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Redefining Learning Disabilities as Inadequate Response to Instruction: The Promise and Potential Problems

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Abstract. In this introduction to the special issue, a response-to-instruction approach to learning disabilities (LD) identification is discussed. Then, an overview of the promise and the potential pitfalls of such an approach is provided. The potential benefits include identification of students based on risk rather than deficit, early identification and instruction, reduction of identification bias, and linkage of identification assessment with instructional planning. Questions concern the integrity of the LD concept, the need for validated interventions and assessment methods, the adequacy of response to instruction as the endpoint in identification, the appropriate instruction intensity, the need for adequately trained personnel, and due process. Finally, an overview of the articles constituting the special issue is provided.

Although individuals with learning disabilities (LD) have been part of our educational system since its inception, recognition and identification of the special learning needs of individuals with LD, now recognized as a worldwide condition (Gersons-Wolfensberger & Ruijssenaars, 1997), are relatively recent phenomena. Currently, more students are identified as having specific LD than any other type of disability. During the last two decades, the number of students identified as LD has increased substantially from about 1.2 million in 1979–1980 to 2.8 million in 1998–1999 (U.S. Department of Education, 2000). Just over 50 percent of all students identified for special education in the United States are classified as LD (approximately 5 percent of the school-age population). There are several possible explanations for this growth in identification of LD (Gresham, MacMillan, & Bocian, 1997; MacMillan, Gresham, & Bocian, 1998). These include (1) recognition of the significant academic and social problems realized by individuals with LD, (2) greater social acceptance of LD over other categories of special education (during the same period in which LD identification has increased significantly, identification of mental retardation (MR) has decreased significantly), and (3) increasing needs for literacy at home and work.

Growth in identification of individuals for special education is of concern to educators and policymakers largely because special education services are more costly than general education (Chambers, Parrish, & Harr, 2002). The cost per student for special education is nearly twice that for general education ($12,000 per special education student compared with $6,500 for a general education student). Furthermore, much of the burden for funding special education comes from state and local education agencies. Thus, accurate determination of which students qualify for special education is critical.

Unfortunately, establishing acceptable criteria for LD identification historically has been the single most controversial issue in the field of LD. This issue persists. At the heart of the controversy about identification is the use of the IQ-achievement discrepancy. Although not required by law, the IQ-achievement discrepancy is a frequently used procedure for documenting a severe discrepancy between achievement and intellectual ability in one or more areas—oral expression, listening comprehension, written expression, basic reading skills,

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reading comprehension, mathematics calculation, and mathematics reasoning.

The IQ-achievement discrepancy is fraught with measurement and conceptual problems, and few cognitive or affective characteristics differentiate poor readers with discrepancies from those without discrepancies (Fletcher et al., 1994; Foorman, Francis, Fletcher, & Lynn, 1996; Stuebing et al., 2002). Fundamentally, the assumptions underlying the IQ-achievement discrepancy model have not been supported (Stanovich & Siegel, 1994). Assumptions *not* empirically supported include that the: (1) degree of discrepancy from IQ would meaningfully relate to the severity of the LD (Stanovich & Siegel, 1994), (2) academic performance of students with a discrepancy differs from that of students without a discrepancy (Gresham, 2002), (3) discrepancy yields reliable information (Reynolds, 1984), (4) findings inform instruction (Elliott & Fuchs, 1997; Fletcher et al., 1998), and (5) use of IQ tests is a necessary procedure for identifying students with LD (Donovan & Cross, 2002).

Thus, as the field of LD matures, recognition grows that the conceptualization and definition of LD need to be reconsidered. Despite recognition that an alternative procedure to IQ-achievement discrepancy may be necessary, alternative ideas for identifying and conceptualizing LD are few (B. A. Shaywitz, Holahan, Fletcher, & Shaywitz, 1992). One model for reconceptualizing LD is in terms of a failure to respond to treatment (Berninger & Abbott, 1994; Vellutino & Scanlon, 1987), which is sometimes conceptualized in terms of treatment validity (L. S. Fuchs & Fuchs, 1998). In this article, we explain a response-to-instruction approach to LD identification. Then, we provide an overview of the promise and the potential pitfalls of such an approach.

A RESPONSE-TO-INSTRUCTION MODEL OF LD

The roots of a response-to-approach to the identification of LD reside in a 1982 National Research Council study (Heller, Holtzman, & Messick, 1982), which proposed that the validity of a special education classification be judged according to three criteria. The first criterion was whether the quality of the general education program is such that adequate learning might be expected. The second consideration was whether the special education program is of sufficient value to improve student outcomes and thereby justify the classification. The third criterion was whether the assessment process used for identification is accurate and meaningful. When all three criteria are met, a special education classification is deemed valid. The first two criteria emphasize instructional quality: first in the setting where the problem develops and second under the auspices of the special services the classification affords. By implication, the assessment process, referred to in the third criterion, requires judgments about the quality of instructional environments and the student's response to those environments.

In 1995, L. S. Fuchs operationalized the Heller et al. (1982) framework (see also L. S. Fuchs & Fuchs, 1998) with the following assessment phases. In *Phase I*, the rate of growth for all students in the class is tracked. The purpose of classwide assessment is to determine whether the overall rate of responsiveness for the class indicates that the instructional environment is sufficiently nurturing to expect student progress. If the mean rate of growth across all children in the class is low, when compared to other classes in the same building, in the same district, or in the nation, then the appropriate decision is to intervene at the classroom level to develop a stronger instructional program. Phase I assessment, therefore, addresses Heller et al.'s first criterion that the quality of the general education program be such that adequate learning might be expected.

After the presence of a generally nurturing regular classroom instructional environment has been established, *Phase II* assessment commences, with the identification of individuals whose level of performance and rate of improvement are dramatically below those of classroom peers. The purpose is to identify a subset of children at risk for poor outcomes due to their unresponsiveness to the generally effective instructional setting. For this subset of children, *Phase III* assessment continues with the systematic testing of classroom adaptations designed to enhance individual responsiveness in the general education setting. The purpose is to determine whether the regular education setting can be transformed into a productive learning environment for the at-risk student. Only when corrective action fails to yield improved growth does consideration of special services to supplement the general education program become warranted. The assumption is that if corrective adaptations in general education cannot produce growth for the individual, then the student has some intrinsic deficit (i.e., disability) making it difficult for him or her to derive benefit from the instructional environment that benefits the overwhelming majority of children. (The L. S. Fuchs (1995) model also incorporated a fourth phase, in which special education effectiveness was determined for the student. If special education effectiveness for that child could not be documented, then no compelling rationale exists for the LD classification. This last phase, which addresses Heller et al.'s second criterion, generated substantial controversy and was dropped from the identification model. See L. S. Fuchs, Fuchs, and Speece (2002) for an overview and related discussion.)

To operationalize these assessment phases, L. S. Fuchs (1995) relied on curriculum-based measurement (CBM; Deno, 1985), an assessment system that permits modeling of student responsiveness to instruction. In Phase I, CBM quantifies "classroom instructional quality" as mean level of growth for the class. In Phase II, "risk" is defined as a dual discrepancy (i.e., CBM level and CBM rate of growth) between the target student and his or her classmates. In Phase III, CBM is used to

index "responsiveness to classroom adaptations," with the goal of moving the at-risk student's CBM levels and rates of improvement within the range of the class mean. (In Phase IV, the "value of the special education classification" is operationalized as CBM rate of growth in response to those special services.) Fuchs provided data to show how CBM met important standards for ensuring Heller et al.'s (1982) third criterion: that the assessment process used for classification, which necessarily requires judgments about the quality of instructional environments and the student's response to those environments, is accurate and meaningful.

Since L. S. Fuchs (1995) operationalized Heller et al.'s (1982) framework in the mid-1990s, a response-to- model of LD identification has received considerable attention. For example, the LD Initiative, sponsored by the U.S. Department of Education's Office of Special Education, commissioned a paper (Gresham, 2002) formulating response-to- as an alternative to current identification methods; the President's Commission on Excellence in Special Education highlighted response-to- as an approach for lending credibility and utility to LD identification; and a National Academy of Sciences committee on overrepresentation of minority students in special education advanced a response-to- perspective on identification (Donovan & Cross, 2002).

It is important to note that some of these more recent discussions about the nature and content of a response-to- approach to LD identification reconceptualize Phase III of the L. S. Fuchs (1995) model. In attempting to address the at-risk student's problem within the context of general education, Fuchs proposed adaptations that typical classroom teachers might incorporate in a routine way. Using a consultative, problem-solving approach, adaptations were tailored to address the individual's difficulties in a manner that could be incorporated into general education. The goal was to incorporate successful adaptations into the ongoing instructional environment for the target student so that general education was "redefined" for that student. The primary focus, however, was on indexing responsiveness in a general education setting that could be maintained over time. The essential question remained: Is the student's responsiveness to the general education program within the range of classmates? If so, the student was deemed disability-free; if not, the student was considered further for LD identification.

By contrast, Phase III has been interpreted as emphasizing remediation of the at-risk student's difficulty with a relatively intensive, fixed duration (e.g., 10–15 weeks) trial of small-group or individual tutoring that involves a standard, validated protocol. Responsiveness to this intensive trial is the operative concept within this "response-to-" model. That is, if the student responds to the intensive prevention trial, then the student is deemed disability-free (and remediated); he or she then is returned to the original classroom environment. Failure to respond confirms the presence of a LD, and persistence of the academic problem then warrants special education. A recently conducted study exemplifies this approach (Vaughn, Linan-Thompson, & Hickman-Davis, 2002). Second-grade students at risk for reading disabilities were assessed and provided 10 weeks of supplemental, small-group reading instruction. A priori criteria were established for "dismissal" from supplemental instruction. After 10 weeks, all students who met criteria were no longer included in supplemental instruction and the remaining students were regrouped and provided another 10 weeks of instruction. This continued for 30 weeks, with those students remaining in supplemental instruction (25 percent of original sample) being considered eligible for referral for special education. However, this study illustrates the critical questions that remain with such an approach. Many of the students who were discontinued from supplemental instruction failed to "thrive" in the general education setting and would have been candidates for further supplemental instruction.

This model has been termed "a three-tiered prevention model" with primary intervention consisting of the general education program; secondary intervention involving the fixed duration, intensive, standard protocol trial (with the goal of remediating the academic deficit rather than enhancing general education); and tertiary intervention synonymous with special education. (Note that a three-tiered prevention model is an umbrella term, with variations in how the levels are operationalized.) D. Fuchs and colleagues, later in this issue, explore this distinction between a problem-solving approach, rooted in the general education framework, and a standard, intensive instruction protocol approach, rooted in a prevention model.

REDEFINING LEARNING DISABILITIES AS INADEQUATE RESPONSE TO INSTRUCTION: THE PROMISE AND POTENTIAL PITFALLS

The Promise

Response to instruction may represent a promising alternative to the traditional testing method of identifying students for LD. Traditional practices rely on waiting for the student to have extreme difficulty learning and for teachers to recognize this and refer the student for special education. This less than reliable practice leaves the burden for screening on the teacher (Gresham et al., 1997). Often referred to as a "wait to fail" model, several disadvantages include relatively late identification for students who have special needs; imprecise screening through teacher observation; false negatives (i.e., unidentified students) who are not provided necessary services or provided services too late; and use of identification measures that are not linked to instruction. Ideally, response to instruction can both promote effective practices and help close the gap between identification and intervention. A response-to-instruction model

could yield several promising benefits: (1) identification of students using a risk rather than a deficit model, (2) early identification and instruction of students with LD, (3) reduction of identification bias, and (4) a strong focus on student outcomes.

Identifying Individuals at Risk Rather than by Deficit

Implementation of a response-to-instruction model may provide an opportunity to move from a deficit model to a risk model for both identifying and intervening with students with LD. This offers potential benefit to a large number of students—including those with learning problems without LD as well as students with LD. Ideally, all students (kindergarten or first grade through second or third grade) would be screened early for potential problems in academic and behavioral domains. Those students who are identified as "at risk" would be provided highly effective instruction to reduce their risk in the identified area (e.g., language, reading, numeracy/math, behavior). Students whose response to instruction moved them out of risk status would receive no further supplemental intervention. Students whose response to well-documented, effective, and well-implemented instruction was low or who remained at risk would be considered for placement in special education. Thus, potentially, many students could benefit from this type of an identification procedure.

When well implemented, a response-to-instruction model could also serve to better integrate services between general and special education. In a well-functioning system, resources from general education could be used to (1) bolster core academic and behavioral programs within general education so that fewer students were at risk for learning and behavior problems and (2) assist in screening and instruction for students to assure that those who did not respond to instruction were in need of special education.

Movement from a deficit model to a risk model for identification and instruction in LD is inconsistent with the history of special education and of LD. Instruction of students with LD has been marked by the persistent attempt to identify underlying processing deficits associated with students' LD and then the subsequent design and implementation of instructions to remediate those deficits (for review, see Lyon, 1985; Mann, 1979). Although there is little doubt that many individuals with LD have underlying neurological deficits, the field simply has been unsuccessful at reliably identifying those deficits and, more importantly, in linking the assessment of processing deficits to effective instructions (Chall, 2000; Kavale, 1980; Kavale & Forness, 2000; Kavale & Mattson, 1983; Silver, 2001). Fundamentally, underlying deficits have not been reliably identified, and corresponding instructions have not adequately addressed the learning problems of students with LD (Hammill & Larsen, 1974, 1978; Larsen, Parker, & Hammill, 1982).

Thus, although the assessment of processing abilities and the provision of process-oriented instruction may have a fruitful future, the most effective current model for addressing students' LD is one that relies on progress-monitoring approaches directly linked to explicit and systematic instruction. CBM represents an assessment method that can provide the multiple sources of documentation needed for (1) modeling academic growth, (2) distinguishing between ineffective general education environments and unacceptable individual student learning, (3) informing instructional planning, and (4) evaluating relative instruction effectiveness (L. S. Fuchs, 1995; L. S. Fuchs & Fuchs, 1998; L. S. Fuchs et al., 2002). This allows for early and ongoing identification of students who are behind their same-class and same-grade peers.

Identifying and Treating Students with LD Early

The model of using response to instruction as a means of identifying students with LD has the highly desirable benefit of early identification and early instruction. If we begin to screen students who are at risk for problems as early as January of kindergarten, the likelihood of students slipping through the system with significant undetected learning problems is reduced. A critical question for research to address is: How early is the right time to screen and intervene to maximize resources and results? For example, screening procedures at kindergarten are less precise and therefore produce a high number of false positives (students identified as at risk who, over time and with no supplemental intervention, would no longer be at risk). Because screening measures are less precise in kindergarten, to ensure that all students truly at risk are included, overidentification is required. If an instruction protocol is implemented in kindergarten, many students will be treated who may not have needed it. Of course, this may be a better alternative than withholding instruction until later grades. Perhaps the most relevant issue is that in kindergarten, supplemental instruction may be expensive because it requires treating a large number of students to ensure that the needs of all students truly at risk are addressed.

Reducing Bias in the Identification Process for LD

Using a response-to- model of LD identification increases the probability that students who are identified as LD and provided special education truly are the students with the greatest academic needs. Therefore, the bias inherent in the teacher-based referral process is reduced. It is not surprising that some variability in LD identification practices occurs from state to state, but there is also considerable variability within states and within school districts. Variability in referral and

identification for LD results in large part from reliance on classroom teachers' views of how students perform, and teachers' explanations for poor performance, in lieu of systematic screening and CBM approaches. Thus, teachers who view a student's poor performance as representing a LD are more likely to refer for special education eligibility assessment than teachers who have other interpretations for low performance. This "hit or miss" approach to referral and identification for LD results in the inevitable misidentification of students—with missed opportunities to serve students with LD.

Within a response-to- model, systematic procedures for school-level screening could potentially reduce the bias inherent in the current referral and identification process for students with LD. All students would be screened early (middle of kindergarten or beginning of first grade; see earlier discussion about the advantages and disadvantages of screening during the middle of kindergarten) to determine the likelihood of risk. Based on the findings, students would be provided supplemental instruction and subsequently referred to special education based on their performance.

Reducing bias in referral and identification for LD is particularly salient to understanding the disproportionate representation of minorities in special education. As summarized in the National Research Council Report on disproportionate representation in special education (Donovan & Cross, 2002), the primary issue is not how many students from each ethnic group are represented in special education, the issue is *how* students are referred and placed and whether the services they receive after placement adequately and appropriately meet their needs. This report also suggests that a response-to- model holds promise for assuring that the students who are most at need and most likely to benefit from special education would be selected and provided special education services. Using response-to- as part of an overall system of screening, monitoring, and providing supplemental instruction provides a means to reduce or eliminate disproportionate representation that might otherwise result from teacher or assessment bias. Using response-to-, the students most in need would be provided supplemental instruction and their response to these typically effective interventions would determine the future course. Thus, it is expected that rates for misidentifying LD would be reduced (Epps, Ysseldyke, & McGee, 1984; Reschly, Tilly, & Grimes, 1999; Vellutino, Scanlon, & Lyon, 2000).

By implementing a response-to- approach to identifying LD, it is expected that the current bias in underidentifying girls with LD also would be corrected. Teachers refer girls for LD at a rate that is significantly lower than that for boys, even though they are not less likely to have reading disabilities (S. E. Shaywitz, Shaywitz, Fletcher, & Escobar, 1990). Thus, it is expected that using a response-to- approach to identify students for LD would provide a more accurate representation of students with special needs by ethnic group and by sex.

Connecting Identification Assessment with Instructional Planning and Progress Monitoring

Presently, a substantial amount of resources is used to test and identify students for LD, with little connection between the resulting assessment information and the design of effective instruction. Using a response-to-instruction model as a means of identifying students as LD keeps the focus on the student's learning and the extent to which instructional goals are met. This switch in emphasis from assessment for identification to ongoing instructionally relevant assessment assures that student progress would be monitored and procedures for adapting instruction would be tested. Although more needs to be known about the effectiveness of various adaptations and accommodations associated with effective outcomes for individuals with LD, there is a considerable knowledge base from which to work. For example, we understand (1) some key features of effective instruction (e.g., pacing, group size, and amount of time), (2) characteristics of effective instructional materials, and (3) the amounts and types of instructional practice and feedback required to maximize student outcomes (for reviews, see Gersten, Schiller, & Vaughn, 2000; Swanson, Hoskyn, & Lee, 1999; Vaughn, Gersten & Chard, 2000).

Layering instructional support based on the needs of students (Dickson & Bursuck, 1999; O'Connor, 2000) has been implemented as one means of determining whether instruction in reading aimed at reducing reading failure would reduce the number of students referred for special education. These studies, as well as others (e.g., Torgesen, Alexander, Wagner, Rashotte, Voeller, & Conway, 2001; Vellutino et al., 1996), have provided intensive supplemental instruction to increase the amount of time for reading and to reduce the instructional group size. Across studies, findings indicate that students at risk for reading disabilities make significant instruction gains, with fewer students at risk over time. However, 5–7 percent of students still require additional support or special education.

Thus, the ideal goal with a response-to-instruction model to LD identification would require these components: (1) ongoing progress-monitoring assessment procedures, (2) adequate information about what instructions are most effective and the expected trajectory of outcomes from those instructions, (3) a system in which general education was committed to highly effective core academic instruction and behavioral interventions as well as knowledge and resources to implement supplemental programs for at-risk students, and (4) ultimately, a means for screening and tracking the progress of a large number of students.

The Potential Pitfalls

Despite the promise of a response-to-instruction model for LD identification, key conceptual issues need to be

sharpened, and methodological approaches to response to instruction need to be further specified and studied. In this section, we discuss some of the key questions to be addressed.

In a Response-to-Instruction Model, is LD "Real"?

Traditionally, disability is viewed as a deficit that resides within the individual, the severity of which might be influenced, but not created, by contextual variables (Doris, 1986; Hammill, 1990). Accordingly, disability is a permanent rather than a temporary condition. It may seem surprising, therefore, that the assessment process within a response-to-instruction approach to LD identification focuses in large part on the environment, that is, manipulating instruction, via adaptations to general education in a problem-solving model or via an intensive prevention trial, and indexing the child's response. Some might conclude that individuals who qualify for special education through such an assessment process do not have a "true" disability; after all, no description of cognitive deficits is included. So, it is important to note that the purpose of the response-to-instruction focus on environment is to *eliminate* contextual variables as a viable explanation for academic failure. If the child fails to respond to a program with which the vast majority of children learn, then the inference is that the child's deficits render learning uniquely challenging and require a special education. The failure to respond verifies that the deficit resides in the individual, not the instructional program.

At the same time, a response-to-instruction model measures the individual child's learning along a continuum of academic responding to the instructional environment and designates disability as a fixed point on that continuum. Given the arbitrariness of fixing that cutpoint, some may question the viability of the LD concept. In considering this issue, it is important to note that many disorders are identified at an arbitrary point on a continuum. For example, students are identified with emotional and behavioral disorders because they fall on the extreme end of a behavioral scale. High blood pressure is defined arbitrarily as a point on the continuum of blood pressure measurements, just as depression is diagnosed as a score on a measure of symptoms. The identification processes for these various conditions share this assumption: at some cutpoint on a continuum, risk is considered sufficiently severe to signal the presence of a deficit that warrants special intervention. In a response-to-instruction model of LD identification, the continuum is the range of academic response to a generally effective instructional program, and the special intervention is special education. Of course, specifying the arbitrary cutpoint remains a challenge (see L. S. Fuchs, this issue) and some may argue that low achievement itself is adequate to define unresponsiveness (see D. Speece, this issue, as well as D. Fuchs, 2002 for further discussion of this point).

On a more general note, LD is far from unique in its struggle with consistent and reliable definition. Even disabilities that are more widely accepted than LD, such as autism, mental retardation, and Asperger Syndrome, elude consistent definition and identification. In the final analysis, LD is real because it produces challenging and life-long effects on the lives of individuals and their families (Gerber, 2001). Response to instruction is one classification method that can be used to forecast, and therefore allow intervention to minimize, those persistent difficulties.

Do We Have Validated Intervention Models and Measures to Assure Instruction Validity?

To implement a response-to-instruction model, validated adaptations or prevention approaches are needed. In addition, measures are required to index responsiveness or learning over time. These tools are available for some, but not all, academic areas, and they are better developed at some grade levels. For example, a fair amount of work has been accomplished in reading to provide the groundwork for both intervention and measurement procedures within a response-to-instruction identification scheme. By contrast, in mathematics, spelling, and written expression, although measurement procedures for tracking growth are well established, validated intervention methods for testing responsiveness to instruction require further attention. With respect to age level, more information is available at the early grades (kindergarten through third grade) than for older students (fourth grade and beyond). Moreover, a response-to-instruction model at the later grades not only depends on the development and testing of procedures for implementation, it also requires conceptual analysis to determine its tenability later in the course of academic development.

Is Inadequate Response to Instruction a Defensible Endpoint in the Identification Process?

When children fail to respond to instruction, the assumption is that some inherent deficit, not the instructional program, explains the lack of response and that some special intervention is required. Two important issues, however, remain unanswered. The first is whether the deficit responsible for the lack of learning is best described as a LD. The second is whether Heller et al.'s (1982) second criterion—whether the special education program is of sufficient value to justify the classification—can be met.

With respect to the first issue, it is important to consider that LD often coexists with other disorders such as attention deficit hyperactivity disorder or conduct disorders. Alternatively, lack of response may be attributable to mental retardation rather than LD. The

question therefore arises whether, and if so how much, time should be allocated to further assessment in order to narrow down and describe the specific disorder(s) that contribute to the lack of response. Arguments can be generated to defend relatively large or small expenditures. On the one hand, prior work demonstrates poor utility of differential diagnosis between LD and mild mental retardation for instructional planning; this argues against further assessment (Baroff, 1999; Gutkin, 1979). On the other hand, it is possible that understanding the contribution of attention deficits or conduct disorders might hold value for planning appropriate programs. Moreover, protecting the distinction between LD and mental retardation is critical to the advocacy work that has fostered improvements in services for students with LD over the past three decades (MacMillan, Siperstein, & Gresham, 1996). These arguments suggest the potential value of further diagnostic procedures.

The second issue, concerning the need for further assessment, pertains to the need to demonstrate the value of special education and to thereby justify the classification (Heller et al., 1982). After all, identification can be defended only if the services it affords result in real benefit. Consequently, a continued assessment phase, focused on demonstrating the value of the special education, seems warranted. L. S. Fuchs et al. (2002) described a recent attempt to implement such a continued assessment phase as part of a response-to-instruction model within a Nashville public school. The "extended assessment plan," implemented following a failure to respond to instruction, included a diagnostic special education trial (approved by the multidisciplinary team in which the parent participated). During the diagnostic special education trial, the use of CBM continued to determine whether special education enhanced performance (reducing the student's dual discrepancy in terms of performance level and rate of improvement). No later than eight weeks into this phase, the team reconvened with the parent to review the CBM data. When successful progress was demonstrated within the diagnostic special education trial period, the successful intervention continued, and an Individual Education Plan was developed.

When differential progress was not demonstrated during the diagnostic trial period, however, the extended assessment plan continued. The assessment team, in collaboration with the parent(s), reviewed options and collected additional assessment information with which to describe and address the dual discrepancy. These options included, but were not limited to, (1) placing the student in general education with accommodations that teach the student how to access the general education curriculum in effective ways despite basic skill limitations, (2) continuing the diagnostic trial period for a designated period of time, (3) continuing the diagnostic trial period in a more restrictive placement that offers additional resources for effecting progress, and (4) continuing the special education diagnostic trial in another school where other special educators or alternative resources are available to address the student's needs.

In this way, the extended assessment plan, with its diagnostic special education trial, might lead to the identification of students for whom alternative curricula were appropriate, where literacy or numeracy goals were de-emphasized and where the use of prosthetic devices to overcome handicaps assumed priority. Alternatively, an unsuccessful diagnostic special education trial could lead school districts to proactively consider and empirically test results associated with more intensive models of special education. Regardless of which option was selected, the student's progress continued to be monitored via CBM: when the student was returned to general education, CBM was used to problem solve on the student's behalf; when the diagnostic trial was extended, CBM was used to assess whether a data-based rationale could be mounted on behalf of special education; and when an Individual Education Plan was opened, CBM was used to develop an optimal plan in response to the student's actual progress and to determine the earliest opportunity for productively exiting the student from special education.

How Intensive Should "Instruction" be Defined in a Response-to-Instruction Model for LD Identification?

Issues concerning how intensive instruction should be defined in a response-to-instruction model for LD identification are essential to what the identification means. Presently, two types of instruction are being considered. The first, as conceptualized by L. S. Fuchs and Fuchs (1998), defines "instruction" in terms of effective general education. Other permutations (see, e.g., Marston, this issue) allocate substantial resources to adapt general education via a problem-solving approach. With any of these approaches, the implications of the assessment seem clear. If the child demonstrates responsiveness, then the presence of a disability has been disconfirmed, and the general education program, with or without adaptations, continues so that the student's needs are addressed. If the child fails to respond, then a more highly differentiated and intensive instructional program, that is, special education, is required.

The second approach to "instruction" involves relatively intensive (although short-term) tutoring using a standard protocol. The implications of the assessment are somewhat less clear. If the child responds to this relatively intensive instruction, has the presence of a disability (and a need for special education) been disconfirmed? Can the child be returned to the general education program without further support? Is it sound to infer that no inherent deficit caused the initial problem? Although the long-term outcomes associated with such a demonstration of responsiveness are unknown, it is safe to assume that some children will return to general education with their academic problems permanently remediated, whereas others will resurface with problems. Research is needed to identify

what proportion of children are likely to be false positive entries to the response-to-instruction assessment process, what proportion represent instructional casualties for whom the response-to-instruction trial prevents long-term problems, and what proportion of children who respond adequately to the trial are false negative LD decisions and will reappear later with more serious problems. See D. Fuchs et al., this issue, and L. S. Fuchs, this issue, for additional discussion of this and related issues.

Are There Adequately Trained Personnel to Implement a Response-to-Instruction Model?

If a response-to-instruction model is to be used across the thousands of school districts in this country, then a very large number of appropriately trained personnel will be required. These professionals will need the knowledge and skills to implement validated instruction protocols or to conduct research-based problem-solving models. They will also need the knowledge and skills to conduct CBM of student learning, to interpret the assessment results, and to formulate decisions about eligibility. Moreover, for many professionals, including school psychologists, special and regular educators, and principals, such a reorientation in LD identification will require a "paradigm shift" in thinking about assessment and instruction (Reschly et al., 1999; Reschly & Ysseldyke, 1995). To date, response-to-instruction models of LD identification have been implemented only on a small scale, using highly trained personnel in research settings. Large-scale implementation, which is yet to be tested, requires the specification and implementation of an ambitious professional development agenda. See articles by Denton, Vaughn, and Fletcher (this issue) and by Marston (this issue) for additional discussions of this and other issues related to feasibility, sustainability, and scalability.

When Should Due Process be Initiated?

An issue yet to be addressed within a response-to-instruction approach to LD identification concerns where due process, and parental involvement, should be initiated. Does it begin with problem-solving adaptations to the general education program or with the intensive short-term preventive tutoring? Is it delayed until unresponsiveness is demonstrated and a special education classification is imminent? On the one hand, due process early in the identification process may be essential to protect against students getting caught in a cycle where they linger between general education and some layer of services short of special education, without appropriate parental input. On the other hand, initiating due process early in identification will be costly and will add considerable time and personnel requirements to identification. Clearly, discussions about due process in such a reconfigured identification system are needed.

SUMMARY

In this article, which serves to introduce this special issue, we have attempted to provide background information about and operationalize a response-to-instruction approach to LD classification. We also described the promise associated with such a reconceptualization of LD identification and briefly discussed some of the potential problems. The contributors to this special issue take over from here, with in-depth discussions of the critical issues underlying a response-to-instruction approach to LD identification. First, Debbie Speece reviews conceptual arguments and empirical data to consider whether static measurement of low achievement may represent a viable method for operationalizing inadequate response to instruction. Second, Doug Fuchs and colleagues propose a taxonomy of instructions within the framework of instruction responsiveness definitions of LD. They consider empirical evidence on the efficacy of alternative formats for providing instruction for the purpose of diagnosing LD. Next, Lynn Fuchs examines alternative methods for conducting the assessment of instruction responsiveness. She focuses on methods for measuring learning and for setting the cutpoints to demarcate responsiveness. She also considers how methods for operationalizating instruction affect conceptual and technical concerns. Then, Doug Marston describes the problem-solving model as it is used in Lincoln School within the Minneapolis public school district. He summarizes prevalence and achievement data associated with implementation in that school and then describes the challenges associated with taking the model to scale within the school system. Finally, Carolyn Denton, Sharon Vaughn, and Jack Fletcher consider the potential feasibility, sustainability, and scalability of using instruction responsiveness as a framework for diagnosing reading disability.

AUTHORS' NOTE

Both authors contributed equally to this article.

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