CRITICAL ISSUES IN RESPONSE-TO-INTERVENTION, COMPREHENSIVE EVALUATION, AND SPECIFIC LEARNING DISABILITIES IDENTIFICATION AND INTERVENTION: AN EXPERT WHITE PAPER CONSENSUS

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Abstract. **Developed in concert with the Learning Disabilities Association of America (LDA), this White Paper regarding specific learning disabilities identification and intervention represents the expert consensus of 58 accomplished scholars in education, psychology, medicine, and the law. Survey responses and empirical evidence suggest that five conclusions are warranted: 1) The SLD definition should be maintained and the statutory requirements in SLD identification procedures should be strengthened; 2) neither ability-achievement discrepancy analysis nor failure to respond to intervention alone is sufficient for SLD identification; 3) a "third method" approach that identifies a pattern of psychological processing strengths and weaknesses, and achievement deficits consistent with this pattern of processing weaknesses, makes the most empirical and clinical sense; 4) an empirically-validated RTI model could be used to prevent learning problems, but comprehensive evaluations should occur for SLD identification purposes, and children with SLD need individualized interventions based on specific learning needs, not merely more intense interventions; and 5) assessment of cognitive and neuropsychological processes should be used for both SLD identification and intervention purposes.**

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White Paper Overview and Purpose

This White Paper project was undertaken to address the Learning Disabilities Association of America (LDA) concerns regarding the Individuals with Disabilities Education Act (IDEA) of 2004 statutory and regulatory requirements for the identification of Specific Learning Disabilities (SLD), and the subsequent U.S. Department of Education Final Regulations and Commentary regarding implementation of IDEA (34 CFR Parts 300 and 301; Federal Register, 2006).

The purpose of the White Paper is to provide additional information for and guidance to the federal government, professional organizations, practitioners, and the public. The LDA is hopeful that this document will facilitate legal, regulatory, policy, and training decisions, and ultimately, service delivery to children with SLD.

Subsequent to public release, the LDA sought to examine the arguments presented in IDEA and the Final Regulations. The LDA Public Policy/Advocacy Committee solicited a number of professionals to examine the evidence that supported or refuted the information presented in the law and commentary. This LDA effort resulted in an LDA White Paper Survey of experts in the field, which in turn led to the production of this White Paper.

This White Paper presents the expert professional opinions and empirical evidence regarding the identification of children with SLD and best practices in SLD service delivery. The findings of the LDA Expert Panel Survey (see Appendix A) and this White Paper represent the opinions and empirical evidence presented by 58 doctoral-level scholars in special education, psychology, medicine and the law with expertise in and public recognition for their work in SLD identification and intervention.

METHOD

Participants

All 58 Expert Panel participants have published extensively in SLD, cognitive/neuropsychological assessment of high incidence disorders including SLD, and/or SLD educational intervention, in peer-reviewed journals, peer-reviewed scholarly books, and/or argued legal cases in court proceedings (see Table 1 for demographic data). Given the goal of the White Paper, to affect SLD public policy and practices in the United States, only those individuals with professional affiliations in this country were invited to participate by the LDA. In addition, authors who have primarily advocated ability-achievement discrepancy or failure to respond-to-intervention for SLD identification purposes in their writings and/or presentations were not considered for inclusion in the sample.

A total of 64 individuals were initially invited to participate, three of whom declined due to time demands, two declined without reason, and one declined because the person had concerns that our position that cognitive and neuropsychological assessment data were relevant for intervention was premature. It is important to recognize that this was not a random sample of potential experts, but rather a survey of those individuals who have been recognized through peer-reviewed publications as scholars with legitimate professional investments in the law and practice concerning SLD identification and intervention. LDA membership was not required for participation.

For the final sample (N = 58), males (57%) and females (43%) were fairly well represented, and most (76%) had Ph.D. degrees, with fewer having other doctorates (i.e., Ed.D, Psy.D., M.D., J.D.). The cohort had a wide age range (35 to 88 years). It should be noted that the years in academia (two to 42 years) and practice (zero to 42 years) were not mutually exclusive. The Expert Panel had a considerable number of peer-reviewed journal articles (M = 44.17, SD = 50.16). It should be noted that books and book chapters were collapsed, and the value for presentations is not exact, given many respondents gave whole numbers and a plus sign (e.g., 100+) instead of an exact number. Individual curricula vitae are available upon request from the first author.

Procedure

After consultation with LDA leadership, the first author developed the LDA White Paper Survey items based on his knowledge of IDEA (2004) and the literature on SLD identification and service delivery. The Survey included 12 Likert items (see Appendix A), and several open-ended questions that asked participants to note the major issues and points they would like to see addressed in the White Paper. These qualitative open-ended questions, and subsequent email contacts between participants and the first author, were used for commentary regarding individual items. It should be noted that these qualitative comments are not exhaustive or fully inclusive of all Expert opinions, but were instead chosen by the first author to support the arguments presented, and subsequently reviewed and acknowledged by the Expert Panel as relevant to the discussion. The deidentified comments are available from the first author.

After piloting the survey with the LDA leadership, the first author and LDA leadership developed a list of the 64 professionals with multiple publications and/or national presentations addressing both response-to-intervention and cognitive and/or neuropsychological assessment for identification of specific learning dis-

Table 1
Expert Panel Demographic Data

Variable	*N*	*f*	%	*M*	*SD*	Range
Gender	58					
Male		33	57			
Female		25	43			
Degree	58					
Ph.D.		44	76			
Ed.D./Psy.D.		7	12			
M.D.		4	7			
J.D.		3	5			
Chronological Age	51			56.63	9.63	35 - 88
Years in Academia	54			20.41	11.30	2 - 42
Years in Practice[1]	54			16.69	13.23	0 - 42
Journal Articles	54			44.17	50.16	0 - 206
Books/Book Chapters	54			19.57	18.05	0 - 81
Professional Presentations[2]	53			140.60	163.09	20 - 1000+

[1]Years in Practice providing services to children with disabilities is not mutually exclusive from Years in Academia; [2]Approximate mean, given some respondents did not give exact number when over 100.

abilities and other high incidence disorders. The LDA and first author then solicited participation from the 64 professionals, and follow-up contacts were made by LDA and/or the first author to facilitate data collection. After data collection and analyses by the first author and a graduate assistant, the White Paper was drafted and submitted to the Expert Panel for review. After incorporating and reconciling a majority of the comments, the paper was sent again for final agreement, and presented at the LDA Summit on Specific Learning Disabilities Evaluation, Identification, and Service Delivery in Baltimore on February 16, 2010. After receiving additional feedback and guidance from Summit participants and the LDA leadership, the first author made final revisions and submitted the White Paper for publication.

White Paper Expert Panel Position

This White Paper provides a summary of these Expert Panel White Paper Survey opinions, with relevant, but not exhaustive, citations provided in support of these conclusions. The five major conclusions drawn from these opinions and the extant empirical evidence include:

1. Maintain the SLD definition and strengthen statutory requirements in SLD identification procedures;
2. Neither ability-achievement discrepancy analyses nor failure to respond-to-intervention (RTI) alone is sufficient for SLD identification;
3. To meet SLD statutory and regulatory requirements, a "third method" approach that identifies a pattern of psychological processing strengths and weaknesses, and achievement deficits consistent with this pattern of processing weaknesses, makes the most empirical and clinical sense;
4. An empirically-validated RTI model could be used to prevent learning problems in children, but comprehensive evaluations should occur for SLD identification purposes, and children with SLD need individualized interventions based on specific learning needs, not merely more intense interventions designed for children in general education; and

5. Assessment of cognitive and neuropsychological processes should be used not only for identification, but for intervention purposes as well, and these assessment-intervention relationships need further empirical investigation.

The following is a detailed examination of Expert Panel White Paper Survey responses, and empirical literature that addresses the validity of these conclusions.

Conclusion 1: Maintain the SLD definition and strengthen statutory requirements in SLD identification procedures.

For the SLD definition, a vast majority of participants indicated they strongly agree or agree with the hallmark characteristics of SLD (92%), which suggests that these children have both psychological processing strengths (assets) and weaknesses (deficits) that result in a specific disability that characterizes SLD (Item 1). This finding is consistent with other practitioner surveys on SLD identification (Caterino, Sullivan, Long, & Bacal, 2005; Machek & Nelson, 2007; 2010), professional organizations and consensus panels that have position statements on SLD identification (Learning Disabilities Roundtable, 2002, 2005; National Association of School Psychologists, 2007; Schrank, Miller, Caterino, & Desrochers, 2006), and authors of numerous recent scholarly publications regarding the essential defining characteristics of SLD (Berninger, 2006; Fiorello, Hale, Decker, & Coleman, 2009; Fiorello, Hale, & Snyder, 2006; Fiorello, Hale, Snyder, Forrest, & Teodori, 2008; Feifer & Della Toffalo, 2007; Flanagan, Alfonso, Mascolo, & Hale, in press; Flanagan & Alfonso, in press; Flanagan, Oritz, & Alfonso, 2007; Flanagan, Ortiz, Alfonso, & Dynda, 2006; Fletcher-Janzen & Reynolds, 2008; Geary & Hoard, 2005; Hain, Hale, & Kendorski, 2009; Hale, 2006; Hale, Fiorello, Dumont, Willis, Rackley, & Elliott, 2008; Hale, Kaufman, Naglieri, & Kavale, 2006; Hale, Fiorello, Miller, Wenrich, Teodori, & Henzel, 2008; Hale, Flanagan, & Naglieri, 2008; Hale, Naglieri, Kaufman, & Kavale, 2004; Kavale & Flanagan, 2007; Kavale, Holdnack, & Mostert, 2005; Mastropieri & Scruggs, 2005; Mather & Gregg, 2006; Mazzocco, 2005; Mazzocco & Myers, 2003; Murphy, Mazzocco, Hanich, & Early, 2007; Miller & Hale, 2008; Ofiesh, 2006; Reynolds & Shaywitz, 2009; Scruggs & Mastropieri, 2002; Semrud-Clikeman, 2005; Semrud-Clikeman, Fine, & Harder, 2005; Torppa, Tolvanen, Poikkeus, Eklund, Lerkkanen, Leskinen, et al., 2007; Warner, Dede, Garvan, & Conway, 2002; Willis & Dumont, 2006; Wodrich, Spencer, & Daley, 2006).

Many participants felt strongly (i.e., *strongly disagree* or *disagree*; 82%) that the definition should not be amended to include any child exhibiting low achievement or meeting minimal academic standards (Item 2), suggesting they believe that low achievement alone is not a suitable diagnostic indicator for SLD (Fiorello et al., 2006; 2008; 2009; Flanagan & Alfonso, in press; Flanagan et al., in press; Fletcher-Janzen & Reynolds, 2008; Hain et al., 2009; Hale, 2006; Hale et al., 2004, 2006, 2008; Kavale & Flanagan, 2007; Kavale et al., 2005; Mastropieri & Scruggs, 2005; Mather & Gregg, 2006; Mazzocco, 2003; Murphy et al., 2007; Miller & Hale, 2008; Ofiesh, 2006; Reynolds & Shaywitz, 2009; Scruggs & Mastropieri, 2002; Torppa et al., 2007; Warner et al., 2002). In addition, Expert Panel comments reflected concern that those who were higher functioning cognitively, but still had processing strengths and weaknesses that adversely affect achievement, would not be identified and served if a low achievement definition were adopted. These struggling students would be overlooked if a low achievement definition replaced the current SLD definition, or if an RTI-only approach was used for identification.

Participants expressed concerns that the very essence of SLD lies in its definition, making it qualitatively and functionally different from low achievement only (Fiorello et al., 2006, 2008, 2009; Flanagan & Alfonso, in press; Flanagan et al., in press; Fletcher-Janzen & Reynolds, 2008; Hain et al., 2009; Hale, 2006; Hale et al., 2004, 2006, 2008; Kavale & Flanagan, 2007; Kavale et al., 2005; Mastropieri & Scruggs, 2005; Mather & Gregg, 2006; Mazzocco, 2003; Murphy et al., 2007; Miller & Hale, 2008; Ofiesh, 2006; Reynolds & Shaywitz, 2009; Scruggs & Mastropieri, 2002; Torppa et al., 2007; Warner et al., 2002), with many participants suggesting that SLD identification should require multidisciplinary team recognition of and adherence to IDEA SLD statutory language when making eligibility determinations, which has not been emphasized in practice (Fiorello et al., 2006, 2008, 2009; Flanagan et al., in press; Fletcher-Janzen & Reynolds, 2008; Hain et al, 2009; Hale, 2006; Hale et al., 2004, 2006, 2008; Kavale & Flanagan, 2007; Kavale et al., 2005; Mazzocco, 2003; Murphy et al., 2007; Miller & Hale, 2008; Warner et al., 2002).

The conclusion that low achievement alone does not reflect SLD does not imply that only children with SLD should receive intervention for their learning difficulties, or that those with low achievement should not receive instructional support. Rather, it argues that changing the definition of SLD to allow those with low achievement to receive special education services, which has occurred in the past with poor implementation of discrepancy approaches for SLD identification, is not appropriate. On the contrary, empirical evidence suggests children with low achievement would likely benefit from an RTI model, where greater intensity of instruction should likely lead to response for a significant percentage of struggling students (Ardoin, Witt,

Connell, & Koenig, 2005; Barnett, Daly, Jones, & Lentz, 2004; Deno, 2002; Daly III, Martens, Barnett, Witt, & Olson, 2007; Fletcher & Vaughn, 2007; Jimerson, Burns, & VanDerHeyden, 2007; Reschly, 2005). However, nonresponsive children subsequently identified with a pattern of cognitive strengths and weaknesses that underlie SLD need something different, particularly individualized instruction to meet their academic needs (Berninger & Holdnack, 2008; Decker, 2008; Feifer, 2008; Fiorello et al., 2009; Flanagan et al., 2006; Fletcher-Janzen & Reynolds, 2008; Fuchs & Deshler, 2007; Hale et al., 2008; Kaufman, 2008; Mather & Gregg, 2006; Miller & Hale, 2008; Reynolds & Shaywitz, 2009; Warner et al., 2002).

Conclusion 2: Neither ability-achievement discrepancy analyses nor failure to respond to intervention alone is sufficient for SLD identification.

For SLD identification, there was a clear Expert Panel consensus that the two major models recognized by Congress and OSERS – ability-achievement discrepancy and failure to respond to intervention – are not sufficient for SLD identification, with most participants indicating they *strongly disagree* or *disagree* with RTI (Item 5; 96%) and discrepancy (Item 6; 88%) as standalone methods for SLD determination. The experts indicated that one of the most significant, and perhaps irreconcilable, problems with these approaches is there is no way to determine if children identified with either approach meet the SLD statutory definition (i.e., exhibit a disorder or deficit in one or more the basic psychological processes). At the same time, recent empirical data indicate that a discrepancy between cognitive ability and reading achievement differentiates children with reading SLD from typical readers (Ferrer, Shaywitz, Holahan, Marchione, & Shaywitz, 2010).

For ability-achievement discrepancy, the Expert Panel conclusion is consistent with literature indicating that ability-achievement discrepancy alone has limited utility for SLD identification, and may lead to a number of problematic outcomes (Aaron, 1997; Berninger & Abbott, 1994; Bocian, Beebe, MacMillan, & Gresham, 1999; Flanagan & Alfonso, in press; Fletcher et al., 2002; Fuchs, Fuchs, Mathes, Lipsey, & Roberts, 2002; Gunderson & Siegal, 2001; Peterson & Shinn, 2002; Stanovich & Siegal, 1994; Sternberg & Grigorenko, 2002; Stuebing, Fletcher, & LeDouz, 2002; VanDerHeyden, Witt, & Gilbertson, 2007; Vellutino et al., 1996), which is due at least in part to poor implementation of the discrepancy model and application of a discrepancy-only approach in contrast to using discrepancy models as a necessary but insufficient conditional model in SLD identification (Dombrowski, Kamphaus, & Reynolds, 2004; Reschly & Hosp, 2004; Scruggs & Mastropieri, 2002; Tilly, Reschly, & Grimes, 1999; Vaughn, Linan-Thompson, & Hickman, 2003; Ysseldyke & Marston, 2000).

According to the literature (Aaron, 1997; Berninger & Abbott, 1994; Bocian et al., 1999; Dombrowski et al., 2004; Fletcher et al., 2002; Fuchs et al., 2002; Gunderson & Siegal, 2001; Peterson & Shinn, 2002; Reschly & Hosp, 2004; Scruggs & Mastropieri, 2002; Stanovich & Siegal, 1994; Sternberg & Grigorenko, 2002; Stuebing et al., 2002; Tilly et al., 1999; VanDerHeyden et al., 2007; Vaughn et al., 2003; Vellutino et al., 1996; Ysseldyke & Marston, 2000), problems with the discrepancy model used alone for SLD identification include, but are not limited to, the following:

- Uniform discrepancy application is insensitive to developmental differences in cognition and achievement;
- Unclear which IQ score should be used to establish "ability" for discrepancy calculation;
- Difficulty with distinguishing between children with SLD and low achievers;
- Inconsistent application of the approach across schools, districts, and states;
- Over-identification of students from diverse backgrounds;
- Measurement problems that result in poor decision-making;
- Early identification is unlikely although it is critical for ameliorating problems (a "wait-to-fail" model); and
- Encourages "test and place" practices which are neither an accurate nor an effective use of resources.

Although most in the Expert Panel can agree that RTI may have a role in the prevention of learning problems and providing early intervention services for all children, results suggest it too is problematic for SLD identification purposes. The Expert Panel clearly indicated that RTI measures and methods lack technical adequacy for SLD decision making (Item 11; 94% strongly disagree or disagree), and indicate that there is a dearth of empirical evidence supporting the use of RTI alone in addressing the intervention needs of all children with SLD (Item 8; 86% strongly disagree or disagree). Although it has been argued that RTI should be mandated for advancing academic achievement in the schools (Brown-Chidsey & Steege, 2005; Hale, 2006), there are numerous reasons for which children do not respond to interventions, only one of which is SLD; therefore, inferring SLD from failure to respond to intervention is not scientifically or clinically justifiable (Berninger & Holdnack, 2008; Decker, 2008; Feifer, 2008; Feifer & Della Toffalo, 2007; Fiorello et al., 2006, 2008, 2009; Flanagan et al., 2006, in press; Fletcher-Janzen & Reynolds, 2008; Fuchs & Deshler, 2007; Fuchs

& Fuchs, 2006; Gerber, 2005; Hain et al., 2009; Hale, 2006; Hale et al., 2004, 2006, 2008; Kavale & Flanagan, 2007; Kavale et al., 2005; Mastropieri & Scruggs, 2005; Mather & Gregg, 2006; Mazzocco, 2005; Murphy et al., 2007; Miller & Hale, 2008; Ofiesh, 2006; Reynolds & Shaywitz, 2009; Scruggs & Mastropieri, 2002; Torppa et al., 2007; Warner et al., 2002).

According to the literature (Barth et al., 2008; Berninger & Holdnack, 2008; Decker, 2008; Feifer, 2008; Feifer & Della Toffalo, 2007; Fiorello et al., 2006, 2008, 2009; Flanagan et al., 2006; in press; Fletcher-Janzen & Reynolds, 2008; Fuchs & Deshler, 2007; Fuchs & Fuchs, 2006; Fuchs, Fuchs, & Compton, 2004; Gerber, 2005; Gersten & Dimino, 2006; Hain et al., 2009; Hale, 2006; Hale et al., 2004, 2006, 2008; Kavale & Flanagan, 2007; Kavale et al., 2005; Mastropieri & Scruggs, 2005; Mather & Gregg, 2006; Mazzocco, 2005; Murphy et al., 2007; Miller & Hale, 2008; Ofiesh, 2006; Reynolds & Shaywitz, 2009; Scruggs & Mastropieri, 2002; Speece, 2005; Torppa et al., 2007; Warner et al., 2002), problems with an RTI approach for SLD identification include, but are not limited to, the following:

- No consensus on type of RTI to use (i.e., standard protocol or problem-solving);
- No consensus on a measurement model for defining responsiveness in RTI models;
- No agreed-upon curricula, instructional methods, or measurement tools with adequate technical quality;
- Effectiveness of an RTI approach for SLD identification is currently without empirical support;
- RTI research has largely focused on word reading at the early elementary grades, with methods across grades and content areas not empirically established;
- No consensus on the definition of empirically-based approaches;
- Single-subject design cannot be used because manipulation of more than one independent variable in problem-solving RTI precludes determining causation;
- No empirically-supported literature supporting determination of response or failure to respond, with different groups of children identified as non-responders by different methods;
- No agreed upon teacher training standards or supervision methods to ensure interventions are carried out with integrity;
- RTI has no mechanism for differential diagnosis of SLD and other disorders;
- RTI is nothing more than a model of "diagnosis by treatment failure," which has long been proven to be a poor model in medicine; and
- There is no true positive in an RTI model, meaning that all children who fail to respond to quality instruction and intervention are considered SLD by default.

The last point regarding RTI, that there is no true positive in an RTI model, is probably the most problematic for using an RTI approach for SLD identification (Fiorello et al., 2008; Flanagan & Alfonso, in press; Hale et al., 2006, 2008; Miller & Hale, 2008). Without a true positive, there is no way to determine true negatives, false positives, false negatives, and the sensitivity and specificity of the measures used in identification (Hale, Wycoff, & Fiorello, in press). This limitation could explain why studies examining responsiveness have not been successful in identifying responders and nonresponders reliably (Barth et al., 2008; Fuchs et al., 2004; Speece, 2005), and who would be classified with SLD using an RTI model. Although measurement models may need re-evaluation in RTI practice (Barth et al., 2009), the subjectivity in determining responsiveness will likely remain (Gerber, 2005), and unless a true positive can be identified in an RTI model, its viability for SLD identification will remain tenuous at best.

Conclusion 3: To meet SLD statutory and regulatory requirements, a "third method" approach that identifies a pattern of psychological processing strengths and weaknesses, and achievement deficits consistent with this pattern of processing weaknesses, makes the most empirical and clinical sense.

Although a majority of the participants indicated they *strongly agree* or *agree* (70%) with the statements that children identified with SLD should meet the statutory (SLD definition) and regulatory (SLD method) requirements prior to identification (Item 4), there was less agreement here, with some participants indicating they were neutral (18%) or they disagree or strongly disagree (12%). In follow-up questioning and review of open-ended comments, the respondents less committed to this statement had some difficulty with the current SLD identification methods most frequently recognized in the OSERS Final Regulations (2006) (i.e., ability-achievement discrepancy and failure to respond to intervention), and instead offered a preference for a SLD identification model using a pattern of processing strengths and weaknesses, which is consistent with the SLD statutory definition that requires a deficit in the basic psychological processes that interferes with academic achievement.

The use of a processing strengths and weaknesses model allows for recognition of the SLD statutory requirements, and is consistent with the "third method" approach stipulated in the final regulations (34 CFR Parts 300 and 301; Federal Register, 2006), that indicates "300.309(a)(2)(ii) permits, but does not require, consideration of a pattern of strengths or weaknesses, or both,

relative to intellectual development if the evaluation group considers such information relevant to the identification of SLD" (p. 46651). A strengths and weaknesses model makes good empirical, clinical, and legal sense because it ensures children identified with SLD demonstrate one or more processing deficits that interfere with academic achievement, the core characteristic of SLD (Fiorello et al., 2006, 2008, 2009; Flanagan et al., in press; Hain et al., 2009; Hale et al., 2004, 2006, 2008; Kavale et al., 2005; Mather & Gregg, 2006). Not only does this processing strengths and weaknesses approach make sense for SLD identification purposes, but processing assessment could also lead to more effective individualized interventions for children who do not respond adequately to intensive interventions in an RTI approach (Berninger, 2006; Berninger & Holdnack, 2008; Decker, 2008; Feifer, 2008; Fiorello et al., 2006, 2008, 2009; Feifer & Della Toffalo, 2007; Flanagan et al., in press; Fletcher-Janzen, 2008; Fletcher-Janzen & Reynolds, 2008; Grigorenko, 2009; Hain et al., 2008; Hale, 2006; Hale et al., 2004, 2006, 2008; in press; Kaufman, 2008; Kavale et al., 2005; Lidz & Pena, 2009; Mazzocco, 2005; Mazzocco & Myers, 2003; Reynolds, 2008; Scruggs & Mastropieri, 2002; Swanson, 2008).

A pattern of processing strengths and weaknesses approach obtained both from the clinical history and from the testing data (e.g., Mather & Shaywitz, in press) would be consistent with the strong support for the SLD definition (Item 1; 92% agreement) and strong negative ratings for the singular use of either the SLD discrepancy or RTI identification methods (Items 5 and 6, 96% and 88% disagreement, respectively). In addition, the Expert Panel consensus was clear that even a dual discrepancy RTI approach, namely low achievement and failure to respond to intervention, was not sufficient for SLD identification (Item 11), as most respondents answered strongly disagree or disagree (94%) with this item. In addition to the RTI methodological limitations described earlier, dual discrepancy approaches such as low achievement and failure to respond to intervention (Ardoin et al., 2005; Barnett et al., 2004; Burns & Senesac, 2005; Fletcher, Lyon, & Barnes, 2006; Fuchs & Fuchs, 2006; Fuchs et al., 2004; Speece, 2005; Ysseldyke & Marston, 2000) cannot discriminate between those with SLD and those who are low achieving for some other reason, and would not consider high ability individuals who demonstrated relative, albeit significant, processing and achievement deficits as being children with SLD. Thus, this dual discrepancy method would violate SLD statutory requirements (Fiorello et al., 2006, 2008, 2009; Hale, 2006; Hale et al., 2004, 2008; in press).

To support the processing strengths and weaknesses approach to SLD identification, a majority of the Expert Panel either *strongly agree* or *agree* that there are technically sound measures for identifying these cognitive and neuropsychological processing strengths and weaknesses (Item 7; 96%), and that these measures should be administered prior to identification of SLD (Item 12; 92%), with the mean scores indicating most strongly agree (76%) with the latter statement. Certainly, phonological processes are important to consider for children with reading SLD, but clearly the research indicates there are multiple psychological processes that affect reading, mathematics, language, and written expression (Berninger & Holdnack, 2008; Decker, Carboni, & Oliver, 2008; Fiorello et al., 2006, 2008, 2009; Feifer & Della Toffalo, 2007; Flanagan et al., 2007; in press; Fletcher-Janzen & Reynolds, 2008; Geary & Hoard, 2005; Hain et al., 2009; Halberda, Mazzocco, & Feigenson, 2008; Hale, 2006; Hale et al., 2004, 2006, 2008, in press; Kaufman, 2008; Kavale & Flanagan, 2007; Mather & Gregg, 2006; Mazzocco, 2005; Mazzocco & Myers, 2003; McGrew & Wendling, in press; Miller & Hale, 2008; Murphy et al., 2007; Reynolds, 2008; Riccio, 2008; Semrud-Clikeman et al., 2005; Swanson, 2008; Torppa et al., 2007). A majority of the Expert Panel indicated they strongly agree (86%) or agree (10%) that there is empirical evidence that other psychological processes affect reading, math, and writing achievement, suggesting assessment of these processes is critical for SLD identification and service delivery (Item 3). This conclusion is supported by a recent meta-analysis that found moderately large to large effect sizes in cognitive processing differences between children with SLD and typical children, suggesting their assessment in SLD identification is both warranted and necessary (Johnson, Humphrey, Mellard, Woods, & Swanson, 2010).

There is a clear Expert Panel consensus that technically sound assessment tools are available for assessment of cognitive and neuropsychological processes (Item 7; 70% strongly agree, 26% agree), which should be administered prior to SLD identification (Item 12; 92% agreement), thereby ensuring that children identified with SLD meet IDEA statutory (i.e., definition) requirements regarding processing assets and deficits (Item 1; 92% agreement). The relevance of cognitive and neuropsychological assessment as part of a comprehensive evaluation prior to SLD identification is not only the position of the Expert Panel, but also one recognized and discussed in a number of scholarly works by these panelists and other authors (Berninger, 2006; Berninger & Holdnack, 2008; Decker, 2008; Elliott, 2008; Feifer, 2008; Feifer & Della Toffalo, 2007; Fiorello et al., 2006, 2008, 2009; Flanagan & Alfonso, in press; Flanagan et al., 2007, 2008; in press; Fletcher-Janzen, 2008; Fletcher-Janzen & Reynolds, 2008; Geary &

Hoard, 2005; Grigorenko, 2009; Hain et al., 2009; Halberda et al., 2008; Hale, 2006; Hale et al., 2004, 2006, 2008, in press; Hughes, 2008; Johnson et al., 2010; Kaufman, 2008; Kavale & Flanagan, 2007; Kavale et al., 2005; Kemp & Korkman, 2008; Machek & Nelson, 2010; Mather & Gregg, 2006; Mazzocco & Myers, 2003; Miller, 2008; Miller & Hale, 2008; Murphy et al., 2007; Reynolds, 2008; Reynolds & Shaywitz, 2009; Riccio, 2008; Scruggs & Mastropieri, 2002; Schrank et al., 2006; Semrud-Clikeman, 2005; Semrud-Clikeman et al., 2005; Swanson, 2008; Torppa et al., 2007; Warner et al., 2002; Willis & Dumont, 2006; Wodrich et al., 2006).

Conclusion 4: An empirically-validated RTI model could be used to prevent learning problems, but comprehensive evaluations should occur for SLD identification purposes, and children with SLD need individualized interventions based on specific learning needs, not merely more intense interventions designed for children in general education.

There was inconsistent agreement that an RTI approach should be attempted prior to comprehensive evaluation for SLD determination (Item 10; 43% *strongly agree* or *agree*; 29% *neutral*; 28% *disagree* or *strongly disagree*), yet the majority of the Expert Panel surveyed report that both RTI and comprehensive evaluation of psychological processes are important in a balanced service delivery model. Based on follow-up discussion with experts and a review of comments, it seems this inconsistency in ratings could reflect disagreement over the utility of increasing intervention intensity in an RTI model as is suggested by some RTI proponents (Ardoin et al., 2005; Barnett et al., 2004; Brown-Chidsey & Steege, 2005; Deno, 2002; Daly III et al., 2007; Fletcher, Denton, & Francis, 2005; Fletcher & Vaughn, 2007; Gresham, 2004; Jimerson et al., 2007; Reschly, 2005), and/or concern over the lack of consistent RTI practices across schools, districts, and states (Berkeley, Bender, Peaster, & Saunders, 2009; Zirkel & Krohn, 2009), which is also one of the major criticisms of the ability-achievement discrepancy method as noted earlier (Aaron, 1997; Berninger & Abbott, 1994; Bocian et al., 1999; Dombrowski et al., 2004; Fletcher et al., 2002; Fuchs et al., 2002; Gunderson & Siegal, 2001; Peterson & Shinn, 2002; Reschly & Hosp, 2004; Scruggs & Mastropieri, 2002; Stanovich & Siegal, 1994; Sternberg & Grigorenko, 2002; Stuebing et al., 2002; Tilly et al., 1999; VanDerHeyden et al., 2007; Vaughn et al., 2003; Vellutino et al., 1996; Ysseldyke & Marston, 2000).

The Expert Panel also *strongly disagreed* or *disagreed* (86%) that RTI will meet the needs of all children with SLD (see Item 8), because these students need individualized services, not simply more intense ones. Expert Panel comments also indicated concern that the delay between recognition of a learning problem in an RTI model, and a comprehensive evaluation for SLD identification and service delivery, could be detrimental to children's well-being if poor responsiveness is not addressed immediately or in a timely manner given the child's functional impairment. The concern is that RTI can become, in practice, a "watch them fail" model (Reynolds & Shaywitz, 2009). Clearly, when children do not respond to our best attempts at intervention, team decisions are necessary to determine when comprehensive evaluation of cognitive and neuropsychological processes is warranted (Berninger, 2006; Berninger & Holdnack, 2008; Decker, 2008; Elliott, 2008; Feifer, 2008; Feifer & Della Toffalo, 2007; Fiorello et al., 2006, 2008, 2009; Flanagan & Alfonso, in press; Flanagan et al., 2007, 2008, in press; Fletcher-Janzen, 2008; Fletcher-Janzen & Reynolds, 2008; Geary & Hoard, 2005; Grigorenko, 2009; Hain et al., 2009; Halberda et al., 2008; Hale, 2006; Hale et al., 2004, 2006, 2008, in press; Hughes, 2008; Johnson et al., 2010; Kaufman, 2008; Kavale & Flanagan, 2007; Kavale et al., 2005; Kemp & Korkman, 2008; Machek & Nelson, 2010; Mather & Gregg, 2006; Mazzocco & Myers, 2003; Miller, 2008; Miller & Hale, 2008; Murphy et al., 2007; Reynolds, 2008; Reynolds & Shaywitz, 2009; Riccio, 2008; Schrank et al., 2006; Scruggs & Mastropieri, 2002; Semrud-Clikeman, 2005; Semrud-Clikeman et al., 2005; Swanson, 2008; Torppa et al., 2007; Warner et al., 2002; Willis & Dumont, 2006; Wodrich et al., 2006).

It is also important to note that several Expert Panel participants *strongly agree* or *agree* (43%) that intervention should be attempted within an RTI framework prior to comprehensive evaluation (Item 10). This agreement could reflect a need to serve those children with learning delays within an RTI model, yet providing comprehensive evaluations as soon as possible for SLD identification and service delivery for those children who appear to have significant processing strengths and deficits, even if a multi-tiered RTI model has not been completed. In other words, the Panel experts suggest some decision-making flexibility is required for nonresponders in an RTI model if comprehensive evaluation is needed to address the learning deficits experienced by children with SLD. Flexibility in referral for comprehensive evaluation is both warranted and necessary given the empirical problems with defining response/nonresponse within an RTI framework noted earlier.

Conclusion 5: Assessment of cognitive and neuropsychological processes should be used not only for identification, but for intervention purposes as well, and these assessment-intervention relationships need further empirical investigation.

One of the frequent criticisms of cognitive and neuropsychological assessment is that it is not related to intervention (e.g., Brown-Chidsey & Steege, 2005;

Fletcher et al., 2005; Jimerson et al., 2007; Reschly, 2005; Tilly et al., 1999; Ysseldyke & Marston, 2000), even though in recent years researchers have begun to show the relevance of cognitive and neuropsychological assessment for determining responsiveness to academic and behavioral interventions (Berninger et al., 2000; Chenault, Thomson, Abbott, & Berninger, 2006; Fiorello et al., 2006; Gustafson, Ferreira, & Ronnberg, 2007; Hain et al., 2009; Hale, Fiorello, & Brown, 2005; Hale et al., 2006, 2008, in press; Helland, 2007; Lovett, Steinbach, & Frijters, 2000; Mascolo, Kaufman, & Hale, 2009; Naglieri & Johnson, 2000; Richards et al., 2006; Shaywitz et al., 2003; Simos, Fletcher, Sarkari, Billingsley, Denton, & Papanicolaou, 2007; Smit-Glaude, van Strien, Licht, & Bakker, 2005).

Given that this research has only recently begun to emerge, it is not surprising that the Expert Panel had mixed ratings on Item 9 addressing the relationship between cognitive and neuropsychological processes and intervention (74% *agree* or *agree*; 18% *neutral*; 8% *disagree*). In written comments, several respondents indicated that the evidence was stronger for some cognitive and neuropsychological processes and intervention (e.g., reading) than others (e.g., math, writing), and that further research involving technically adequate measures to determine cognitive, neuropsychological, and academic response-to-intervention interrelationships was necessary.

Clearly, the Expert Panel results suggest further research is needed for establishing relationships between cognitive and neuropsychological assessment data, SLD identification methods, and intervention strategies and to document the concurrent, ecological, and treatment validity of evaluation results.

Summary and Conclusions: Both RTI and comprehensive evaluation of psychological processes that take into account ability and achievement are needed to optimize service delivery for children with and without SLD.

Consistent with many cognitive and neuropsychological assessment and intervention studies now available in peer-reviewed publications, the evidence presented here suggests that using technically-adequate measures to explore psychological processing strengths and weaknesses, and concomitant achievement deficits could lead to better practice in SLD identification and service delivery.

To accomplish this end, the U.S. Congress, U.S. Department of Education, education policy makers, and professional stakeholders in SLD need to work together to find common ground if we are to better the lives of children with learning delays using an RTI approach, and those children with learning deficits using a processing strengths and weaknesses approach.

This combination of empirically-supported best practices could reduce the need for special education referral and evaluation by providing children with learning delays early intervention services using RTI methods, but for those children who do not respond to our best attempts at intervention, additional evaluation of processing strengths and weaknesses could lead to more accurate identification of SLD and other high incidence disorders.

This more balanced, integrative approach would ensure that any child identified with SLD meets rigorous inclusion/exclusion criteria (i.e., inadequate response to intervention, processing strengths and weaknesses, achievement discrepant from processing strengths and consistent with processing weaknesses). This approach would ensure any child classified with SLD meets IDEA statutory and regulatory requirements. With a true positive determined in such an approach, subsequent research could examine true positives, false positives, true negatives, and false negatives to evaluate the sensitivity and specificity of different measures used in the identification process.

In addition, such a balanced practice approach would ensure that when greater intensity of instruction is not successful in an RTI model, those children who are non-responders could receive individualized instruction based on their unique patterns of cognitive and academic processing strengths and needs. This processing information can be integrated into a larger problem-solving model approach to service delivery, where individualized interventions can be designed, implemented, evaluated, and recycled as necessary until a satisfactory level of responsiveness is achieved.

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APPENDIX A

Learning Disabilities Association of America
LDA/SLD Evaluation and Identification Project
Expert Panel Survey

This survey consists of two parts. It is designed to develop content for the initial drafting of the LDA/SLD White Paper on evaluation and identification of children with SLD.

The first part of the survey asks individuals to provide Likert ratings regarding their level of agreement with the following statements. The second part asks individuals to provide at least 5 points which you would like to see addressed in the white paper.

PART I. Please indicate your level of agreement with the following statements on a 1 to 5 Likert scale, with 1 indicating *strongly disagree* to 5 indicating *strongly agree*.

	Strongly Disagree		**Neutral**		**Strongly Agree**
1. Children with specific learning disabilities have a deficit (i.e., cognitive weakness) in the basic psychological processes in the presence of cognitive integrities (i.e., cognitive strength). **M = 4.70, SD = .86**	1	2	3	4	5
2. The definition of specific learning disabilities should be amended to include any child who is not meeting minimal academic standards (e.g., failing to respond to instruction/low achievement). **M = 1.66, SD = 1.06**	1	2	3	4	5
3. There is empirical evidence that there are basic psychological processes beyond phonological awareness that have direct links to reading, math, and writing achievement. **M = 4.82, SD = .48**	1	2	3	4	5
4. Children identified with SLD should meet both statutory (i.e., SLD definition) and regulatory (i.e., SLD identification method) IDEA language. **M = 3.94, SD = 1.24**	1	2	3	4	5
5. Using failure to respond to intervention is all that is necessary for identifying a child with a SLD. **M = 1.20, SD = .80**	1	2	3	4	5
6. Using ability-achievement discrepancy is all that is necessary for identifying a child with a SLD. **M = 1.43, SD = 1.04**	1	2	3	4	5
7. There are technically sound cognitive and/or neuropsychological measures currently available for use in identification of a deficit in the basic psychological processes. **M = 4.64, SD = .63**	1	2	3	4	5
8. Increasing intervention *intensity* in a multi-tier response to intervention model will meet the academic and psychosocial needs of all children with SLD. **M = 1.61, SD = .98**	1	2	3	4	5
9. There is empirical research that documents the relationship between psychological/neuropsychological processes and intervention outcomes. **M = 3.94, SD = .89**	1	2	3	4	5
10. A response to intervention approach should be attempted before a child is referred for a comprehensive evaluation for SLD identification. **M = 3.18, SD = 1.21**	1	2	3	4	5
11. There are technically sound measures and decision rules that indicate a dual discrepancy RTI approach (i.e., failure to respond to intervention and below minimum academic benchmarks) is sufficient for SLD identification. **M = 1.47, SD = .76**	1	2	3	4	5
12. Administration of cognitive and/or intellectual measures should be required for identification of SLD. **M = 4.66, SD = .69**	1	2	3	4	5