CREATING CONNECTIONS: INVESTIGATING THE USE OF
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DEDICATION

For my parents, Johnnie and Sydney Broyles, thank you for your
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ABSTRACT

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The purpose of this study was to identify how recommendations provided by
educational diagnosticians in a student's full and individual evaluation are used by
teachers to effectively promote and provide specialized instruction. This study also
investigated how to communicate the recommendations to teachers most effectively. An
exploratory and descriptive, non-experimental design study was conducted, and data were
gathered from respondents using a researcher-designed survey. Respondents included
general and special education teachers instructing students at 10 junior high campuses
within a metropolitan school district in North Central Texas. Responses to survey
questions were analyzed using both frequency distributions and descriptive statistics.
Overall, two major themes emerged from the study. First, respondents indicated a need
for the information found in the instructional recommendations in a full and individual
evaluation and reported accessing and utilizing this information to enhance classroom
instruction. Second, the communication of this information can be improved, and special
education teachers need to be involved in the transmission of this information in some
way. Recommendations and limitations are also discussed.

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CHAPTER I

INTRODUCTION

Gap Between Theory and Practice

Research has identified the need for educators to engage in communication,

collaboration, and connections across departmental lines to ensure the best outcomes for

students and to address the documented gap between theory and practice (Haywood,

2012; Shapiro & Kratochwill, 2000). This gap in school settings was documented as early

as the 1970s (Seaton et al., 1974) and became prominent in educational research in the

1980s (Darling-Hammond & Baratz-Snowden, 2007; Ford 2018; Larabee, 1992; Soder,

1986). The importance of collaboration and the impact on positive student and teaching

outcomes was also consistently noted (Darling-Hammond & Baratz-Snowden, 2007;

Draper, 2019; Haywood, 2012; Shapiro & Kratochwill, 2000).

Research shows that collaboration among educational professionals impacts the

improvements in student success and outcomes (Draper, 2019; Goddard et al., 2007).

Generally, students receiving special education services interact with a high number of

teachers, specialists, and therapists throughout the day, which allows opportunities for

collaboration essential for student success. In addition to the positive outcomes that

collaboration can create, Vangrieken et al. (2015) identified that teacher modeling and

implementation of collaborative skills and processes increased job satisfaction and played

a role in developing collaborative and cooperative skills in students.

However, educational professionals face barriers in collaboration due to limited

amounts of time, high amounts of stress and work demands, and instances of work

performed in isolation (Draper, 2019). Limited resources combined with an excess of tasks that collaboration entails have been identified as barriers impacting effective collaboration (Jao & McDougall, 2016). Teacher attitudes and beliefs towards collaboration, such as openness or a willingness to engage in change, create an additional challenge to overcome (Zimmerman, 2006).

Another gap between theory and classroom practice was associated with consistent and reliable implementation of classroom strategies, interventions, and evidence-based practices (Haydon et al., 2010; Jenkins et al., 2015; Pinto et al., 2015). Tools, such as collaboration and classroom interventions, have benefitted teachers and students; however, the implementation of these are still problematic. For example, Finnerty et al. (2019) examined current educational research and discussed the lack of reliability and collaboration associated with the provision of interventions across educational settings and the negative impact it has created. Another problem identified in research on the effective practice of instructional strategies, Ford (2018) noted that we cannot be certain classroom interventions have been implemented, even when those interventions have been provided or modeled for teachers.

The Need for and Use of Assessment Data

In their research on the prevalence of effective instructional practices, Burns and Ysseldyke (2009) identified the importance of obtaining feedback directly from educators on their classroom practices as a way to begin to address the gap between theory and practice. Downing and Peckham-Hardin (2007) also reflected this concept in survey research. They found that 70% of both special education and general education teachers

working in the field of education indicated a need for more specific and effective classroom interventions tailored to individualized student needs. In addition, they indicated that although the abundance of educational research on classroom interventions and strategies available, teachers indicated that additional classroom and instructional support was needed.

One way that researchers can support teachers in this identified area of need is through the development of specific, individualized interventions based on assessment data. As Farley-Ripple et al. (2019) identified, assessment data is not only extremely informative, but widely available and easily obtainable. However, these factors can also become problematic. The selection, interpretation, and implementation of academic interventions based on assessment data continues to be challenging and inconsistent, and teachers have indicated a need for more training and professional development in working with students with disabilities (Sloik, 2018; Wilson, 2014).

An approach developed to address this area of need was teacher training on specific classroom systems to use (Pameijer, 2017). Pameijer (2017) proposed a model to utilize in the classroom to develop interventions directly from assessment information, called Assessment for Intervention. The data showed positive results after implementation of this model in classrooms. In a survey of 104 general education teachers trained in the model, 90% of teachers reported an increase in their knowledge of how to implement interventions that would positively impact student outcomes.

Similarly, Ward et al. (2017) conducted a study on applying assessment to classroom practice using a workshop model with current classroom teachers. Participants

attended 16 workshop sessions that focused on implementing whole-group and individualized assessments and then using that data to form and implement specific interventions. The results indicated that from this direct instruction, teachers successfully learned how to utilize formal and informal assessment data to make better decisions about classroom instruction and interventions (Ward et al., 2017).

The Need for Formal Evaluation Data

Some researchers involved in research related to addressing the gap between theory and practice have also demonstrated the importance of using formal evaluation data to support connections between assessment and instruction. Wieman (2014) suggested a diagnostic approach on improving classroom instruction with the use of data. The approach is to utilize and analyze data; teachers collect data on student performance, determine how the data compare to the desired outcome, and then use that determination to create instructional interventions. This approach individualizes interventions that teachers are able to implement.

Tiekstra et al. (2017) described how results of intelligence and formal cognitive assessments shaped educators' beliefs and classroom practices. They indicated that interventions developed from this information was the best way to bridge the gap between theory and practice. The need for this type of approach to classroom intervention was echoed by other educational professionals in this survey research study. Most teachers surveyed reported that results of formal evaluations were essential to making educational practice recommendations.

Formal cognitive and academic achievement evaluations that have provided this type of referenced data, classroom recommendations, and interventions have been completed by assessment personnel, which in some states included educational diagnosticians (Rueter & Simpson, 2012). The primary role of educational diagnosticians in a school setting has been to determine student-specific strengths and weaknesses and to make recommendations about improving instruction for those students in the classroom (Zweback & Mortenson, 2002). It is important to further examine how these interventions based on formal assessment data are developed and communicated.

Educational Diagnosticians and the Full and Individual Evaluation

Educational Diagnosticians

Diagnostician Certification in the State of Texas

In the state of Texas, educational diagnosticians have been responsible for conducting formal evaluations of students to determine if eligibility criteria for a disability is met. Certain other states, such as New Mexico, have also employed educational diagnosticians to facilitate and manage special education services within school districts. Requirements for educational diagnostician certification vary, but educational diagnosticians in the state of Texas are required to have a minimum of 3 years of teaching experience in addition to a master's degree from an accredited institution according to guidelines established by the Texas Education Agency (Texas Education Agency, 2017). These guidelines placed educational diagnosticians in a favorable position to make recommendations related to instruction and instructional

strategies when implementing special education services for students (Guerra &

Maxwell, 2015).

Mandated State Standards

The state of Texas has further identified standards that educational diagnosticians

are expected to meet, model, and maintain in order to assume the role of an educational

diagnostician in a school setting (Texas Education Agency, 2017). Individuals employed

as diagnosticians have been expected to understand and apply knowledge of the purpose,

philosophy, and legal foundations of evaluation and special education (Texas Education

Agency, 2017). This has allowed diagnosticians to effectively convey the purpose of

special education evaluations and their relationship to special education services (Collier

et al., 2020).

Determining Student Eligibility for Special Education Services

Educational diagnosticians are also expected to have knowledge of special

education eligibility criteria and the unique procedures for the identification of students

with disabilities (De Zell Hall, 2014; Rueter et al., 2016). This has required

diagnosticians to use various types of assessment procedures and tools to appropriately

identify students with disabilities and to establish an educational need for special

education services (Schultz & Stephens, 2015). To determine if a student meets the

federal and state criteria to receive special education services, educational diagnosticians

have typically administered formal cognitive and achievement assessments (Robinson et

al., 2002). In their research on assessment personnel, Rueter and Simpson (2012)

described how the results of and data from these assessments were compiled into a

detailed, individualized report called the full and individual evaluation (FIE). Strength areas and deficit areas of the student are extensively detailed and explained within the FIE document and the data have then been used to help determine whether a student meets the eligibility criteria of a disability (Chappell et al., 2009; Flanagan et al., 2013; Gartlan & Strosnider, 2011; Yell et al., 2003).

The Full and Individual Evaluation

The Importance of the FIE

Pierangelo and Giuliani (2008) documented how the FIE includes scaled scores which are converted into standard scores on a variety of cognitive measures and academic abilities. Data from the FIE were then used to show how a student performs compared to other students of the same age and grade as well as relative, or individual, strengths and weaknesses (Pierangelo & Giuliani, 2008). Scores are typically reported within the context of below average, average, or above average. As strengths and deficit areas become apparent, research has documented how diagnosticians make recommendations and suggest specific, research-based interventions and accommodations for classroom teachers to use in the instruction of the students (Gomez et al., 2020; Lynch et al., 2012).

The FIE in the Admission, Review, and Dismissal Process

Upon completion of the report, the FIE is reviewed and discussed at an initial Admission, Review, and Dismissal meeting. The 'ARD' process, also known as the Admission, Review, and Dismissal process, is a procedure through which special education services are initiated, reviewed, or dismissed for a student (Texas Education

Agency, 2021). The ARD committee has historically been comprised of parents, general

education and special education teachers, administrators, educational diagnosticians, and

other support staff depending on the needs of the student (Pierangelo & Giuliani, 2008).

The state of Texas uses the term ARD to refer to these processes; other states utilize

different terminology to refer to similar procedures.

The Texas Education Agency (2021) reported an initial ARD meeting is held to

determine if special education services are appropriate. Guerra et al. (2017) described

how the evaluation report is reviewed at these meeting and documents whether eligibility

for special education services are met, and if appropriate, what those services should look

like or entail. The FIE plays a critical role in these meetings, as the assessment itself and

data contained within it should guide the development of the educational plan that

documents the specialized services and interventions to be provided (Fiorello et al., 2006;

Macy et al., 2019).

Statement of the Problem

Limited research exists in the area of how, or even if, data on student specific

strengths and weaknesses and the resulting instructional recommendations from an FIE

developed by educational diagnosticians are examined or implemented by classroom

teachers. Because information from a student's full and individual evaluation contains

individualized ways to address learning needs, connections should appear between

assessment recommendations, specialized instruction, and effective classroom practices.

As identified above, connecting research to practice, or in the case of this research study,

implementing effective classroom practices developed from FIE data, has been shown to

be an area of concern. One challenge in establishing the connection between assessment and instruction lies in identifying how teachers access, utilize, and receive the data for instruction.

Purpose of the Study

Thus, a rationale exists for determining how the recommendations provided by educational diagnosticians in a full and individual evaluation are used by teachers to effectively promote and provide specialized instruction. Investigation is also needed on how educational diagnosticians could communicate the recommendations to teachers most effectively. The goal of this research study is to expand on these notions. First, the researcher investigated teachers' access and usage of information located in a student's full and individual evaluation. Second, the researcher obtained teacher feedback on proposed tools and training that can connect them with student evaluation information to improve classroom practice. Specifically, the research questions addressed are as follows:

a.   How are teachers accessing the instructional recommendations provided by educational diagnosticians and located in a student's full and individual evaluation?

b.   How are teachers utilizing recommendations designed by educational diagnosticians to address student specific deficits that are identified and discussed in the full and individual evaluation?

c.   What is an effective way for educational diagnosticians to communicate information from the full and individual evaluation to teachers so it can be useful in planning specialized instruction?

CHAPTER II

LITERATURE REVIEW

Special education has been defined as "instruction that is specially designed to meet the unique needs of students who have disabilities" (Pierangelo & Giuliani, 2008, p. 1). The types of special education services provided occur on a continuum, ranging from the least to most restrictive environments—services may occur in a general education classroom, considered the least restrictive environment, or in specialized, contained classrooms and schools, considered the most restrictive setting (Hallahan & Kauffman, 2006). Depending on the area of need and nature of the disability, special education services and the type of academic instruction aligned with those services can vary.

Swanson and Vaughn (2010) identified the most common settings in which special education services are provided: the general education classroom, a general education classroom using a co-teach model, a special education resource room, and a special education self-contained classroom. Special education services provided must adhere to the concept of a free and appropriate public education for students with disabilities, a consistent theme first identified in legislation in the 1970s with the passing of the Education for All Handicapped Children Act and further supported in more recent legislation through the Individuals with Disabilities Education Act (IDEA) in 1990 and 2004 (Lemons et al., 2018).

In order for students to receive special education services, eligibility for those services must be established. Students are identified as eligible to receive special education services when they meet the criteria of a disability condition, as outlined by the

federal government, and when the effects of that disability condition are shown to affect or impact their educational performance and progress (Friend & Bursuck, 2012; Kauffman et al., 2017; Pierangelo & Giuliani, 2006; Yell, 2019; Yell et al., 2020). Currently, the guidelines documented in the reauthorization of IDEA in 2004 state that special education services can be provided to students between the ages of 3 and 21 who meet eligibility criteria in one or more of 13 disability types, including: Specific Learning Disability, Speech or Language Impairment, Intellectual Disability, Emotional Disturbance, Multiple Disabilities, Hearing Impairment, Orthopedic Impairment, Other Health Impairment, Autism, Visual Impairment, Traumatic Brain Injury, and Deaf-Blindness (Pierangelo & Giuliani, 2006).

Over the past several decades, many researchers described how identification of a disability occurs through the process of a special education evaluation or assessment for special education services (Bradley et al., 2002; Flanagan & Harrison, 2005; Francis et al., 2005; Gearheart & Gearheart, 1990; Overton, 2009; Taylor, 2019). The results of this assessment are contained within the FIE document. Research has shown how the FIE process collects, analyses, and utilizes data and observations needed to document the condition of a disability and to make recommendations about needed services and interventions (Chappell et al., 2009; Flanagan et al., 2013; Gartlan & Strosnider, 2011; Rueter & Kinnison, 2009; Simpson & Bakken, 2011; Stoiber & Vanderwood, 2008).

The FIE documents the results and recommendations of an evaluation for special education services and is completed initially to determine the presence of a disability and every three years after to determine or document the continuation of a disability (de la

Garza, 2015). These results are reviewed with relevant educational staff and families to make important decisions about the future educational plan for a student based on documentation of a disability (Garriott et al., 2000). Specific educational plans and services based on findings from an FIE are considered and documented in an Individualized Educational Plan (IEP) which contains identified educational strengths and weaknesses, present levels of academic and functional performance, educational goals and objectives, classroom accommodations and modifications, services to be provided, and level of placement or educational setting (Drasgow et al., 2001).

The IEP not only reflects data obtained during the assessment process, but effectively serves as the overall design for how special education services will be provided to a student and outlines the responsibilities of local education agencies to provide those services (Huefner, 2020). Thus, the assessment process and data collected during the process essentially drives the determination of services (Fiorello et al., 2006; Macy et al., 2019). IDEA also outlined the need for parental involvement, participation, and understanding when considering eligibility for a disability based on an FIE and determining needed special education services (Kalyanpur et al., 2000; Yell et al., 2003).

Pierangelo and Giuliani (2006) outlined the purposes of the assessment process documented through the production of the FIE. First, the process effectively identifies students who exhibit difficulties with learning or a lack of educational progress. Second, it determines eligibility and identifies a related disability condition. Third, it provides detailed information about student needs to create an individualized educational plan to address identified educational needs. Fourth, it provides evidence-based

recommendations related to instructional services and interventions a student needs to be successful. Finally, it establishes criteria to monitor and evaluate student progress. This focus benefits students with disabilities by identifying their unique strengths and weaknesses and how special education services can most appropriately address them.

The Impact of the Individuals With Disabilities Education Act

The Effects Observed in Special Education Services and the Assessment Process

This understanding of the purpose, process, and benefits of the nature of special education evaluations and assessments is associated with and results from the somewhat recent changes in federal legislation on special education in general (Slater, 2018; Turnbull, 2007; Zirkel, 2020). With the implementation of the IDEA in 2004, the federal government legally mandated improvements to the special education evaluation process, revised eligibility categories of disability conditions, and described effective special education services (Friend & Bursuck, 2012). The intent of this legislation was "to ensure that all students with disabilities have available to them a free, appropriate public education that emphasizes special education and related services designed to meet their unique needs", a consideration that the FIE was designed to address (IDEA, 300.1).

Another positive outcome that resulted from the passage of IDEA was the advancement of increasing access to general education settings for students with disabilities and the benefits associated with access of that setting (Agran et al., 2020; Giangreco & Suter, 2015; Giangreco, 2020; Hehir, 2006; La Salle et al., 2013). Inclusive education and participation in general education settings for students with disabilities has been an ongoing area of research that highlights the concept of a free and appropriate

public education, identified in special education legislation (Kurth et al., 2020). Documented research in this area shows that students with disabilities demonstrate learning and academic progress, independent of the nature of the severity of a disability, when receiving purposeful instruction in general education environments (Browder et al., 2006; Cole et al., 2019; Dessemontet et al., 2012; Rojewski et al., 2015; Spooner et al., 2018).

This rationale for inclusive education has also reinforced the need to individualize interventions for students with disabilities in general education settings (Tomlinson, 2006). Despite the progress demonstrated from inclusive educational practices, a survey study conducted by Horne et al. (2008) documented continued educator concerns related to the provision of inclusive methods, the most prominent concern documenting the lack of teacher training in supporting students with disabilities. This finding was supported by findings in other research that documented a need for additional teacher training in this area (Frieberg, 2002; McNaughton et al., 2001; Whitaker, 2001). Friend (2011) also discovered a teacher-reported need for support in the provision of inclusive education from special education personnel.

As such, the IDEA legislation brought with it many changes to the provision of special education services to students with disabilities. Specifically, in the area of assessment and evaluation, these changes included strengthening the assessment and evaluation processes and procedures utilized in the determination of a disability (National Joint Committee on Learning Disabilities, 2010). Research documents that within IDEA, consideration of a disability must be due to factors other than a lack of adequate

instruction, moving away from previous models of evaluation for eligibility that relied on discrepancies between cognitive ability and academic achievement, and resulting in a more reliable analysis (Fletcher et al., 2007; Harrison & Thomas, 2014; Maki et al., 2017; Schroeder et al., 2017).

Response to Intervention: Benefits and Limitations

In addition, IDEA created a provision for the identification of disabilities through the analysis of student responses to research-based interventions, otherwise known as the Response to Intervention (RTI) model of assessment (IDEA, 300.1). Hayes et al. (2018) documented the specific approach of the RTI model as a tiered systems approach that provides detailed information on various levels of student learning and achievement, making the collected data extremely valuable in the analysis of student performance. Some school districts have implemented the RTI model as an assessment methodology while others have used it to address concerns related to accountability of student performance (Balu et al., 2015). Ultimately, the RTI model has been generally defined as a system that provides targeted interventions to address academic deficits while monitoring and analyzing student responses to the interventions (Grapin et al., 2019; Stephens et al., 2012).

A large amount of research has been conducted on the effectiveness of implementing the RTI model in schools and the positive impact it has on academic outcomes (Fuchs & Fuchs, 2006; Fuchs & Vaughn, 2012; Greenwood et al., 2018; O'Connor et al., 2005; Vellutino et al., 2008). Other research has documented the improvement of specific academic skills through the implementation of RTI. For

example, Vaughn et al. (2009) documented how implementation of the RTI process improved reading skills, specifically in reading comprehension. Additional research supports the improvements achieved in students' reading abilities through RTI implementation (Denton et al., 2006; McMaster et al., 2005).

Similar academic gains through RTI services have also been demonstrated in research on mathematics and other academic contents (Clements & Sarama, 2007; Gresham & Little, 2012; Sophian, 2004), making the findings of RTI as an effective tool more reliable. An outcome of research conducted in this area showed that academic gains are achievable when using the RTI process as an intervention method and that often, academic deficits are addressed and improved before they significantly impact a student's educational progress (Heckman & Masterov, 2005; Vaughn & Fuchs, 2003).

The provisions of IDEA and the RTI model both intended to create supports for the academic growth of students with disabilities, but limitations to using the RTI methodology as a replacement for the identification of a disability have also been documented (Arden et al., 2017; Balu et al., 2015; Machek & Nelson, 2010; Osher, 2017). Machek and Nelson (2010) documented how RTI has not been a standalone methodology to document the presence of a disability and identified the usefulness of and need for the collection and analysis of cognitive factors and data to consider in the determination of a disability. Osher (2017) furthered this sentiment and identified a discrepancy related to the lack of analysis on cognitive abilities in RTI and described how the legal guidelines that support the RTI process and the special education evaluation process were designed independently of each other, making a cohesive model difficult to

develop. Hale et al. (2010) also encouraged the implementation of any RTI model as a method to prevent the progression of academic deficits and intervene accordingly, as opposed to its usage as a diagnostic method.

While RTI data has helped to inform educational professionals of student deficit areas to target, special education evaluations officially document a disability condition and provide recommendations to facilitate access to appropriate curriculum, instruction, and specialized services (Maki et al., 2015; McGrew & Wendling, 2010). Further, special education evaluations incorporate analysis of cognitive processing and functioning, allowing for a more thorough examination and determination of a student's true and individualized strengths and needs related to learning and educational progress (Fuchs & Deshler, 2007; Thurman & Fiorello, 2008). Researchers have continued to observe and report how assessment that includes analysis of cognitive functioning is crucial to identifying effective interventions that address areas of deficit (Flanagan et al., 2006; Wodrich et al., 2006) and in implementing those interventions in a way that will positively impact educational practice (Jimerson et al., 2007).

The Usage of Assessment Data

An Overview

The application, usage, and implementation of assessment data which these recommendations and instructional interventions develop from have a long history of analysis in the field of educational research in terms of benefits (Doabler et al., 2014; Haydon et al., 2010; Jenkins et al., 2015; Lindstrom, 2007; Pinto et al., 2015), challenges (Ford 2018; Pugach & Peck, 2016; Sloik, 2018; Wieman, 2014; Wilson, 2014), and

importance (Macy, 2019; Rueter & Simpson, 2012; Staman et al., 2017). Before considering the specific roles of the special education evaluation and the FIE in the application of classroom interventions, it is necessary to review why assessment data is needed and how it supports the development of positive educator practices and student outcomes, as well as the continued concerns evidenced through research.

Ploger et al. (2018) acknowledged this need and identified a disconnect between the acquisition and application of effective teaching practices, knowledge, and skills. Research has sought to address this identified gap between theory and practice in classroom instruction to improve educational outcomes for students (Darling-Hammond & Baratz-Snowden, 2007; Ford, 2018; Tracey & Morrow, 2006; Yang et al., 2020). Some research has been conducted to identify increasing connections between research and practice on effective practices in specific content areas, such as math, science, writing, and reading (Brozo, 2010; Cohen & Waite-Stupiansky, 2013; Shanahan & Shanahan, 2008; Slavin et al., 2014; Wright et al., 2016).

Other research has documented the need to address this disconnect through preservice teacher training, as teachers first entering the field of education have limited exposure to implementing effective research findings on content instruction and differentiation into classroom practice (Darling-Hammond & Bransford, 2005; Forlin et al., 2009; Laprairie et al., 2010; Rock & Levin, 2002; Ross et al., 1999). In addition to an examination of educational practices, one area that needs additional focus is in the utilization of outcomes and results from student assessment data to build, strengthen, and

support connections between assessment and instruction (Bosma & Resing, 2008; Elliot, 2003; Lebeer et al., 2011; Shapiro & Kratochwill, 2000; Tiekstra et al., 2016).

In their examination of early childhood assessment, Dennis et al. (2013) echoed these findings. Dennis et al. (2013) reported a current, critical importance to include results from assessment and evaluation in planning for specific instructional strategies that are easily implementable in the classroom setting. In survey research completed by Tiekstra et al. (2017), the findings revealed that the majority of both special education and general education teachers reported that results of formal evaluations were essential to making educational practice recommendations.

Additional research has also shown how assessment data has shaped positive teaching practices and student outcomes (Cho et al., 2011; Good & Lavigne, 2017; Green et al, 2020; Kretlow et al., 2011; Kurth & Keegan, 2014; Sherman et al, 2008; Todd et al., 2017). Some research has focused on the rationales for implementing the use of assessment data to develop classroom interventions. For example, McKinney et al. (2013) studied effective reading supports implemented in a general education setting for students with autism who were receiving instruction in that setting. The researchers identified that because more students with disabilities were now receiving instruction in general education settings, a rationale existed for providing teachers with strategies and supports that would not only allow them to deliver effective teaching, but also to address the unique and specific needs of students with disabilities (McKinney et al., 2013).

Similarly, research completed by Pameijer (2017) illustrated that when teachers received training on using a framework to apply classroom interventions based on

assessment results, 90% of participating teachers reported that the use of the model provided them with a "better understanding of the student" and 65% of teachers reported that they "could apply the recommendations in their classroom" (p. 76). In addition, Kibby (2009) documented a process called *diagnostic teaching* and explained the need for teacher training in developing individualized interventions based on identified student skill deficits, specifically in the area of reading.

Benefits Associated With Assessment Data

Other research in the area of assessment data has documented specific academic gains that students experienced when interventions based on assessment data were implemented (Baker et al., 2002; Cook & Cook, 2013; Gersten et al., 2009; Jung et al., 2018; Stecker et al., 2005). An exemplary study conducted in this area incorporating multiple components of previously identified research, Ward et al. (2017) investigated the application of assessment data in classroom practice. Ward et al. (2017) conducted 16 workshop training sessions in which 19 school representatives from 14 primary schools participated. The half-day workshops included presentations on current theory and research paired with activities and included topics such as reading and spelling, numeracy, language and vocabulary, instructional principles, behavior, and specific assessment and monitoring techniques for lower achievers. Qualitative results showed that participants reported increased knowledge and understanding of research and the need to incorporate findings into classroom teaching and practice (Ward et al., 2017). Quantitative classroom data reported by one of the participating teachers with a class of 25 primary students showed increases in student reading levels (Ward et al., 2017). At the

beginning of the workshop, the mean student reading age was 6 years, 1 month. Post-test

data showed a mean student reading age of 7 years, 7 months, indicating an average

growth of 18 months in eight calendar months.

Other studies have also shown the positive impact that evidence-based practices,

which are frequently proposed as instructional recommendations in students' full and

individual evaluations, and the use of these practices in classrooms has had (Common et

al, 2020; Cook et al., 2020; Coyne et al., 2011; Lammert & Holyoke, 2020; Landrum &

Tankersley, 2004; Urbani, 2020). Raines (2008) defined the concept of an evidence-based

practice approach as a process that involves creating answerable questions, investigating

the evidence, appraising the evidence, adapting and applying the evidence, and evaluating

the results—a resulting *evidence-based practice* then gets disseminated through research,

and in the context of education, implemented in the classroom.

Specific research in this area, such as research completed by Haydon et al. (2010)

and Jenkins et al. (2015), documented how the usage of evidence-based practices in

classrooms has led to increases in academic achievement and desired student behavior.

Doabler et al. (2014) conducted a study on teachers' implementation of evidence-based

practices in math instruction at the elementary level and found that the quality of

instruction in classrooms using the evidence-based instruction was rated higher by

observers than classrooms using the traditional, state standard curriculum and practices.

Barriers and Challenges Associated With Assessment Data

Despite the previously identified research that documents the need for and the

effectiveness and usefulness of applying assessment data and evidence-based practices in

the classroom, barriers to implementation were also discovered (Ajuwon et al., 2012; Draper, 2019; Finnerty et al., 2019; McKenzie, 2009; Paige, 2011; Young, 2011). Wilson (2014) conducted a survey of general education teachers and found that teachers reported a lack of understanding about how to best support students with disabilities in their classrooms, having uncertainty about their expectations as a teacher, and needing additional professional development to support working with students with disabilities.

Sloik (2018) documented similar findings related to a lack of teacher training in working with students with disabilities and the negative impact it has in classrooms and on instruction. This need was especially apparent among preservice teachers (Forlin et al., 2009; Harvey et al., 2010; Laprarie et al., 2010). Fish (2009) found that additional knowledge was needed in the legal aspects of special education to ensure the special education services and interventions provided to students were appropriate and understood by parents and educational staff involved in the determination of services.

Another challenge in this area includes teachers' varied ability to analyze student educational data and create specific and individualized goals to target academic skill deficits (Bambrick-Santoyo, 2010; Boudett et al., 2005; Kelly & Lesh, 2000). Wieman (2014) added that based on the abundance of student data that is now available in school settings, selecting student data to develop initial interventions from is even more difficult, and that these challenges have been further impacted by the amount of communication or interaction between special education and general education staff members. For example, Pugach and Peck (2016) found that although research has documented a need for communication and collaboration between special education and general education staff

members, developing and maintaining these interactions has remained a considerable challenge. Further, Ford (2018) identified the limited relationships that exist between teachers and researchers.

The Need for Assessment Data

Although challenges persist in the application, usage, and implementation of assessment data, the development of individualized interventions from that data remain important to address the academic needs of students and promote their educational success (Pierangelo & Giuliani, 2008). The analysis of cognitive abilities and the role it plays in predicting academic outcomes was documented as early as the 1990s, speaking to the importance and need for the utilization of these data sources (Jensen, 1998; Neisser et al., 1996). More recently, Staman et al. (2017) discussed the importance of educators' knowledge of their students' deficits and the impact that the provision of individualized interventions in those areas could have on student learning and success. Macy et al. (2019) identified a key source of data to use when considering these individualized goals and interventions to use in classroom practice—data from the special education evaluation.

Currently, limited research exists in the area of utilizing recommendations from an FIE to inform classroom practice. Clearly, additional research in this area is needed, as specific cognitive and academic deficits that can inform practical and effective classroom interventions can be discovered during special education evaluations (Dehn, 2006; Hale, 2006).This is echoed in research conducted by Fiorello et al. (2006), which found that cognitive assessments and data from those assessments was relevant and meaningful in

the consideration of interventions to address student specific deficits and need to be used by knowledgeable professionals more efficiently. Prior to investigating this approach to implementing interventions, it is important to examine the nature, creation, and purpose of the FIE.

<p align="center">**The Role of the FIE in the Usage of Assessment Data**</p>

Educational Diagnosticians

In the state of Texas, where the current study was conducted, educational diagnosticians have played a large role in the determination of eligibility for special education services (Guerra et al., 2017; Zweback & Mortenson, 2002). Educational diagnosticians employ a variety of methods and practices to assess and report functioning in cognitive, academic, behavioral, and socialization aspects and describe how the results of those assessments connect to classroom instructions and interventions to both teachers and parents (Collier et al., 2020). In addition to the determination of eligibility through the identification of a disability condition, educational diagnosticians are also expected to support teachers in their instruction of students with disabilities (Guerra & Maxwell, 2015).

This level of expertise takes specialized training, and guidelines were adopted by the Texas Education Agency that describe standards educational diagnosticians are expected to meet, model, and maintain in their practice, one of which being the ability to understand and apply knowledge of the purpose, philosophy, and legal foundations of specifically the evaluation process and special education in general (Texas Education Agency, 2017). Educational diagnosticians are required to possess a minimum of 3 years

of teaching experience and a master's degree in special education (Texas Education Diagnostician's Association, 2014). After the successful completion of state-based certification assessments, in addition to the previously stated criteria, individuals have met the needed requirements to provide services as an educational diagnostician.

Purpose and Development of the FIE

Educational diagnosticians have been responsible for a multitude of tasks during an academic year, but the main focus has been on determining student eligibility for special education through the completion of an FIE (De Zell Hall, 2014; Mastropieri & Scrugg, 2005; Rueter et al., 2016). The purpose of the FIE has been to identify the presence of a disability condition through the collection and analysis of student data (Rueter & Simpson, 2012) and to construct, interpret, and communicate cognitive and academic profiles from the collected data (Robinson et al., 2002). The data obtained from the assessment process and reported in the FIE is also required to comply with many federal and state criteria and procedures (Fielding, 2004).

Despite the primary focus of the FIE on eligibility, the FIE also documents recommendations regarding needed interventions that support the student in making educational progress in a classroom setting (Lynch et al., 2012). Considering the amount of experience and specialized training educational diagnosticians are required to have, they are well positioned to address student deficits and needs through their recommendations and positively impact classroom practice (Gomez et al., 2020). In addition, analysis of cognitive processes and abilities is becoming increasingly complex

and requires specialized training and experience to effectively reach a determination (Shaw, 2004).

The creation of the FIE through the evaluation process has employed varied methodologies, processes, and procedures, adding to the complexity and detail found within an FIE (Gartland & Strosnider, 2011; Sattler & Simpson, 2014; Schultz et al., 2012). Schultz and Stephens (2015) identified five different and current approaches to determine the presence of a Specific Learning Disability alone. Research completed by Lynch et al. (2012) also documented multiple approaches that have been used when approaching the evaluation process, and as a result of their research, developed an evaluation planning guide designed to assist evaluation specialists in approaching assessment, adding to the notion the amount of thoroughness required to document the presence of a disability condition, regardless of the nature of disability. Research also showed that educational diagnosticians spend an increasingly significant amount of time testing and assessing students because of the abundance of available data and testing instruments, thereby increasing the potential quality and reliability of the results (Stephens & Naglieri, 2015).

The FIE contains results from a combination of norm-referenced assessments designed to measure areas of intellectual and academic achievement (Guerra et al., 2017). Kwiatek and Schultz (2014) discussed how this type of data and decisions made based upon this data was further strengthened by using informal data, such as classroom observations, data related to cumulative school records, and data related to the area of concern, to support it. When reviewed thoroughly, research has documented how this

data is used to demonstrate how a student was performing compared to other students of the same age or grade in addition to looking at relative, or individual, strengths and weaknesses (Elliot & Roach, 2017; Fletcher et al., 2004; Fuchs et al., 2007; Klein-Ezel & Ezel, 2004; Moore-Brown et al., 2006). Thus, a lot of consideration and documentation go into the development of the FIE.

Conclusion

In addition to using this data to determine the presence of a disability condition, educational diagnosticians have also used the evaluation process and the FIE to generate recommendations to support students receiving special education services and to inform educators on these needs (Chappell et al., 2009; Maki & Adams, 2020; Nelson & Machek, 2007; Salvia et al., 2012). Many of these recommendations have been used to determine accommodations or special education services, supports, and interventions a student may need to make progress in the educational setting and support a link between assessment and instruction (Darling-Hammond & Baratz-Snowden, 2007; Haywood, 2012; Pameijer, 2017; Ploger et al., 2018). In a review of appropriate and effective accommodations for students with learning disabilities, Lindstrom (2007) recommended that data obtained from diagnostic evaluations should be directly reflected in the planning of student specific interventions. In addition, Pinto et al. (2015) further identified the need to individualize and make recommendations based on the needs of individual students, as the effectiveness of instructional strategies when implemented across larger groups of students has significantly differed.

However, in the development of the current study, limited research was obtained that specifically identified how recommendations from an FIE were accessed or utilized by classroom teachers to effectively provide specialized and individualized instruction. This confirmed the researcher's decision to study the impact, if any, the instructional strategies and recommendations contained within an FIE have on teaching practices and assisted in forming the basis for this exploratory study.

CHAPTER III

METHODOLOGY

The purpose of this study was to analyze how instructional strategies and recommendations documented within a student's full and individual evaluation were accessed and utilized by classroom teachers. Preferred communication methods for the transmission of this information were also investigated. In order to answer the research questions formulated from this research purpose, an exploratory and descriptive, non-experimental design study was conducted. Data were gathered from respondents using a researcher-designed survey. The respondent population consisted of general education and special education teachers instructing students in Grades 7 and 8 at 10 junior high campuses within a metropolitan school district in North Central Texas. Data were then analyzed with frequency reporting and descriptive statistics to document the results.

Research Design

The primary source of data for this study was data obtained from the administration of a survey. Due to the limited availability of a suitable and validated pre-existing survey tool upon review of literature related to the topic of interest, a survey tool aligned with the purpose of the study was created to answer the research questions. The final version of the administered survey (see Appendix B) contained three sections. Section 1 collected demographic information of respondents and required respondents to answer a total of seven questions on varied demographic indicators. Section 2 served as the survey introduction and required respondents to provide a rating of the perceived level of instructional services and supports that a student with a disability received in

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their classroom(s). Respondents were also asked to indicate the student's primary disability category. Two questions comprised this section. Section 3 required respondents to indicate their level of agreement with a variety of statements on accessing and utilizing instructional recommendations from a student's full and individual evaluation for special education services. There were eight total questions in this section; seven questions required a response using Likert scale ratings which ranged from Strongly Agree to Strongly Disagree. A final question in this section asked respondents to select a preferred method of communicating instructional recommendations from a list of seven possible choices with an option to provide an open-ended response.

After the survey had been initially constructed, feedback was obtained from five junior high teachers from outside of the school district in which the study occurred. Feedback was also received from two other professionals in the field of special education. The feedback was reviewed, and the survey was further modified based on the obtained feedback. The final version of the survey was designed with a low number of questions to increase the response rate and decrease the amount of time spent completing the survey. It was expected that respondents would need 10–15 minutes to complete the survey. The survey layout and questions were then finalized and prepared for administration.

Survey Administration

The participants consisted of teachers, both general education and special education teachers, who were teaching at the junior high level (7th and 8th grade) in the Arlington Independent School District, a metropolitan school district in North Central Texas. At the time of the survey, the district employed approximately 8,500 people and

served nearly 62,000 students. At the junior high level, there were approximately 8,600 students currently served. Of those, 45% were Hispanic/Latino, 20% were European American, 25% were African American, 6% were Asian American, and less than 5% were identified as other. There were 10 junior high campuses in the school district, with approximately 50–70 teachers per campus. All junior high teachers had the opportunity to respond to the survey.

The sampling methodology for the study was designed from the concept of convenience sampling (Teddlie & Yu, 2007). This methodology led to generating a sample of participants who met a sample criterion and who were willing and available to participate. Criteria for participation included being 18 years of age or older, holding a valid teacher certification, and being currently employed as a teacher for the 2018–2019 school year at one of the 10 junior high campuses in the district.

After initial permission to conduct the study and administer the survey was obtained from the Institutional Review Board of Texas Woman's University, contact was made with the research department of the Arlington Independent School District. A proposal to conduct the research at the district level was submitted and accepted. A master list of the email address for all junior high teachers at the selected campuses was then provided by the school district.

An initial email was sent to each teacher email address taken from the district provided master list. This initial email introduced and described the purpose of the research study, detailed the estimated time required to complete the survey, and then invited teachers to participate in the study. An online link was provided in the body of the

email to access the survey. Contact information for the researcher was listed if participants had questions about or needed clarification on the study or survey questions. The email also informed participants that if they decided to participate, responses were not linked to any personal or identifiable information.

After 3 days had passed from this initial email delivery, a reminder email was sent to the same email list of potential participants. The reminder email reminded them of receipt of the initial email, provided a link to access the online survey, and also detailed the estimated time required for completion. A second reminder email with the same information was sent out again after another 3 days. Reminder emails were provided to increase response rates.

The survey was administered during the third week of April in 2019 and remained open until the end of the fourth week in April for data collection. The survey was electronic and was hosted on the PsychData website. This allowed for collection and storage of survey responses and ensured a secure setting which helped to protect confidentiality and anonymity. Participants had the opportunity to complete the survey with the use of a computer or other electronic device with internet access. No identifiable information was viewed or collected during completion of the survey. At the end of the survey administration period, respondent data stored on the PsychData website were imported into the IBM SPSS Statistics software for review and analysis.

Data Analysis

The Center for Research Design and Analysis (CRDA) at Texas Woman's University was contacted once the data was collected. The CRDA provided assistance

with reviewing the data and ensuring a cleaned dataset was organized and prepared for analysis. The CRDA also provided guidance on procedures and methods for conducting the analysis and reporting and displaying observations from the data.

A total of 55 respondents started the survey. Upon review of the survey responses, nine respondents were removed from the dataset due to unfinished and incomplete surveys. Data from a total of 46 respondents were analyzed. Frequency distributions were completed for each demographic indicator and reported. The survey questions were analyzed using both frequency distributions and descriptive statistics to summarize the collected responses. This information was used to construct tables to present the findings described in Chapter IV of this study.

Limitations

Despite successful collection of data during the survey window, there were limitations that were apparent during review and analysis of the data. The total number of survey responses was small ($n = 46$), and the study was limited to one school district in one state. A cause and effect relationship was not able to be established based on the amount and type of data that was collected, making deeper analysis with more advanced statistical methods difficult. Analysis of the data only included reporting frequencies and descriptive statistics. Unfortunately, the findings did not allow for generalization to other respondent groups. The purpose of this study was exploratory in nature, and despite the limitations, the data was informative and helped to address the research questions proposed.

CHAPTER IV

RESULTS

This chapter analyzed the data on survey items aligned with each of the research questions investigated in this study. Demographic information was presented followed by an analysis of each survey item. Some of the survey items analyzed required respondents to indicate their agreement on a Likert scale, with 1 = *Strongly Disagree*, 2 = *Disagree*, 3 = *Neutral*, 4 = *Agree*, and 5 = *Strongly Agree*. The frequencies of responses were also reported, along with the mean scores and standard deviations when appropriate.

Demographic Information

A total of 55 respondents responded to the survey. Upon review of the survey responses, nine respondents were removed from the dataset due to unfinished and incomplete surveys. Data from a total of 46 respondents were analyzed. Demographic information was collected on several indicators. These indicators included gender, ethnicity, route to educator certification, area of education (general or special education), and current content area taught (see Table 1).

Table 1

Demographic Information

Demographic Indicator		*n*	%
Gender	Male	7	15.2%
	Female	39	84.8%
Ethnicity	Caucasian	36	78.3%
	African American	6	13.0%
	Hispanic	3	6.5%
	Asian	1	2.2%

	20–29	14	30.4%
	30–39	12	26.1%
Age Range	40–49	6	13.0%
	50–59	9	19.6%
	60+	5	10.9%
Level of Education	Bachelor's degree	25	54.3%
	Master's degree	21	45.7%
Route to Certification	Traditional	27	58.7%
	Alternative certification	19	41.3%
Area of Education	General education	39	84.8%
	Special education	7	15.2%
	English/Language Arts	10	21.7%
	Reading	3	6.5%
	Math	5	10.9%
	Science	8	17.4%
	Social Studies	7	15.2%
Content Area	Social/Life Skills	1	2.2%
	Elective	4	8.7%
	Career and Technology	4	8.7%
	Engineering	1	2.2%
	Grade Recovery	2	4.3%
	Prevocational Studies	1	2.2%
Total		46	100.0%

There were seven male respondents (15.2%) and 39 female respondents (84.8%). In terms of ethnicity, 36 respondents (78.3%) identified as Caucasian, six respondents (13.0%) identified as African American, three respondents (6.5%) identified as Hispanic, and one respondent (2.2%) identified as Asian.

In terms of age, 14 respondents (30.4%) identified in the 20 to 29 years of age range. Of the respondents, 12 respondents (26.1%) identified in the 30 to 39 years of age

range. Six respondents (13.0%) identified in the 40 to 49 years of age range. Nine

respondents (19.6%) identified in the 50 to 59 years of age range. Finally, five

respondents (10.9%) identified in the 60 or higher years of age group.

Respondents were asked about the highest level of educational degree they had

received. Categories on this indicator included a bachelor's degree, a master's degree, or

a doctoral degree. Of the respondents, 25 (54.3%) indicated holding a bachelor's degree.

Of the respondents, 21 (45.7%) indicated holding a master's degree. There were no

responses recorded in the doctoral degree category.

Respondents were asked about the route taken to obtain their educator

certification. Of the respondents, 27 (58.7%) obtained certification through a traditional,

university-based degree program with a major focus on education. Of the respondents, 19

(41.3%) obtained certification through an alternative certification program. In addition,

39 respondents (84.8%) reported working in the field of general education. Seven

respondents (15.2%) reported working in the field of special education.

Data were also obtained on the current content area respondents were teaching in.

Content area responses included English/Language Arts, Reading, Math, Science, Social

Studies, Social/Life Skills, Elective classes, Career and Technology, Engineering, Grade

Recovery, and Prevocational Studies. Of the respondents, 10 (21.7%) reported teaching

in the area of English/Language Arts. Three respondents (6.5%) reported teaching in the

area of Reading. Five respondents (10.9%) reported teaching in the area of Math. Eight

respondents (17.4%) reported teaching in the area of Science. Seven respondents (15.2%)

reported teaching in the area of Social Studies. One respondent (2.2%) reported teaching

in the area of Social/Life Skills. Four respondents (8.7%) reported teaching in the area of Elective classes. Four respondents (8.7%) reported teaching in the area of Career and Technology. One respondent (2.2%) reported teaching in the area of Engineering. Two respondents (4.3%) reported teaching in the area of Grade Recovery. Finally, one respondent (2.2%) reported teaching in the area of Prevocational Studies.

After the demographic information was collected, the survey next asked respondents about a student with a disability receiving special education services in one of their classes. Respondents were asked to rate the level of instructional support they perceived that student received from the special education services provided. Possible responses for this rating included a low, moderate, or high amount of special education services and supports. Of the respondents, 11 (23.9%) reported a student with a perceived low amount of special education services and supports. Of the respondents, 22 (47.8%) reported a student with a perceived moderate amount of special education services and supports. Of the respondents, 13 (28.3%) reported a student with a perceived high amount of special education services and supports. Respondents were then asked to indicate the primary disability category for the same student (see Table 2). Respondents were asked to answer the remaining survey items with this student in mind.

Table 2

Reported Student Disability Category

Disability Category	n	%
Autism	7	15.2%
Deafness	1	2.2%
Emotional Disturbance	5	10.9%

Intellectual Disability	7	15.2%
Multiple Disabilities	4	8.7%
Other Health Impairment	3	6.5%
Specific Learning Disability	14	30.4%
Visual Impairment	2	4.3%
Unsure	3	6.5%
Total	46	100.0%

Results showed that 14 respondents (30.4%) reported a student with a Specific

Learning Disability. Seven respondents (15.2%) reported a student with Autism. Another

seven respondents (15.2%) reported a student with an Intellectual Disability. Five

respondents (10.9%) reported a student with an Emotional Disturbance. Four respondents

(8.7%) reported a student with Multiple Disabilities. Three respondents (6.5%) reported a

student with an Other Health Impairment, or OHI. Two respondents (4.3%) reported a

student with a Visual Impairment. One respondent (2.2%) reported a student with

Deafness. Finally, three respondents (6.5%) indicated they were unsure of the disability

type for the student they reported in the previous survey section.

Accessing Instructional Recommendations

In order to gather data to analyze the first research question, respondents were

asked to provide their level of agreement on four survey items. Item responses were rated

on the 5-point scale noted in the previous section. The individual survey questions were

presented via tables with frequencies, mean scores, and standard deviations. Overall

mean scores on the four survey items ranged from 2.3 to 4.1, which indicated varying

levels of agreement and disagreement. The data for each survey item were presented

below in Tables 3, 4, 5, and 6.

Table 3

Knowledge of Instructional Services and Supports

Responses	*n* (%)	Mean	SD
Strongly Agree	15 (32.6%)		
Agree	23 (50.0%)		
Neutral	5 (10.9%)	4.1	0.8
Disagree	3 (6.5%)		
Strongly Disagree	0 (0%)		
Total	46 (100%)		

Question 1 required respondents to rate their agreement with a statement on

knowledge of the types of instructional services and supports available through special

education services (see Table 3). Respondents reported a high level of agreement with

this statement; 15 respondents (32.6%) indicated Strongly Agree and 23 (50.0%)

respondents indicated Agree. Five respondents (10.9%) indicated Neutral, and another

three respondents (6.5%) indicated Disagree. None of the respondents (0.0%) indicated

Strongly Disagree. The mean score on this item was 4.1 with a standard deviation of 0.8.

Table 4

Accessing Information from a Full and Individual Evaluation

Responses	*n* (%)	Mean	SD
Strongly Agree	15 (32.6%)		
Agree	23 (50.0%)	4.0	1.0
Neutral	3 (6.5%)		
Disagree	3 (6.5%)		

39

Strongly Disagree	2 (4.4%)		
Total	46 (100%)		

Question 2 required respondents to rate their agreement with a statement on reviewing a student's full and individual evaluation to learn about instructional recommendations and student specific strengths and weaknesses (see Table 4). Respondents reported a high level of agreement with this statement; 15 respondents (32.6%) indicated Strongly Agree and 23 respondents (50.0%) indicated Agree. Three respondents (6.5%) indicated Neutral, three respondents (6.5%) indicated Disagree, and two respondents (4.4%) indicated Strongly Disagree. The mean score on this item was 4.0 with a standard deviation of 1.0.

Table 5

Accessing Information in Another Way

Responses	*n* (%)	Mean	SD
Strongly Agree	1 (2.2%)		
Agree	10 (21.7%)		
Neutral	6 (13.0%)	2.3	1.2
Disagree	13 (28.3%)		
Strongly Disagree	16 (34.8%)		
Total	46 (100%)		

Question 3 required respondents to rate their agreement with a statement on obtaining instructional recommendations and information about student specific strengths and weaknesses in a way other than through a review of a student's full and individual evaluation (see Table 5). Respondents reported a high level of disagreement with this

statement; 16 respondents (34.8%) indicated Strongly Disagree and 13 respondents

(28.3%) indicated Disagree. Six respondents (13.0%) indicated Neutral, 10 respondents

(21.7%) indicated Agree, and one respondent (2.2%) indicated Strongly Agree. The mean

score on this item was 2.3 with a standard deviation of 1.2.

Question 4 required respondents to rate their agreement with a statement on

receiving instructional recommendations and information about student specific strengths

and weaknesses from a special education staff member on a routine basis (see Table 6).

Respondents reported a high level of agreement with this statement; 10 respondents

(21.7%) indicated Strongly Agree and 20 respondents (43.5%) indicated Agree. Five

respondents (10.9%) indicated Neutral, eight respondents (17.4%) indicated Disagree,

and three respondents (6.5%) indicated Strongly Disagree. The mean score on this item

was 3.6 with a standard deviation of 1.2.

Table 6

Accessing Information from a Special Education Staff Member

Responses	*n* (%)	Mean	SD
Strongly Agree	10 (21.7%)		
Agree	20 (43.5%)		
Neutral	5 (10.9%)	3.6	1.2
Disagree	8 (17.4%)		
Strongly Disagree	3 (6.5%)		
Total	46 (100%)		

Utilizing Instructional Recommendations

In order to gather data to analyze the second research question, respondents were

asked to provide their level of agreement on three survey items. Item responses were

rated on the 5-point scale noted in the previous section. The individual survey questions

were presented via tables with frequencies, mean scores, and standard deviations. Overall

mean scores on the four survey items ranged from 3.9 to 4.2, which indicated agreement

with each of the survey items used to assess this area of interest. The data for each survey

item were presented below in Tables 7, 8, and 9.

Question 5 required respondents to rate their agreement with a statement on

utilizing information from a student's full and individual evaluation to plan instruction

(see Table 7). Respondents reported a high level of agreement with this statement; 12

respondents (26.1%) indicated Strongly Agree, and 22 respondents (47.8%) indicated

Agree. Nine respondents (19.6%) indicated Neutral, two respondents (4.3%) indicated

Disagree, and one respondent (2.2%) indicated Strongly Disagree. The mean score on

this item was 3.9 with a standard deviation of 0.9.

Table 7

Utilizing Information to Plan Specialized Instruction

Responses	*n* (%)	Mean	SD
Strongly Agree	12 (26.1%)		
Agree	22 (47.8%)		
Neutral	9 (19.6%)	3.9	0.9
Disagree	2 (4.3%)		
Strongly Disagree	1 (2.2%)		
Total	46 (100%)		

Table 8

Utilizing Information to Adapt Teaching Style or Develop Teaching Strategies

Responses	*n* (%)	Mean	SD
Strongly Agree	12 (26.1%)		
Agree	26 (56.5%)		
Neutral	4 (8.7%)	4.0	0.9
Disagree	3 (6.5%)		
Strongly Disagree	1 (2.2%)		
Total	46 (100%)		

Question 6 required respondents to rate their agreement with a statement on utilizing information from a student's full and individual evaluation to adapt their teaching style (see Table 8). Respondents reported a high level of agreement with this statement; 12 respondents (26.1%) indicated Strongly Agree and 26 respondents (56.5%) indicated Agree. Four respondents (8.7%) indicated Neutral, three respondents (6.5%) indicated Disagree, and one respondent (2.2%) indicated Strongly Disagree. The mean score on this item was 4.0 with a standard deviation of 0.9.

Table 9

Utilizing Information if Provided

Responses	*n* (%)	Mean	SD
Strongly Agree	14 (30.4%)		
Agree	27 (58.7%)		
Neutral	5 (10.9%)	4.2	0.6
Disagree	0 (0%)		
Strongly Disagree	0 (0%)		
Total	46 (100%)		

Question 7 required respondents to rate their agreement with a statement on if they would use instructional recommendations from a student's full and individual evaluation if it was provided to them in some way (see Table 9). Respondents reported a high level of agreement with this statement; 14 respondents (30.4%) indicated Strongly Agree and 27 respondents (58.7%) indicated Agree. Five respondents (10.9%) indicated Neutral, and no respondents (0.0%) indicated Disagree or Strongly Disagree. The mean score on this item was 4.2 with a standard deviation of 0.6.

Communicating Instructional Recommendations

The final research question analyzed in this study gathered data from respondents on their perception of the best way to ensure that instructional recommendations from a student's full and individual evaluation were reviewed and discussed. In other words, the researcher wanted to hear directly from classroom teachers on how to effectively communicate evaluation information to increase access and usage. One survey question was used to obtain the data (see Table 10).

Table 10

Ensuring Information is Reviewed and Discussed

Communication Method	*n*	%
1. A face to face, informal meeting with a special education staff member.	12	26.1%
2. Recurring special education meetings to review specific students.	5	10.9%
3. Open office hours where a teacher can meet with a diagnostician.	4	8.7%
4. A short, typed document with instructional recommendations and student strengths/weaknesses.	9	19.6%

5. Regular communication with the student's special education contact teacher/case manager.	13	28.3%
6. A training or tutorial on how to interpret instructional recommendations from an evaluation.	3	6.5%
7. Other.	0	0.0%
Total	46	100%

The most preferred method of communication was Communication Method 5, regular communication with the student's special education contact teacher or case manager. Thirteen respondents (28.3%) indicated a preference for this method. Twelve respondents (26.1%) preferred a face to face, informal meeting with a special education staff member. Nine respondents (19.6%) preferred a document they could reference to view information about instructional recommendations or student specific strengths and weaknesses. Five respondents (10.9%) indicated a preference for recurring, special education departmental meetings to review specific students or concerns. Four respondents (8.7%) indicated a preference for utilizing a diagnostician's open office hours to discuss instructional recommendations from an evaluation. The least preferred method was a training or tutorial on how to interpret instructional recommendations from an evaluation. Only three respondents (6.5%) indicated a preference for this method. No respondents (0.0%) indicated Communication Method 7.

CHAPTER V

IMPLICATIONS, RECOMMENDATIONS, AND CONCLUSIONS

The purpose of this research was to assess how secondary teachers accessed and

utilized instructional recommendations located in a student's full and individual

evaluation. This research also wanted to identify how these recommendations could be

communicated effectively by obtaining direct feedback from teachers. In this chapter, the

study and observations found from a thorough analysis of the data were discussed. The

conclusions, limitations, and implications for future research were also discussed.

Accessing Instructional Recommendations

The data showed that the highest level of agreement, with agreement measured by

respondents who strongly agreed or agreed, occurred on the survey item that asked

respondents if they personally reviewed a student's full and individual evaluation to learn

about the student's needs. Specifically, 38 (82.6%) respondents reported that they

reviewed a student's evaluation for special education services to learn about the

instructional recommendations within the evaluation as well as student specific strengths

and weaknesses documented during the evaluation process. The second highest level of

agreement occurred on the survey item that asked respondents if this information was

distributed to them by a special education teacher on a routine basis. 30 (65.2%)

respondents strongly agreed or agreed with this statement. Only 11 (23.9%) respondents

strongly agreed or agreed with the survey item that stated they do not review the

student's evaluation but obtain the information in another way. From this sample, most

respondents reported a direct interaction with detailed and specific student information

that helped to inform teaching practices in the classroom. Few respondents showed agreement with the statement that they do not review the student's evaluation but obtain it in another way, which lends further support to the idea that teachers are directly accessing this useful information.

These findings are supported by other research completed in this area. Tiekstra et al. (2017) conducted survey research with teachers and other school specialists. Surveyed teachers reported that results of formal evaluations, such as the instructional recommendations referenced in the present study, were essential to making educational practice recommendations. The impact of not having access to this information was also shown to be detrimental to student success. Watson et al. (2006) found that a lack of understanding of effective teaching practices contributed to poor student outcomes.

In addition, Rueter and Simpson (2012) found that educational diagnosticians perceived classroom teachers lacked follow-through and a willingness to implement instructional recommendations documented in students' full and individual evaluations. They also reported their evaluations were extensive, overlooked sources of data designed to improve student outcomes. The findings of the present research study differ from these results, in that teachers, both in general education and special education, reported high levels of engagement with evaluations that contained instructional recommendations.

Utilizing Instructional Recommendations

The highest level of agreement was reached on the second survey item of this section, which asked respondents if they utilized evaluation information to adapt their teaching styles or develop teaching strategies in order to meet student needs. Responses

indicated that 38 (82.6%) respondents strongly agreed or agreed with this statement, suggesting that knowledge of this information had a direct impact on classroom teaching practices. Only four (8.7%) respondents strongly disagreed or disagreed with this statement. The data also showed that 34 (73.9%) respondents strongly agreed or agreed with the first survey item of this section, which asked respondents if evaluation information was utilized to plan specialized instruction, which further suggested the importance of knowledge of this information. In terms of disagreement on this item, three (6.5%) respondents strongly disagreed or disagreed.

This data showed that a high number of respondents of those sampled not only interacted with the information provided on a student's full and individual evaluation, but actively used that information to plan specialized instruction, adapt their teaching styles, and develop teaching strategies. Very few respondents showed disagreement with either of these statements, which added support for this finding. Most encouragingly, 41 (89.1%) respondents strongly agreed or agreed with the survey item that asked if they would use evaluation information to enhance their instructional practices if it was provided to them in some way. This added support for the idea that evaluation information, such as recommendations about how to instruct students with disabilities or a detailed analysis of student specific strengths and weaknesses and how to address those areas, was perceived as valuable and useful to classroom teaching practice.

These findings aligned with other research studies conducted in this area. Specifically, Lindstrom (2007) documented how data obtained from diagnostic evaluations should be directly reflected in the planning of students' classroom

accommodations. Lindstrom identified the uniqueness of this data because it communicated and displayed individual strengths and weaknesses. Further, research completed by Haydon et al. (2010) and Jenkins et al. (2015) documented how the usage of evidence-based practices, which are commonly proposed as instructional recommendations in students' full and individual evaluations, led to increases in positive student outcomes. Dennis et al. (2013) reported similar findings and identified a crucial need for including results from assessments and evaluations to plan for instructional strategies that were easily implementable in the classroom setting.

Research on the actual usage of instructional recommendations and evidence-based practices has also been documented and complemented the present findings. Through classroom observations, Green et al. (2020) determined teachers utilized evidence-based practices to promote appropriate student behavior, but at a rate lower than established research has identified as most effective. Burns and Ysseldyke (2009) showed that of 174 special education teachers surveyed, 60% reported using evidence-based practices in the instruction of students with disabilities at least once per week. Finally, Doabler et al. (2014) found that the quality of instruction in classrooms using evidence-based instruction was rated higher by observers than classrooms using the traditional, state-standard curriculum and practices.

The research reported in this area clearly documented the positive outcomes associated with modifying instructional approaches using best practices. The instructional recommendations located in students' full and individual evaluations contain evidence-based practices and go a step further by individualizing these practices to build upon

student specific strengths and weaknesses. Thus, a rationale for utilizing these recommendations was apparent and was reflected in the findings of the present study. It was also encouraging that nearly 90% of respondents in this study reported they *would* use instructional recommendations if they were provided to them in some way.

Communicating Instructional Recommendations

The survey item that was most preferred was engaging in communication with a student's special education teacher or case manager, with 13 (28.3%) respondents selecting this choice. The second most preferred survey item in this area was a face to face, informal meeting with a special education staff member. A total of 12 (26.1%) respondents showed preference for this option. The third most preferred option was for a document detailing instructional recommendations and student specific strengths and weaknesses that respondents could reference when planning instruction, with nine (19.6%) respondents indicating this preference. Less preferred selections included monthly, recurring departmental meetings to review specific students, accounting for five (10.9%) total responses, meeting with a diagnostician during open office hours, accounting for four (8.7%) total responses, and a training or tutorial on interpreting recommendations from an evaluation, accounting for three (6.5%) total responses.

Of these results, it was of note that a total of 25 (54.4%) respondents selected options that involved direct communication from a special education teacher. This suggested that respondents perceived special education teachers as experts who can serve as a resource to communicate valuable information. This related back to data collected on the first research question which suggested that special education teachers play an

important role in this transmission of information. It was also worth noting that only four (8.7%) respondents indicated a preference for meeting directly with an educational diagnostician.

These findings are important based on other research completed in this area. Cho et al. (2011) found that in terms of instructing students with disabilities, teachers reported a lack of sufficient training or information. A lack of knowledge about published curricular or instructional methods was also reported. In a survey of general education teachers, Wilson (2014) discovered that teachers reported having a lack of understanding about how to best support students with disabilities, having uncertainty about their expectations as a teacher, and needing additional professional development to support working with students with disabilities. There was clearly an established need to communicate the instructional recommendations located in students' full and individual evaluations to support positive student outcomes.

Overall, two major themes emerged from this study. First, respondents indicated a need for the information found in the instructional recommendations contained within a student's full and individual evaluation. They reported both accessing this information and utilizing to enhance their instruction in the classroom. Second, the communication of this information can be improved, and special education teachers need to be involved in the transmission of this information in some way. Respondents reported preferring an interaction with special education personnel to receive and discuss these instructional recommendations.

Limitations

There were several limitations associated with this study. The sample size was particularly small, consisting of only 46 respondents from one school district which limited the types of data analysis. Specific methods to improve accessing or utilizing instructional recommendations found in students' full and individual evaluations were not addressed, only whether or not teachers performed these behaviors. Student outcomes for teachers who accessed or utilized instructional recommendations compared to those who did not were also not investigated. Thus, there were no variable or cause and effect relationships to examine or analyze. However, this research study was exploratory in nature and sought to gain an understanding of current teacher behaviors and perceptions.

Implications for Future Research

Future research should build upon these limitations and seek additional feedback from teachers to build a larger sample size. It would be worthwhile to review examples of evaluations to determine which types of instructional recommendations were recommended to establish additional connections to classroom practice. A thorough analysis of student outcomes related to the implementation of instructional recommendations would also help to establish the importance of full and individual evaluations completed by educational diagnosticians.

REFERENCES

Agran, M., Jackson, L., Kurth, J. A., Ryndak, D., Burnette, K., Jameson, M., Zagona, A.,

Fitzpatrick, H., & Wehmeyer, M. (2020). Why aren't students with severe

disabilities being placed in general education classrooms: Examining the relations

among classroom placement, learner outcomes, and other factors. *Research and

Practice for Persons with Severe Disabilities*, *45*(1), 4–13.

https://doi.org/10.1177/1540796919878134

Ajuwon, P. M., Lechtenberger, D., Griffin-Shirley, N., Sokolosky, S., Zhou, L., &

Mullins, F. E. (2012). General education pre-service teachers' perceptions of

including students with disabilities in their classrooms. *International Journal of

Special Education*, *27*(3), 100–107.

Arden, S. V., Gandhi, A. G., Edmonds, R., & Danielson, L. (2017). Toward more

effective tiered systems: Lessons from national implementation efforts.

Exceptional Children, *83*(3), 269–280.

https://doi.org/10.1177/0014402917693565

Baker, S., Gersten, R., & Lee, D. S. (2002). A synthesis of empirical research on teaching

mathematics to low-achieving students. *The Elementary School Journal*, *103*(1),

51–73.

Balu, R., Zhu, P., Doolittle, F., Schiller, E., Jenkins, J., & Gersten, R. (2015). *Evaluation

of response to intervention practices for elementary reading*. U.S. Department of

Education, Institute of Education Sciences.

Bambrick-Santoyo, P. (2010). *Driven by data: A practical guide to improve instruction*. Jossey-Bass.

Bosma, T., & Resing, W. C. M. (2008). Bridging the gap between diagnostic assessment and classroom practice. *Journal of Cognitive Education and Psychology*, *7*(2), 174–198. https://doi.org/10.1891/194589508787381854

Boudett, K. P., City, E. A., & Murname, R. J. (Eds.). (2005). *Data wise: A step by step guide to using assessment results to improve teaching and learning*. Harvard Education Press.

Bradley, R., Danielson, L., & Hallahan, D. P. (Eds.). (2002). *Identification of learning disabilities: Research to practice*. Lawrence Erlbaum. https://doi.org/10.1002/pits.10181

Browder, D., Wakeman, S., Spooner, F., Ahlgrim-Delzell, L., & Algozzine, B. (2006). Research on reading instruction for individuals with significant cognitive disabilities. *Exceptional Children*, *72*(4), 392–408. https://doi.org/10.1177/001440290607200401

Brozo, W. G. (2010). The role of content literacy in an effective RTI program. *The Reading Teacher*, *64*(2), 147–150. https://doi.org/10.1598/RT.64.2.11

Burns, M. K., & Ysseldyke, J. E. (2009). Reported prevalence of evidence-based instructional practices in special education. *The Journal of Special Education*, *43*(1), 3–11. https://doi.org/10.1177/0022466908315563

Chappell, J. C., Stephens, T. L., Kinnison, L., & Pettigrew, J. D. (2009). Educational diagnosticians' understanding of phonological awareness, phonemic awareness,

and reading fluency. *Assessment for Effective Intervention*, *35*(1), 24–33.

https://doi.org/10.1177/1534508409331653

Cho, H-J., Wehmeyer, M., & Kingston, N. (2011). Elementary teachers' knowledge and

use of interventions and barriers to promoting student self-determination. *The*

Journal of Special Education, *45*(3), 149–156.

https://doi.org/10.1177/0022466910362588

Clements, D. H., & Sarama, J. (2007). Effects of a preschool mathematics curriculum:

Summative research on the Building Blocks project. *Journal for Research in*

Mathematics Education, *38*(2), 136–163.

https://doi.org/10.2307/30034954

Cohen, L. E., & Waite-Stupiansky, S. (Eds.). (2013). *Learning across the early childhood*

curriculum. Emerald Group Publishing Limited.

Cole, C., Murphy, H., Frisby, M., Grossi, T., & Bolte, H. (2019). *A longitudinal study to*

determine the impact of inclusion on student academic outcomes. Center on

Education and Lifelong Learning, Indiana University.

Collier, M., Shenoy, S., Ovitt, B., Lin, Y-L., & Adams, R. (2020). Educational

diagnosticians' role in home-school collaboration: The impact of efficacy and

perceptions of support. *School Community Journal*, *30*(1), 33–58.

Common, E. A., Lane, K. L., Cantwell, E. D., Brunsting, N. C., Oakes, W. P., Germer, K.

A., & Bross, L. A. (2020). Teacher-delivered strategies to increase students'

opportunities to respond: A systematic methodological review. *Behavioral*

Disorders, *45*(2), 67–84. https://doi.org/10.1177/0198742919828310

Cook, B. G., & Cook, S. C. (2013). Unraveling evidence-based practices in special

    education. *The Journal of Special Education*, *47*(2), 71–82.

    https://doi.org/10.1177/0022466911420877

Cook, S. C., Collins, L. W., Morin, L. L., & Riccomini, P. J. (2020). Schema-based

    instruction for mathematical word problem solving: An evidence-based review for

    students with learning disabilities. *Learning Disability Quarterly*, *43*(2), 75–87.

    https://doi.org/10.1177/0731948718823080

Coyne, M. D., Kame'enui, E. J., & Carnine, D. W. (2011). *Effective teaching strategies*

    that accommodate diverse learners (4th ed.). Prentice Hall.

Darling-Hammond, L., & Bransford, J. (2005). *Preparing teachers for a changing world:*

    What teachers should learn and be able to do. John Wiley & Sons.

Darling-Hammond, L., & Baratz-Snowden, J. (2007). A good teacher in every classroom:

    Preparing the highly qualified teachers our children deserve. *Educational*

    Horizons, *85*(2), 111–132.

De la Garza, B. (2015). The FIE process: Data review, eligibility, and collaboration

    [PowerPoint slides]. Region One Education Service Center.

    https://apps.esc1.net/ProfessionalDevelopment/uploads/WKDocs/54894/The%20

    FIE%20Process%20full%20page%20slides.pdf

De Zell Hall, L. (2014). Educational diagnosticians play diverse, unique roles. *The*

    DiaLog, *43*(1), 4.

Dehn, M. J. (2006). *Essentials of processing assessment.* Wiley.

Dennis, L. R., Rueter, J. A., & Simpson, C. G. (2013). Authentic assessment:

Establishing a clear foundation for instructional practices. *Preventing School Failure*, *57*(4), 189–195. https://doi.org/10.1080/1045988X.2012.681715

Denton, C. A., Fletcher, J. M., Anthony, J. L., & Francis, D. J. (2006). An evaluation of intensive intervention for students with persistent reading difficulties. *Journal of Learning Disabilities*, *39*(5), 447–466.

https://doi.org/10.1177/00222194060390050601

Dessemontet, R. S., Bless, G., & Morin, D. (2012). Effects of inclusion on the academic achievement and adaptive behaviour of children with intellectual disabilities. *Journal of Intellectual Disability Research*, *56*(6), 579–587.

https://doi.org/10.1111/j.1365-2788.2011.01497.x

Doabler, C. T., Nelson, N. J., Kosty, D. B., Fien, H., Baker, S. K., Smolkowski, K., & Clarke, B. (2014). Examining teachers' use of evidence-based practices during core mathematics instruction. *Assessment for Effective Intervention*, *39*(2), 99–111. https://doi.org/10.1177/1534508413511848

Downing, J. E., & Peckham-Hardin, K. D. (2007). Inclusive education: What makes it a good education for students with moderate to severe disabilities? *Research and Practice for Persons with Severe Disabilities*, *32*(1), 16–30.

https://doi.org/10.2511/rpsd.32.1.16

Draper, E. (2019). Meaningful connections: Making inclusion work. *General Music Today*, *32*(2), 24–26. https://doi.org/10.1177/1048371318809969

Drasgow, E., Yell, M. L., & Robinson, T. R. (2001). Developing legally correct and

    educationally appropriate IEPs. *Remedial and Special Education*, *22*(6), 359–373.

    https://doi.org/10.1177/074193250102200606

Elliot, J. G. (2003). Dynamic assessment in educational settings: Realizing potential.

    Educational Review, *55*(1), 15–32. https://doi.org/10.1080/00131910303253

Elliot, S. N., & Roach, A. T. (2007). Alternate assessments of students with significant

    disabilities: Alternative approaches, common technical challenges. *Applied*

    Measurement in Education, *20*(3), 301–333.

    https://doi.org/10.1080/08957340701431385

Farley-Ripple, E. N., Jennings, A. S., & Buttram, J. (2019). Toward a framework for

    classifying teachers' use of assessment data. *AERA Open*, *5*(4), 1–18.

    https://doi.org/10.1177/2332858419883571

Fielding, C. (2004). Low performance on high-stakes test drives special education

    referrals: A Texas survey. *The Educational Forum*, *68*(2), 126–132.

    https://doi.org/10.1080/00131720408984619

Finnerty, M. S., Jackson, L. B., & Ostergren, R. (2019). Adaptations in general education

    classrooms for students with severe disabilities: Access, progress assessment, and

    sustained use. *Research and Practice for Persons with Severe Disabilities*, *44*(2),

    87–102. https://doi.org/10.1177/1540796919846424

Fiorello, C. A., Hale, J. B., & Snyder, L. E. (2006). Cognitive hypothesis testing and

    response to intervention for children with reading disabilities. *Psychology in the*

    Schools, *43*(8), 835–853. https://doi.org/10.1002/pits.20192

Fish, W.W. (2009). Educator perceptions toward the IEP meeting. *Academic Leadership: The Online Journal*, *7*(4), 1–16.

Flanagan, D. P., & Harrison, P. L. (Eds.). (2005). *Contemporary intellectual assessment*. Guildford Press.

Flanagan, D. P., Ortiz, S. O., Alfonso, V. C., & Dynda, A. M. (2006). Integration of response to intervention and norm-referenced tests in learning disability identification: Learning from the Tower of Babel. *Psychology in the Schools*, *43*(7), 807–825. https://doi.org/10.1002/pits.20190

Flanagan, D., P., Ortiz, S. O., & Alfonso, V. C. (2013). *Essentials of cross-battery assessment* (3rd ed.). Wiley Publishing.

Fletcher, J. M., Coulter, W., Reschly, D. J., & Vaughn, S. (2004). Alternative approaches to the definition and identification of learning disabilities: Some questions and answers. *Annals of Dyslexia*, *54*(2), 304–331. https://doi.org/10.1007/s11881-004-0015-y

Fletcher, J. M., Lyon, G. R., Fuchs, L. S., & Barnes, M. A. (2007). *Learning disabilities: From identification to intervention*. Guilford Press.

Ford, C. (2018). Effective practice instructional strategies: Design of an instrument to assess teachers' perceptions of implementation. *Studies in Educational Evaluation*, *56*, 154–163. https://doi.org/10.1016/j.stueduc.2017.12.004

Forlin, C., Loreman, T., Sharma, U., & Earle, C. (2009). Demographic differences in

changing pre-service teachers' attitudes, sentiments, and concerns about inclusive

education. *International Journal of Inclusive Education*, *13*(2), 195–209.

https://doi.org/10.1080/13603110701365356

Francis, D. J., Fletcher, J. M., Stuebing, K. K., Lyon, G. R., Shaywitz, B. A., & Shaywitz,

S. E. (2005). Psychometric approaches to the identification of LD: IQ and

achievement scores are not sufficient. *Journal of Learning Disabilities*, *38*(2), 98–

108. https://doi.org/10.1177/00222194050380020101

Frieberg, H. (2002). Essential skills for new teachers. *Educational Leadership*, *59*(6), 56–

60.

Friend, M. (2011). *Special education: Contemporary perspectives for school

professionals* (3rd ed.). Pearson.

Friend, M., & Bursuck, W. D. (2012). *Including students with special needs: A practical

guide for classroom teachers* (6th ed.). Pearson.

Fuchs, D., & Deshler, D. D. (2007). What we need to know about responsiveness to

intervention (and shouldn't be afraid to ask). *Learning Disabilities Research and

Practice*, *22*(2), 129–136. https://doi.org/10.1111/j.1540-5826.2007.00237.x

Fuchs, D., & Fuchs, L. S. (2006). Introduction to response to intervention: What, why,

and how valid is it? *Reading Research Quarterly*, *41*(1), 93–99.

https://doi.org/10.1598/RRQ.41.1.4

Fuchs, D., Fuchs, L. S., Compton, D. L., Bouton, B., Caffrey, E., & Hill, L. (2007).

Dynamic assessment as responsiveness to intervention: A scripted protocol to

identify young at-risk readers. *Teaching Exceptional Children*, *39*(5), 58–63.

https://doi.org/10.1177/004005990703900508

Fuchs, L. S., & Vaughn, S. (2012). Responsive-to-intervention: A decade later. *Journal of Learning Disabilities*, *45*(3), 195–203.

https://doi.org/10.1177/0022219412442150

Garriott, P. P., Wandry, D., & Snyder, L. (2000). Teachers as parents, parents as children: What's wrong with this picture? *Preventing School Failure*, *45*(1), 37–43.

https://doi.org/10.1080/10459880109599814

Gartlan, D., & Strosnider, S. (2011). Comprehensive assessment and evaluation of students with learning disabilities: A paper prepared by the National Joint Committee on Learning Disabilities. *Learning Disability Quarterly*, *(34)*1, 3–16.

https://doi.org/10.1177/073194871103400101

Gearheart, C., & Gearheart, B. (1990). *Introduction to special education assessment: Principles and practices*. Love Publishing Company.

Gersten, R., Chard, D., Jayanthi, M., Baker, S. K., Morphy, P., & Flojo, J. (2009). Mathematics instruction for students with learning disabilities: A meta-analysis of instructional components. *Review of Educational Research*, *79*(3), 1202–1242.

https://doi.org/10.3102/0034654309334431

Giangreco, M. F., & Suter, J. C. (2015). Precarious or purposeful? Proactively building inclusive special education service delivery on solid ground. *Inclusion*, *3*(3), 112–131. https://doi.org/10.1352/2326-6988-3.3.112

Giangreco, M. F. (2020). "How can a student with severe disabilities be in a fifth-grade class when he can't do fifth-grade level work?" Misapplying the least restrictive environment. *Research and Practice for Persons with Severe Disabilities*, *45*(1), 23–27. https://doi.org/10.1177/1540796919892733

Goddard, Y. L., Goddard, R. D., & Tschanne-Moran, M. (2007). A theoretical and empirical investigation of teacher collaboration for school improvement and student achievement in public elementary schools. *Teachers College Record*, *109*, 877–896.

Good, T. L., & Lavigne, A. L. (2017). *Looking in classrooms* (11th ed.). Routledge. https://doi.org/10.4324/9781315627519

Gomez, M., Blackwell, W. H., Cole, C. V., & Young, C. (2020). Examining the preparedness of educational diagnosticians in Texas. *Journal of Human Services: Training, Research, and Practice*, *6*(1), 1–28.

Grapin, S. L., Waldron, N., & Joyce-Beaulieu, D. (2019). Longitudinal effects of RTI implementation on reading achievement outcomes. *Psychology in the Schools*, *56*(2), 242–254. https://doi.org/10.1002/pits.22222

Green, A. L., Lewis, T. J., & Olsen, A. A. (2020). General education teachers' use of evidence-based practices: Examining the role of student race and risk status. *Behavioral Disorders*, *45*(3), 183–192. https://doi.org/10.1177/0198742919883570

Greenwood, C. R., Beecher, C., Atwater, J., Petersen, S., Schiefelbusch, J., & Irvin, D. (2018). An eco-behavioral analysis of child academic engagement: Implications

for preschool children not responding to instructional intervention. *Topics in Early Childhood Special Education*, *37*(4), 219–233. https://doi.org/10.1177/0271121417741968

Gresham, G., & Little, M. (2012). RTI in math class. *Teaching Children Mathematics*, *19*(1), 20–29. https://doi.org/10.5951/teacchilmath.19.1.0020

Guerra, M. G., & Maxwell, G. M. (2015). The role of the educational diagnostician as perceived by South Texas administrators. *Journal of Case Studies in Education*, *7*, 1–12.

Guerra, M. G., Kupczynski, L. P., Mundy, M. A., & Garza, C. (2017). The diagnostic competencies: Perceptions of educational diagnosticians, administrators, and classroom teachers. *International Journal of Special Education*, *32*(4), 708–722.

Hale, J. B. (2006). Implementing IDEA with a three-tier model that includes response to intervention and cognitive assessment methods. *School Psychology Forum: Research and Practice*, *1*(1), 16–27.

Hale, J. B., Alfonso, V., Berninger, V., Bracken, B., Christo, C., Clark, E., Cohen, M., Davis, A. S., Decker, S. H., Denckla, M., Dumont, R., Elliott, C., Feifer, S. G., Fiorello, C. A., Flanagan, D. P., Fletcher-Janzen, E., Geary, D., Gerber, M. M., Gerner, M. … Yalof, J. (2010). Critical issues in response-to-intervention, comprehensive evaluation, and specific learning disabilities identification and intervention: An expert white paper consensus. *Learning Disability Quarterly*, *33*(3), 223–236. https://doi.org/10.1177/073194871003300310

Hallahan, D. P., & Kauffman, J. M. (2006). *Exceptional learners: Introduction to special education* (10th ed.). Pearson.

Harrison, P. L., & Thomas, A. (Eds.). (2014). *Best practices in school psychology: Data-based and collaborative decision making*. National Association of School Psychologists.

Harvey, M. W., Yssel, N., Bauserman, A. D., & Merbler, J. B. (2010). Preservice teacher preparation for inclusion: An exploration of higher education teacher training institutions. *Remedial and Special Education*, *31*(1), 24–33. https://doi.org/10.1177/0741932508324397

Haydon, T., Conroy, M. A., Scott, T. M., Sindelar, P. T., Barber, B. R., & Orlando, A. M. (2010). A comparison of three types of opportunities to respond on student academic and social behaviors. *Journal of Emotional and Behavioral Disorders*, *18*(1), 27–40. https://doi.org/10.1177/1063426609333448

Hayes, A. M., Dombrowski, E., Shefcyk, A. H., & Bulat, J. (2018). *Learning disabilities screening and evaluation guide for low- and middle-income countries*. RTI Press. https://doi.org/10.3768/rtipress.2018.op.0052.1804

Haywood, H. C. (2012). Dynamic assessment: A history of fundamental ideas. *Journal of Cognitive Education and Psychology*, *11*(3), 217–229. https://doi.org/10.1891/1945-8959.11.3.217

Heckman, J., & Masterov, D. V. (2005). *The productivity argument for investing in young children.* University of Chicago.

Hehir, T. (2006). *New directions in special education: Eliminating ableism in policy and practice*. Harvard Education Press.

Horne, P. E., Timmons, V., Adamowycz, R. (2008). Identified teacher supports for inclusive practice. *Exceptionality Education Canada*, *18*(3), 82–94. https://doi.org/10.5206/eei.v18i3.7627

Huefner, D. S. (2000). The risks and opportunities of the IEP requirements under IDEA '97. *The Journal of Special Education*, *33*(4), 195–204. https://doi.org/10.1177/002246690003300402

Individuals with Disabilities Education Act, 20 U.S.C. § 1400 (2004).

Jao, L., & McDougall, D. (2016). Moving beyond the barriers: Supporting meaningful teacher collaboration to improve secondary school mathematics. *Teacher Development*, *20*(4), 556–573. https://doi.org/10.1080/13664530.2016.1164747

Jenkins, L. N., Floress, M. T., & Reinke, W. (2015). Rates and types of teacher praise: A review and future directions. *Psychology in the Schools*, *52*(5), 463–476. https://doi.org/10.1002/pits.21835

Jensen, A. (1998). *The g factor: The science of mental ability*. Praeger.

Jimerson, S. R., Burns, M. K., & VanDerHeyden, A. M. (Eds.). (2007). *Handbook of response to intervention: The science and practice of assessment and intervention*. Springer. https://doi.org/10.1007/978-0-387-49053-3

Jung, P. G., McMaster, K. L., Kunkel, A., Shin, J., & Stecker, P. M. (2018). Effects of data-based individualization for students with intensive learning needs: A meta-analysis. *Learning Disabilities Research & Practice*, *33*(3), 144–155. https://doi.org/10.1111/ldrp.12172

Kalyanpur, M., Harry, B., & Skrtic, T. (2000). Equity and advocacy expectations of culturally diverse families' participation in special education. *International Journal of Disability, Development, and Education*, *47*(2), 119–136. https://doi.org/10.1080/713671106

Kauffman, J. M., Hallahan, D. P., & Pullen, P. C. (Eds.). (2017). *Handbook of special education*. Routledge. https://doi.org/10.4324/9781315517698

Kelly, A. E., & Lesh, R. A. (Eds.). (2000). *Handbook of research design in mathematics and science education*. Routledge. https://doi.org/10.4324/9781410602725

Kibby, M. W. (2009). Why is the school psychologist involved in the evaluation of struggling readers?. *Journal of Educational and Psychological Consultation*, *19*(3), 248–258. https://doi.org/10.1080/10474410903128988

Klein-Ezell, C., & Ezell, D. (2004). Use of portfolio assessment with students with cognitive disabilities/mental retardation. *Assessment for Effective Intervention*, *30*(4), 15–24. http://doi.org/10.1177/073724770503000403

Kretlow, A. G., Wood, C. L., & Cooke, N. L. (2011). Using in-service and coaching to increase kindergarten teachers' accurate delivery of group instructional units. *The Journal of Special Education*, *44*(4), 234–346. https://doi.org/10.1177/0022466909341333

Kurth, J. A., & Keegan, L. (2014). Development and use of curricular adaptations for
students receiving special education services. *The Journal of Special Education*,
48(3), 191–203. https://doi.org/10.1177/0022466912464782

Kurth, J. A., Miller, A. L., & Toews, S. G. (2020). Preparing for and implementing
effective inclusive education with participation plans. *Teaching Exceptional
Children*, *53*(2), 140–149.

https://doi.org/10.1177/0040059920927433

Kwiatek, R., & Schultz, E. (2014). Using informal assessment data to support the
diagnosis of specific learning disability. *The DiaLog*, *43*(1), 13–16.

La Salle, T. P., Roach, A. T., & McGrath, D. (2013). The relationship of IEP quality to
curricular access and academic achievement for students with disabilities.
International Journal of Special Education, *28*(1), 135–144.

Lammert, C., & Holyoke, E. S. (2020). Supporting English-learners through practice-
based research. *Reading Horizons*, *59*(1), 24–40.

Landrum, T. J., & Tankersley, M. (2004). Science in the school-house: An uninvited
guest. *Journal of Learning Disabilities*, *37*(3), 207–212.
https://doi.org/10.1177/00222194040370030401

Laprairie, K., Johnson, D. D., Rice, M., Adams, P., & Higgins, B. (2010). The top ten
things new high school teachers need to know about servicing students with
special needs. *American Secondary Education*, *38*(2), 23–31.

Larabee, D. F. (1992). Doing good, doing science: The Holmes Group reports and the
rhetorics of educational reform. *Teachers College Record*, *93*(4), 628–640.

Lebeer, J., Birta-Szekeley, N., Demeter, K., Bohacs, K., Araujo Candeias, A., Sonnesyn,

    G., Partanen, P., & Dawson, V. (2011). Re-assessing the current assessment

    practice of children with special education needs in Europe. *School Psychology*

    International, *3*, 69–92. https://doi.org/10.1177/0143034311409975

Lemons, C. J., Vaughn, S., Wexler, J., Kearns, D. M., & Sinclair, A. C. (2018).

    Envisioning an improved continuum of special education services for students

    with learning disabilities: Considering intervention intensity. *Learning*

    Disabilities Research and Practice, *33*(3), 1–40.

    https://doi.org/10.1111/ldrp.12173

Lindstrom, J. H. (2007). Determining appropriate accommodations for postsecondary

    students with reading and written expression disorders. *Learning Disabilities*

    Research and Practice, *22*(4), 229–236.

    https://doi.org/10.1111/j.1540-5826.2007.00251.x

Lynch, S., Swicegood, P., & Simpson, C. (2012). Evaluation of narrow cognitive abilities

    in relation to academic needs: An evaluation planning guide. *The DiaLog*, *41*(2),

    8–16.

Machek, G. R., & Nelson, J. M. (2010). School psychologists' perceptions regarding the

    practice of identifying reading disabilities: Cognitive assessment and response to

    intervention considerations. *Psychology in the Schools*, *47*(3), 230–245.

    https://doi.org/10.1002/pits.20467

Macy, M., Bagnato, S. J., & Weiszhaupt, K. (2019). Family-friendly communication via

    authentic assessment for early childhood intervention programs. *Zero to Three*,

    40(2), 45–51.

Maki, K. E., Floyd, R. G., & Roberson, T. (2015). State learning disability eligibility

    criteria: A comprehensive review. *School Psychology Quarterly*, *30*(4), 457–469.

    https://doi.org/10.1037/spq0000109

Maki, K. E., Burns, M. K., & Sullivan, A. (2017). Learning disability identification

    consistency: The impact of methodology and student evaluation data. *School*

    Psychology Quarterly, *32*(2), 254–267.

    https://psycnet.apa.org/doi/10.1037/spq0000165

Maki, K. E., & Adams, S. R. (2020). Specific learning disabilities identification: Do the

    identification methods and data matter? *Learning Disability Quarterly*, *43*(2), 63–

    74. https://doi.org/10.1177/0731948719826296

Mastropieri, M. A., & Scruggs, T. E. (2005). Feasibility and consequences of response to

    intervention: Examination of the issues and scientific evidence as a model for the

    identification of individuals with learning disabilities. *Journal of Learning*

    Disabilities, *38*(6), 525–531. https://doi.org/10.1177/00222194050380060801

McGrew, K. S., & Wendling, B. (2010). Cattell-Horn-Carroll cognitive achievement

    relations: What we have learned from the past 20 years of research. *Psychology in*

    the Schools, *47*(7), 651–675. https://doi.org/10.1002/pits.20497

McKenzie, R. G. (2009). A national survey of pre-service preparation for collaboration.

    Teacher Education and Special Education, *32*(4), 379–393.

    https://doi.org/10.1177/0888406409346241

McKinney, M., Simpson, C. G., & Rose, C. A. (2013). High functioning autism spectrum

    disorders and effective reading comprehension instruction. *The DiaLog*, *42*(3), 6–

    12.

McMaster, K. L., Fuchs, D., Fuchs, L. S., & Compton, D. L. (2005). Responding to

    nonresponders: An experimental field trial of identification and intervention

    methods. *Exceptional Children*, *71*(4), 445–463.

    https://doi.org/10.1177/001440290507100404

McNaughton, D. B., Hall, T. E., & Maccini, P. (2001). Case-based instruction in teacher

    education. *Teacher Education and Special Education*, *24*(2), 84–94.

    https://doi.org/10.1177%2F088840640102400203

Moore-Brown, B., Huerta, M., Uranga-Hernandez, Y., & Pena, E. D. (2006). Using

    dynamic assessment to evaluate children with suspected learning disabilities.

    Intervention in School & Clinic, *41*(4), 209–217.

    https://doi.org/10.1177/10534512060410040301

National Joint Committee on Learning Disabilities. (2010). *Comprehensive*

    and evaluation of students with learning disabilities. National Joint Committee on

    Learning Disabilities. https://www.njcld.org

Neisser, U., Boodoo, G., Bouchard, T. J., Boykin, A. W., Brody, N., Ceci, S. J., Halpern,

    D. F., Loehlin, J. C., Perloff, R., Sternberg, R. J., & Urbina, S. (1996).

    Intelligence: Knowns and unknowns. *American Psychologist*, *51*(2), 77–101.

    https://doi.org/10.1037/0003-066X.51.2.77

Nelson, J. M., & Machek, G. R. (2007). A survey of training, practice, and competence in

    reading assessment and interventions. *School Psychology Review*, *36*(2), 311–327.

    https://doi.org/10.1080/02796015.2007.12087948

O'Connor, R. E., Harty, K. R., & Fulmer, D. (2005). Tiers of intervention in kindergarten

    through third grade. *Journal of Learning Disabilities*, *38*(6), 532–538.

    https://doi.org/10.1177/00222194050380060901

Osher, D. A. (2017). How to reconcile requests for special education evaluations with

    RTI. *Communique*, *45*(6), 14–15.

Overton, T. (2009). *Assessing learners with special needs: An applied approach*.

    Pearson.

Paige, D. (2011). Engaging struggling adolescent readers through situational interest: A

    model proposing the relationships among extrinsic motivation, oral reading

    proficiency, comprehension, and academic achievement. *Reading Psychology*,

    32(5), 395–425. https://doi.org/10.1080/02702711.2010.495633

Pameijer, N. (2017). Assessment and intervention: Bridging the gap with a practice-based

    model. *Educational and Child Psychology*, *34*(1), 66–82.

Pierangelo, R., & Giuliani, G. (2006). *Learning disabilities: A practical approach to

    foundations, assessment, diagnosis, and teaching.* Allyn & Bacon.

Pierangelo, R., & Giuliani, G. (2008). *Understanding assessment in the special education

    process*. Corwin Press.

Pinto, P., Greybeck, B., Vottler, N., & Price, D. (2015). Effectiveness of instructional strategies in fostering literacy skills of students with autism spectrum disorders. *The DiaLog*, *44*(1), 11–14.

Ploger, W., Scholl, D., & Seifert, A. (2018). Bridging the gap between theory and practice: The effective use of videos to assist the acquisition and application of pedagogical knowledge in preservice teacher education. *Studies in Educational Evaluation*, *58*, 197–204. https://doi.org/10.1016/j.stueduc.2017.12.009

Pugach, M. C., & Peck, C. (2016). Dividing practices: Preservice teacher quality assessment and the (re)production of relations between general and special education. *Teacher Education Quarterly*, *43*(3), 3–23.

Raines, J. C. (2008). *Evidence-based practice in school mental health.* Oxford University Press. https://doi.org/10.1093/acprof:oso/9780195366266.001.0001

Robinson, C. S., Menchetti, B. M., & Torgesen, J. K. (2002). Toward a two-factor theory of one type of mathematics disabilities. *Learning Disabilities Research and Practice*, *17*(2), 81–89. https://doi.org/10.1111/1540-5826.00035

Rock, T. C., & Levin, B. B. (2002). Collaborative action research projects: Enhancing preservice teacher development in professional development schools. *Teacher Education Quarterly*, *29*(1), 7–21.

Rojewski, J. W., Lee, I. H., & Gregg, N. (2015). Causal effects of inclusion on postsecondary education outcomes of individuals with high-incidence disabilities. *Journal of Disability Policy Studies*, *25*(4), 210–219. https://doi.org/10.1177/1044207313505648

Ross, D. D., Brownell, M. T., & Sindelar, P. T. (1999). Research from professional

    development schools: Can we live up to the potential? *Peabody Journal of*

    Education, *74*(3–4), 209–223.

Rueter, J. A., & Kinnison, L. (2009). Recommendations of evidence-based strategies.

    Academic Exchange Quarterly, *13*(4), 219–225.

Rueter, J. A., & Simpson, C. G. (2012). The promises and realities of evidence-based

    practices: Perceptions from assessment personnel. *Administrative Issues Journal*,

    2(1), 122–132.

Rueter, J. A., McWhorter, R. R., Lamb, J. H., & Dykes, F. O. (2016). Updated

    perspectives on educational diagnosticians' understanding of reading assessments.

    Current Issues in Education, *19*(1), 1–18.

Salvia, J., Ysseldyke, J., & Bolt, S. (2012). *Assessment in special and inclusive*

    education. Wadsworth.

Sattler, J. M., & Simpson, C. (2014). Some thoughts on good assessment practice. *The*

    DiaLog, *43*(1), 6.

Schroeder, M., Drefs, M. A., & Cormier, D. C. (2017). The messiness of LD

    identification: Contributions of diagnostic criteria and clinical judgment.

    Canadian Psychology, *58*, 218–227. https://doi.org/10.1037/cap0000115

Schultz, E. K., Simpson, C. G., & Lynch, S. (2012). Specific learning disability: What

    constitutes a pattern of strength and weaknesses. *Learning Disabilities: A*

    Multidisciplinary Journal, *18*(2), 87–97.

Schultz, E. K., & Stephens, T. L. (2015). Core-selective evaluation process: An efficient and comprehensive approach to identify students with SLD using the WJ IV. *The DiaLog*, *44*(2), 5–12.

Seaton, H. W., Lasky, E. Z., & Seaton, J. B. (1974). Teacher and specialist: A communication gap? *Education*, *95*(1), 90–91.

Shanahan, T., & Shanahan, C. (2008). Teaching disciplinary literacy to adolescents: Rethinking content-area literacy. *Harvard Educational Review*, *78*(1), 40–59. https://doi.org/10.17763/haer.78.1.v62444321p602101

Shapiro, E. S., & Kratochwill, T. R. (2000). *Behavioral assessment in schools: Theory, research, and clinical foundations*. Guilford Press.

Shaw, S. R. (2004). Disordered processing. *NASP Communique*, *32*(5), 33–34.

Sherman, J., Rasmussen, C., & Baydala, L. (2008). The impact of teacher factors on achievement and behavioural outcomes of children with attention deficit/hyperactivity disorder (ADHD): A review of the literature. *Educational Research*, *50*(4), 347–360. https://doi.org/10.1080/00131880802499803

Simpson, C. G., Bakken, J. P. (Eds.). (2011). *Collaboration: A multidisciplinary approach to educating students with disabilities*. Prufrock Press.

Slater, A. E. (2018). *Placement under the IDEA: Avoiding predetermination and other legal pitfalls.* LRP Publications.

Slavin, R. E., Lake, C., Hanley, P., & Thurston, A. (2014). Experimental evaluations of elementary science programs: A best-evidence synthesis. *Journal of Research in Science Teaching*, *51*(7), 870–901. https://doi.org/10.1002/tea.21139

Sloik, M. (2018). Inclusion for all: Bridging the gap between what we know and what we do. *Journal of Graduate Studies in Education*, *10*(1), 17–20.

Soder, R. (1986). Tomorrow's teachers for whom and for what? Missing propositions in the Holmes Group report. *Journal of Teacher Education*, *37*(2), 2–5. https://doi.org/10.1177/002248718603700601

Sophian, C. (2004). Mathematics for the future: Developing a Head Start curriculum to support mathematics learning. *Early Childhood Research Quarterly*, *19*(1), 59–81. https://doi.org/10.1016/j.ecresq.2004.01.015

Spooner, F., Root, J. R., Saunders, A. F., & Browder, D. (2018). An updated evidence-based practice review on teaching mathematics to students with moderate and severe developmental disabilities. *Remedial and Special Education*, *40*(3), 150–165. https://doi.org/10.1177/0741932517751055

Staman, L., Timmermans, A. C., & Visscher, A. J. (2017). Effects of a data-based-decision making intervention on student achievement. *Studies in Educational Evaluation*, *55*, 58–67. https://doi.org/10.1016/j.stueduc.2017.07.002

Stecker, P. M., Fuchs, L. S., & Fuchs, D. (2005). Using curriculum-based measurement to improve student achievement: Review of research. *Psychology in the Schools*, *42*(8), 795–819. https://doi.org/10.1002/pits.20113

Stephens, T. L., Flowers, A., & Pethick, L. M. (2012). Redefining the use of standardized assessments: Identifying strengths and weaknesses within the RTI process. *The DiaLog*, *41*(2), 4–7.

Stephens, T. L., & Naglieri, J. A. (2015). Using the pattern of strengths and weakness, or
third method, for SLD identification. *The DiaLog*, *44*(1), 5–8.

Stoiber, K. C., & Vanderwood, M. L. (2008). Traditional assessment, consultation, and
intervention practices: Urban school psychologists' use, importance, and
competence ratings. *Journal of Educational & Psychological Consultation*, *18*,
264–292. https://doi.org/10.1080/10474410802269164

Swanson, E. A., & Vaughn, S. (2010). An observation study of reading instruction
provided to elementary students with learning disabilities in the resource room.
Psychology in the Schools, *47*(5), 481–492. https://doi.org/10.1002/pits.20484

Taylor, R. L. (2019). *Assessment of exceptional students: Educational and psychological
procedures* (8th ed.). Pearson.

Teddlie, C., & Yu, F. (2007). Mixed methods sampling: A typology with examples.
Journal of Mixed Methods Research, *1*(1), 77–100.
https://doi.org/10.1177/2345678906292430

Texas Education Agency. (2017). *Educational diagnostician certification*. Texas
Education Code, Chapter 239, Subchapter C, Rules §239.80-85.
http://ritter.tea.state.tx.us/sbecrules/tac/chapter239/ch239c.html

Texas Education Agency. (2021). *Parent's guide to the admission, review, and dismissal
process*. Texas Education Agency. http://tea.texas.gov

Texas Education Diagnostician's Association. (2014). *Certification*. Retrieved from
Texas Administrative Code, Title 19, Part 7, Chapter 231, Subchapter F, Rule
§231.623. Texas Administrative Code. https://texreg.sos.state.tx.us/

Thurman, S. K., & Fiorello, C. A. (Eds.). (2008). *Applied cognitive research in K-3 classrooms.* Routledge. https://doi.org/10.4324/9780203932681

Tiekstra, M., Minnaert, A., & Hessels, M. G. P. (2016). A review scrutinizing the consequential validity of dynamic assessment. *Educational Psychology*, *36*(1), 112–137. https://doi.org/10.1080/01443410.2014.915930

Tiekstra, M., Bergwerff, L., & Minnaert, A. (2017). Voices from practice: When is the gap between diagnosis and intervention apparent? *Educational & Child Psychology*, *34*(1), 55–65.

Todd, A. W., Algozzine, R. F., Horner, R. H., Preston, A. I., Cusumano, D., & Algozzine, K. (2017). A descriptive study of school-based problem-solving. *Journal of Emotional and Behavioral Disorders*, *27*, 17–24. https://doi.org/10.1177/1063426617733717

Tomlinson, C. A. (2006). *An educator's guide to differentiating instruction*. Houghton Mifflin.

Tracey, D. H., & Morrow, L. M. (2006). *Lenses on reading: An introduction to theories and models*. The Guilford Press.

Turnbull, H. R., Stowe, M., & Huerta, N. (2007). Free a*ppropriate public education: The law and children with disabilities.* Love Publishing Company.

Urbani, J. M. (2020). Dialogic reading: Implementing an evidence-based practice in complex classrooms. *Teaching Exceptional Children*, *52*(6), 392–402. https://doi.org/10.1177/0040059920917694

Vangrieken, K., Dochy, F., Raes, E., & Kyndt, E. (2015). Teacher collaboration: A

    systematic review. *Educational Research Review*, *15*, 17–40.

    https://doi.org/10.1016/j.edurev.2015.04.002

Vaughn, S., & Fuchs, L. S. (2003). Redefining learning disabilities as inadequate

    response to instruction: The promise and potential problems. *Learning*

    Disabilities Research and Practice, *18*, 137–146.

    https://doi.org/10.1111/1540-5826.00070

Vaughn, S., Wanzek, J., Murray, C. S., Scammacca, N., Linan-Thompson, S., &

    Woodruff, A. L. (2009). Response to early reading interventions: Examining

    higher responders and lower responders. *Exceptional Children*, *75*(2), 165–183.

    https://doi.org/10.1177/001440290907500203

Vellutino, F. R., Scanlon, D. M., Zhang, H., & Schatschneider, C. (2008). Using response

    to kindergarten and first grade intervention to identify children at-risk for long-

    term reading difficulties. *Reading and Writing*, *21*(4), 437–480.

    https://doi.org/10.1007/s11145-007-9098-2

Ward, J., Crawford, S., & Solity, J. (2017). Applying assessment through teaching and

    instructional psychology: An alternative model of service delivery to raise

    attainment in primary schools. *Educational & Child Psychology*, *34*(1), 94–109.

Watson, J., Caney, A., Beswick, K., & Skalicky, J. (2006). Profiling teacher change

    resulting from a professional learning program in middle school numeracy.

    Mathematics Teacher Education and Development, *7*, 3–17.

Whitaker, S. D. (2001). Supporting beginning special education teachers. *Focus on Exceptional Children*, *34*(4), 1–18. https://doi.org/10.17161/foec.v34i4.6787

Wieman, R. (2014). Using data to improve instruction: Different approaches for different goals. *Action in Teacher Education*, *36*(5–6), 546–558. https://doi.org/10.1080/01626620.2014.977755

Wilson, A. D. (2014). Prerequisite skills needed for students with disabilities to be successful in the general education classroom: A survey of teachers' perception. *The DiaLog*, *43*(2), 13–19.

Wodrich, D. L., Spencer, M. L. S., & Daley, K. B. (2006). Combining RTI and psychoeducational assessment: What we must assume to do otherwise. *Psychology in the Schools*, *43*(7), 798–806. https://doi.org/10.1002/pits.20189

Wright, K. L., Franks, A. D., Kuo, L.-J., McTigue, E. M., & Serrano, J. (2016). Both theory and practice: Science literacy instruction and theories of reading. *International Journal of Science and Mathematics Education*, *14*(7), 1275–1292. https://doi.org/10.1007/s10763-015-9661-2

Yang, X., Kuo, L.-J., & Jiang, L. (2020). Connecting theory and practice: A systematic review of K-5 science and math literacy instruction. *International Journal of Science and Mathematics Education*, *18*(2), 203–219. https://doi.org/10.1007/s10763-019-09957-4

Yell, M. L. (2019). *Special education and the law* (5th ed.). Pearson.

Yell, M. L., Collins, J., Kumpiene, G., & Bateman, D. (2020). The individualized education program: Procedural and substantive requirements. *Teaching*

Exceptional Children, *52*(5), 304–318.

https://doi.org/10.1177/0040059920906592

Yell, M. L., Katsiyannis, A., Drasgow, E., & Herbst, M. (2003). Developing legally

correct and educationally appropriate programs for students with autism spectrum

disorders. *Focus on Autism and Other Developmental Disabilities*, *18*(3), 182–

191. https://doi.org/10.1177/10883576030180030601

Young, K. (2011). Institutional separation in schools of education: Understanding the

functions of space in general and special education teacher preparation. *Teaching

and Teacher Education*, *27*(2), 483–493.

https://doi.org/10.1016/j.tate.2010.10.001

Zimmerman, J. (2006). Why some teachers resist change and what principals can do

about it. *NAASP Bulletin*, *90*(3), 238–249.

https://doi.org/10.1177/0192636506291521

Zirkel, P. A. (2020). An updated primer of special education law. *Teaching Exceptional

Children*, *52*(4), 261–265. https://doi.org/10.1177/0040059919878671

Zweback, S., & Mortenson, B. P. (2002). State certification/licensure standards for

educational diagnosticians: A national review. *Education*, *123*(2), 370–379.

APPENDIX A

IRB Approval Letter

Texas Woman's University

Institutional Review Board (IRB)

irb@twu.edu

https://www.twu.edu/institutional-review-board-irb/

April 10, 2019

Jonathan Broyles
Teacher Education

Re: Exempt - IRB-FY2019-124 Creating Connections: Investigating the Use of Diagnostic Information in the Classroom

Dear Jonathan Broyles,

The above referenced study has been reviewed by the TWU IRB - Denton operating under FWA00000178 and was determined to be exempt on April 10, 2019. If you are using a signed informed consent form, the approved form has been stamped by the IRB and uploaded to the Attachments tab under the Study Details section. This stamped version of the consent must be used when enrolling subjects in your study.

Note that any modifications to this study must be submitted for IRB review prior to their implementation, including the submission of any agency approval letters, changes in research personnel, and any changes in study procedures or instruments. Additionally, the IRB must be notified immediately of any adverse events or unanticipated problems. All modification requests, incident reports, and requests to close the file must be submitted through Cayuse.

Approval for this study will expire on April 9, 2020. A reminder of the study expiration will be sent 45 days prior to the expiration. If the study is ongoing, you will be required to submit a renewal request. When the study is complete, a close request may be submitted to close the study file.

If you have any questions or need additional information, please contact the IRB analyst indicated on your application in Cayuse or refer to the IRB website at http://www.twu.edu/institutional-review-board-irb/.

Sincerely,

TWU IRB - Denton

APPENDIX B

Teacher Survey

The return of your completed questionnaire constitutes your informed consent to act as a participant in this research.

Section 1: Participant Demographics.
Directions: Answer the following questions by selecting the best answer choice.

1. Gender: Male   Female

2. Ethnicity: Caucasian   African-American   American Indian
Hispanic   Asian/Pacific Islander Other

3. Age: 20-29   30-39   40-49   50-59
60+

4. Level of Education: Bachelor's   Master's   Doctorate

5. Route to Certification: Traditional   Alternative Certification

6. Educational Area: Special Education   General Education

7. Current content area: ELAR   Math   Science   Social Studies
Social/Life Skills   Elective – Fine Arts, PE, etc.
Other

Section 2: Survey Introduction.
Directions: For the purposes of this survey, please think of a student with a disability receiving services in special education in one of your classes who requires instructional support. Next, think about the levels of special education services and supports that student receives. Take a minute to think of that student.

8. Please rate the level of instructional services and supports that student receives:
   1. Low amount of instructional services and supports
   2. Moderate amount of instructional services and supports
   3. High amount of instructional services and supports

9. Please select the primary disability category of the student you were asked to think about in the directions of this survey section.
   1. Autism
   2. Deaf-blindness
   3. Deafness
   4. Emotional Disturbance

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5. Hearing Impairment
6. Intellectual Disability
7. Multiple Disabilities
8. Orthopedic Impairment
9. Other Health Impairment
10. Specific Learning Disability
11. Speech or Language Impairment
12. Traumatic Brain Injury
13. Visual Impairment
14. Unsure

Section 3: Participant Responses

Statements	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Directions: Read each statement below and indicate your level of agreement with each statement. Response choices range from 'Strongly Disagree' to 'Strongly Agree'. Please indicate your response by selecting the appropriate level of agreement. For any questions referring to a 'student', please reference the student you thought of at the beginning of the survey to answer those questions.					
10. I know what types of instructional services and supports are available through Special Education.					
11. I review the student's Full and Individual Evaluation (FIE) to learn about instructional recommendations and specific strengths and weaknesses of the student.					
12. I do not review the student's Full and Individual Evaluation (FIE), but I obtain					

instructional recommendations and information about student specific strengths and weaknesses in another way.					
13. Information about instructional recommendations and student specific strengths and weaknesses is distributed to me by a special education staff member on a routine basis.					
Statements	**Strongly Disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**
14. I utilize information from the student's Full and Individual Evaluation (FIE) to plan specialized instruction for the student.					
15. I utilize information from the student's Full and Individual Evaluation (FIE) to adapt my teaching style or to develop teaching strategies to meet the student's needs.					

16. I *would* use information about instructional recommendations and student specific strengths and deficits from the student's Full and Individual Evaluation (FIE) to enhance my instructional practices if it was provided to me in some way.					

17. What would be the best way to ensure that instructional recommendations and

other teaching strategies identified in a Full and Individual Evaluation (FIE) are

reviewed or discussed?

    a. A face-to-face, informal meeting with a special education staff member.

    b. Recurring special education meetings to review specific students.

    c. Open office hours where a teacher can meet with a diagnostician.

    d. A short, typed document with instructional recommendations and

       student strengths/weaknesses.

    e. Regular communication with the student's special education contact

       teacher/case manager.

    f. A training or tutorial on how to interpret instructional recommendations

       from an evaluation.

    g. Other.

APPENDIX C

Initial Survey Email

Dear Teacher,

My name is Jonathan Broyles and I am in the process of obtaining my doctoral degree in the area of Special Education at Texas Woman's University. I am conducting an online survey to obtain data for my dissertation to study how diagnostic information from a full and individual evaluation is utilized in the classroom. Full and individual evaluations describe areas of student strengths and deficits, and they are important when considering the provision of special education services. As a teacher at a junior high school, you are invited to participate in this research. The results of this research will be used to identify ways to make the communication of this information more efficient.

The survey was created in a manner that allows for quick and easy completion. It should take 10-15 minutes at most. Your participation is completely voluntary and can be withdrawn at any time.

If you agree to participate in this research, please complete the online survey by following the link located at the end of this email. Your participation in and completion of the survey constitutes your informed consent to participate in this research. No identifiable information will be collected or stored, and participant responses are not linked to an individual's information.

If you have any questions about the research, please contact me or my advisor, Jane Pemberton, PhD., at the following addresses:

Jonathan Broyles
Jbroyle1@aisd.net

Jane Pemberton
jpemberton@twu.edu

Thank you for your participation!

Survey Link: www.PsychData.com

APPENDIX D

Survey Reminder Email

Dear Teacher,

Recently an email was sent to you inviting you to participate in a research study that is investigating the use of diagnostic information in the classroom for my dissertation.

If you have already completed the survey, please accept my sincere thanks. If you have not yet completed the survey and would still like to participate, please complete the online survey by following the link at the bottom of this page. The survey should take no longer than 10-15 minutes to complete.

If you have any questions about the research, please contact me or my advisor, Jane Pemberton, PhD., at the following addresses:

Jonathan Broyles
Jbroyle1@aisd.net

Jane Pemberton
jpemberton@twu.edu

Thank you for your participation!

Survey Link: www.PsychData.com