

Identifying Specific Learning Disability: Is Responsiveness to Intervention the Answer?

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Abstract

Responsiveness to intervention (RTI) is being proposed as an alternative model for making decisions about the presence or absence of specific learning disability. I argue that there are many questions about RTI that remain unanswered, and radical changes in proposed regulations are not warranted at this time. Many fundamental issues related to RTI are unresolved, and a better strategy may be to more rigorously implement existing identification criteria (e.g., discrepancy and psychological processing deficits) in a structured psychometric framework. Suggestions on how to modify present procedures are provided.

From the inception of *specific learning disability* (SLD) as a category of special education, its identification has been problematic. To aid the identification process, the U.S. Office of Education (1977) issued rules and regulations formalizing discrepancy as the primary criterion for SLD identification (Mercer, Jordan, Allsopp, & Mercer, 1996). Recently, the validity of the discrepancy criterion has been questioned, and a responsiveness-to-intervention (RTI) model has been proposed as an alternative (Vaughn & Fuchs, 2003). The RTI model replaces traditional psychometric methods with a protocol that links identification and interventions by emphasizing student outcomes instead of student deficits. Although RTI emphasizes treatment validity, questions about its diagnostic validity can be raised. Is RTI the answer to SLD identification?

Defining SLD

Problems surrounding SLD identification are related to a lack of consensus

about the best way to operationalize the formal definition. At the same time, the formal SLD definition continues to be contentious primarily because of its failure to provide closure about “two critical elements: understanding—a clear and unobscured sense of LD—and explanation—a rational exposition of the reasons why a particular student is LD” (Kavale & Forness, 2000, p. 240). The present SLD definition is too broad to be wrong and too vague to be complete.

One purported purpose of the RTI model is to “redefine” SLD, but, in reality, SLD is only being reoperationalized. Because the pending reauthorization of the Individuals with Disabilities Education Act (IDEA, 2003) does not include any modification of the SLD definition, there is technically no “redefining.” Instead, RTI is best viewed as a new operational definition that will supplant the long-standing “discrepancy” criterion as the operational definition of SLD.

The reluctance to change the SLD definition seems curious in light of 35 years of debate about its merits. In a

scientific sense, changes in the formal definition should precede modifications in the operational definition. Consequently, a rationale for *not* changing the formal definition would appear necessary. The special education categories of mental retardation (MR) and emotional and behavior disorder (ED) provide precedence for changes in the formal definition. The profound changes being proposed for practice with RTI make the status quo with respect to the formal definition indefensible.

SLD Parameters

The present definition of SLD does not adequately circumscribe the condition; thus, its interpretation for practical purposes (i.e., its operationalization) is also suspect (Kavale, Forness, & Lorschbach, 1991). For example, “discrepancy” is not specifically articulated in the SLD definition but has been the primary criterion used for SLD identification. The disconnect between the formal definition and its operational components demonstrates the impos-

sibility of the theoretical being accurately represented in the operational and vice versa. Discrepancy *alone* is too disconnected from what is actually stipulated in the formal definition to meet the criteria of significance and meaningfulness necessary for a valid operational definition (Bergmann, 1961). There is, however, a parameter in the definition that is clearly articulated but largely ignored. The definition describes SLD as being related to "a disorder in one or more of the basic psychological processes" (IDEA, 2003, sec. 602). With modern theories about the importance of processing skills replacing outdated views (e.g., perceptual-motor deficits) that were associated with the SLD concept when it was first proposed, new validated process deficits should be incorporated in an operational definition of SLD (e.g., Hoskyn & Swanson, 2000). The closer adherence to what is actually stipulated in the definition would eliminate the present disconnect between the formal and the operational definitions.

As a category of special education, SLD should represent a particular disability class (Kavale & Forness, 1985a). For linguistic reasons, however, it has been easier to use the plural term "learning disabilities," which has eroded the notion of SLD as a discrete and independent condition different from other more generalized learning deficiencies. Predictably, the meaning of SLD has also been diluted by a conventional wisdom suggesting that "there are many types of learning disability," thereby extending its boundaries to the point where SLD is no longer a distinct classification. Thus, in practical terms, SLD moves in a direction that makes it increasingly unrecognizable (Kavale & Forness, 2003). The logical relation shifts from *All students with SLD have learning problems* to *All students with learning problems have SLD*, which is patently not true if SLD is properly viewed as a categorical designation (Kavale & Forness, 1985b). Clearly, SLD should reclaim its position as a legitimate category for stu-

dents experiencing particular types of learning difficulties. A good place to start is with a new formal definition that articulates strict parameters for the condition. Simply tinkering with a new *operational* definition cannot achieve this goal.

SLD and Reading Disability (RD)

The RTI model has increased the confounding between SLD and RD by focusing exclusively on reading achievement (Fuchs, Fuchs, Mathes, Lipsey, & Roberts, 2002). The problem is that SLD may not be solely a reading achievement problem, and although a large proportion of students with SLD will manifest difficulties in reading, they may be deficient in other academic areas, especially math (Kavale & Nye, 1985–1986). The RTI emphasis on reading raises questions about the equivalence of SLD and RD. Are the two concepts equivalent? The early days of SLD witnessed heated debate about the distinction between SLD and RD (e.g., Lerner, 1975). At a fundamental level, the debate involved questions about territorial responsibilities rather than conceptual equivalence (Gaskins, 1982). Apparently, however, supporters of RTI view SLD and RD as equivalent because of a willingness to designate students who demonstrate RD as SLD. The problem with this position is that RD is itself a legitimate concept and, although clearly present in many students with SLD, it is not what makes SLD what it is. If SLD and RD are viewed as equivalent, then only one designation is necessary. Logically, the emphasis on reading suggests that RD would be the concept chosen, but then the pragmatic problems arise about how to provide special education services to students with RD. The SLD designation provides the only entry to special education, but in doing so, SLD loses its integrity and becomes a category of convenience for students

who cannot read (Kavale & Forness, 1998).

SLD and Discrepancy

According to Vaughn and Fuchs (2003), "At the heart of the controversy about [SLD] identification is the use of the IQ–achievement discrepancy" (p. 137). This is true only because RTI supporters appear to have exaggerated the deficiencies presumed to be associated with discrepancy. For example, one objection suggests that the degree of discrepancy does not relate to severity level. This objection is rendered immaterial, however, if discrepancy is properly viewed as a threshold concept documenting the presence or absence of underachievement, a necessary but not sufficient criterion for SLD identification. Discrepancy need not be related to severity to be useful in the identification process (Kavale, 1987).

Another objection suggests that the academic performance of students with a discrepancy does not differ from that of students without a discrepancy. This objection is based on the incorrect assumption that discrepancy necessarily has any bearing on academic performance. Students who may or may not demonstrate a discrepancy could, in fact, possess the same level of low achievement and thus possess similar academic performance levels. In a relative sense, both groups would appear to be disabled as both exhibit functional impairments in academic development. Keogh (1994) suggested that unexpected low achievement relative to ability is one of the basic elements defining SLD. The student demonstrating a discrepancy is different because that student may be properly termed an underachiever and thus possess a primary feature of SLD.

If a student is not an underachiever, then the possibility exists that the student may fall into the category of "slow learner" (i.e., students with IQs from 70–85). About 14% of the school population falls within this IQ

range, but this status has never been associated with a special education category. A slow learner does not demonstrate unexpected low achievement but rather an achievement level consonant with IQ level (Gresham, MacMillan, & Bocian, 1996). Although the low achievement level is problematic, particularly when there is a desire that “no child be left behind,” it nevertheless reflects a true state of affairs. What should *not* happen is that a designation of SLD be given to a slow learner.

The value of discrepancy lies in its ability to document the unexpected nature of the learning problem. Everything else being equal, there would be little reason to believe that such a student would experience learning difficulties. The discrepancy criterion indicates the presence of underachievement but only the *possibility* of a disability. Discrepancy should thus represent the “first gate to learning disabilities identification” (Speece, Case, & Melloy, 2003, p. 147). Although the discrepancy concept is valid across IQ ranges, SLD should be associated only with significantly below average achievement levels. For example, Siegel (2003) was distressed by the possibility that a student with an IQ of 130 and a reading achievement score of 110 would be considered by the discrepancy model to have RD. This argument is specious because students should be referred *only* if they are exhibiting signs of academic difficulty (i.e., below-average achievement). Gordon, Lewandowski, and Keiser (1999) warned against the use of the SLD label for “relatively well-functioning” students. Special education should be provided when there is significant academic difficulty *and* the criteria for particular special education classification are met. If the student described by Siegel was struggling academically, then consideration might be given to other potential diagnoses such as attention-deficit disorder or mood disorder rather than blindly assuming an RD diagnosis because the student meets the discrepancy criterion.

Discrepancy models for SLD identification have also been criticized for presumably not yielding reliable information, but such an argument is a bit contrived. The properties of different discrepancy models have been thoroughly evaluated, and a consensus emerged that standard score, regression methods were psychometrically defensible (Shepard, 1980). Because students were often required to meet only the discrepancy criterion for SLD classification, any who did were, in fact, identified with a sound statistical procedure that provided reliable information (Reynolds, 1985). The real problem comes from results of large-scale studies showing that up to 50% of any SLD population may not meet the stipulated discrepancy criterion (e.g., Kavale & Reese, 1992). This raises a question: Why were students who did not meet the discrepancy criterion identified as having SLD? If a student does not meet a reliable criterion, then the resulting classification cannot be reliable. The problem has not been the reliability of the discrepancy criterion but rather the lack of rigor in its implementation: “Public school practices for diagnosing children with LD bear little resemblance to what is prescribed in federal and state regulations (i.e., administrative definitions) defining LD” (MacMillan, Gresham, & Bocian, 1998, p. 323).

Arguably, the presence of measurement error in the discrepancy model increases the risk of false negatives as well as some false positives. But measurement error has an impact only when there is rigid adherence to a single cut-point without further investigation of competing diagnostic hypotheses. For instance, if a discrepancy criterion of 20 points is used and a student has a 19-point discrepancy, that student may still have SLD, just as a student with a 21-point discrepancy should not automatically be labeled SLD. Best practice would suggest that scores within a range of discrepancy, for example, between 15 and 25, be evaluated more thoroughly for other

indicators of SLD. Such an evaluation would increase diagnostic accuracy and provide a convergence of evidence for SLD diagnosis versus competing hypotheses.

Objections to discrepancy models for SLD identification have also included the criticism that they do not inform instruction, but this suggestion misses the point: The real task is first to achieve reliable and valid classification. Discrepancy is best viewed as an *identification* criterion, so there would be little reason to expect it to have any bearing on instructional decisions. Creating effective instruction can become a primary focus when identification procedures provide confidence that the student “truly” has SLD. It is unfortunate that special education has come to de-emphasize classification, thus creating a mind-set in which there is little concern about whether a student truly has SLD so long as effective instruction can be provided (Kavale & Forness, 1998).

SLD and Intelligence

For some time, there has been the suggestion that a consideration of IQ is not necessary in defining SLD (Siegel, 1989). This objection seems unwarranted because on examination, IQ plays a critical role in SLD identification. First, without IQ, it would be impossible to determine an expected achievement level, a necessary part of the discrepancy criterion. Second, intellectual assessment may be necessary for instructional purposes in light of findings revealing that one empirically validated reading instruction method (i.e., systematic phonics) is not effective for students with low IQ (Ehri, Nunes, Stahl, & Willows, 2001). Special education has unfortunately come to de-emphasize the value of intellectual assessments (Morison, White, & Fever, 1996).

The persisting negative perception of intellectual assessment stems in part from the fact that, in the past, IQ tests were developed under the strong

influence of the concept of *g*, the assumption that there is one primary cognitive ability (Buckhalt, 2002). Consequently, attempts to use the Wechsler scales to find diagnostic profiles based on scatter, recategorizations, patterns, or factor scores were not successful (Kavale & Forness, 1984). Over time, however, cognitive ability tests have moved away from *g*, and there are now well-validated, theory-based tests of cognitive processes that measure multiple and complex processes (Kaufman & Kaufman, 2001). The value of IQ tests, therefore, lies in their ability to identify individual differences in cognitive functioning and the possibility of providing insight into the nature of underlying process deficits (Kaplan, Fein, Kramer, Delis, & Morris, 1999). In turn, the enhanced understanding of cognitive processes will result in better *individualized* interventions (Naglieri, 2003).

In reality, IQ tests have only modest influence on the special education process, and it is certainly not the case that IQ testing is an impediment to obtaining special education services (Fletcher et al., 1998). The IQ concept is vilified because the word *intelligence* may create positive or negative impressions about a student. For example, special education eligibility based on an SLD designation is viewed as positive and an entitlement, whereas eligibility based on an MR or ED classification is viewed negatively and as potentially punitive. These perceptions are what make IQ tests appear villainous, as they provide the basis for receiving presumed positive or negative labels (MacMillan, Gresham, Bocian, & Lambros, 1998).

Clearly, the IQ testing associated with the discrepancy model has not restricted access to the SLD category. In fact, rigorous implementation of the discrepancy model would probably make the SLD classification rate fairly constant. The real difficulty, however, is that the discrepancy model is not implemented rigorously, as is demonstrated in large-scale studies of the SLD identification process (e.g., Gott-

lieb, Alter, Gottlieb, & Wishner, 1994; MacMillan, Gresham, & Bocian, 1998). The lack of rigor in implementing the discrepancy model has resulted in the creation of two alternative (but inappropriate) discrepancy models: a *relative* discrepancy model, in which SLD determination depends on the performance level of an individual student compared with other students in the same school (Peterson & Shinn, 2002) or an *absolute* low achievement model in which below-average academic performance, irrespective of IQ level, leads to an SLD designation. These alternative discrepancy models arise because the individual school setting (i.e., context) becomes the primary influence in the way the presence or absence of SLD is determined. For example, if the average reading ability in a particular classroom is 90, a student with an IQ of 110 and a reading score of 85 would not appear out of the ordinary and may not be viewed as discrepant, but a student with an IQ of 80 and reading score of 75 may appear to possess a discrepancy in that particular context. When context becomes the primary influence, the alternative discrepancy models fail to use IQ-achievement differences to identify underachievement, a necessary component for SLD identification (MacMillan & Siperstein, 2002).

SLD and Unexpected School Failure

If the discrepancy criterion was eliminated, the fundamental notion of SLD as unexpected learning failure in the presence of average or above-average cognitive ability would be impossible to document. The RTI approach, which eliminates assessment of general cognitive ability, essentially excludes unexpected learning failure as a parameter in SLD identification. The situation is exacerbated by the suggestion that there is no need to distinguish between high ability-low achieving versus low ability-low achieving students because of modest differences found between these groups on reading and

behavior measures (Vellutino, Scanlon, & Lyon, 2000). It would be illogical, however, to assume that students with low ability (meaning they tend to score low on nearly every assessment) would outperform students with high ability (i.e., SLD) on all measures of reading and behavior. An SLD group, by definition, does not function in the low average to borderline IQ range. For example, if an IQ cutoff score is set too low, then there are difficulties in distinguishing students who may be discrepant. Stuebing et al. (2002) found a modest difference ($ES = 0.30$) in general cognitive ability between IQ-achievement discrepant and low ability groups primarily because they were not really identifying different groups.

When unexpected learning failure is acknowledged as a critical element of SLD, one may conclude that discrepancy is a necessary component in making decisions about the presence or absence of SLD (Kavale, 2002). The elimination of IQ-achievement discrepancy also appears to result in students with SLD remaining unidentified, as eligibility would be based on the inappropriate relative discrepancy or low achievement model. Thus, IQ-achievement discrepancy remains useful as a fundamental element in SLD identification, and discussion of its demise is unwarranted (see Aaron, 1997).

SLD Diagnosis

By eliminating IQ testing as part of SLD identification, RTI introduces what may be termed an outcomes-based model. Students are initially selected because of below-average reading achievement and then provided with an empirically validated intervention. If reading ability improves, then the special intervention is no longer necessary, and the student returns to the standard reading curriculum. If the student does not respond, then more intensive intervention is in order. If there is a failure to respond to the more intensive intervention, then a diagnosis of SLD would be forthcoming, and even more

intensive remedial services would be required. The nature of these services remains a moot point, but if the student continues to struggle, then perhaps the SLD diagnosis might, at some point, be transformed into an MR or ED designation and a different set of special education services would be provided.

To see the inefficiency of such a system, consider the example of a student who demonstrates an inability to remain seated during classroom instruction, continually interrupts others, and shows increasingly poor academic performance. Such a student would soon come to the attention of the classroom teacher and be referred for evaluation, which would likely lead to some form of behavioral intervention for the student's primary symptoms. If the student remains unresponsive, then a more intensive behavioral intervention may be implemented but may still not significantly reduce the target behavior. The failure to respond to this more intensive intervention may lead to a diagnosis of attention-deficit/hyperactivity disorder (ADHD) and pharmacological intervention. Even then, medication may initially have limited positive effects and may be changed several times with no significant effects forthcoming. Because there is again a failure to respond, a diagnosis of oppositional defiant disorder (ODD) may now be considered, and interventions consistent with ODD behaviors would be implemented. It is important to note that throughout this scenario, the student would continue to experience academic difficulties. Yet, the academic problems take a secondary position until the confounding caused by the comorbidity among behavioral disorders is unraveled. The co-occurrence difficulties may mean that academic problems are simply part of a larger syndrome. Greater efficiency would be achieved if appropriate assessments to establish the existence and parameters of particular problems are done in the first place (Lopez, Forness, MacMillan, Bocian, & Gresham, 1998).

Vaughn and Fuchs (2003) suggested that current SLD identification is flawed because it is predicated on a "wait-to-fail" model. This criticism is based on the misperception that the RTI model is, in reality, different from present practice. Early identification has long been a major focus, which suggests that schools do not wait for failure but rather attempt to find "at-risk" students as early as possible (Jenkins & O'Connor, 2002). The real question is, students at risk for what? Usually, the efforts have been directed at RD rather than SLD *per se*.

The wait-to-fail notion also assumes reading failure is, at least partially, the result of poor instruction. If poor instruction were a primary variable associated with difficulties in learning to read, then the possibility exists that whole classrooms, or many students in a single classroom, might be referred simultaneously. In most cases, classroom teachers are aware of students experiencing difficulties, and those students are provided with accommodations and support. This is essentially the prereferral process that attempts to provide appropriate modifications before any formal special education is initiated (Fuchs, Fuchs, Bahr, Fernstrom, & Stecker, 1990). The RTI model appears to be prereferral writ large, with greater specification about the types of reading interventions and outcome assessments that should be used. This is a significant positive step because the resources used for preventive interventions will ultimately benefit all students. Nevertheless, a number of unanswered questions remain. First and foremost, should the student who moves through the RTI model, which clearly establishes increasingly severe RD, now be designated SLD? This change in status does not appear justified, primarily because RD should not be equated with SLD. On what basis is an SLD classification warranted? At this point, the conceptual leap from RD to SLD is too great. The RTI model appears better suited to prevention of RD than to classification of SLD.

SLD and Empirically Validated Interventions

A primary advantage of the RTI model over previous prereferral efforts is that students experiencing RD are assured of receiving interventions with empirical validation. It is important to note, however, that statistically, the actual effects of the interventions can be deemed only moderate (see Ehri, Nunes, Willows, et al., 2001). Therefore, the interventions are unlikely to result in a change in classification from, for example, poor to average reader. Practically, on standardized reading measures, the obtained effects would indicate that the average student in the borderline range (i.e., standard score = 70) would move, at the end of intervention, to a standard score of 78, which remains in the borderline range. Does this level of improvement indicate a significant response? In all likelihood, a majority of students with RD will not change status, which raises the question about how a failure to respond can be confidently translated into a specific diagnosis. In reality, continued status as a student with RD is not a diagnosis and is best viewed as a symptom common to many disability conditions.

The advantages of using empirically validated interventions in the RTI model may be somewhat diminished by their narrow focus on phonological processing, particularly phonemic awareness at the word level. These programs work for some students but not necessarily for all students. This fact led Swanson (1999) to conclude that the importance of phonological awareness training may be overstated. The narrow intervention focus was criticized by Pressley and Allington (1999), who argued that other aspects of literacy (e.g., comprehension) must also be considered. This view assumes greater importance when improved outcomes in reading have been shown to be associated with interventions directed at, for example, higher-order processing, reading comprehension, and written expression (Vaughn, Ger-

sten, & Chard, 2000). In addition, conceptualizations such as the double-deficit theory propose that RD is based on deficits in phonological processing and rapid naming of letters and digits (Wolf & Bowers, 1999). Allor (2002) found that both deficits contribute uniquely to word reading ability. Thus, an emphasis on phonological processing may be too narrowly focused and may not account for all the possible factors contributing to RD. In an open letter to Reid Lyon about the National Institutes for Child Health and Development (NICHD) reading research projects, Strauss (2001) suggested that "your narrow definition of reading, your avoidance of important questions on literacy . . . obligates us to question whether you really do welcome challenge . . . and to consider your statements with the same scientific skepticism that you purportedly advocate" (p. 32). Thus, RTI includes interventions that have received only modest empirical validation and that focus on a single deficit in what may best be viewed as a multivariate problem.

SLD and Responsiveness

Although many parts of the RTI model are well-specified and rigorous, the meaning of a successful response to instruction remains vague. Must students be reading at a level consonant with their peers? Must students merely read more, regardless of whether they remain significantly behind their peers? Who decides when the level of failure warrants formal referral? How is *no* response to instruction differentiated from a marginal response to instruction? At this point, there are few established criteria for making such determinations, indicating a likelihood that there will be a reliance on somewhat vague "clinical" (i.e., teacher) judgments about the level of response. Clinical judgment introduces the possibility that extraneous factors may influence outcomes, which makes it difficult to argue against "statistical" (i.e., test) results providing more rigorous,

consistent, and systematic decisions (Meehl, 1954).

RTI and SLD Classification

The RTI model appears to be an appropriate first step in the SLD identification process. At the end of the RTI process, a student is known to possess significant reading difficulties that have not responded positively to validated interventions. This appears to be the only proper conclusion, because nonresponsiveness should not be viewed as a diagnostic criterion; nonresponsiveness is an outcome that may or may not be caused by SLD. Thus, the RTI model cannot stand alone as the primary means to identify SLD; it represents a single criterion (i.e., nonresponsiveness), which was the same criticism leveled against the discrepancy model. The advantage of discrepancy over RTI is that it documents the presence or absence of underachievement, a parameter integral to the SLD construct. On the other hand, the RTI model can only document the presence of low achievement. If underachievement is viewed as a necessary but not sufficient criterion for SLD classification, then the diagnostic process could proceed to investigate additional criteria in an effort to gain greater confidence about final SLD status (Kavale & Forness, 1995).

Kavale and Forness (2000) offered a five-level hierarchical operational definition based on elements formed in the federal SLD definition as an example of how the identification process could be extended. A modified version is shown in Figure 1. Each level represents a necessary but not sufficient condition, and SLD classification is achieved only when all five criteria are met. Assessment begins with an attempt to document the presence or absence of underachievement. If a student reveals a significant discrepancy, then the process proceeds with attempts to document significant basic skill deficits, insufficient learning effi-

ciency, the presence of process deficits, and the interpretation of alternative explanations for poor academic performance.

The Kavale and Forness (2000) operational definition did not specify particular assessments. Flanagan, Ortiz, Alfonso, and Mascolo (2002), although calling the Kavale and Forness operational definition "an important new direction for current practice" (p. 346), indicated that the model "did not directly incorporate a well-validated theoretical paradigm and there was no specific guidance given in what methods might be used to accomplish effective measurement of LD" (p. 346). To achieve this end, Flanagan et al. developed a comprehensive framework for SLD determination based on the Cattell-Horn-Carroll (CHC) theory of cognitive abilities. The identification process proceeds through six levels in which the selection and interpretation of intelligence and achievement tests is based on cross-battery assessment (see Flanagan & Ortiz, 2001). For example, Level I-A (interindividual academic ability analysis) is shown in Figure 2. Each academic skill is then assessed. As an example, the basic reading skills assessment is shown in Table 1. The final step is to choose specific tests. For example, assessments of reading speed (RS) may be chosen from among the *Gray Oral Reading Test (GORT-4)*, *Test of Word Reading Efficiency (TOWRE)*, or *Woodcock-Johnson Tests of Achievement (WJ III)*.

These examples demonstrate the possibility of creating a theoretically and psychometrically defensible approach to SLD identification. The approach integrates accepted concepts about SLD with theories about cognitive and academic functioning to generate a comprehensive and systematic assessment framework that provides an inherently practical method for SLD identification. The model offers the potential for increased confidence in the validity of SLD classification as well as an in-depth evaluation of academic and cognitive skills that may identify

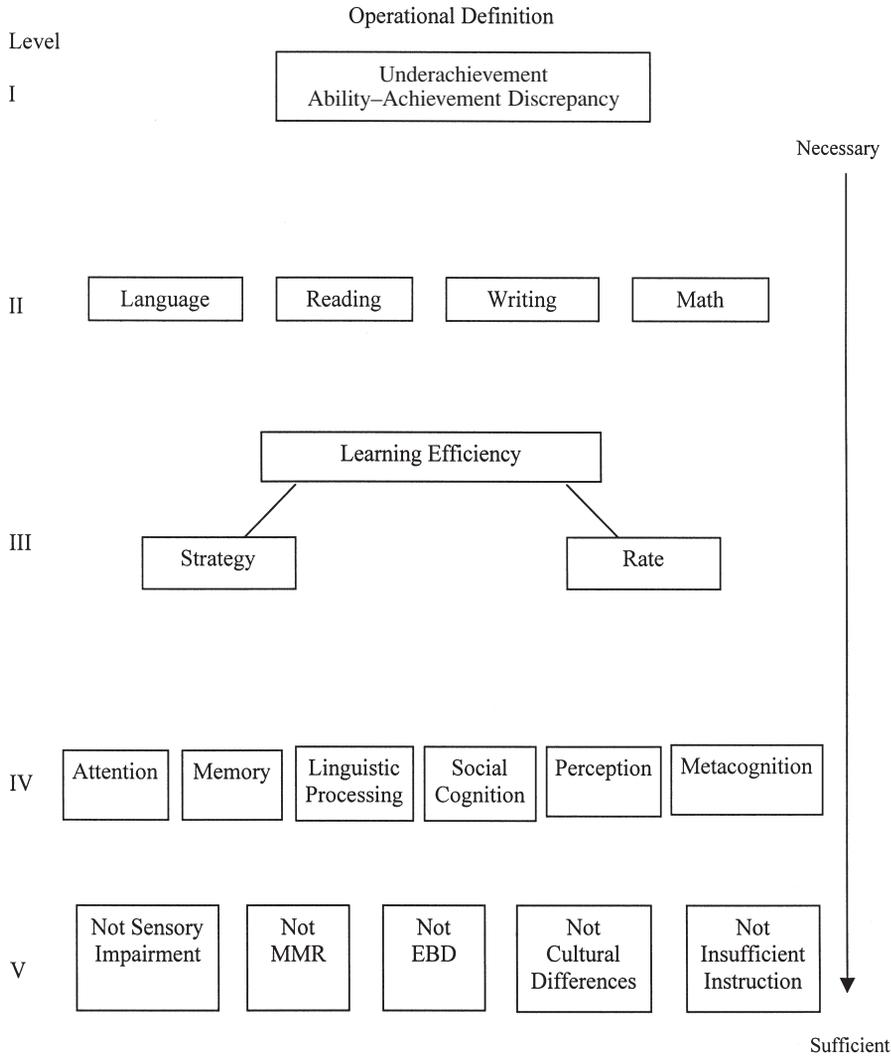


FIGURE 1. Example of an operational definition of learning disability by Kavale and Forness.

factors that are impeding student progress. With impeding factors identified, specific targets for remediation can be determined that offer the possibility for truly individualized intervention.

In contrast, what can be said about a student who does not respond to instruction? The only legitimate conclusion is that the student possesses significant RD. What cannot be concluded with any confidence is that the student now fits the parameters of SLD. What is the basis for the SLD designation? In reality, there is none unless there is some legerdemain in which all RD

magically transforms itself into SLD. The real problem with the RTI model lies not in the procedures themselves but rather in the leap of faith necessary for nonresponsiveness to become SLD. The history of SLD shows that the original concept evolved from much more than a reading problem that resists treatment (Hallahan & Mercer, 2002).

Conclusion

In an insightful analysis of problems associated with SLD identification, Scruggs and Mastropieri (2002) offered validity criteria for identification pro-

cedures. For an identification procedure to be deemed valid, the following questions concerning it must be answered in the affirmative: (a) Does the identification procedure address the multifaceted nature of SLD? (b) Can the procedure be applied across the age spectrum of students with SLD? (c) Can the procedure be applied with measures demonstrating technical adequacy? (d) Will the procedure reduce overidentification of SLD? (e) Will the procedure reduce inappropriate variability in identification rates across state and local educational authorities? and (f) Is the procedure more likely than current procedures to identify students who meet present conceptualizations of SLD? The RTI model does not appear to yet meet these criteria. For example, the emphasis on phonological processing and the decoding aspect of reading fails to consider math, writing, or even reading comprehension deficits. The RTI emphasis on early identification and the avoidance of a wait-to-fail model would not appear to cross the age spectrum. Many measures associated with the RTI model are best viewed as experimental because their technical adequacy has not yet been established. The problem of overidentification will be difficult to resolve when the initial pool of students represents the lowest 25% in reading achievement in a kindergarten or first-grade population. Across settings, the lowest 25% of the school population will undoubtedly show very different achievement distributions that are likely to produce very different nonresponsiveness profiles, which will do little to reduce the problem of variability across settings.

Finally, many years of SLD research have contributed to the development of the SLD construct, but the proposed RTI model emphasizes only a single processing deficit (i.e., phonological processing). Within the context of SLD identification, the possibility of a single processing deficit is too arcane, and it would take a significant conceptual leap to generalize this particular form of RD into SLD.

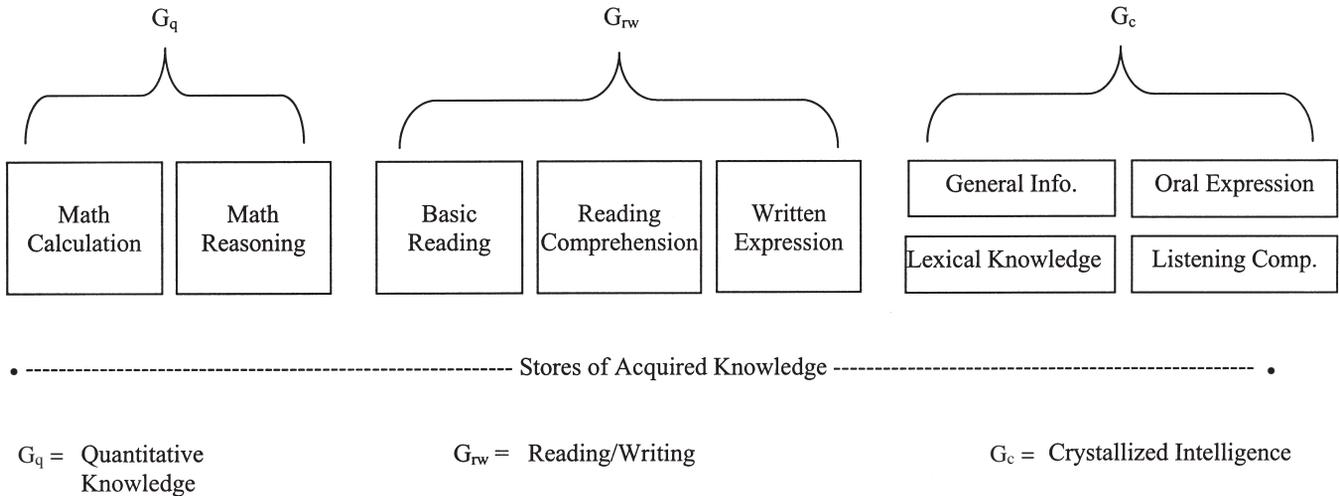


FIGURE 2. Level I-A: Measurement of specific academic skills and acquired knowledge—interindividual academic ability analysis.

Scruggs and Mastropieri (2002) concluded their analysis by suggesting “that radically altering or eliminating the concept of learning disabilities because of problems with current identification procedures amounts to ‘throwing the baby out with the bathwater’” (p. 165). The RTI model as presently described appears to radically alter the SLD concept and, consequently, cannot be endorsed; in fact, it will have the effect of eliminating much of what is known about SLD. At best, the RTI model identifies students who are at risk for reading failure, but the narrowly focused reading achievement problem, the single processing deficit, and the limited intervention options suggest that what is being identified is a far cry from SLD in any significant sense. The disconnect between the RTI model and the SLD construct creates the potential for diagnostic chaos. The number of false positives and false negatives may increase significantly because of a failure to know what a true positive should be. Such a scenario would not provide the answer to problems associated with SLD identification.

ABOUT THE AUTHOR

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Corresponding Cattell-Horn-Carroll ability	Definition
Reading Decoding (RD)	Ability to recognize and decode words or pseudowords in reading
Verbal (printed) Language Comprehension (V)	General development, or the understanding of words, sentences, and paragraphs in native language, as measured by reading vocabulary and reading comprehension tests
Reading Speed (RS)	Time required to silently read a passage or series of sentences as quickly as possible
Phonetic Coding: Analysis (PC:A)	Ability to segment larger units of speech sounds into smaller units of speech sounds
Phonetic Coding: Synthesis (PC:S)	Ability to blend smaller units of speech together into larger units of speech

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REFERENCES

Aaron, P. G. (1997). The impending demise of the discrepancy formula. *Review of Educational Research, 67*, 461–502.

Allor, J. H. (2002). The relationship of phonemic awareness and rapid naming on reading development. *Learning Disability Quarterly, 25*, 47–57.

Bergmann, G. (1961). Sense and nonsense in operationalism. In P. G. Frank (Ed.), *The validation of scientific theories* (pp. 45–56). New York: Collier.

Buckhalt, J. A. (2002). A short history of g: Psychometrics’ most enduring and controversial construct. *Learning and Individual Differences, 13*, 101–114.

- Ehri, L. C., Nunes, S. R., Stahl, S. R., & Willows, D. M. (2001). Systematic phonics instruction helps students learn to read: Evidence from the National Reading Panel's meta-analysis. *Review of Educational Research, 71*, 393-447.
- Ehri, L. C., Nunes, S. R., Willows, D. M., Schuster, B. V., Yeghoub-Zadeh, Z., & Shanahan, T. (2001). Phonemic awareness instruction helps children learn to read: Evidence from the National Reading Panel's meta-analysis. *Reading Research Quarterly, 36*, 250-287.
- Flanagan, D. P., & Ortiz, S. O. (2001). *Essentials of cross-battery assessment*. New York: Wiley.
- Flanagan, D. P., Ortiz, S. O., Alfonso, V. C., & Mascolo, J. T. (2002). *The achievement test desk reference (ATDR): Comprehensive assessment and learning disabilities*. Boston: Allyn & Bacon.
- Fletcher, J. M., Francis, D. J., Shaywitz, S. E., Lyon, G. R., Foorman, B. R., Stuebing, K. K., et al. (1998). Intelligent testing and the discrepancy model for children with learning disabilities. *Learning Disabilities Research & Practice, 13*, 186-203.
- Fuchs, D., Fuchs, L. S., Bahr, M. W., Fernstrom, P., & Stecker, P. M. (1990). Prereferral intervention: A prescriptive approach. *Exceptional Children, 56*, 493-513.
- Fuchs, D., Fuchs, L. S., Mathes, P. G., Lipsey, M. W., & Roberts, P. H. (2002). Is "learning disabilities" just a fancy term for low achievement? A meta-analysis of reading differences between low achievers with and without the label. In R. Bradley, L. Danielson, & D. P. Hallahan (Eds.), *Identification of learning disabilities: Research to practice* (pp. 737-762). Mahwah, NJ: Erlbaum.
- Gaskins, L. W. (1982). Let's end the reading disabilities/learning disabilities debate. *Journal of Learning Disabilities, 15*, 81-83.
- Gordon, M., Lewandowski, L., & Keiser, S. (1999). The LD label for relatively well-functioning students: A critical analysis. *Journal of Learning Disabilities, 32*, 485-490.
- Gottlieb, J., Alter, M., Gottlieb, B. W., & Wishner, J. (1994). Special education in urban America: It's not justifiable for many. *The Journal of Special Education, 27*, 453-465.
- Gresham, F. M., MacMillan, D. L., & Bocian, K. M. (1996). Learning disabilities, low achievement, and mild mental retardation: More alike than different? *Journal of Learning Disabilities, 29*, 570-581.
- Hallahan, D. P., & Mercer, C. D. (2002). Learning disabilities: Historical perspectives. In R. Bradley, L. Danielson, & D. P. Hallahan (Eds.), *Identification of learning disabilities: Research to practice* (pp. 1-67). Mahwah, NJ: Erlbaum.
- Hoskyn, M., & Swanson, H. L. (2000). Cognitive processing of low achievers and children with reading disabilities: A selective meta-analytic review of the published literature. *School Psychology Review, 29*, 102-119.
- Individuals with Disabilities Education Improvement Act, S.1248, 2003, sec.602(29).
- Individuals with Disabilities Education Improvement Act of 2003 (2003). Senate Bill 1248.
- Jenkins, J. R., & O'Connor, R. E. (2002). Early identification and intervention for young children with reading/learning disabilities. In R. Bradley, L. Danielson, & D. P. Hallahan (Eds.), *Identification of learning disabilities: Research to practice* (pp. 99-149). Mahwah, NJ: Erlbaum.
- Kaplan, E., Fein, D., Kramer, J., Delis, D., & Morris, R. (1999). *The WISC-III as a process instrument*. San Antonio, TX: Psychological Corp.
- Kaufman, A. S., & Kaufman, N. L. (Eds.). (2001). *Specific learning disabilities and difficulties in children and adolescents: Psychological assessment and evaluation*. Cambridge, England: Cambridge University Press.
- Kavale, K. A. (1987). Theoretical issues surrounding severe discrepancy. *Learning Disabilities Research, 3*(1), 12-20.
- Kavale, K. A. (2002). Discrepancy models in the identification of learning disability. In R. Bradley, L. Danielson, & D. P. Hallahan (Eds.), *Identification of learning disabilities: Research to practice* (pp. 369-426). Mahwah, NJ: Erlbaum.
- Kavale, K. A., & Forness, S. R. (1984). A meta-analysis of the validity of Wechsler Scale profiles and recategorizations: Patterns or parodies? *Learning Disability Quarterly, 7*, 136-156.
- Kavale, K. A., & Forness, S. R. (1985a). Learning disability and the history of science: Paradigm or paradox? *Remedial and Special Education, 6*, 12-23.
- Kavale, K. A., & Forness, S. R. (1985b). *The science of learning disabilities*. San Diego, CA: College-Hill Press.
- Kavale, K. A., & Forness, S. R. (1995). *The nature of learning disabilities: Critical elements of diagnosis and classification*. Mahwah, NJ: Erlbaum.
- Kavale, K. A., & Forness, S. R. (1998). The politics of learning disabilities. *Learning Disability Quarterly, 21*, 245-273.
- Kavale, K. A., & Forness, S. R. (2000). What definitions of learning disability say and don't say: A critical analysis. *Journal of Learning Disabilities, 33*, 239-256.
- Kavale, K. A., & Forness, S. R. (2003). Learning disability as a discipline. In H. L. Swanson, K. R. Harris, & S. Graham (Eds.), *Handbook of learning disabilities* (pp. 76-93). New York: Guilford Press.
- Kavale, K. A., Forness, S. R., & Lorschach, T. C. (1991). Definition for definitions of learning disabilities. *Learning Disability Quarterly, 14*, 257-266.
- Kavale, K. A., & Nye, C. (1985-1986). Parameters of learning disabilities in achievement, linguistic, neuropsychological, and social/behavioral domains. *The Journal of Special Education, 19*, 443-458.
- Kavale, K. A., & Reese, J. H. (1992). The character of learning disabilities: An Iowa profile. *Learning Disability Quarterly, 15*, 74-94.
- Keogh, B. K. (1994). A matrix of decision points in the measurement of learning disabilities. In G. R. Lyon (Ed.), *Frames of reference for the assessment of learning disabilities: New views on assessment issues* (pp. 15-26). Baltimore: Brookes.
- Lerner, J. W. (1975). Remedial reading and learning disabilities: Are they the same or different? *The Journal of Special Education, 9*, 119-131.
- Lopez, M. F., Forness, S. R., MacMillan, D. L., Bocian, K. M., & Gresham, F. M. (1998). Children with attention deficit hyperactivity disorder and emotional or behavioral disorders in primary grades: Inappropriate placement in the learning disorder category. *Education & Treatment of Children, 19*, 286-299.
- MacMillan, D. L., Gresham, F. M., & Bocian, K. M. (1998). Discrepancy between definitions of learning disabilities and school practices: An empirical investigation. *Journal of Learning Disabilities, 31*, 314-326.
- MacMillan, D. L., Gresham, F. M., Bocian, K. M., & Lambros, K. M. (1998). Current plight of borderline students: Where do they belong? *Education and Training in Mental Retardation and Developmental Disabilities, 33*, 83-94.
- MacMillan, D. L., & Siperstein, G. N. (2002). Learning disabilities as operationally defined by schools. In R. Bradley, L. Danielson, & D. P. Hallahan (Eds.), *Identification of learning disabilities: Research to practice* (pp. 287-333). Mahwah, NJ: Erlbaum.
- Meehl, P. E. (1954). *Clinical versus statistical prediction: A theoretical analysis and a review of the evidence*. Minneapolis: University of Minnesota Press.

- Mercer, C. D., Jordan, L., Allsopp, D. H., & Mercer, A. R. (1996). Learning disabilities definitions and criteria used by state education departments. *Journal of Learning Disabilities, 19*, 217-232.
- Morison, P., White, S. H., & Fever, M. J. (Eds.) (1996). *The use of IQ tests in special education decision making and planning*. Washington, DC: National Academy Press.
- Naglieri, J. A. (2003). Current advances in assessment and intervention for children with learning disabilities. In T. E. Scruggs & M. A. Mastropieri (Eds.), *Advances in learning and behavioral disabilities: Identification and assessment* (Vol. 16, pp. 163-190). Oxford, England: Elsevier Science.
- Peterson, K. M. H., & Shinn, M. R. (2002). Severe discrepancy models: Which best explains school identification practices for learning disabilities? *School Psychology Review, 31*(4), 459-476.
- Pressley, M., & Allington, R. (1999). What should reading instructional research be the research of? *Issues in Education. Contributions From Educational Psychology, 5*, 1-35.
- Reynolds, C. R. (1985). Measuring the aptitude-achievement discrepancy in learning disability diagnosis. *Remedial and Special Education, 6*, 37-55.
- Scruggs, T. E., & Mastropieri, M. A. (2002). On babies and bathwater: Addressing the problems of identification of learning disabilities. *Learning Disability Quarterly, 25*, 155-168.
- Shepard, L. A. (1980). An evaluation of the regression discrepancy method for identifying children with learning disabilities. *The Journal of Special Education, 14*, 79-91.
- Siegel, L. S. (1989). IQ is irrelevant to the definition of learning disabilities. *Journal of Learning Disabilities, 22*, 469-478, 486.
- Siegel, L. S. (2003). IQ-discrepancy definitions and the diagnosis of LD: Introduction to the special issue. *Journal of Learning Disabilities, 33*, 2-3.
- Speece, D. L., Case, L. P., & Melloy, D. E. (2003). Responsiveness to general education instruction as the first gate to learning disabilities identification. *Learning Disabilities Research & Practice, 18*, 147-156.
- Strauss, S. L. (2001). An open letter to Reid Lyon. *Educational Researcher, 30*, 26-33.
- Stuebing, K. K., Fletcher, J. M., LeDoux, J. M., Lyon, G. R., Shaywitz, S. E., & Shaywitz, B. A. (2002). Validity of IQ-discrepancy classifications of reading difficulties: A meta-analysis. *American Educational Research Journal, 39*, 469-518.
- Swanson, H. L. (1999). Has the importance of phonological awareness training been greatly overstated? *Issues in Education. Contributions From Educational Psychology, 5*, 125-139.
- U.S. Office of Education. (1997, December 29). Assistance to states for educating of handicapped children: Procedures for evaluating specific learning disabilities. Federal Register, 42 (250), 65082-65085. Washington, DC: U.S. Government Printing Office.
- Vaughn, S., & Fuchs, L. S. (2003). Redefining learning disabilities as inadequate response to instruction: The promise and potential problems. *Learning Disabilities Research & Practice, 18*, 137-146.
- Vaughn, S., Gersten, R., & Chard, D. J. (2000). The underlying message in LD intervention research: Findings from research syntheses. *Exceptional Children, 67*, 99-114.
- Vellutino, F. R., Scanlon, D. M., & Lyon, G. R. (2000). Differentiating difficult-to-remediate and readily remediated poor readers: More evidence against the IQ-achievement discrepancy definition of reading disability. *Journal of Learning Disabilities, 33*, 223-238.
- Wolf, M., & Bowers, P. G. (1999). The double-deficit hypothesis for the developmental dyslexias. *Journal of Educational Psychology, 91*, 415-438.

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