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# The school psychologist's role in the problem solving process: How assessment can inform intervention

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The School Psychologist's Role in the Problem Solving Process: How Assessment Can  
Inform Intervention

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In

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## Abstract

This study serves as an investigation into the role of school psychologists within the problem solving process, intervention selection, and the role assessment in guiding intervention selection. School psychologists have many different roles that they can carry out and the roles of assessment and intervention tend to be the two largest. Assessments are designed for clinical decision-making and interventions are designed to target the specific needs of a student. As problem solvers and decision makers, it would make sense to use the tools that school psychologists have, including assessment and intervention, in combination in order to help students succeed. The current study provides insight into the current practices of school psychologists in using assessment to inform intervention and their functional role in pre-referral meetings. In this study, school psychologists were asked to complete a survey specific to their current role in pre-referral meetings, intervention selection, and the role that assessment has in this process. Overall implications of this study suggest increasing use of assessments to inform intervention during pre-referral meetings is worthy of more consideration. Assessment continues to play a large role within the field of school psychology, especially when it comes to understanding the individual needs of a child. Interventions also play a large role in pre-referral meetings and are designed to target a child's needs, which was agreed on amongst school psychologists as best practice. Therefore, using assessment to inform intervention may be a direction for school psychological services to move toward as more systems develop multi-tiered systems of support for intervention.

## **Introduction and Literature Review**

### **The Role of the School Psychologist**

The National Association of School Psychologists (NASP) defines a school psychologist as someone who “provide[s] effective services to help children and youth succeed academically, socially, behaviorally, and emotionally” (NASP, 2010, p. 1). School psychologists at their core are trained to help children; however, this broad definition does not explicitly state how school psychologists are to help children succeed. To address this, NASP further states that school psychologists, “conduct effective decision making using a foundation of assessment and data collection [as well as] engage in specific services for students such as direct and indirect interventions that focus on academic skills, learning, socializing, and mental health” (NASP, 2010, p. 1). The varied roles of the school psychologist cover many aspects of education, which affect a student’s daily life; however, the roles of assessment and intervention tend to take the forefront (Merrell, Ervin, & Peacock, 2011). Both roles have their nuances and difficulties which can make effective decision making difficult, but when done following best practices, can have a positive impact on a student’s life.

### **The Role of Assessment**

One of the most prominent, and controversial, topics in school psychology is assessment. Assessments can be used to describe a wide variety of data collection tools, ranging from standardized tests to informal observations (Merrell, et al., 2011). Standardized cognitive assessments, or intelligence tests, are most closely associated with the history of school psychologists. School psychologists often use these assessments to assist with databased decision-making (Decker, Hale, & Flanagan, 2013).

When assessments are selected in order to make decisions, school psychologists must be aware of the assessment's psychometric properties (Merrell, et al., 2011). These properties refer to an assessment's validity and reliability. Validity refers to "the extent to which a test measures what it is intended to measure" (Merrell, et al., 2011, p. 171). For example, a ruler is intended to measure height and if it instead measured temperature, that ruler would not be a valid measure. Reliability refers to "the extent to which the measure is consistent" (Merrell, et al., p. 171). Again, using the ruler, if you measure an item that is a foot long, the ruler should always measure that item as being a foot long. The norm-based assessments that school psychologists use go through extensive development in order to ensure that the assessments are both valid and reliable so that psychologists can make decisions with data that is measured accurately.

When administering assessments, school psychologists must also be aware of the ethical guidelines surrounding both the field of school psychology and the role of assessment. Within the NASP Principles for Professional Ethics, there is an entire section dedicated to responsible assessment and intervention practices (NASP, 2010). These guidelines range from selection of appropriate assessments to interpretation of said assessments. As these assessments are often used to determine if a child has an underlying disability that may explain their struggles with school, the correct use of these assessments often lead to weighty decisions. In a school setting, assessments are most frequently used in order to determine if a student qualifies for special education (Merrell, et al., 2011). Eligibility for special education is an important decision; therefore, schools want to collect as much objective data about a child as possible. As such, it is difficult to separate the role of assessment and the role of eligibility within schools.

**Determination of a specific learning disability.** One area in education where it is most difficult to separate assessment and eligibility is when determining if a child has a Specific Learning Disability (SLD). This is especially true as SLD is the most common disability to be diagnosed and served within public schools (U.S. Department of Education, 2015). A Specific Learning Disability is legally defined in the Individuals with Disabilities Education act 2004 (IDEA 2004) as

“a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, that may manifest itself in the imperfect ability to listen, think, speak, read, write, spell, or to do mathematical calculations” (IDEA 2004 §300.8).

There is much debate in the field of school psychology when it comes to how SLD should be determined within the schools and the role that assessment has in this process (Hale et al., 2010). Within the parameters of IDEA 2004, there are three regulations around determining SLD that are meant to help guide schools when they need to determine if a student qualifies as a student with SLD.

The first of these guidelines states that schools “must not require the use of a severe discrepancy between intellectual ability and achievement for determining whether a child has a specific learning disability” (IDEA 2004 §300.307). Until IDEA 2004 was passed, many schools were required to use the discrepancy model in order to determine eligibility, meaning that there was at least one standard deviation difference between a child’s cognitive and achievement scores (Feifer & Della Toffalo, 2007; Sotelo-Dynega, Flanagan, & Alfonso, 2011). This model, as gleaned through the definition, was heavily reliant on assessment. Although this model has fallen out of favor within the world of

education, historically, it maintained the role of the school psychologist as that of assessor.

The second guideline asserts that states, “Must permit the use of a process based on the child’s response to scientific, research-based intervention” (IDEA 2004 §300.307). This regulation has led to an increase of Response to Intervention (RTI) in schools with at least 14 states requiring this model to identify SLD (Zirkel, 2012). RTI is a three-tier structure focused on meeting the needs of all students within a school through three levels of intensifying intervention (Fieffer & Della Tofallo, 2007; Fletcher, Barth, & Stuebing, 2011, Sotelo-Dynega, et al., 2011). Through this model, the role of assessment, while still necessary to rule out various disabilities including Intellectual Disability (ID), is significantly decreased while the role of prevention and intervention are emphasized.

The final guideline around SLD determination states that schools “may permit the use of other alternative research-based procedures for determining whether a child has a specific learning disability” (IDEA 2004 §300.307). Although this regulation is broad and does not specifically guide schools in how to determine if a child has a Specific Learning Disability, the many assessment experts agree that this is the best way to practice (Hale, et al., 2010). The consensus between experts is that school psychologists identifying a pattern of psychological of strengths and weaknesses (PSW) is the most empirical and clinically sound process. In order to obtain a pattern of strengths and weaknesses, cognitive and academic ability must be measured. Obtaining psychological strengths and weaknesses also includes looking beyond the Full Scale IQ and into the

indices of an assessment (Holdnack & Weiss, 2006). As such, with the PSW model, assessment once again takes a larger role when determining SLD.

The debate around the role of assessment in school psychology, specifically with how we determine if a child has SLD, continues to this day. Although it is unlikely that there will ever be unanimous guidance as to how to determine if a student qualifies for special education, there is some consensus within the field. A panel of experts within the field of school psychology concluded that the two major models outlined in the first two guidelines, ability-achievement discrepancy and RTI, are not sufficient for SLD identification (Hale, et al., 2010). They did support the use of assessment through “other alternative research-based procedures”, specifically using PSW. Although they did not support using RTI for determining if a child has SLD, they did support the use of intense interventions that focus on the learning needs of a child. As such, the role of assessment appears to have a continued role in determining eligibility while the role of intervention has an increasingly important role with the treatment of a student’s learning needs.

### **The Role of Intervention**

Interventions have become an important, and in some cases, critical, component of addressing the needs of a student. Under the parameters of IDEA 2004, schools may use federal funds to

“develop and implement coordinated, early intervening services...for students in kindergarten through grade 12 who are not currently identified as needing special education or related services, but who need additional

academic and behavior support to succeed in a general education environment” (IDEA 2004 §300.226).

Within a school setting, an intervention can cover a broad number of focuses, as they can target both academic and behavioral problems in and out of the classroom. While there are many actions that can be done that are considered interventions, experts agree that interventions are most effective when they are evidence based and implemented with fidelity and integrity, meaning that you are collecting data and able to monitor a student’s progress (Kratochwill & Shernoff, 2003).

**Components of an evidence-based intervention.** Evidence-based intervention typically refers to research-based and manualized practices that have been tested using experimental and control groups to establish causation and to assess the effects (Hoagwood, 2003). In order to establish an intervention as being evidence-based, it must go through rounds of development, similar to assessment, in order to ensure that the intervention has both efficacy and effectiveness. Efficacy refers to how intervention outcomes are produced in a research setting under controlled conditions (Shoenwald & Hoagwood, 2001). Establishing efficacy takes rounds of trials and adjustments, just to make sure that the intervention works in ideal conditions. Effectiveness, on the other hand, refers to how intervention outcomes are produced in the environment that they are intended. The move from efficacy to effectiveness is often tricky as we typically have less control over the real world than we do in a lab setting (Walker, 2004). Making the jump from efficacy to effectiveness is often where most interventions fail; however, when they do succeed, they are then considered a good evidence-based intervention.

Having evidence-based interventions often ensures that the intervention is targeting the area of need effectively.

Outside of being evidence-based, many other components influence the effectiveness of an intervention. The implementer, or the person who carries out the intervention, is often an important factor when considering intervention effectiveness. Many candidates are available to serve as implementer; however, the majority of school-based interventions are teacher-led (Peacock & Collet, 2011). This could mean that a teacher has a packaged academic program with specific scripts and dosages that they use with students or the teachers make adjustments in the classroom in order to help a student succeed.

Although interventions come in many shapes and forms, an important component of intervention effectiveness is intervention fidelity. This concept refers to the extent to which an intervention is implemented as it is designed (Gearing et al., 2011). With the amount of work that goes into designing an effective evidence-based intervention, it makes sense that they will be most effective when they are implemented as designed. The most important pieces when it comes to making sure that an intervention is implemented correctly within a school setting include teacher support, administrative support, training opportunities, and flexibility of the intervention designer (Forman, Olin, Hoagwood, Crowe, & Saka, 2009). Having support both on an administrative and teaching level helps to ensure that the intervention is both accepted and implemented within the school building. Training opportunities allow those who implement the intervention to feel confident as to how accurately they are implementing the intervention. This is especially

true when any interventions utilize technology, as many do currently. Flexibility from the designer is also important because, as mentioned previously, it is difficult to have an intervention make that leap from a lab to real life setting. A good developer will work with their implementers and make changes to the intervention as necessary. Although there are many moving factors when it comes to implementing an intervention, when these factors all work together, an intervention is more likely to reach its intended levels of success.

Another component that is critical when utilizing interventions is the population with which the intervention will be used. In a school setting, this population includes students who are struggling, either academically or behaviorally (Merrell, et al., 2011). Students come into schools a complex young people, with their own set of knowledge, history, and genetic predisposition that may make some interventions more effective than other ones. Even when an intervention has gone through rounds of development to ensure it is both efficacious and effective as well as when the intervention is implemented with fidelity; it will not be truly effective unless it addresses the needs of the child. In order to make sure that interventions are serving their purpose of helping children succeed, people in the school who know their students must be involved in the problem-solving process.

### **Intervention Planning Teams and Pre-Referral**

With the rise of intervention use through RTI, intervention has become the first step when trying to problem-solve in the schools. This means that they are typically considered and implemented before any referral for special education is made, at a pre-referral meeting. Before IDEA 2004, directors of special education viewed pre-referral

meetings as the first step to an evaluation (Poland, Thurlow, Ysseldyke, & Mirkin, 1982). In the 1980's and 1990's, schools were concerned about the amount of students being placed in special education. In accordance with the ability-achievement discrepancy model, students were being placed in special education at higher rates than schools were able to finance and service (Decker, et al., 2013; Holdnack & Weiss, 2006). As a result, schools began to implement meetings in order to help students beyond a "test and place" model. These meetings were made up of teams consisting of teachers, administrators, and other support staff, such as the school psychologist and are referred to as intervention assistance teams (IAT), pre-referral intervention teams (PIT), student assistance teams (SAT), and child study teams (CST; Burns, Vanderwood & Ruby, 2005; Kovaleski, 2002). Although these teams go by a variety of different names, which varies across school systems, pre-referral teams are often used to help with the problem solving process in schools (Long, 2013).

The purpose of pre-referral has evolved alongside the regulations for determining special education placement. There are many purposes of the child study team, including making decisions on who should be evaluated for special education services as well as what interventions should be tried in the classroom. A variety of school personnel are involved in these meetings, including: teacher, administrator, and other school staff such as the school psychologist or reading and math specialists. Parents are also critical participants in these meeting. The teacher or the parent are typically the ones who initiate the problem-solving process, both of whom are around the student the most and recognize that the student is struggling (Long, 2013; Poland, Thurlow, Ysseldyke, & Mirkin, 1982). Once the referral is made, then the problem solving process can begin.

These teams consistently consider both referral for special education services as well as intervention in a general education setting, looking for many solutions that may be able to describe why a student is struggling.

All across America, child study meetings are used to address issues in the classroom that may not necessarily be solved with special education. Within the southern United States, 60.8% of teachers stated that most students that they refer are not referred for special education and 43% did not expect an evaluation to be done because of a child study meeting (Lee-Tarver, 2006). Similarly, in southern California, interventions were the result of child study meetings. In this school system, as a result of the interventions completed, 62.87% of students stayed in general education classroom while 34.32% went to on the be referred for special education (Lane, Pierson, Robertson, & Little, 2004). In Pennsylvania, instructional support teams were mandated and implemented across the state and because of this, 83-85% of the students discussed at these meetings were not referred on for special education (Kovaleski & Glew, 2006). Many schools have come a long way with how they view and treat students who have difficulties with learning. Pre-referral teams have helped students with a variety services beyond just being placed in special education.

### **Using Assessment to Guide Intervention Selection**

In recent years, schools have increasingly considered the role of interventions, which are often first mentioned during pre-referral meetings. The NASP standards offer guidance when it comes to selecting interventions, stating that, “school psychologists use a problem-solving process to develop interventions appropriate to the presenting

problems and that are consistent with data collected” (NASP, 2010, p. 9). Assessments, at their core, are designed for clinical decision-making (Decker, 2013). Test scores objectively give information about a person’s functioning. For this reason, assessments go through rounds of development and norming in order to ensure that they are both valid and reliable; however, that does not ensure that an assessment has a link to real world solutions. Assessments must also support prescriptive action, or being able to create a treatment from the information produced by them.

Within a school setting, both standardized normative assessments used with curriculum-based measures are tools that can help explain why a child is having academic difficulties (Decker, 2008). Historically the data collected through assessments has been used solely to make decisions about eligibility for special education; however, it is reasonable to use assessment data in a more prescriptive way, by guiding intervention. It also falls within the parameters of IDEA 2004, as well as from the 2009 *Forest Grove School District v T.A.* Supreme Court ruling, to consider using available assessment procedures in a deliberate manner to inform academic and behavioral interventions, prior to consideration of eligibility (Dixon, Eusebio, Turton, Wright, & Hale, 2011). Similarly, experts within the field of school psychology came to the consensus that assessments should be used not only for identification, but also for intervention purposes (Hale et al, 2010). As intervention continues to play an increasingly larger role within schools, the more data used to select interventions in students should be welcomed.

As stated previously, the role of the school psychologist is to “provide effective services to help children and youth succeed academically, socially, behaviorally, and

emotionally” (NASP, 2010, p. 1). Through the many roles that school psychologists have, they are, for the most part, successful in this; however, the world of education is constantly changing. In order to ensure that the needs of children are met, school psychologists must adapt to change and be ready to meet the needs of any child. With the increasing focus on intervention and the historical tie to assessment, combining the two roles could serve children better. By using processing assessments to gather further information about a student’s strengths and needs, this information can better help guide intervention selection that best fits the needs of the student. Psychologists would be able to use assessments for prescriptive and preventative purposes rather than reactively trying to find the cause of a problem. As problem solvers and decision makers, it would make sense to use the tools that school psychologists have, including assessment and intervention, in combination in order to help students succeed.

In order to investigate the role of school psychologists within the problem solving process, intervention selection, and the role of assessment in guiding intervention selection; a better understanding of current practices is needed. This study sought to answer the following research questions:

Research Question 1. How do schools identify a student with a Specific Learning Disability?

Research Question 2. How do schools utilize pre-referral meetings in the problem-solving process?

Research Question 3. What interventions are used to help address the academic needs of students and how are they chosen?

Research Question 4. When assessment is used to inform student's strengths and weaknesses during the problem solving team process, how does it influence the intervention?

Research Question 5. How does using assessments to inform intervention improve academic outcomes for students?

Research Question 6. How does using assessments to inform interventions influence school psychologist's role in the problem solving process?

## Methods

### Participants

Participants were recruited via their state organizations. Participants consisted of 73 school psychologists practicing in the state of Virginia. The survey was sent to 477 practicing psychologists in Virginia. The response rate to the survey was 15.03%. The majority 85.93% (n=62) of participants were female and 15.06% (n=11) of participants were male. The highest degree obtained by 89.04% (n=65) was an Educational Specialist or Certificate of Advanced Study in School Psychology and 5.47% (n=4) of participants indicated their highest level of degree attainment was a Ph.D. or Psy.D in School Psychology. Other degrees that 5.47% (n=4) of participants had received included having were Masters Degrees and Doctorate of Education. When asked how long they had practiced as a school psychologist, 8.22% (n=6) practiced for 0-5 years, 12.33% (n=9) practiced for 6-10 years, 20.55% (n=15) practiced for 11-15 years, 22.29% (n=17) practiced for 16-20 years, and 35.61% (n=26) practiced for more than 21 years.

When asked in what types of settings they provide services, 24.65% (n=18) of school psychologists indicated that they worked in urban school districts, 24.65% (n=18) work in suburban school districts, and 50.68% (n=37) work in rural school districts. When asked what level of school they provide services in, 34.25% (n=25) worked in all levels of schools (e.g., preschool, elementary, middle, high), 10.96% (n=8) worked in only elementary schools, and 2.74% (n=2) worked in only middle schools. Many psychologists worked in a combination two of settings including, 9.59% (n=7) in preschools and elementary schools, 8.23% (n=6) in elementary and middle schools, 6.84% (n=5) in elementary and high schools, and 2.74% (n=2) in middle and high

schools. Other psychologists worked in a combination of three settings including, 6.84% (n=5) in elementary middle, and high schools, 10.95% (n=8) in preschools, elementary, and middle schools, and 5.48% (n=4) in preschools, elementary, and high schools. The remaining 2.21% (n=4) of psychologists indicated that they work in other settings, including Child Find and alternative placement settings.

### **Materials**

In order to answer the research questions, a 23-item survey was developed by the researcher, which is included in written format in Appendix A. Qualtrics, a web-based survey program, was used to create, collect, and store survey items and participant responses. The survey items were presented in multiple-choice style formats, checklist-style answer choices, and open-ended responses. These items were then summarized by descriptive statistics, frequency charts, and text sorting generated from the Qualtrics program.

### **Procedure**

This study was completed online as a survey via Qualtrics. The survey was administered via email to a database of school psychologists who had shared their email with the Virginia Department of Education. The School psychologists in this database were emailed by the researcher. The survey was also posted on the Maryland School Psychology association website; however, only one incomplete response was obtained and therefore was not included in the results. The researcher had also reached out to the Florida Association of School Psychology, but received no response. The email (Appendix B) included information about the purpose of the study, a link to participate in the study, and contact information for the researcher. Informed consent was obtained

after the participants clicked on the survey link, at the beginning of the survey. The survey contained various questions specific to the current professional practices of school psychologists.

## Results

The survey items were presented in multiple-choice style formats, checklist-style answer choices, and open-ended responses. These items were then summarized by descriptive statistics, frequency charts, and text sorting generated from the Qualtrics program.

### **How do schools identify a student with a Specific Learning Disability?**

When looking at how various schools determine if a child has a Specific Learning Disability, there was no single reported way that schools make this decision. When identifying students with SLD, 39.35% (n=28) of school psychologists indicated that their schools use only the ability/achievement discrepancy model, 12.33% (n=9) use only the RTI model, and 12.33% (n=9) use only alternative research based methods. Combinations of models were also common with 15.07% (n=11) using all three procedures, 15.07% (n=11) using both the ability/achievement discrepancy model and RTI, 2.74% (n=2) using both the ability/achievement discrepancy model and alternative research-based methods, and 4.11% (n=3) using both RTI and alternative research-based methods. Of the 24 school psychologists who indicated that they use alternative research-based methods, 8.33% (n=2) indicated that they used cross battery, 25.00% (n=6) indicated that they use patterns of strengths and weaknesses, and 66.67% (n=16) indicated that they use both cross battery and patterns of strengths and weaknesses.

### **How do schools utilize pre-referral meetings in the problem-solving process?**

When asked, "Do your schools participate in child study/student study/pre-referral meetings," 100% (n=73) of school psychologists indicated that their schools participate in pre-referral meetings. When a team is at the table for a pre-referral meeting, many

options are typically considered, as displayed in table 1. Multiple responses were allowed for this question. Interventions are most often considered during the pre-referral meeting as 89.04% (n=65) psychologists indicated that they consider interventions. Referral for special education was the second most considered option at pre-referral with 60.27% (n=44). Other options frequently considered were counseling services (43.83%, n=32), FBA/BIP (39.73%, n=28), speech/language services (36.98%, n=27), and occupational therapy (15.06%, n=11). Other services were considered 15.06% (n=11) of the time, including 504 plan, attendance, rule outs (e.g., vision, hearing, medical concerns), community services, Therapeutic Day Treatment (TDT), and RTI data.

*Table 1.*

*What is typically considered during the pre-referral meeting?*

	<i>School Psychologists' Responses</i>
Interventions	89.04%
Referral for Special Education	60.27%
Counseling Services	43.83%
FBA/BIP	39.73%
Speech Language Services	36.98%
Occupational Therapy	15.06%
Other	15.06%

**What interventions are used to help address the academic needs of students and how are they chosen?**

When it comes time to choose interventions for students, there are many points in time during the problem solving process to do so. About a third, 33.85% (n=22), of school psychologists indicated that their schools consider interventions during all stages of the problem solving process (e.g., pre-referral, during referral, after eligibility). Another third, 36.92% (n=24), consider interventions during the pre-referral meeting.

Few psychologists 3.07% (n=2) consider interventions during the referral process. Less than half of psychologists indicated that their schools consider interventions at a combination of times throughout the problem solving process, with 9.23% (n=6) at pre-referral and after eligibility, 9.23% (n=6) at pre-referral and during referral, and 1.53% (n=1) consider interventions both during referral and after eligibility. Only 4.61% (n=3) consider interventions at another point in time, one specifically stating that they have a block in the school day for interventions. Only 1.53% (n=1) indicated that their schools do not consider interventions at all.

When asked, “How do your schools select interventions for students,” 23 of 60 responses (38.33%) mentioned a student’s individual need, such as “focusing on academic or behavior needs of the child” and “the teams look at the child’s particular weaknesses and strengths and look for interventions that will target the specific concern.” Fourteen responses (23.33%) mentioned standardized tests (i.e., PALS, MAP, etc.) as well as other classroom-based benchmarks, including “based on PALS results and other county assessments” and “screening results, such as PALS, will trigger placement in a specific intervention group.” Seven responses (11.67%) mentioned availability, such as “typically dictated by what is available and widely used across the county” and “based on what is available at the school”. Seven responses (11.67%) mentioned central office decisions, including “Central Office Education specialists usually select for the district and then push out to the schools” and “they are chosen at district level”. Seven responses (11.67%) mentioned involvement of a specialist, including “interventions are selected by our Student Intervention Specialists” and “through data meetings and input from reading and math specialists.” Seven responses (11.67 %) mentioned a team decision, including

“teacher consultation, ‘child study’ discussion, [and] screenings” and “the child study teams determine the needs of the child and come up with strategies and interventions.” Six responses (10.00 %) mentioned RTI data and level, such as “based upon their RTI data/tier and similar needs for a small group”. Six school psychologists (10.00%) responded that they were not involved in intervention selection. Four responses (6.67%) mentioned classroom data, including “interventions are selected based upon data collection provided by their individual classroom teachers during the child study meetings.”

When schools choose interventions in order to help students succeed, there are many options available to them. Table 2 shows which academic interventions Virginia school psychologists indicated their schools use. The most commonly selected interventions included 17.30% (n=32) Leveled Literacy Intervention (LLI), 11.89% (n=22) READ 180, 9.37% (n=18) Peer Assisted Learning Strategies (PALS), 6.49% (n=12) Quick Reads, and 5.95% (n=11) FASTT Math. Other interventions that School Psychologists listed which were not available for selection included Wilson Reader, iReady, Orton Gillingham, Language Live, Phonological Awareness and Literacy Screening (PALS) tutoring supports, SPIRE Reading, SRI Reading, SMI Math, RISE, Moving with Math, Everyday Math, LEXIA, and Words their Way.

Table 2.

*What Academic Interventions do your Schools Utilize?*

	<i>School Psychologists' Responses</i>
Other	22.16%
Leveled Literacy Intervention (LLI)	17.30%
READ 180	11.89%
Peer Assisted Learning Strategies	9.73%
Quick Reads	6.49%

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FASTT Math	5.95%
Corrective Reading	4.86%
Read Naturally Live	3.78%
Voyager Passport	3.24%
Phonics for Reading	3.24%
System 44	2.70%
Early Numeracy	2.16%
Waterford	1.62%
Headsprout	1.62%
Number Worlds	1.08%
Math Wise	0.54%
Read Well	0.54%
Literacy in the Digital Age	0.54%
Number Rockets	0.54%

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When asked, “What do you see as best practices when selecting academic interventions for students,” 24 of 56 responses (42.85%) mentioned individual needs of the child, such as “interventions match area(s) of deficit/need” and “meeting the student's needs by selecting from a variety of programs, rather than giving each student the same program.” Thirteen responses (23.21%) mentioned evidence-based interventions, including “making sure the intervention is research based and effective for the problem described” and “is it supported by research? Has it been successful when used with other students?” Nine responses (16.07%) mentioned data collection, such as “data collection is crucial to know whether or not the intervention is working or needs to be intensified or terminated” and “teacher collected data that more specifically designates weaknesses as it relates to the classroom/school curriculum.” Eight responses (14.28%) mentioned implementation, including “research based interventions, age appropriate and individualized with the student's strengths and weaknesses considered, monitoring for success, and consistency in the implementation of interventions.” Six responses (10.71%) mentioned classroom data and curriculum based, such as “using CBMs that are appropriate relative to curriculum demands at different grade levels”. Two responses

(3.57%) mentioned caseloads of school psychologists, including “best practice likely has school psychologists with much smaller caseloads that would allow them to use testing for pre-referral intervention. That is not possible here due to the number of referrals for special education.” Two responses (3.57%) mentioned a team decision, such as “a problem solving team approach. Members of the team should understand the types of interventions available and the teacher should be able to explain the difficulty the student is experiencing.”

**When assessment is used to inform student’s strengths and weaknesses during the problem solving team process, how does it influence the intervention?**

When asked, “do your schools use processing assessments before eligibility is considered in order to guide academic intervention selection,” 22.73% (n=15) of school psychologists indicated that they did, 68.18% (n=45) indicated that they did not, and 9.09% (n=6) responded other, such as “less than 30%”, “in unique cases only”, and “occasionally.” The 21 participants who responded “yes” and “other” to this question were presented the remainder of the questions in the survey. The 45 participants who responded “no” were taken to the question “Should processing assessments be used not only for identification but for intervention purposes as well” and the end of the survey.

The most commonly used assessments to inform interventions, displayed in Table 3, included, Behavior Assessment System for Children, Third Edition (BASC-3, 18.18%, n=12), Comprehensive Test of Phonological Processing, Second Edition (CTOPP-2, 18.18%, n=12), Conners-3 (16.67%, n=11). Other assessments/subtests that school psychologists listed which were not available for selection included Woodcock Johnson Test of Cognitive Abilities, Fourth Edition (WJ-IV), Woodcock Johnson Oral Language

Tests (WJ-IV Oral), Beery-Buktenica Developmental Test of Visual-Motor Integration, Sixth Edition (VMI), Bender Gestalt, and Test of Visual Perceptual Skills, Fourth Edition (TVPS-4). Other behavior rating scales that school psychologists listed which were not available for selection included the Emotional Disturbance Decision Tree (EDDT), Children's Depression Inventory, Second Edition (CDI-2), and Revised Children's Manifest Anxiety Scale, Second Edition (RCMAS-2). Other tests of memory and attention that school psychologists listed which were not available for selection included the Conners Continuous Performance Test, Third Edition (CPT-3) and Conners Kiddie Continuous Performance Test, Second Edition (KCPT-2). Other tests of auditory processing that school psychologists listed which were not available for selection included the Feifer Assessment of Reading (FAR).

*Table 3.*

*Which Assessments do you typically use to Inform Intervention during the Problem Solving Process?*

	School Psychologists' Responses
Behavior Assessment System for Children, third edition (BASC-3)	18.18%
Comprehensive Test of Phonological Processing, second edition (CTOPP-2)	18.18%
Conners-3	16.67%
Behavior Rating Inventory of Executive Functioning, second edition (BRIEF-2)	9.09%
Other assessments/subtests not listed	7.58%
Wide Range Assessment of Memory and Learning, second edition (WRAML-2)	7.58%
Test of Auditory Processing Skills, third edition (TAPS-3)	4.55%
Select subtests of A Developmental Neuropsychological Assessment, second edition (NEPSY-2)	4.55%
Other tests of memory and attention	4.55%
Children's Memory Scale (CMS)	3.03%
Other tests of auditory processing	3.03%
Other behavior rating scale	1.52%
Select subtests of Delis-Kaplan Executive Function System (D-KEFS)	1.52%

When asked, "Should processing assessments be used not only for identification but for intervention purposes as well", 22.22% (n=14) strongly agreed, 36.51% (n=23) somewhat agreed, 12.70% (n=8) neither agreed nor or disagreed, 23.81% (n=15) somewhat disagreed, and 4.76% (n=3) strongly disagreed.

### **How does using assessments to inform intervention improve academic outcomes for students?**

When asked, "In what ways does using processing assessments to guide interventions improve the way students are identified for special education", 4 out of 11 responses (36.36%) mentioned strengths and weaknesses, including "to determine

significant processing weaknesses and strengths which guide interventions.”. Three responses (27.27%) mentioned special education eligibility, such as “we cannot qualify a student under SLD without a processing deficit. Interventions can be developed to improve some processing deficits, such as phonological processing.” Three responses (27.27%) mentioned increased data, including “gives us more targeted data to consider for intervention.” Three responses (27.27%) mentioned processing information, such as “processing assessments help specify processing deficits and guide interventions, eligibility and/or IEP goals.” Two responses (18.18%) mentioned guiding IEP goals, including “it helps guide what accommodations and goals will be addressed in the IEP for students identified with specific processing weaknesses.” Two responses (18.18%) mentioned progress monitoring, such as we use them for progress monitoring to determine if a student should be referred due to insufficient progress.”

**How does using assessments to inform interventions influence school psychologist’s role in the problem solving process?**

When asked, “How many extra hours a week does using processing assessments to guide interventions take you,” 92.31% (n=12) responded 0-5 hours while one (7.69%) responded 11-15 hours. When asked, “How many cases per year do you use processing assessments to guide intervention”, 7.69% (n=1) responded 1-2 cases a year, 23.08% (n=3) responded 3-5 cases a year, 7.69% (n=1) responded 11-15 cases a year, 23.08% (n=3) responded 16-20 cases a year, and 38.46% (n=5) responded 20 or more cases a year.

When asked, “How does this process improve your role in the pre-referral team process,” seven of 11 responses (63.63%) mentioned increased understanding of a

student, including “provides team members with a better understanding of the student and their needs.” Three responses (27.27%) mentioned that they are not involved in the pre-referral process. One response (18.18%) simply stated, “I am part of the team.”

When asked, “How does this process fit with what you do as a school psychologist,” five of 11 responses (45.45%) mentioned assessment, such as “I am able to administer many of the assessments that would help guide interventions; however, my main role is evaluating students. We are fortunate to have Title I in our schools so they help administer these assessments to monitor progress and provide information to our child study teams.” Four responses (36.36%) mentioned helping children, including “determining how we can better help kids learn.” Three responses (27.27%) mentioned intervention, such as “fits well within the assessment and intervention role.” Two responses (27.27%) mentioned individual needs of a student, including “Processing assessments help me better serve students in identifying the needs of the individual.”

### Discussion

This study serves as an investigation into the role of school psychologists within the problem solving process, intervention selection, and the role of assessment may have to guide intervention selection. School psychologists have numerous roles within the school setting, which include assessment and intervention. This study surveyed school psychologists in Virginia in order to see how those roles are utilized in day-to-day practice.

The first research question looked at how schools determine a Specific Learning Disability. IDEA 2004 states that schools “must not require the use of a severe discrepancy between intellectual ability and achievement for determining whether a child has a specific learning disability” (IDEA, 2004 §300.307). Even though schools cannot require the use of a discrepancy model, the majority of school psychologists reported that their schools use the ability/achievement discrepancy model either on its own or in combination with other models to determine SLD eligibility. Numerous studies have shown that the ability-achievement model is ineffective (Feifer & DeFina, 2000; Fieffer & Della Tofallo, 2007; Hale et al., 2010; Vellutino et al., 1996); however, because it has been around the longest, it seems that many districts have not given up traditional and familiar ways of identifying SLD. This may have implications for school psychologists to promote identification procedures with their systems which match with best practices within the field.

Although “other alternative research-based based procedures”, including PSW, was recommended by experts within the field of school psychology as the most clinically sound procedure (Hale et al., 2010), less than half of psychologists in this survey

responded their district uses this method. Of those who did respond saying they used this third procedure, the majority indicated that they did use a pattern of psychological strengths and weaknesses.

The second research question looked at how schools utilize pre-referral meetings. One hundred percent of psychologists responded that their schools participate in pre-referral meetings. The majority of psychologists reported options outside of referral for special education were made at these meetings; with the main option considered being intervention. This lines up with previous research, as other schools across the country reported that they did not use pre-referral meetings for referrals for special education (Kovaleski & Glew, 2006; Lane, et al., 2004). While special education is still sometimes brought up during these meetings, the pre-referral meeting is identified an important first step in the problem solving process where a variety of options are considered.

The third research question looked at how interventions address the academic needs of students. All but one psychologist indicated that their schools utilize interventions. Academic interventions are also frequently utilized at any point in the problem solving process. When talking about how academic interventions are chosen, the main theme was that interventions should match the individual student. Many of the school psychologists also saw this as best practices when selecting interventions for students. The purpose of an intervention is to help a student make gains in an area of weakness or need (Merrell, et al., 2011). It therefore makes sense that the needs of the individual should be what drive intervention selection.

NASP principles for ethical practices also state that psychologists should use a variety of data sources in order to aid in their decision-making (NASP, 2010). Another

common theme highlighted in psychologists' answers when it comes to how they select interventions and what they see as best practices, was the use of curriculum-based measures and other sources of classroom data when selecting interventions. Interventions are typically data-driven and require constant tracking of data (Merrell, et al., 2011). The data that is collected throughout the intervention helps to ensure that the intervention is being implemented effectively and with fidelity, which are imperative to the success of the intervention, and as such, the success of the child.

When it came to best practices in selecting intervention, many psychologists voiced concerns around intervention implementation. Although having evidence-based interventions theoretically would produce desired outcome, whether that be academic or behavioral, many pieces get in the way of an intervention being effective. Having an intervention effectively implemented in a school building is a challenge in itself. It is estimated that within the field of mental health, it takes about 20 years for an intervention to be developed and implemented into routine practice (Hoagwood, 2003). With the amount of research that is produced every year around evidence-based interventions, this number seems shocking; however, there are many reasons that a school may be hesitant to adopt an intervention. One of the main reasons an intervention may not be adopted is the climate of the school (Foreman, et al., 2009). If a school's climate is not accepting of change or philosophically does not agree with how an intervention works, then that intervention will likely never be successful in that building. Another important factor in the failure of interventions is the role of the implementer. If an intervention is costly, either financial or simply takes a lot of time to complete, the implementer may be unable or unwilling to implement the intervention with fidelity. All of these factors frequently

interfere with the success of interventions, and that is seen by practicing school psychologists.

The fourth research question looked at how assessment is used to inform students' strengths and weaknesses in order to inform intervention. The majority of school psychologists do not practice this way; however, the majority of school psychologists had favorable views towards the potential of using assessments to inform interventions. Of the psychologists who did use assessments to inform intervention, Behavior Rating scales were the most commonly used followed by tests of phonological or auditory processing. Although assessments are traditionally used for eligibility purposes, this is not the only way that assessments have been utilized within a school setting.

The fifth research question looked at how using assessment to inform intervention improves outcomes for students. The overarching theme in this was identifying a student's strengths and weaknesses. As mentioned previously, the goal of assessment is to determine a student's strengths and needs objectively and the goal of intervention is to target those specific needs. Assessments are meant to have prescriptive action, meaning that they are supposed to create a treatment from the data gathered by them (Decker, 2013). Targeted and intense interventions are agreed to be necessary to help students with learning difficulties (Hale, et al., 2010). As such, using assessment data to guide intervention selection fulfills the role of prescriptive action and helps to meet a student's needs.

The sixth research question looked at how using assessment to inform interventions influences the role of the school psychologist in the problem solving process. Of those who practice this way, it does not appear to be a weighty burden to

their caseload. Using assessment to guide intervention did not add more than 15 hours a week. The number of cases that psychologist used assessment to inform intervention varied from 1-2 to more than 20 a year. The majority of psychologists also reported that it helps understand a student's individual needs, which as discovered previously, is important when determining which academic intervention best fits a student. Assessment is typically the primary role for school psychologists (Merrell, et al., 2011). Although intervention often takes a close second, many school psychologists do not get to spend as much time in this role as they would like. By using processing assessments to guide intervention selection, school psychologists are able to fulfill two roles at once while also achieving the larger goal of helping students succeed academically, socially, behaviorally, and emotionally.

Overall results suggest increasing use of assessments to inform intervention during pre-referral meetings is worthy of more consideration. Assessment continues to play a large role within the field of school psychology, especially when it comes to understanding the individual needs of a child. Interventions are designed to target a child's needs, and it is agreed on amongst school psychologists that this is best practices. Therefore, using assessment to inform intervention may be a direction for school psychological services to move toward as more systems develop multi-tiered systems of support for intervention.

### **Limitations**

The findings of this study are restricted to school psychologists who practice in the state of Virginia. This study was originally aimed to compare how school psychologists practice between states, specifically looking at Virginia, Maryland, and

Florida. There was no difficulty in obtaining participants from Virginia. Although the survey was posted on the Maryland School Psychology Association website, only one school psychologist from Maryland responded to the survey. This participant, however, did not complete the survey; therefore, their data is not included in the findings. The researcher also attempted to have the survey distributed to school psychologists in Florida; however, there was no response. Although the results of the Virginia psychologists were insightful, being able to compare how psychologists practice between states would have provided an extra level of understanding. Since each state is able to set some of their own guidelines about how assessments and interventions are used, it would have been informative to gather data about how school psychologists in each of these states practice.

Additionally, there may have been some confusion around the wording of some of the questions, specifically around the questions regarding using assessment to guide intervention selection. The intention was to investigate how school psychologists use assessments to guide intervention selection during pre-referral; however, there were mentions of eligibility decisions within participants' written responses. By adding clarification within the questions, specifically mentioning pre-referral within the questions, responses may have reflected more about how assessment can be used to guide intervention selection before eligibility for special education is considered.

Participants who responded to the survey may have been more invested in the topic than other potential participants who elected not to participate in the study. The survey design relied on knowledge of a school psychologist's current district and school system, knowledge about best practices in the field of school psychology, and their own

personal experiences with assessment and intervention. As such, some information may have been difficult to recall for some participants.

### **Recommendations for Future Research**

With the limitations stated, future research that investigates how school psychologists practice in states outside of Virginia would be recommended in order to determine the differences between states practice. As each state has its own guidelines around intervention and assessment, it would be beneficial to investigate how psychologists across the country differ in practice as the field of school psychology continues to evolve. Such research would allow for better understanding of how school psychologists practice, how best practices are conceptualized and utilized, and what trends are occurring in the fields of assessment and intervention.

Another way to further this research would be application within the field of school psychology. As the results indicated, few psychologists use processing assessments to guide intervention selection. Implementation of this model in the field would yield more data about how student outcomes are directly affected. Being able to monitor this model would yield data on how successful assessments were able to guide intervention, as well as how effective that intervention was when it was guided by assessment data. Research at this level could provide guidance to best practices in school psychology as well as how the model would fit into schools on a day-to-day basis.

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## Appendix A

### Survey Items

#### Identification of Investigators & Purpose of Study

You are being asked to participate in a research study conducted by Rachel Larkin from James Madison University. The purpose of this study is to investigate the role of school psychologists within the problem solving process as well as look at how various districts determine which interventions to use. This study will contribute to the researcher's completion of her Ed.S. Thesis

#### Research Procedures

This study consists of an online survey that will be administered to individual participants through email using Qualtrics (an online survey tool). You will be asked to provide answers to a series of questions related to the role of school psychologists within the problem solving process as well as look how various districts determine which interventions to use in the problem solving process. Time Required Participation in this study will require 15 minutes of your time.

#### Risks

The investigator does not perceive more than minimal risks from your involvement in this study (that is, no risks beyond the risks associated with everyday life).

#### Benefits

Potential benefits from participation in this study include increasing the understanding of how pre-referral meetings are conducted as well as how interventions are chosen and measured in schools in order to help students get the best services-service delivery. There are no direct benefits to the participants.

#### Confidentiality

The results of this research will be presented at a symposium or conference. While individual responses are anonymously obtained and recorded online through the Qualtrics software, data is kept in the strictest confidence. No identifiable information will be collected from the participant and no identifiable responses will be presented in the final form of this study. All data will be stored in a secure location only accessible to the researcher. The researcher retains the right to use and publish non-identifiable data. At the end of the study, all records will be destroyed. Final aggregate results will be made available to participants upon request.

#### Participation & Withdrawal

Your participation is entirely voluntary. You are free to choose not to participate. Should you choose to participate, you can withdraw at any time without consequences of any kind. However, once your responses have been submitted and anonymously recorded you will not be able to withdraw from the study.

#### Questions about the Study

If you have questions or concerns during the time of your participation in this study, or after its completion or you would like to receive a copy of the final aggregate results of this study, please contact:



- d. 16-20 years
  - e. 21+years
4. What state do you practice in?
  - a. Virginia
  - b. Maryland
  - c. Florida
  - d. Other
5. How would you describe the area you work in?
  - a. Urban
  - b. Suburban
  - c. Rural
6. What types of schools do you work in?
  - a. Preschool
  - b. Elementary
  - c. Middle
  - d. High
  - e. Other

*Special Ed/Interventions*

1. Which option best describes your state regulations for identification of students with a Specific Learning Disability
  - a. Ability/Achievement Discrepancy Model
  - b. Response to Intervention
  - c. Alternative research-based procedures
2. What alternative research-based procedures do you use in the identification of Specific Learning Disability?
  - a. Cross Battery
  - b. Pattern of Strengths and Weaknesses
  - c. Other
3. Do your schools participate in child study/student study/pre-referral (or similarly named) meetings?
  - a. Yes
  - b. No
  - c. Other
4. What is typically considered during pre-referral meetings?
  - a. Interventions
  - b. Referral for special education
  - c. FBA/BIP
  - d. Counseling services
  - e. Speech/Language
  - f. Occupational therapy
  - g. Other
5. What academic interventions do your schools utilize?

- |   |                                      |
|---|--------------------------------------|
| a. Leveled Literacy Intervention (LLI)      | n. Kaleidoscope                      |
| b. Read 180                                 | o. Waterford                         |
| c. Read Naturally Live                      | p. Math Wise                         |
| d. iLit                                     | q. Pirate Math                       |
| e. Literacy in the Digital Age              | r. Solve It!                         |
| f. System 44                                | s. Number Rockets                    |
| g. Peer Assisted Learning Strategies (PALS) | t. Above and Beyond with Digi Blocks |
| h. Headsprout                               | u. Early Numeracy                    |
| i. Corrective Reading                       | v. FASTT Math                        |
| j. Phonics for Reading                      | w. Number Worlds                     |
| k. Voyager Passport                         | x. Understanding Math                |
| l. Quick Reads                              | y. Other                             |
| m. Read Well                                |                                      |
6. How do your schools select interventions for students?
  7. At what point in the decision-making process does your school consider academic interventions?
    - a. Pre-referral
    - b. During referral
    - c. After eligibility
    - d. Not at all
    - e. Other

### *Integrated Assessment*

1. Do your schools use processing assessments (i.e., behavior scales, CTOPP-2, WRAML-2) before eligibility is considered in order to guide academic intervention selection for students?
  - a. Yes
  - b. No
  - c. Other
2. Which assessments do you typically use to inform intervention during the problem solving process?
  - a. Behavior Assessment System for Children, third edition (BASC-3)
  - b. Conners-3
  - c. Behavior Rating Inventory of Executive Functioning, second edition (BRIEF-2)
  - d. Achenbach rating scales
  - e. Other behavior rating scale
  - f. Wide Range Assessment of Memory and Learning, second edition (WRAML-2)
  - g. Children's Memory Scale (CMS)
  - h. other tests of memory and attention

- i. Comprehensive Test Of Phonological Processing, second edition (CTOPP-2)
  - j. Test of Auditory Processing Skills, third edition (TAPS-3)
  - k. other tests of auditory processing
  - l. select subtests of A Developmental Neuropsychological Assessment, second edition (NEPSY-2)
  - m. select subtests of Delis-Kaplan Executive Function System (D-KEFS)
  - n. other tests of neurological functioning
  - o. other assessments/subtests not listed
3. How many hours a week does using processing assessments to inform intervention take you?
  - a. 0-5
  - b. 6-10
  - c. 11-15
  - d. 15+
4. How many cases per year do you use processing assessment to guide intervention selection?
  - a. 1-2
  - b. 3-5
  - c. 6-10
  - d. 11-15
  - e. 16-20
  - f. 20+
5. In what ways does using processing assessment to guide interventions improve the way students are identified for special education?
6. How does this process improve your role in the pre-referral team processes?
7. How does this process fit with what you do in the role of school psychologist?
8. Should processing assessments be used not only for identification but for intervention purposes as well?
  - a. Strongly agree
  - b. Somewhat agree
  - c. Neither agree nor disagree
  - d. Somewhat disagree
  - e. Strongly disagree
9. What do you see as best practices when selecting academic interventions for students?

**Appendix B**

Sample email to be sent to participants

Hello,

My name is Rachel Larkin and I am a third year student at James Madison University's School Psychology Program. I am currently working on my Ed.S. thesis, investigating how school psychologists use psycho-educational assessments in order to inform interventions for students. The following link contains a survey looking into how various school districts utilize assessments and interventions, which will not take more than 15 minutes to complete:

[http://jmu.co1.qualtrics.com/jfe/form/SV\\_bp7Z04hzsg7ppVX](http://jmu.co1.qualtrics.com/jfe/form/SV_bp7Z04hzsg7ppVX)

Thank you for your participation,

**Rachel Larkin, M.A.**

Ed.S. Candidate, School Psychology

James Madison University