelines and recommendations, while only nine addressed them in terms of legal requirements. The vast percentage of SEAs did not address duration, frequency, or intensity of interventions. Likewise, few addressed movements between Tiers, but almost all included provisions for frequency of progress monitoring. Lastly, only six SEAs had explicit standards for the transition from RTI to special education evaluation. This article highlighted the fact that because many SEAs did not have specific laws for SLD and RTI, many matters were left to the discretions of individual districts. This left ambiguity and inconsistency between LEAs and SEAs. Between this snapshot and the last (a timespan of three years), the number of SEAs requiring the sole use of RTI went from two to seven.

August 2011

During 2011, Hauerwas et al. (2013) collected data with the aim to examine each SEA's regulatory criteria for SLD as well as SEA guidance documents on the use of RTI for SLD identification. In a qualitative research design of directed content analysis, the authors addressed the following questions regarding 1) RTI requirements for SLD identification; 2) the types of guidance documents available; 3) the types of data collection required/described; 4) the frequency of data collection; 5) language regarding fidelity; 6) how progress/responsiveness was

defined; and 7) the requirement for cognitive testing. As of the summer of 2011, 38 out of the 50 SEAs (D.C. was not included) had provided detailed information regarding the use of RTI in either the SLD identification process in their SEA regulations and/or guidance documents. Overall, the authors found no national consensus on how to use RTI as part of SLD identification. In terms of frequency of data collections, all SEAs with RTI guidance materials noted that student progress data were necessary – some also recommended weekly progress monitoring. Seven SEAs included additional information about how to define sufficient progress. Lastly, varied and multidimensional assessment processes were evident in only a few SEA's regulations and guidance; they focused on either ecological assessment and/or cognitive processing. In general, the authors concluded that even though no SEA's practices were perfect, there were many SEAs that were using emerging best practices. Between this snapshot and the last (a timespan of one year), the number of SEAs requiring the sole use of RTI went from seven to 11.

September 2013

The most recently published article examining SLD practices is by Maki et al. (2015). The main goal of this study was to review learning disability regulations and guidelines from all 50 states D.C.; results were collected in September of 2013. As part of this study, Maki et al. looked at 1) SEAs' use of the federal SLD definition (IDEA-04); and 2) SLD identification methods. They found that 90% of SEAs used the federal SLD definition contained in IDEA; 8% of SEAs require measurement of psychological processes for identification purposes; all SEAs included the same eight achievement areas in which a student can exhibit an SLD; and 11% of SEAs included lack of appropriate instruction as a rule-out category. Before the reauthorization of IDEA, all but two SEAs required the use of the ability-achievement discrepancy model. As of

this study, 34 SEAs allowed (but did not require) SLD identification using a severe discrepancy model, while 10 SEAs prohibited its use. The authors found a large discrepancy between SEAs regarding their regulation and guidance documentation of RTI as a model for SLD identification - some provided explicit regulations and/or guidance, while others did not offer any. Lastly, another finding was that, despite its lack of scientific evidence as a model for identifying SLD, a quarter of SEAs allowed the use of PSW. Between this snapshot and the last (a timespan of two years), the number of SEAs requiring the sole use of RTI went from 11 to eight.

Summary

As evident from the previous four articles, the realm of SLD in the United States is still evolving. SEAs' laws and guidelines are being updated regularly in an attempt to reflect best practices in research and in the field. In 2007, fifteen SEAs had adopted RTI practices and in 2011, 38 SEAs had provided detailed information regarding the use of RTI in the SLD identification process. Likewise, in 2007, only two SEAs solely required RTI for SLD identification; this number went up to 11 in 2011 but went down to eight during the last 2013 report. Despite the overall positive rise in SEAs' implementation of RTI, these four articles highlighted that SEAs' regulation and guidance tended to be inconsistent, lacking consensus, and often not representative of best practices. Given that the last snapshot occurred over seven years ago, there is a need for an updated understanding of the current status of SLD definitions and identification methods that are present in contemporary regulation and guidance documents.

Chapter III: Methods

The purpose of this study was to examine and compare SEA regulations and guidelines as they pertain to SLD in the United States. A descriptive analysis research methodology was selected to examine and understand individual SEAs' regulations and guidelines regarding SLD and RTI practices. This chapter describes the research design, data collection, and data analysis to be conducted.

Research Design

The research questions were answered through the lens of descriptive analysis. This approach allowed the collection of qualitative data (found in regulation and guidance documents) to be analyzed quantitatively. According to Gall et al. (2007), descriptive research design is defined as research that analyzes a sample or whole population by representing pieces of information quantitively in order to draw conclusions. The current study examined the whole population of SEAs in the United States in the form of its regulation and guidance documents regarding SLD and RTI. Through descriptive analysis, large of amounts of data were able to be distilled into meaningful patterns for analysis (Loeb et al., 2017). This research design and the development of research questions for the current study mirrors, in part, previous relevant research (Hauerwas et al., 2013; Maki et al., 2015; Zirkel & Thomas, 2010a, 2010b). These past studies also aimed to better understand SEA regulation and guidance documents as they related to SLD and RTI using descriptive analyses.

Sampling

The sample for this study included 51 SEAs' regulation and guideline documents as it related to SLD and RTI. Specifically, these documents included special education regulations; SLD regulatory criteria for identification; guidance for special education procedures; guidance for SLD identification; and guidance for the implementation of RTI. The selection of these documents was guided by Hauerwas et al.'s (2013) research using SEA websites. As per previous studies, documents were limited to those sanctioned by each SEA and published on their websites (Zirkel & Thomas, 2010b); training and professional development documents were not included (Hauerwas et al., 2013).

Procedure

Development of the Codebook

Before data collection took place, a codebook for data extraction was created based on the four research questions (Table 1). Coding for the first research question was based on the definition of SLD provided in each SEA's regulation document. In order to categorize the data, the researcher created three groups: Upon examination of the definitions, the researcher placed SEAs into one of three groups: 1) adopted the federal definition; 2) adopted the federal definition but made changes (fewer than four); or 3) included a definition that made four or more changes.

The second research question refers to year of publication for both regulation and guidance documents. Coding included SEAs' documents that fell into one of three groups: 1) not updated since Hauerwas et al.'s (2013) data collection in August of 2011; 2) updated since Hauerwas et al.'s data collection; or 3) new document created after August of 2011 or one not included Hauerwas et al.'s study.

For the third research question, one of five options were possible for selection: 1) requires RTI only, 2) allows RTI or severe discrepancy, 3) allows RTI or PSW, 4) allows RTI or PSW or severe discrepancy, and 5) requires RTI *and* PSW *or* severe discrepancy. These categories were selected based on Hauerwas et al.'s (2013) results of then-current SLD identification methods. Hauerwas et al.'s. codebook also included a sixth category. This category was originally included in this study's codebook but was removed after findings indicated that no SEA fell into the category of "Require RTI and PSW."

The final research question involved binary coding of the preidentified three best practices of SLD identification using RTI: 1) universal screening, 2) progress monitoring, and 3) fidelity practices. Regulation and guidance documents were coded separately for inclusion of the three preidentified best practices. Yes (Y) was coded if the best practice was mentioned and No (N) was coded if no mention could be identified. Table 1 presents an example of the codebook used for Alabama.

Data Collection and Analysis

Data collection for this study took place in June of 2021 and began by screening information posted on SEA websites, regarding regulations and guidelines pertaining to SLD and RTI. This screening process involved identifying the appropriate SEA webpage and downloading the relevant documents. Documents were located on SEA websites using the search tool; key terms were entered, and relevant documents were downloaded. They key terms that were entered separately included: *learning disability, special education, SLD, multi-tier systems of support, MTSS, response to intervention,* and *RTI.* The appropriateness of the documents for the current study was validated by the previous work on this topic (Hauerwas et al., 2013; Zirkel & Thomas, 2010a, 2010b). Similar to Hauerwas et al. and others, additional documents were screened for

appropriateness if they were referenced within another SEA regulation or guidance document. A document was deemed appropriate for inclusion in this study if: 1) the document was produced/published/endorsed by the specific SEA *and* located on the SEA website; 2) the document included guidelines that were relevant to the current study's research questions; and 3) the document did not constitute professional development or other such training documents.

The two categories of SEA documents in this study were 1) regulations and 2) guidance. Regulations are legally binding documents that include requirements for districts and schools to follow. Guidelines, on the other hand, are not legally binding; these are documents provided by the SEA that consist of a set of recommendations for implementation. The importance of including both types of documents is two-fold: 1) LEAs and schools are required to implement regulatory language, and 2) LEAs and schools are provided with guidelines directly from their state agency.

Once the appropriate documents were identified and downloaded, they were cursorily skimmed in order for the researcher to gain familiarity. In this initial skim, the researcher highlighted pertinent information related to the research questions such as the definition of SLD, identification methods, and location of RTI language. The date of each document was recorded in this initial screening. Subsequently, the researcher read the documents in their entirety: 1) the SLD section of every regulation document, and 2) every guidance document. During the thorough reading of a document, each variable in Table 2 were coded and then highlighted in the document in a corresponding color (i.e., definition was highlighted blue). After reading each document, a second check of the extracted data was conducted, and cross referenced to ensure accuracy. To confirm that the variables related to RTI best practices were accurate (universal screening, progress monitoring, and fidelity), a search for key terms was conducted in each

document. However, the lack of a key term, such as "fidelity" did not mean that this variable was automatically marked as not present in a document. For example, it was acceptable if an SEA did not use the term "fidelity" but used different language to mean the same thing, such as "integrity." Thus, further reading for alternative was necessary.

Research Question 1.

The aim of the first research question was to determine which states are following the federal definition for SLD. The definition for SLD was extracted from each regulation document and entered into the codebook. If the document did not contain a definition, that information was also recorded in the codebook. Next, each definition was pasted into a website that checks differences between two bodies of text (www.diffchecker.com). The definition provided in the regulation document was compared against the federal definition. The researcher coded how many differences each definition contained. For the purposes of this question, "difference" meant alterations to the definition that changes the meaning of the text. A non-example of this would be changing "mental retardation" to "intellectual disability". Other minor changes such as punctuation did not count toward the number of differences listed. Based on the results, the researcher grouped the 51 SEAs into one of three groups: 1) adopted the federal definition; 2) adopted the federal definition but made changes (fewer than four); or 3) included a definition that made four or more changes. The cut-point of four was chosen based two factors. First, 49 out of the 51 SEAs either made no changes or made fewer than four. Second, the other two SEAs were outliers in comparison; Florida and Kentucky each had seven or more changes to the federal definition. Therefore, the research separated them in order to discuss their differences.

Research Question 2.

The aim of the second research question was to know when SEA documents were last updated and to compare publication dates to the most recent list of documents from Hauerwas et al.'s (2013) documents. While not the most recent study, Hauerwas et al.'s article was used as a reference point because of their inclusion of individual document names and dates of publication. Each document was scanned for the publication date (or date of most recent update) and entered into the codebook. If no date could be found, "n.d." was coded. Next, the researcher cross referenced Hauerwas et al.'s (2013) documents with the documents pulled in 2021. First, the title of the document was compared to the titles from 2013; If a similar document title was found, the researcher coded if that document had been updated since 2013, based on publication date. If a similar document title could not be found, this document was coded as "new" as well as whether or not it was published before or after Hauerwas et al.'s data collection date.

Research Question 3

The aim of the third research question was to report the methods for SLD identification that SEA's require or allow. The researcher read the SLD regulation section for each SEA and coded which criteria they fell under: 1) requires RTI only, 2) allows RTI or severe discrepancy, 3) allows RTI or PSW, 4) allows RTI or PSW or severe discrepancy, and 5) requires RTI *and* PSW *or* severe discrepancy.

Research Question 4.

The aim of the fourth research question was to determine the extent to which three specific recommended approaches to SLD using RTI was present in SEA documents. In order to determine if the documents contained these recommended approaches (universal screening progress monitoring, fidelity practices), the researcher performed a document search by first reading every document thoroughly, and then searching for key terms to ensure nothing was

missed. During the read-through, the researcher highlighted document elements that corresponded to each recommended approach and coded appropriately. The key term search was performed next; each key word and phrase in Table 2 was searched separately and results were compared to what had been previously highlighted. Finally, the researcher coded which SEAs had regulation and guidance documents that contained each recommended approach.

Determination of Inter-Rater Reliability

When conducting any research, it is important to ensure that the data collected are reliable in order to reduce the effects of researcher bias and human error (Krippendorff, 2012). One way in which to improve the reliability of a study is through the calculation of inter-rater reliability (IRR; Krippendorff, 2012). IRR produces a percentage of agreement after two or more raters review the same information and come to a conclusion based on that information. This percentage will be interpreted based on Landis and Koch's (1977; as cited in Hallgren, 2012) guidelines. According to Hallgren (2012), IRR should be .80 or higher, in other words, 80% agreement.

For the current study, IRR was established through spot checking approximately 20% of the SEAs (n=10) with the use of one doctoral-level volunteer who was knowledgeable in education and RTI practices. All SEAs were assigned a number, 1-51, based on alphabetical order. The 10 SEAs were then chosen at random using Google's random number generator. Before the volunteer was given all relevant documents for each SEA, the main researcher ensured the volunteer was comfortable with extracting data to the given codebook. To do this, the researcher first explained each data category that was to be collected. These included 1) definition, 2) year of publication, 3) identification method(s), and 4) presence of universal screening, progress monitoring, and fidelity language. Once the volunteer was comfortable with

the methodology for extracting data, the researcher picked an SEA on which to practice. After the practice session, the researcher and volunteer debriefed on the volunteer's results. On this practice SEA, the volunteer successfully extracted and entered the data with 90% agreement. Following this, the volunteer was provided with the 19 regulation and guidance documents from the 10 SEAs. Following the IRR data extraction, the researcher and the volunteer debriefed and identified mismatches. Finally, these mismatches were resolved as a team by looking back through the specific documents. The results of the IRR are presented in Chapter IV.

Ethical Considerations

Ensuring the practices and procedures of research are performed in an ethical manner is crucial for all research (Tracy, 2010). Given the nature of the current study's research design, however, the involvement of an institutional review board (IRB) was not necessary. According to the federal code of regulations for the Policy for Protection of Human Research Subjects (§46.102), a "human subject" is defined as:

> … a living individual about whom an investigator (whether professional or student) conducting research:
>
> > (i) Obtains information or biospecimens through intervention or interaction with the individual, and uses, studies, or analyzes the information or biospecimens; or
> >
> > (ii) Obtains, uses, studies, analyzes, or generates identifiable private information or identifiable biospecimens.

Because the data collected in this study were obtained from publicly available documents and did not involve the contribution of individual participants, the research involved no "human subjects" as defined previously and was therefore not classified as human subjects' research.

Table 1

Example Codebook Variables

State	Alabama	
	Regulation	Guidance
Definition	Same as Federal	-
Year of publication	2013	2009
Requires RTI only		-
Allows RTI or SD		-
Allows RTI or PSW		-
Allows RTI or PSW or SD	X	-
RTI *and* PSW *or* SD		-
Universal screening	N	Y
Progress monitoring	N	Y
Fidelity	N	Y

Note. RTI: Response to Intervention; SD: Severe Discrepancy; PSW: Pattern of Strengths and Weaknesses

Table 2

Search for Recommended Approaches by Key Words and Phrases

Recommended Approach	Key Words and Phrases
1. Universal Screening	Universal screening; screening; assessment; probe
2. Progress Monitoring	Progress; progress monitoring; rate of improvement; benchmark
3. Fidelity Practices	Fidelity; integrity; adherence

Chapter IV: Results

The following chapter reviews the results of the analysis of 51 SEAs' regulation and guidance documents as they pertained to 1) SLD definitions, 2) SLD and RTI document dates, 3) SLD identification practices, and 4) RTI best practices. IRR data is also presented in this chapter. Each research question is introduced, and data are presented.

Determination of Inter-Rater Reliability

In order to ensure the reliability of the data collected, IRR was conducted and established by calculating the percentage agreement between the researcher and a volunteer. The 10 SEAs that were randomly chosen for the IRR through Google's random number generator included 10 regulation documents and nine guidance documents (19 total documents). Using the codebook presented in Chapter III, which was designed to capture research question data, 93 data points were compared, and percentage of agreeance was calculated for each category (Table 1). The term "category" pertaining to the codebook for purposes of the current study is described in Chapter II, *Development of the Codebook,* and depicted in Table 1. Number of data points was determined in each category as follows: 1) 10 definitions; 2) 10 regulation publication dates; 3) 9 guidance publication dates; 4) 10 identification methods; 5) 10 regulation universal screening; 6) 8 guidance universal screening; 7) 10 regulation progress monitoring; 8) 8 guidance progress monitoring; 9) 10 regulation fidelity practices; and 10) 8 guidance fidelity practices.

To calculate agreeance, numbers of data matches in each category across SEAs was determined. These agreements were added up and divided by the number of data points in each category from which a percentage was calculated. For example, the researcher and the volunteer

were in agreeance for the category “Date of Publication for Regulation” in nine out of the 10 SEA regulation documents. This resulted in an agreeance of 90% in that specific category. Overall, the average IRR of all 10 categories was .92, which exceeds the recommended 80% agreeance for acceptable IRR (Hallgren, 2012). One category, however, “Fidelity Mentioned in Guidelines” initially fell below the 80% agreeance thresh mark. After comparing data points between the researcher and the volunteer, all of the disagreements were related to the language SEA guidelines used. For example, some guideline documents used “integrity” to mean the same thing as “fidelity”. In these circumstances, the volunteer coded these documents as not mentioning fidelity, while the researcher did. Through the debriefing process, the researcher and volunteer agreed that the documents using “integrity” were to be included. After the debriefing, agreement for “Fidelity Mentioned in Guidelines” was 100%.

Research Question 1

The first research question was: How is SLD defined and to what extent does each SEA definition differ from the federal definition? For this question, each SEA’s regulation definition was extracted and then compared to the most recent federal definition which is as follows:

> Specific learning disability means a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, that may manifest itself in the imperfect ability to listen, think, speak, read, write, spell, or to do mathematical calculations, including conditions such as perceptual disabilities, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia.
>
> (ii) Disorders not included. Specific learning disability does not include learning problems that are primarily the result of visual, hearing, or motor disabilities, of

> mental retardation, of emotional disturbance, or of environmental, cultural, or economic disadvantage. (34 CFR 300.8(c)(10))

Upon examination of the definitions, the researcher placed SEAs into one of three groups: 1) adopted the federal definition; 2) adopted the federal definition but made changes (fewer than four); or 3) included a definition that made four or more changes.

Group number one, those SEAs adopting the federal definition, represented the majority of state agencies. Out of the 51 SEAs, 67% (*n*=35) adopted the federal definition for SLD. Included in this group are SEAs of which regulation documents do not contain a written definition, but instead, state that the federal definition was adopted. Of these 35 SEAs, 31 have made non substantive changes, such as changing "emotional disturbance" to "emotional disability", while three have adopted the federal language verbatim. For the purposes of this study, these changes were not considered deviations from the federal definition, as they do not change its original meaning. In the example of emotional disability and emotional disturbance, both refer to the same construct.

Group number two comprised 27% *(n*=14) of SEAs; these state agencies adopted the federal definition with fewer than four changes. One of the most common changes demonstrated in this group was the addition of "limited English proficiency" to the list of disorders that would preclude an SLD identification; five SEAs made this addition. Another five SEAs added the language, "that affects a student's educational performance", following the federal language, "included conditions." Two SEAs, Maryland and New York, added language after the federal verbiage, "mathematical calculations", that refers to pre-specified criteria which districts must follow when determining eligibility. For example, New York referred to subsection (j) which outlined additional procedures for identifying students with learning disabilities. Other SEAs that

added language to their definition include Tennessee, which provided an example of a "perceptual disability," and Michigan, which added Autism Spectrum Disorder to its list of precluded disorders. North Carolina was the only SEA in this group of state agencies, having made fewer than four changes to the federal definition of SLD, that removed federal language and replace it with their own. They removed "including conditions such as perceptual disabilities, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia" and replaced it with "Conditions may include, but are not limited to, dyslexia and dyscalculia" [NC 1500-2.4(b]. Finally, three SEAs in this group did not include the list of "disorders not included" in their SLD definition.

Group number three included two SEAs, Florida and Kentucky. These SEAs made four or more changes to the federal definition of SLD. Instead of "psychological processes," Florida used the language "learning processes"; instead of "imperfect ability", "significant difficulties affecting the ability" is used. Florida regulations removed the federal included conditions of "perceptual disabilities," "brain injury," and "minimal brain function," and added conditions "dyscalculia" and "dysgraphia." Kentucky's changes included removing the first sentence of the federal definition and replacing it with: "a disorder that adversely affects the ability to acquire, comprehend, or apply reading, mathematical, writing, reasoning, listening, or speaking skills to the extent that specially designed instruction is required to benefit from education" [707 KAR 1:002(59)]. They also removed the conditions "brain injury" and "minimal brain function" and replaced it with "dyscalculia" and "dysgraphia." Lastly, Kentucky's definition states that a "lack of relevant research-based instruction in the deficit area" would preclude SLD classification. Delineation of SEAs by group based on their adoption of federal definition language can be found in Table 3.

Research Question 2

The second research question was: When were SEA documents last updated? Regulation and guidance documents were examined for publication date and compared to Hauerwas et al.'s (2013) documents. The rationale for focusing on Hauerwas et al.'s article is that it provides the most recent and exhaustive list of collected regulation and guidance documents, which served as a baseline for the current study. For the purposes of analysis and to answer research question 2, SEA documents fell into one of three groups: 1) not updated since Hauerwas et al.'s data collection in August of 2011; 2) updated since Hauerwas et al.'s data collection; or 3) new document created after August of 2011 or one not included Hauerwas et al.'s study. Table 4 lists the 107 documents collected from SEA's department of education websites. Out of the 102 documents with a given date, the average year of publication is 2014, with the earliest being 2007 and the latest 2021. Upon review, 27 (25%) documents across 24 SEAs had not been updated since 2011. Forty-five (42%) documents had been updated since 2011 across 37 SEAs. In addition, 35 new documents were collected (33%) across 29 SEAs that had not yet been published during Hauerwas et al.'s data collection; three of these 26 documents were published prior to Hauerwas et al.'s data collection but were not included in their study. Overall, 75% of the collected documents have either been updated or added since 2011. As of this current 2021 study, four SEAs had not updated either their regulation or guidance documents or created new ones.

Research Question 3

The third research question was: What method(s) for SLD identification are required or allowed? SEA's regulation documents were examined to find allowable methods for determining SLD. These methods aligned with five discreet types of eligibility criteria: 1) requires RTI only,

2) allows RTI or severe discrepancy, 3) allows RTI or PSW, 4) allows RTI or PSW or severe discrepancy, and 5) requires RTI *and* PSW *or* severe discrepancy.

Thirteen (25%) SEAs required the sole use of RTI for the identification of SLD. Two of these 13 required RTI only before a specific grade; New York required RTI for grades kindergarten through fourth, while New Mexico required RTI for grades kindergarten through third. The second type of eligibility criterion included seven (14%) SEAs; these allowed for RTI or PSW for identification. Similarly, seven (14%) SEAs, representing the third type of eligibility criterion, allowed for RTI or severe discrepancy for identification. The largest group, 23 (45%) SEAs, reported regulations that mirrored the federal rules and allowed LEAs to choose between RTI, severe discrepancy, or PSW. This group represented the fourth type of eligibility criterion and included New York and New Mexico which allowed for all three methods after a specific grade. Lastly, the fifth type of eligibility criterion included three (6%) SEAs; they required RTI in addition to either Severe Discrepancy *or* Pattern of Strengths and Weaknesses. Table 5 summarizes the eligibility data.

Research Question 4

The final research question was: To what extent are three specific recommended approaches to SLD eligibility using RTI (Jimerson et al., 2016; Kovaleski et al., 2013) evident in SEA documents: universal screening, progress monitoring, and fidelity practices? This question examined whether or not SEAs' regulation and guidance documents contained language that referenced these three RTI best practices. These practices were selected based on what research has found to be highly effective in the implementation of RTI and is discussed in Chapter II. Universal screening practices were mentioned in 10 (20%) SEA regulation documents and 35 (67%) guidance documents. Progress monitoring practices were mentioned in 21 (41%) SEA

regulation documents and 41 (80%) guidance documents. Finally, fidelity practices were mentioned in 10 (20%) SEA regulation documents and 35 (67%) guidance documents. Figure 1 displays these results as a percentage for each best practice and document type, graphically. Table 7 summarizes the specific SEAs that included language in both regulation and/or guidance documents regarding the three identified best practices.

Table 3

Percentage of Inter-Rater Reliability by Category

Category	Percent Agreement
1. Definition in Regulation	100%
2. Date of Publication for Regulation	90%
3. Date of Publication for Guidance	100%
4. SLD Determination	90%
5. Universal Screening in Regulations	83%
6. Universal Screening in Guidelines	94%
7. Progress Monitoring in Regulations	94%
8. Progress Monitoring in Guidelines	89%
9. Fidelity Mentioned in Regulations	100%
10. Fidelity Mentioned in Guidelines	78%
Average IRR	92%

Note. SLD: Specific learning disability.

Table 4

Adoption of Federal Definition for Specific Learning Disability

SEA	Group 1: Adopted Federal Definition	Group 2: Made fewer than 4 changes to Federal Definition	Group 3: Made 4 or more changes to Federal Definition
AL	X		
AK*	X		
AZ*	X		
AR	X		
CA	X		
CO		X	
CT*	X		
DE		X	
DC	X		
FL			X
GA	X		
HI	X		
ID+		X	
IL*	X		
IN	X		
IA	X		
KS	X		
KY			X
LA	X		
ME	X		
MD		X	
MA*	X		
MI		X	
MN+		X	
MS	X		
MO		X	
MT	X		
NE	X		

Table 4 (continued)

SEA	Group 1: Adopted Federal Definition	Group 2: Made fewer than 4 changes to Federal Definition	Group 3: Made 4 or more changes to Federal Definition
NV	X		
NH	X		
NJ+		X	
NM*	X		
NY		X	
NC		X	
ND*	X		
OH	X		
OK	X		
OR	X		
PA*	X		
RI	X		
SC*	X		
SD	X		
TN		X	
TX*	X		
UT		X	
VT	X		
VA	X		
WA		X	
WV+		X	
WI	X		
WY	X		

Note. SEA refers to State Education Agency. A star (*) indicates no written definition was provided in SEA regulations; a plus sign (+) refers to precluded disorders that were not included in definition

Table 5

SEA Documents by Date, Regulation/Guidance, and Title

SEA	*Date*	*Regulation vs Guidance*	*Title of Document*
Alabama	**2013**	Regulation	Rules of the Alabama State Board of Education Chapter 290-8-9
	2009	Guidance	Response to Instruction (RtI): Alabama's Core Support for All Students
Alaska	**2013**	Regulation	State Special Education Handbook
	2008	Guidance	Alaska RTI Definitions
Arizona	**2021**	Both	Arizona Technical Assistance System – AZ-TAS, Evaluation Process
Arkansas	**2019**	Regulation	AR Special Education Process Guide
	2016	Guidance	**Arkansas Technical Assistance Manual: Identification of Students with SLD**
California	**2015**	Regulation	CASER Special Education Reference
	2009	Guidance	Disability Eligibility Using Response to Instruction and Intervention (RtI2)
Colorado	**2013**	Regulation	ECEA Rules for the Administration of the Exceptional Children's Education Act 1 CCR 301-8
	2012	Required Form	**Determination of Eligibility: SLD**
	2017	Guidance	**Specific Learning Disability Evaluation and Eligibility**
	2019	Guidance	**Specific Learning Disability Guidelines**
Connecticut	2013	Regulation	Connecticut Regulation Regarding Specific Learning Disability: Section 10-76d-9 (b).
	2010	Guidance	Guidelines for Identifying Children with Learning Disabilities
	2008	Guidance	Connecticut's Framework for RTI
Delaware	**2020**	Regulation	Title 14 Education Delaware Administrative Code
	2014	Guidance	**RTI Implementation Guide for Teachers**
DC	2011-	Regulation	Special Education Policy DCMR Title 5
Florida	**2014**	Regulation	Exceptional Education Eligibility for Students with Specific Learning Disabilities
	2015	Guidance	Florida RTI*
	2015	Guidance	**Decision-Making Tool for SLD and LI Eligibility**
Georgia	2010	Regulation	Eligibility Determination and Categories of Eligibility
	2019	Guidance	**Georgia's Tiered System of Supports for Students**
Hawaii	n.d.	Regulation	Chapter 60 - Provision of a Free Appropriate Public Education for Student with a Disability
Idaho	**2018**	Regulation	Special Education Manual 2018

Table 5 (continued)

SEA	*Date*	*Regulation vs Guidance*	*Title of Document*
	2018	Guidance	**Idaho Specific Learning Disability (SLD) Eligibility**
Illinois	**2021**	Regulation	Illinois Administrative Code 226
	2012	Guidance	Illinois Special Education Eligibility and Entitlement Procedures and Criteria within a Response to Intervention (RTI) Framework
Indiana	**2019**	Regulation	Indiana Special Education Rules
	2011-	Guidance	Considerations in Specific Learning Disability Evaluation and Eligibility Determination
Iowa	**2019**	Regulation	Special Education Eligibility and Evaluation Standards
	2019	Guidance	**Iowa Special Education Eligibility and Evaluation—Questions and Answers**
	2011+	Guidance	**Iowa Department of Education Guidance Document Response to Intervention**
Kansas	2008	Regulation	Kansas Special Education Resources
	2018	Guidance	Kansas Special Education Process Handbook
	2020	Guidance	**Kansas Eligibility Indicators**
	2019	Guidance	**Kansas Multi-Tier System of Supports & Alignment**
Kentucky	2008	Regulation	Kentucky Administrative Regulations 707 KAR 1:002 – 707 KAR 1:380
	2014	Guidance	**Specific Learning Disabilities Eligibility Guidance Document**
	2012	Guidance	A Guide to the Kentucky System of Interventions
Louisiana	2009	Regulation	Bulletin 1508: Pupil Appraisal Handbook
Maine	**2017**	Regulation	Maine Unified Special Education Regulation
	2018	Guidance	**Response to Intervention - Maine**
Maryland	n.d.	Regulation	COMAR 13A.05.01.06
	2016	Guidance	**Technical Assistance Bulletin on Specific Learning Disabilities**
	2008	Guidance	Maryland's Response to Intervention Framework
Massachusetts	**2008**	Regulation Form	SLD Team Determination of Eligibility
	2018	Regulation	**An Act Relative to Students with Dyslexia**
	n.d.	Guidance	**Multi-Tiered System of Support Blueprint**
Michigan	**2021**	Regulation	Michigan Administrative Rules for Special Education (MARSE)
	2017	Guidance	Michigan Criteria for Determining the Existence of a Specific Learning Disability
Minnesota	2009	Regulation	MN Chapter 3525: Children with a Disability
	2011+	Guidance	**Determining the Eligibility of Students with Specific Learning Disabilities**

Table 5 (continued)

SEA	*Date*	*Regulation vs Guidance*	*Title of Document*
Mississippi	2009	Regulation	State Policies Regarding Children with Disabilities under the Individuals with Disabilities Education Act
	2020	Guidance	**Multi-Tiered System of Supports Guidance Document**
Missouri	**2020**	Regulation	Eligibility Criteria - Specific Learning Disabilities
	2008	Guidance	State of Missouri Guidance for Identification of Specific Learning Disability (SLD)
Montana	**2007**	Regulation	Special Education Regulation. Administrative Rules of Montana
	2020	Guidance	**Special Education Guidance in Montana**
Nebraska	2010	Regulation	Nebraska Department of Education Chapter 51 - Regulations and Standards for Special Education Programs
	2015	Guidance	**Nebraska SLD Guidance Document**
Nevada	2008	Regulation	NAC 388.420 Eligibility of pupil with specific learning disabilities.
New Hampshire	2008	Regulation	Ed 1107.02 Evaluation Requirements for Children with Specific Learning Disabilities.
	2017	Guidance	**Guide to the New Hampshire Standards for the Education of Children with Disabilities**
New Jersey	2013	Regulation	N.J.A.C. 6A:14, Special Education
	2019	Guidance	**New Jersey Tiered System of Supports (NJTSS) Implementation Guidelines**
New Mexico	**2013**	Regulation	Policies and Procedures for the Provision of Special Education Services for Students with Disabilities and Gifted Students
	2017	Guidance	**The New Mexico Technical Evaluation and Assessment Manual**
	2014	Guidance	New Mexico's Response to Intervention Framework 2014
New York	**2017**	Regulation	Regulations of the Commissioner of Education. PART 200 Students With Disabilities
	2010	Guidance	**Minimum Requirements of a RTI - Use of RTI in the Determination of a Learning Disability**
	2010	Guidance	Response to Intervention Guidance for NY State School Districts
North Carolina	**2020**	Regulation	Policies Governing Services for Children with Disabilities
North Dakota	**2012**	Regulation	N.D. Admin. Code 67-23-06-05

Table 5 (continued)

SEA	*Date*	*Regulation vs Guidance*	*Title of Document*
	2018	Guidance	Guidelines for Serving Students with Specific Learning Disabilities in Educational Settings
Ohio	**2014**	Regulation	Operating Standards for Ohio Educational Associations Servicing Children with Disabilities
	2018	Required Form	Form PR-06: Evaluation Team Report (ETR)
Oklahoma	**2021**	Regulation	Oklahoma State Department of Education Special Education Services Evaluation and Eligibility Handbook
	2017	Guidance	**Oklahoma State Department of Education Special Education Services**
	2010	Guidance	Oklahoma Response to Intervention Guidance Document
Oregon	**2013**	Regulation	Oregon Administrative Rules for Special Education
	n.d.	Guidance	**Oregon RTI***
Pennsylvania	2008	Regulation	Pennsylvania Rule Chapter 14.125
	2008	Guidance	**PA Guidelines for Identifying Students with Specific Learning Disabilities (SLD)**
	2020	Guidance	**MTSS, RTI, and SLD Determination in Pennsylvania**
Rhode Island	**2013**	Regulation	Rhode Island Regulations Governing the Education of Children with Disabilities
	2010	Guidance	Rhode Island Criteria and Guidance for the Identification of Specific Learning Disabilities
South Carolina	**2011+**	Regulation	SC Standards for Evaluation and Eligibility Determination
	2011+	Guidance	SC Response to Intervention: A Framework and Technical Assistance Guide for Districts and Schools
South Dakota	**2016**	Regulation	South Dakota Special Education Administrative Rules Article 24:05
	2017	Guidance	**South Dakota MTSS**
Texas	**2013**	Regulation	19 TAC §89.1040. Eligibility Criteria
	n.d.	Guidance	Response to Intervention and Learning Disability Eligibility
Utah	**2020**	Regulation	Utah State Board of Education Special Education Rules
	2019	Guidance	Utah State Board of Education Specific Learning Disabilities (SLD) Eligibility Guidelines
Vermont	**2013**	Regulation	State of Vermont Special Education Rules
	2019	Guidance	**The Vermont Agency of Education's Multi-tiered System of Supports Guidelines**

Table 5 (continued)

SEA	*Date*	*Regulation vs Guidance*	*Title of Document*
Virginia	**2010**	Regulation	Regulations Governing Special Education Programs for Children with Disabilities in Virginia
	2017	Guidance	**Virginia's Guidelines for Educating Students with Specific Learning Disabilities**
Washington	**2018**	Regulation	Rules for the Provision of Special Education Chapter 392-172AWAC
West Virginia	**2017**	Regulation	Regulations for the Education of Students with Exceptionalities
	2020	Guidance	**West Virginia Tiered System of Support (WVTSS)**
Wisconsin	**2021***	Regulation	Wisconsin PI 11.36(6)
	2021	Guidance	**Frequently Asked Questions about Making Specific Learning Disability**
Wyoming	2010	Regulation	Chapter 7 - Services for Children with Disabilities
	2011-	Guidance	**A Model Response to Intervention (RtI) Framework to Identify Students with Specific Learning Disabilities**

Note. SEA refers to State Education Agency. Bolded dates indicate an updated document. Bolded document titles indicate documents that are new since the last review in 2013 (Maki et al., 2015). A star (*) by the date indicates a document that is updated frequently as reported on the document or website. A minus sign (-) following a date of 2011 indicates a document published before Hauerwas et al.'s data collection period (August, 2011). A plus sign (+) following a date of 2011 indicates a document published after Hauerwas et al.'s data collection period (August, 2011).

Table 6

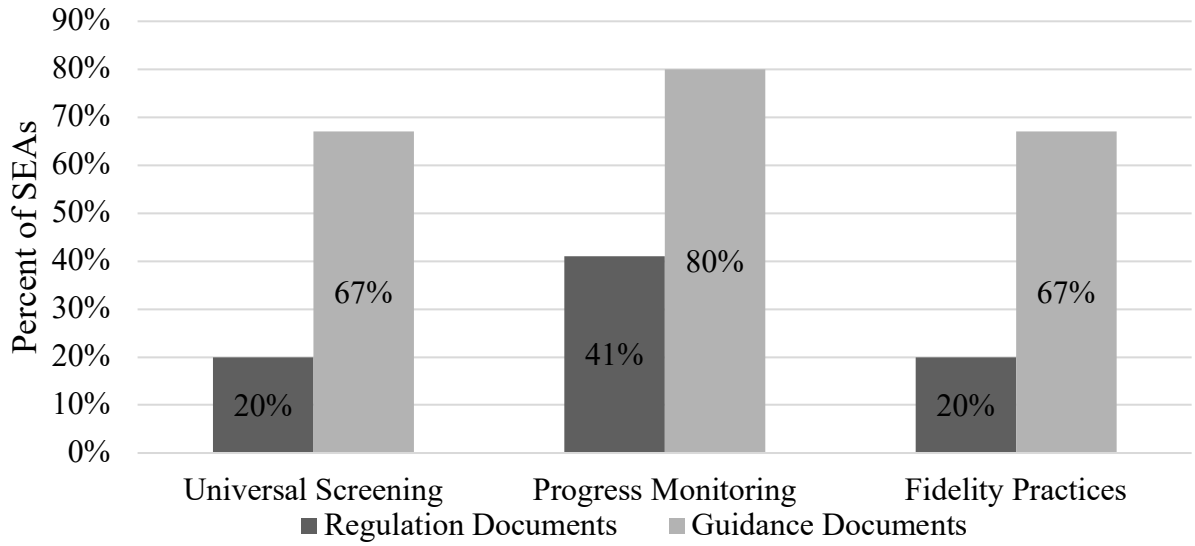
Summary of SEA SLD Eligibility Criterion

Criterion	SEAs
Require RTI *Only*	CO, CT, DE, FL, GA, ID, LA, NM(K-3), NY(K-4), NC RI, TN, WI,
Allow RTI *or* Severe Discrepancy	AK, KY, MA, NJ, OK, VT, WA
Allow RTI *or* PSW	IN, IA, KS, MT, OR, WV, WY
Allow RTI, *or* Severe Discrepancy, *or* PSW	AL, AR, AZ, CA, DC, HI, MD, MI, MN, MS, MO, ND, NE, NH, NM(4-12), NV, NY(5-12), OH, PA, SC, SD, TX, VA
Require RTI *and* Severe Discrepancy *o*r PSW	IL, ME, UT

Note. SEA refers to State Education Agency; SLD refers to Specific Learning Disability; RTI refers to Response to Intervention; PSW refers to Pattern of Strengths and Weaknesses.

Figure 1

Inclusion of RTI Best Practices by Document Type



Note. SEA refers to State Education Agency; RTI refers to Response to Intervention.

Table 7

Evidence of Response to Intervention Best Practices by SEA

Criterion	SEA
Universal Screening Practices Evident	
Regulation	DE, IA, NC, ND, PA, SC, UT, VA, WA, WV
Guidance	AL, AK, AZ, AR, CA, CO, CT, DE, FL, GA, IL, IN, KS, KY, LA, ME, MD, MI, MN, MS, NE, NV, NJ, NM, OH, OK, OR, PA, RI, SC, SD, TN, UT, VT, VA
Use of Progress Monitoring Data Evident	
Regulation	DE, FL, GA, IA, LA, MN, MT, NJ, NC, ND, OR, PA, RI, SC, TN, UT, VT, VA, WA, WV, WI
Guidance	AL, AK, AZ, AR, CA, CO, CT, DE, FL, GA, ID, IL, IN, IA, KS, KY, ME, MD, MA, MI, MN, MS, MO, NE, NV, NJ, NM, NY, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VT, VA, WI
Intervention Fidelity Practices Evident	
Regulation	DE, FL, IA, LA, MT, ND, RI, UT, WA, WI
Guidance	AL, AK, AR, CA, CO, CT, DE, FL, GA, IL, IN, KA, KY, MA, MI, MN, MS, MT, NE, NV, NJ, NM, NY, OH, OK, OR, PA, RI, SC, SD, TN, UT, VT, VA, WI

Note. SEA refers to State Education Agency.

Chapter V: Discussion

With the 2004 reauthorization of IDEA, SEAs have been transitioning to include components of RTI in their regulations and guidelines as it pertains to the identification of SLD. The progress of this transition has not been updated since Maki et al.'s 2015 publication. Given this, the purpose of the current study was to examine nation-wide SLD and RTI regulation and guidance documents in order to provide the field with an updated snapshot. The following chapter discusses the results of each research question, and provides research limitations, recommendations for future research, and implications for practice.

Research Question 1

The goal of the first research question was to examine how each SEA defined SLD and compared it to the most recent federal definition. Overall, the results indicated that 35 (69%) SEAs adopted the federal definition, 14 (27%) made fewer than four changes, and two (4%) SEAs included more than four changes. Prior to the reauthorization of IDEA, only 66% of SEAs had fully adopted the federal definition of SLD in its entirety (Reschly & Hosp, 2004). This number was up to 90% in 2013 when Maki et al. collected data for their 2015 study. In 2021, 67% of regulation documents cited the federal definition in its entirety and without changes, while 33% of SEAs included at least one change. This trend over the last eight years of making changes to the federal language is an interesting phenomenon. However, there was no way to cross examine which SEAs held what definition in 2013 as that information is not given in Maki et al.'s publication. It would be telling, however, to know which SEAs had previously adopted

the federal definition but then made changes after 2013 in order to compare to definitions collected in this current 2021 study.

After examining the results, it is important to answer the second part of the first research question: To what extent have SEAs made modifications to the federal definition? Five SEAs added "limited English proficiency" to the disorders that would prevent an SLD identification if it was decided lack of English language ability was the primary cause of learning problems. The inclusion of limited English proficiency is present in federal language as an additional consideration, but not in the definition itself. This language, which is found in 34 CFR §300.309, adds limited English proficiency to the list of precluded disorders. Therefore, the five SEAs that include this language have added to the specificity of the definition of SLD, as well as best rule-out practices (Jimerson et al., 2016). Another five SEAs added the language "that affects student's educational performance" following the federal language "included disorders". This addition reflects the notion that to be eligible for disability diagnosis, there must be a negative impact on functioning. By including this language, the five SEAs are clarifying that a disability must impact educational performance in order for SLD identification to take place. Two SEAs refer to pre-specified criteria when determining eligibility. These SEAs outline additional procedures for identifying students with learning disabilities. The addition of this specific language makes it more likely that all schools in the SEA are following the same criteria for determination – a best-practice recommendation in SLD determination (Hosp et al., 2016)

Florida and Kentucky were the two SEAs that made four or more changes to the federal definition of SLD. Possibly due to its departure from a severe discrepancy and PSW model, Florida removed "psychological processes" and replaced it with "learning processes". The removal of this language reflects the notion that SLD does not need to be assessed through

cognitive testing. As discussed in Chapter II, researchers have argued that a child's cognitive processes do not need to be tested during SLD identification (Fletcher & Miciak, 2017; Kovaleski, et al., 2013; Miciak et al., 2016). In particular, Fletcher & Miciak (2017) asserted that approaches which involve cognitive measures for identification (i.e., PSW, severe discrepancy) cannot reliably show the difference between students with low achievement *and* cognitive discrepancies from those who do not. Lastly, these two SEAs removed many of the federal language of "included conditions" such as "brain injury" and "minimal brain disfunction;" instead, they added "dyscalculia and dysgraphia." Even though SLD can be brought on through brain injury (Donders & Strom, 1997), brain injury is not defined as a specific condition that impacts a child's ability to read, write, etc. By excluding brain related function and replacing it with area-specific conditions, the assessment team can better determine eligibility.

Research Question 2

The goal of the second research question was to determine when SEA documents were last updated. Out of the 107 regulation and guidance documents collected, 42% had been updated since Hauerwas et al.'s (2013) 2011 data collection, with an additional 33% being brand new documents. These numbers indicate that SEAs are updating and adding to state-wide SLD and RTI documents even 17 years after the reauthorization of IDEA. When comparing Hauerwas et al.'s (2013) list of SEA documents to the ones collected for the current study, it was noted that many of the guideline documents were no longer available on SEA websites. For example, Hauerwas et al. (2013) identified an RTI guidance document for Louisiana that was found via a search on its SEA website. However, no such article could be found by the same name or another for the state of Louisiana. Therefore, results show that five SEAs that once had available guidance documents, now do not. The reason for why these SEAs have removed documents are

unknown. It can be hypothesized, however, that this is because SEAs are in the process of updating their documents, or they have moved them to a location other than education department websites. Because the methodology of the current research is dependent on utilizing regulation and guidance documents solely available on SEA websites, the question of why they were not available was not answered.

As the field of SLD and RTI are ever evolving, it is encouraging to see many SEAs updating regulation and guidance documents as well as creating new guidance documents. There were four SEAs (Louisiana, D.C., Hawaii, and Nevada), however, which have not done so between the current study and Hauerwas et al.'s 2011 data collection. As per the data collected from research question 2, Louisiana required the use of RTI for identification, while the other three continued to allow for use of the severe discrepancy, PSW, as well as RTI. Given the research regarding RTI as a best practice for the identification of SLD (Jimerson et al., 2016), it is concerning that three SEAs (D.C., Hawaii, Nevada) have not updated regulation or guidance documents in over 10 years, and they still include outdated identification practices as indicated in their regulation documents.

Research Question 3

The goal of the third research question was to examine what methods of SLD identification SEAs require or allow in their regulation documents. The results indicated that 27% of SEAs require RTI as the sole identification method, 14% of SEAs allow for RTI or PSW, while another 12% allow for RTI or severe discrepancy. Those that allow all three identification methods made up 43% of the 51 SEAs. Lastly, 6% of SEAs required RTI and another method – either severe discrepancy or PSW. Of note, New Mexico and New York required RTI, kindergarten to third and fourth grade, respectively. There is research that suggests that intensive

interventions in the RTI model are most successful for students in primary grades (K-3; Shapiro & Kovaleski, 2008). Therefore, if older students are more likely to not respond to targeted interventions, a more rapid referral process (one other than RTI) might be more appropriate for students above third or fourth grades (Kovaleski et al., 2013). Despite research suggesting that RTI may not be as appropriate for older students, there is evidence that interventions can be designed to be successful for middle- and high-school students (Canter et al., 2008; Graves et al., 2011). This may be why New Mexico and New York allow individual districts or schools to decide which identification method is appropriate for individual students above these grades.

Within the 10 years between this current study and Hauerwas et al.'s (2013), five SEAs have transitioned to requiring SLD identification through RTI only. Interestingly, two other SEAs have moved away from requiring only RTI: Iowa still requires RTI but also allows for PSW; and West Virginia now allows schools to choose between RTI or PSW. There is even more evidence for a trend towards PSW in recent regulation: 10 years ago, there was only one SEA that allowed for RTI *or* PSW for SLD identification, while in this current study, it was found that six SEAs allowed for RTI *or* a PSW model. Proponents for the PSW method believe that SLD can be determined through a specific pattern of cognitive strengths and weaknesses. However, as outlined in Chapter II, there is no empirical evidence that supports the reliability and validity of PSW. On the contrary, multiple studies refute the efficacy of this model to accurately identify SLD (Miciak et al., 2014; Stuebing et al., 2012). Moreover, research does not support the claim that PSW approaches are useful intervention recommendations based on specific cognitive strengths and weaknesses (Fletcher, 2012; Reschly, Tilly & Grimes, 1999). Given this evidence, it is concerning that federal and SEA regulations still allow a PSW approach to identifying SLD.

Although the SEAs allowing PSW have increased, the number of SEAs allowing the severe discrepancy model in some form has reduced from 36 to 30. Even though this indicates a downward trend, 60% of SEAs allowing this method is still high given the documented troubles with using IQ testing when determining the presence of SLD. The severe discrepancy model has poor reliability as it pertains to the identification of individual students, as well poor stability of identification decisions over time (Francis et al., 2005). Lastly, this method of identification does not have the ability to predict treatment response (Stuebing et al., 2009; Vellutino et al., 2000) or to differentiate between struggling readers with and without a severe discrepancy when it comes to reading ability (Francis et al., 1996). Decades of research outlining the validity and reliability issues of the severe discrepancy model have not yet convinced two-thirds of SEAs to move away from this model, nor has it prompted change to federal regulations.

The reasons why SEAs are still using outdated practices could be a result of the criticism surrounding RTI. The majority of the concerns regarding RTI fall into the categories of implementation and interpretation (Hudson & McKenzie, 2016). For example, Fuchs and Fuchs (2017) found that many schools are struggling to implement RTI in the way in which it was intended. If a school does not have the capacity, resources, and knowledge to apply school wide RTI, it might also struggle with identifying students with SLD with this method (Fuchs & Fuchs, 2017). The second element of criticism, interpretation, involves the difficulties that schools and school districts have understanding and following the regulations/guidelines given to them by their SEA. Many regulations and guidelines are either not clear, not comprehensive, or are open for interpretation (Hudson & McKenzie, 2016). Another explanation for the continuation of outdated identification methods is the general reticence people have towards change, and the time in which it takes a new innovation to be fully accepted by the majority. Rogers et al.'s

(2014) diffusion of innovation model helps explain the rate at which new ideas are adopted and why it takes time for everyone in a system to conform. This model consists of five adopter categories – innovators, early adopters, early majority, late majority, and laggards – which follow a traditional bell-curve in its percentages. As it relates to SLD identification and Rogers' theory, each SEA falls, or will fall in a given category; currently, because 27% of SEAs require solely RTI, it can be said that the field is still in the early majority phase of the model. Overall, given these criticisms and barriers to RTI, it is understandable why some SEAs have been hesitant to move towards RTI-only for SLD identification. However, the results from the current study emphasize the importance for SEAs to provide comprehensive information and support as it relates to SLD identification using RTI.

Research Question 4

The goal of the last research question was to examine which SEAs have three specific recommended approaches to SLD eligibility using RTI (universal screening, progress monitoring, fidelity practices; Jimerson et al., 2016) in their regulation and/or guidance documents. It was found that universal screening practices were mentioned in 20% of regulation documents and 67% of guidance documents; progress monitoring practices in 41% of regulation documents and 80% of guidance documents; and fidelity practices in 20% of regulation documents and 67% of guidance documents. A trend that was observed across all three areas was that more SEAs included language on best practices in guidance documents than they did in regulation documents. This same trend was noted in previous studies (Zirkel & Thomas, 2010b; Hauerwas et al., 2013; Maki et al., 2015). Although it is important to have best practices in guidance documents, the contents of regulation documents hold more weight for actual practices in schools.

Universal screening is a core component of the SLD identification process within an RTI framework (Ardoin et al., 2016; Batsche et al., 2005; Hosp & Ardoin, 2008). Most importantly, the data collected from universal screening informs educators of which students need further supports because of their lack of response to Tier I instruction (Ardoin et al., 2016). Therefore, universal screenings' incorporation in SEAs' regulation and guidance documents is important for RTI as a whole. In total, there were 11 SEAs that did not include this best practice into any of their documents. These SEAs are not providing districts and schools with the information (through their regulation or guidance documents) needed to adequately screen students who are not responding to Tier 1 instruction. Interestingly, four of these 11 SEAs (Idaho, Louisiana, New York, and Wisconsin) require the sole use of RTI for the identification of SLD. The lack of universal screening language is especially concerning among these four SEAs because their schools are required to use only RTI for SLD identification. Although it is not known whether or not the schools in these SEAs are receiving other best practice information, they are not being given the best practice information necessary for implementation from their SEA.

Progress monitoring is another core component of identifying SLD using RTI (Stecker et al., 2008). This system of brief, repeated assessments allow for the measurement of progress during the RTI process, as well as the determination of instructional and intervention needs of students in each Tier (Ardoin et al., 2016). Given its importance, it would be expected that progress monitoring be evident in SEA's regulation and guidance documents. It is promising to note that only four SEAs (DC, Hawaii, New Hampshire, and Wyoming) do not include language regarding progress monitoring in any of their documents; however, none of these four SEAs require the sole use of RTI for SLD identification. Despite this, it is still important that schools in

SEAs not requiring RTI be given best practice guidance for monitoring student's progress through Tiers.

Lastly, fidelity practices underly the efficacy in which RTI interventions are implemented (Sanetti & Fallon, 2011; Sanetti & Kratochwill, 2009). That is, ensuring students receive interventions in the way they were intended is crucial for RTI as a whole (Erchul & Ward, 2016). The measurement of intervention fidelity should be evident in SEA's regulation and guidance documents. Of note, there were 12 SEAs that did not include language regarding fidelity in either of their documents. Of these 12 SEAs, only one (Idaho) required the sole use of RTI for SLD identification. It is promising that the other states which required RTI, all contained the mention of fidelity practices in their regulation or guidance documents.

Delaware and Utah were the only two SEAs that included universal screening, progress monitoring, and fidelity practices in *both* their regulation and guidance documents. The importance of the inclusion of these best practices in both documents is two-fold: 1) LEAs and schools are required to implement the three identified best practices when identifying SLD through RTI, and 2) LEAs and schools have guidelines available to them that come directly from their state agency. It is the hope that the combination of both regulation and guidance assists identification practices at the school level.

Limitations

Although a thorough collection, review, and analysis of SEA regulation and guidance documents were conducted, this study has limitations. As noted in other similar reviews (i.e., Hauerwas et al., 2013; Maki et al., 2015), SEA documents are continuously updated. Therefore, the data provided in the current study are only a snapshot in time as of June 2021, and only reflect documents collected at that time. Care was taken to ensure that every SEA website was

meticulously screened for the relevant documentation. Previous studies that listed document names (i.e., Hauerwas et al., 2013) were also cross-referenced to ensure the most accurate data collection. However, the possibility that some documents were missed by the researcher is seen as a limitation of this study. Lastly, there might be other state-wide documents that contain relevant SLD and RTI implementation information but were not included on SEA websites, and therefore this study. As noted in earlier chapters, these documents were not included as to ensure that collected data were reflections of SEAs specific guidelines and not other third-party organizations. Had methodology allowed for interviews with SEA special education representatives, documents not included on SEA websites may have been found.

Future Research

The results from this research presented a number of implications for future study. First, this study demonstrated that most SEAs have updated their regulation and guidance documents within the last 10 years. What is not known, however, is the process that goes into these updates. How do SEAs decide when and what to update? Who or what research do they consult when making additions or modifications? More research is needed to answer questions like these in order to help the field gain a better sense of how changes to these documents are made. Understanding the specific process SEAs go through to add or update information could be important to ensure that policy makers are being guided by research. Publishing these results could positively influence policy makers and state officials to adopt best practices in SLD and RTI.

As of the collection data of current study (June 2021), there is no research that has examined to what extent LEAs are accessing and utilizing SEA guidance documents. Research is needed to inform the field on levels of supports that individual districts are providing to schools

with regards to SEA guidance documents. Likewise, research is needed to examine documents LEAs are providing to schools and how that information compares to SEA regulation and guidance documents. Another district-level research need includes comparing SEA RTI identification methods to actual practice. For example, the state of Maryland follows federal language and allows for RTI, severe discrepancy, or PSW methods. However, are there districts in Maryland that have adopted RTI as the identification method in the majority of their schools? What percentage of cases use severe discrepancy to make a determination of eligibility? Answers to questions like these can inform the extent to which SEA regulations and guidance are being practiced at the local level. Ultimately, the goal of research in this field is to improve student outcomes and ensure equitable identification practices. Therefore, it will be crucial for future research to be conducted that connects state and local practices to student outcomes.

Implications for Practice

Both practitioners and policymakers can benefit from the results of this current research. School psychologists, special education specialists, administrators, and other school personnel involved in special education determination should be aware of their SEA's current regulations and guidelines as it pertains to SLD and RTI. Understanding the national landscape of SEA's SLD and RTI regulations and guidance provides special education professionals with a baseline from which to reflect on how their own SEA's regulations and guidelines may or may not follow best practices. For example, a school psychologist in an SEA with outdated practices could use the information in this current study to advocate for change. Rogers et al. (2020) found that one of school psychology advocates' biggest success was in the field of legislation and policy. These advocates were able to take their specific knowledge of issues facing school psychology and

become involved in the policy process. Although intimidating, that study highlights the importance and implications that policy advocacy can have on the field.

The results of the current study are particularly important for school administrators' role in the field of policy change. Fowler (2013) asserts that this this population can "play a major a major role in the development of rules and regulations" (p. 17) as well as the implementation of new policy. Fowler (2013) gives examples of how administration's role can be seen: through activities such as recommending policy revisions or developing manuals for staff. If a district or school administrator understands the extent to which their SEA is following (or not following) best practices for SLD identification, they have the capacity to influence both state and federal policy (Crosby & Bryson, 2005).

Lastly, policymakers across the country, both at the state and federal level, should be aware of how their practices compare to others and best practices. Given that these are the individuals who update and create regulations, they will benefit from knowing current nation-wide SLD and RTI regulations. Actors in policy change that have direct influence on education policy at the state level include governors, the legislature and their staff, state boards of education, chief state school officers, judges, local boards of education, superintendents, and education interest groups (i.e., unions; Fowler, 2013). This non-exhaustive list of individuals and groups all play a part in the policy process and can benefit from the results of the current study. Lastly, regulation and guidance documents should be driven by research and best practices; but the extent to which some SEAs are following research, is currently limited. Policymakers, both federal and SEA, should be abreast of best practices regarding SLD identification and RTI.

Conclusion

The purpose of this study was to examine and compare SEAs' regulation and guideline documents as they pertain to SLD and RTI in the United States. Results indicated that SLD and RTI regulations and guidelines have changed considerably since the last reviews (Hauerwas et al., 2013; Maki et al., 2015). The definitions of SLD provided in regulation documents varied between SEAs, but the majority adopted the federal definition with no changes. The most recent research of Hauerwas et al. (2013) served as a baseline for analyzing when SEA documents were last updated; three-quarters of collected regulation and guidance documents have either been updated or added since the Hauerwas et al. collection date of 2011. Analysis of SLD regulation documents indicated that approximately one quarter of SEAs require the sole use of RTI for SLD identification. Lastly, both regulation and guidance documents were analyzed for RTI best practices; language regarding progress monitoring was present in the vast majority of SEAs documents. This current research will provide SEA policymakers across the country with critical SLD and RTI information that can inform decision-making. The ultimate goal of research in the fields of education and school-psychology is to improve student outcomes and ensure equitable identification practices; this current research hopes contribute to that goal.

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