

RTI IN PRACTICE

A Practical Guide to Implementing
Effective Evidence-Based
Interventions in Your School



Includes
CD-ROM

James L. McDougal
Suzanne B. Graney
James A. Wright
Scott P. Ardoin



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Contents

Preface	v
PART I INTRODUCTION	1
1 History of Learning Disabilities and Emergence of a New Model	3
PART II TIER I: EFFECTIVE GENERAL EDUCATION AND UNIVERSAL SCREENING/PROGRESS MONITORING	23
2 Effective Academic Programs for All Students	25
3 School-Wide Data Collection for Screening and Outcome Decisions	53
4 Using Data to Make Decisions in General Education	75
PART III TIER 2: TARGETED INTERVENTIONS AND PROBLEM SOLVING FOR STUDENTS AT RISK FOR FAILURE	95
5 Developing Interventions	97
6 Setting Goals, Monitoring Progress, and Graphing Intervention Outcomes	127
7 Making Decisions After Intervening	153
PART IV TIER 3: INTENSIVE INTERVENTIONS/ INDIVIDUAL EDUCATION PLAN CONSIDERATION AND DEVELOPMENT	179
8 Moving to Tier 3: Eligibility Determination	181

9	IEP Goal Development	197
10	Considering Reintegration and Special Education Exit Decisions within an RTI Service Delivery Model <i>Kelly A. Powell-Smith</i>	221
PART V ORGANIZATIONAL CONSIDERATIONS AND CONCLUSIONS		253
11	RTI and Systems Change	255
12	Conclusions	277
	References	287
	Author Index	307
	Subject Index	311
	About the CD-ROM	321

Preface

My experience in the schools began in 1990. I received my first fulltime position as a school psychologist in a diverse urban elementary school. The majority of the students were on free/reduced lunch and many came to school lacking basic developmental skills like language concepts and exposure to written text. At that time we had many models of reading instruction—some that emphasized phonics and others that focused on reading in story books. The assessments used were inconsistent, varied by the classroom, and were of varying technical quality. While many students learned to read, many also struggled and languished in school, receiving one literacy program or another but not one tailored to their specific needs. My role as the school psychologist was that of gatekeeper to special education. That was incredibly troubling to me as I was responding to students' needs too late to make a real difference and my assessments were usually diagnostic and not intervention oriented.

Based on the work of some innovative educators from our district (including Jim Wright) and a neighboring university, I worked closely with a first-grade teacher to design a reading intervention program for our students. With her master's degree in reading and my increasing skills in Curriculum Based Measurement (CBM), we trained para-professionals (i. e., teacher assistants) to implement supplemental instruction and progress monitoring assessments with struggling primary grade students. Meeting weekly with these para-professionals, we significantly improved the reading of most of our intervention students and substantially reduced the rates of initial evaluations for special education. I quickly became convinced that this was the way to do business in the schools. At the same time, I became increasingly frustrated.

I had to beg and borrow to get \$500 for a set of leveled reading books for our intervention project. Meanwhile, the system had no problems handing down numerous student retentions—estimated at \$8,500 per student—an expensive “intervention” without empirical support and one linked to increased dropout rates and other deleterious outcomes.

This frustration, coupled with support from my family and my administrative supervisors (Dr. Denise Johnson and “Special” Ed Erwin), led to my return to school for doctoral training. There, under the tutelage of Drs. Joel Meyer and Bonnie Nastasi, I received solid training in consultation, prevention, and educational intervention. I became increasingly convinced that responding to one academic (usually literacy) crisis after another was not the way to educate children. I wanted to participate in an educational model that ensured that all students were developing basic academic and behavioral skills (especially those related to literacy), one that was systematic and schoolwide, and one that responded to a student’s need early in their school careers.

Just prior to working on this preface I had the good fortune to attend a presentation from John Corcoran sponsored by the School of Education at SUNY Oswego. John is the author of *The Teacher Who Couldn’t Read*, which chronicles his life as an illiterate child, adolescent, and adult who eventually cracked the code to literacy at the age of 48. I was taken with the emotion in John’s presentation, which for the audience was quite moving. John spoke of his first years in school, entering at the age of six filled with an eagerness to please, with enthusiasm, and innocence. John labeled this time and this portion of his personality as “Johnny the innocent.” He described how he persisted in his eagerness to learn even after being put in the “dumb row” in class. By third grade, John knew he was in trouble and that he couldn’t read. He prayed for help so that he would wake up being able to read like the other children in his class. Falling further behind and still unable to read or to complete the required schoolwork in middle school, John became the “Native Alien,” the outsider who peered in at the literate world without access to it. At school he was angry, frustrated, and a behavior problem who would rather fight, spit, and turn desks over than allow the literate society to harm and embarrass him further, requiring tasks from him for which he did

not have the tools. In high school, John described “going underground”—hiding his illiteracy and creatively using his athletic and social skills and his intelligence to survive. He chronicled his elaborate schemes for getting test answers, having friends sneak him exam booklets for essays, and passing courses without literacy. These strategies were successful enough for him to obtain a college degree and secure a job as a teacher, even though he could not read or write a simple sentence.

As John described his shame as a member of the illiterate society, I felt the powerful and raw emotion of my own shame. This shame was rooted in my participation in the bureaucratic educational machine that produced plenty of John Corcorans, many of whom lacked the social skills, creativity, and athletic ability to negotiate the tremendous barrier of illiteracy. I participated in meeting after meeting that responded to academic causalities much too late, with too little, and without seriously focusing on the obvious goal of teaching the student to read. I wasted hours doing irrelevant assessments (some even involving puzzles and blocks) so that I could tell teachers what they already knew—that Johnny couldn’t read. We would give students time to see if they would eventually get it and argue over which largely ineffective intervention to apply—retention or social promotion. My guts would churn at having to play by the rules, which meant that you didn’t criticize literacy instruction even if it lacked a direct and explicit focus on important early skills such as phonemic awareness and phonics. It meant I had to try to manufacture a discrepancy between an IQ score and an achievement score to get a student the needed reading services. I am guilty of administering additional tests to a student because I did not obtain the desired severe discrepancy required by my district in order to label a student as learning disabled. I would explain my additional testing in professional meetings as my search for the student’s true potential and level of functioning, all the while fully knowing that additional scores add error to the discrepancy formula and make it more likely that I could eventually call the student “disabled.” I had to play by rules that required me to sit on my hands and observe struggling students until the standardized tests I used could measure the extent of their academic failure. My only option for many students was special education; it was given only to

“eligible” students and it was designed largely to reduce expectations for these students and “modify” or slow down the curriculum for them.

In special education, students were often served too late (after third grade) and the monitoring of their academic progress was even worse than in regular education. I once read an Individualized Educational Plan (IEP), which is required for all special education students. The goal for a second-grade student with a severe learning disability in reading read as follows: “Michael will decode unknown sight words with 80% accuracy by June 15th.” The progress monitoring was done quarterly and included a rating scale from NP (no progress) to P (progress). So although Michael was challenged by a significant barrier to literacy, he received no direct or focused instruction for it, nor did his goal contain any specific elements that were directly measured. Further, his IEP for the year indicated that he had made SP—some progress. My assessments of Michael indicated that while he was in third grade, he lacked the phonemic awareness and decoding skills of an average first-grade student. After multiple meetings with the school and a tremendous effort on the part of his mother, Michael was given targeted literacy instruction and his IEP goals were changed to reflect specific growth levels in phonemic awareness and decoding tasks. Now in middle school, Michael is still behind his peers, yet he has broken the code of literacy. Without a tremendous amount of advocacy for Michael over the course of several years, he would have continued to be a non-reader, another Johnny Corcoran.

Today there is little debate over what constitutes explicit and systematic early literacy instruction that is required to assist nearly all children to learn to read. In essence, the reading wars are over. We also have well researched progress monitoring techniques, especially in literacy, which can be used to screen all children for skill deficits and to monitor their progress toward grade-appropriate functioning. These tools are available for use by educators and in many instances they are available online and free of charge. Yet the troubling fact remains that these tools have yet to become the standard in the industry. Many districts and even some states have been slow to adopt RTI procedures and continue to use the failed practices of the past. We have the tools to eradicate almost

all illiteracy in our nation and we are not consistently using them. This is tremendously troubling to me and a major impetus for coordinating the writing of this book.

With that as my segue, I would like to introduce my coauthors and then give a brief summary of the book. I have known Jim Wright since I went to pursue a master's degree in School Psychology. We both went through the same program, we were both employed in the same district for a dozen or so years, and we both sought to change the status quo. Jim has doctoral-level training in school psychology, and training and certification in both school psychology and school administration. For many years, Jim has devoted much of his time to what I believe is the finest educational web-based resource available today, Interventioncentral.org. Jim and I have worked together for many years and it has always been to my benefit when our paths have crossed. Suzanne Graney and I first met when I was applying for a position at a neighboring college. While I did not obtain that particular position, I did meet a wonderful colleague with extraordinary training in RTI and progress monitoring. She has university training as well as experience and skill working with educators in the real world of the public schools. Scott Ardoin and I first met when he was a doctoral student and I was his supervisor for a field experience in consultation. As is often the case, the supervisor learned as much as the student. Scott has been a friend ever since; he makes a wonderful gumbo, and has done some pivotal research advancing our understanding of student progress monitoring. Lastly, Kelly Powell Smith was asked to join us to discuss the reintegration of students from special education into the typical classroom. We are thankful to Kelly for taking the time work with us.

In the preparation of the book we wanted to develop one comprehensive guide to implementing RTI in the school setting. We wanted to strike a balance of presenting background, conceptual information, and relevant research with hands-on forms for implementation, recommendations for educators, and case examples. We have organized the book into five sections. The first section provides an introduction that includes some history of both learning disabilities as well as emerging models of RTI. The next three sections cover assessment, instructional considerations, and decision making across the three tiers of RTI. The last

section addresses the numerous organizational considerations in implementing a far-reaching schoolwide model for improving instruction and accommodating students' learning concerns. In addition to the text, we have also created a companion CD that contains forms and resources for educators implementing RTI procedures.

While we acknowledge the shortcomings and unknowns in implementing comprehensive models of RTI, we are also convinced that these comprehensive and innovative strategies constitute a better way of conducting the business of education. Universal student screenings, evaluation of core instruction, early and responsive intervention for struggling students, and informed instructional decisions based on concrete data are the educational practices that will ensure that the next Johnny Corcoran will break the code to literacy in the primary grades and not middle adulthood. Having participated in the traditional educational model that responded to academic failure with retention, social promotion, and referral to special education, we are now at a time where the science and educational best practices dictate that we prevent academic failure and respond to delay with timely interventions that are sufficiently intense to be effective. These practices constitute a major evolution and will take considerable time and effort to be fully embraced by our educational system, but we feel that this will be time and effort well spent. We are hopeful that this text can be a support for this educational evolution and that it can be useful for guiding and training the educators of the present as well as those to be recruited for the future.

Jim McDougal
State University of New York
Oswego, NY
October, 2009

INTRODUCTION

I

PART

History of Learning Disabilities and Emergence of a New Model

1

Chapter

LEARNING DISABILITIES: DEFINITION AND BACKGROUND

The concept of learning disabilities dates back to the early 1960s. In 1968 the label of “specific learning disability” was added as a federally designated category of handicapping conditions (Hallahan, Kauffman, & Lloyd, 1999). One of the first to address the definition of learning disabilities was Samuel Kirk. In 1962 Kirk wrote:

A learning disability refers to a retardation, disorder, or delayed development in one or more of the processes of speech, language, reading, writing arithmetic, or other school subject resulting from a psychological handicap caused by a possible cerebral dysfunction and/or emotional or behavioral disturbances. It is not the result of mental retardation, sensory deprivation, or cultural and instructional factors (Kirk, 1962, p. 263).

In Kirk’s description can be seen many components of the modern definition including a conceptualization that LD (1) is a deficit in processing (2) that results in reduced academic performance in one or more areas, (3) is possibly related to a cerebral (pertaining to the central nervous system) dysfunction, and (4) is not the result of other handicapping conditions. Later in 1965, Barbara Bateman proposed a modified definition of learning disabilities that removed emotional factors as causal in LD and more significantly suggested that it could be identified by an “educationally significant discrepancy” between estimates of intellectual potential and actual performance level (for discussion, see Hallahan, Kauffman, &

Lloyd, 1999; Smith, 1998). This discrepancy notion was further supported by the epidemiological work of Rutter and Yule in the early to mid-1970s. By studying the IQ predicted reading achievement of children ages 9 to 13 on the Isle of Wright they concluded that there was an abnormal distribution of reading performance scores suggesting that (1) reading underachievement occurred at a higher than expected rate and (2) that different patterns of sex distribution and of neurological deficit and development were observed in the “under achievement” group (Rutter & Yule, 1975). Thus support for the first severe discrepancy provisions for learning disabilities emerged.

THE HISTORY OF LD

Arguably the most important landmark legislation providing rights and educational privilege to students with disabilities was PL 94-142 enacted by Congress in 1975. Prior to 1975 approximately 200,000 individuals with significant disabilities were institutionalized in state-run settings and generally provided minimal standards of care (Ed.gov. 5/21/2007). Further, in 1970 only one in five children with disabilities was educated in public schools. Perhaps one of the most debated classification categories in the PL 94-142 regulations was with respect to learning disabilities.

While crafting a definition of LD in 1976 for the PL 94-142 regulations, the United States Department of Education (USDOE) considered the addition of a severe discrepancy formula (e.g., achievement falling 50 percent or more below the child’s expected achievement level) within the LD definition. While these efforts were offset by a number of objections from national experts of the time offering an array of conceptual and statistical difficulties with this procedure, the notion of seemingly objective discrepancy criteria was not entirely abandoned. The final definition for learning disabilities in PL 94-142 was as follows:

The term “specific learning disability” means a disorder in one or more of the basic psychological processes involved in understanding or using language, spoken or written, which may manifest itself in an imperfect ability to listen, speak, read, write, spell, or to do mathematical calculations. The

term includes such conditions as perceptual handicaps, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia. The term does not include children who have learning disabilities which are primarily the result of visual, hearing, or motor handicaps, or mental retardation, or emotional disturbance, or of environmental, cultural, or economic disadvantage. (U.S. Office of Education, 1977, p. 65083)

While the actual definition in the pivotal regulations did not include a severe discrepancy formula, the section of the law that identified criteria for identifying students with learning disabilities stipulated that:

- a. A team may determine that a child has a specific learning disability if:
 1. The child does not achieve commensurate with his or her age and ability levels in one or more of the areas listed in paragraph (a) (2) of this section, when provided with learning experiences appropriate with the child's age and ability levels; and
 2. The team finds that a child has a severe discrepancy between achievement and intellectual ability in one or more of the following areas:
 - i. Oral expression;
 - ii. Listening comprehension;
 - iii. Written expression;
 - iv. Basic reading skill;
 - v. Reading comprehension;
 - vi. Mathematics calculation; or
 - vii. Mathematics reasoning
 - b. The team may not identify a child as having a specific learning disability if the severe discrepancy between ability and achievement is primarily the result of:
 1. A visual, hearing, or motor handicap;
 2. Mental retardation;
 3. Emotional disturbance; or
 4. Environmental, cultural, or economic disadvantage.
- (Federal Register, Dec. 29, 1977, p. 65083)

Therefore, while the severe discrepancy language did not make it into the formal LD definition, the inclusion of the preceding language essentially added these procedures to the classification. Following the publication of PL 94–142 most states adopted severe discrepancy provisions in their identification procedures for learning disabilities (e.g., Frankenberger & Franzalaglio, 1991). However states varied in terms of the tests used to ascertain a discrepancy, the formulas used to compute the discrepancy, and the magnitude required for identification purposes (for discussion, see Fuchs, Mock, Morgan, & Young, 2003).

CRITICISMS OF DISCREPANCY-BASED MODELS

Criticisms of discrepancy-based models for understanding and identifying learning disabilities are numerous and have a long history. Essentially these criticisms can be conceptualized along two domains: problems with the reliability of a discrepancy-based approach for identifying students with disabilities and problems with the discrepancy-based model for conceptualizing and treating students with learning disabilities. Therefore, basic criticisms of the discrepancy-based model are that this method for understanding and identifying learning disabilities lacks adequate reliability and validity. In terms of reliability, the 300 percent increase noted in the population of students identified with learning disabilities over the last 30 years suggests a lack of stringent criteria for making the diagnosis (President’s Commission on Excellence in Special Education, 2002).

PROBLEMS WITH RELIABILITY

One specific difficulty hampering reliable diagnosis is that there are four major methods for determining the presence of a severe discrepancy and each uses different criteria. The methods include assessing the discrepancy in terms of (1) deviation from grade level, (2) Standard deviation from the mean, (3) Standard Score comparison, and (4) Standard Regression analysis. The first, *deviation from grade level*, suggests that if Kate is in the fourth grade yet reads at a second-grade level then she may be seen as having a severe discrepancy in her reading achievement. In this method

Kate's academic performance is compared to her peers. The second method, *standard deviation from the mean*, might assess Kate on an individually administered achievement test. Given that her score overall or in a specific academic area was at least a standard deviation below the norm she may be perceived as evidencing a severe discrepancy commensurate with an LD diagnosis. This method would compare Kate's achievement with that of a standardized sample of same-age students from across the country. In the third method, *Standard Score comparison*, Kate's performance on an individually administered intelligence test would be compared to her performance on an individually administered achievement test. If she achieved an IQ score of 100 (average score) and an achievement score one or more standard deviations below the mean, she may be seen as evidencing a severe discrepancy commensurate with an LD diagnosis. With this method Kate's academic performance is compared to her performance on an intellectual assessment. Given that the comparison groups for Kate's academic performance differ across these three methods (e.g., compared to peers, a national sample, and to her own IQ score), it is not hard to imagine why the result would be different for students diagnosed as learning disabled depending on the discrepancy method utilized. In essence, different methods of calculating a discrepancy will result in different students being classified. The fourth method, *Standard Regression analysis*, utilizes the Standard Score comparison technique and additionally employs a regression formula as an attempt to statistically account for the measurement error associated with the tests, the reliability of them, and the correlations between them. While this is perhaps the most psychometrically sound method for assessing IQ/achievement discrepancies, it is not without additional inherent difficulties.

In a replication of an earlier study Mercer, Jordan, Allsopp, and Mercer (1996) surveyed all state education departments in the United States and found that 98 percent of them included a discrepancy in their definition of and identification criteria for learning disabilities. As indicated in the 1997 NYS Part 200 Regulations of the Commission of Education, "a student who exhibits a discrepancy of 50% or more between expected achievement and actual achievement determined on an individual basis

shall be deemed to have a learning disability.” This determination in contemporary assessment was often completed using an intelligence test as the measure of *expected achievement* and a norm-referenced, standardized, academic test as a measure of *actual achievement*. The difference between the two scores is used to assess the discrepancy.

This brings us to the second major difficulty significantly hampering the reliability of LD diagnoses made with discrepancy based methods: The norm-referenced, standardized measures commonly employed in this assessment process are inadequate for measuring both *expected achievement* and *actual achievement*. In terms of expected achievement, while IQ tests are good general predictors of educational attainment they are inadequate for assigning an expected achievement outcome for individual students for several reasons. First, IQ test components most linked with reading performance are often verbally mediated and are somewhat dependent on reading. Therefore poor readers may have lower verbal IQ test scores and therefore be denied special education services due to a lack of assessed discrepancy (see Siegel, 1989; Stanovich, 1989). Secondly, this approach assumes that IQ can accurately predict academic performance. To explore this further we can look at the correlations between IQ and achievement reported on the most recent version of a popular standardized achievement measure, the Wechsler Individual Achievement Test-Second Edition (WIAT-II, 2002). The examiner’s manual of the WIAT-II reports that the correlations between full-scale ability (assessed by the WISC-III) and achievement (assessed by the WIAT-II) range from .3 to .78. To understand how well the WISC-III predicts achievement we can square these correlations to determine the amount of shared variance between these scores. The result suggests that the WISC-III accounts for 9 to 61 percent of the variance in a given student’s achievement test score. This also suggests that from 39 to 91 percent of the student’s achievement score is not accounted for by the IQ test. This lends considerable doubt to the notion that an IQ test can accurately assign an expected level of achievement, at least at the level of the individual student. Second, with respect to *actual achievement*, the concept that a student’s actual academic performance can best be assessed with a norm-referenced test

administered at a single point in time has received considerable criticism as well. Among these criticisms are that nationally normed standardized achievement assessments often do not reflect the skills in a given local curriculum, they suffer from regression to the mean effect, and the fact that all psychometric tests include measurement errors that vary across students and across characteristics of the student (see Francis, Fletcher, & Morris, 2003). In single point assessments measurement error creates fluctuations in test scores that vary by test, age, ability level, and ethnicity. Applying cut-off scores to these types of score distributions is problematic since there is generally little or no actual difference between children at or around that cut-off regardless of their assigned status. Score fluctuations (above or below assigned cut-off scores) have been assessed in both real and simulated data sets suggesting that up to 35 percent of cases change status based on measurement error when single tests were used. Similarly, with respect to discrepancy scores, actual data from the Connecticut Longitudinal Study, analyzed by Francis et al. 2005, found that approximately 20 percent to 30 percent of students studied change disability status from third to fifth grade based on discrepancy scores.

Given the cited limitations with the discrepancy model it is easy to see how it lacks reliability in diagnosis. The fact that different criterion are used across different states significantly impairs consistency in identification. In addition, the limited ability of IQ tests to predict the achievement of an individual measurement error, and the difficulties associated with assigning cut-offs in either single test or discrepancies between tests significantly limit the reliability of this approach. In sum the use of discrepancy-based psychometrically oriented models for diagnosis are unreliable and insufficient to accurately designate individuals with learning disabilities (Francis, et al., 2005; Fletcher et al., 2005).

PROBLEMS WITH VALIDITY

In addition to reliability concerns, discrepancy-based models also have been heavily criticized with respect to validity. Since the validity of a construct relies on its uniqueness and utility, the validity of the discrepancy-based model assumes that IQ-achievement

discrepant students are qualitatively different from “regular” (non-discrepant) low achievers. If this model were valid, these two groups of students would differ in terms of their prognosis (development of reading ability), response to intervention (discrepant and non-discrepant groups should show differential response to reading intervention), and with respect to the cognitive profiles thought to underlie reading abilities (e.g., Francis et al., 1995).

The literature in this area has been generally unresponsive of the discrepancy-based model for LD classification. Studies by Stanovich and Seigel (1994) and by Fletcher et al. (1994) suggest that IQ discrepant and non-discrepant low-achieving groups did not differ on measures of independent reading ability. The two groups were also found to have no significant differences with respect to cognitive abilities believed to underlie reading development. Both of these independent studies found that language-based measures were better predictors of early reading ability than performance on IQ tests. In addition several meta-analyses have found little difference in the cognitive process of IQ discrepant and non-discrepant low-achieving groups and further that these groups did not differ with respect to reading development (e.g., Hoskyn & Swanson, 2000; Stuebing et al., 2002).

With respect to Response to Intervention (RTI), a series of studies conducted by Vellutino and colleagues at the University of Albany provided longitudinal data on students’ reading development. In one study incorporating an intense reading remediation component, Vellutino, Scanlon, and Lyon (2000) followed 118 impaired readers and 65 control students from kindergarten through third grade. Their findings suggested that IQ scores could not distinguish between impaired and normal readers, nor were IQ scores helpful in predicting impaired readers who were difficult to remediate versus impaired readers who were readily remediated. Further, they found that in normally developing students IQ did not predict reading achievement nor was it correlated highly with measures of reading ability (e.g., word identification, phonological decoding). The conclusion of this study was that “when intense remediation resources are made available to impaired readers representing a broad range on the intellectual continuum, response to remediation is not associated with measured intelligence” (p. 237).

In sum the literature investigating the validity of discrepancy models has generally been unresponsive. Findings suggest that IQ discrepant and IQ non-discrepant groups of students do not differ in terms of their cognitive profiles, their prognosis in reading, or in their RTI. Included in the President's Commission on Excellence in Special Education Report (USDOE, 2002) are two poignant quotes included here, the first from Dr. Sharon Vaughn and the second from Commissioner Wade Horn.

"There is no compelling reason to use IQ tests in the identification of learning disabilities. And, if we eliminated IQ tests from the identification of individuals with learning disabilities, we could shift our focus on making sure that individuals are getting the services that they need and away from the energy that's going into eligibility determination." (p. 22)

"I would like to encourage this Commission to drive a stake through the heart of this over reliance on the discrepancy model for determining the kinds of children that need services. It doesn't make any sense to me. I've wondered for 25 years why it is that we continue to use it and over rely on it as a way of determining what children are eligible for services in special education." (p. 25)

A PLACE FOR INTELLIGENCE TESTING IN LD DIAGNOSIS?

Criticisms aside, there are reasonable proponents for the continued use of intelligence testing in the assessment process for learning disabilities. Fuchs, Mock, Morgan, and Young (2003) aptly point out that the empirical support for the relationship between IQ and school achievement has a history spanning more than 50 years. Further they illustrate the practical pedagogical implications associated with instruction provided to all children ranging in IQ from 70 to 155. The authors contend that IQ testing may help to preserve our historical conceptions of LD as a distinct diagnostic category understood as children failing to learn with average or above-average intelligence and adequate participation in the general curriculum. In their emerging model for LD assessment the authors suggest that children not responding to an effective general education curriculum, and demonstrating a lack of response to a more intense level of instructional

intervention, would then be administered “valid cognitive assessments” to “facilitate identification of students with LD in historical terms.” There does seem to be some utility in administering cognitive assessments to students demonstrating a failure to progress despite increasingly intense instructional interventions shown to be effective for others. This utility may be ruling out cognitive delays as potentially impairing academic functioning and in providing additional information relevant to the diagnosis. Based on the literature previously provided however, it would appear that the routine use of IQ tests to ascertain an aptitude-achievement discrepancy with a single point-in-time assessment may not be warranted.

EMERGENCE OF CONTEMPORARY MODELS OF LD

HISTORY

The period from the late 1970s to the mid 1990s evidenced a substantial increase in the numbers of students identified with specific learning disabilities (SLD). Summaries of prevalence data over this timeframe suggest that SLD rates have risen by as much as 300 percent, that roughly 80 percent of these SLD students evidenced unaddressed deficits in reading, and that as many as 40 percent to 50 percent of all children served in special education had not been adequately instructed in reading (i.e., President’s Commission on Excellence in Special Education, 2002; U.S. Office of Special Education, NJCLD, 2002).

In response to the apparent overidentification of students as learning disabled, prereferral intervention and the use of prereferral intervention teams became popular by the mid to late 1980s. These teams typically provided for collaborative consultation to teachers toward instructional modifications or accommodations to increase student performance prior to or without special education referral. Perhaps the earliest widespread teaming initiative was the Teacher Assistance Teams reported on by Chalfant, Pysh, and Moultrie (1979). These teams were formed to provide an avenue for teachers to assist other teachers in intervening with and accommodating for students seen as difficult-to-teach. While some data was reported in terms of large-scale implementations of

these teams, by in large they were not well studied nor were data on student progress or the integrity of the team process typically provided (e.g., Fuchs, Mock, Morgan, & Young, 2003).

As prereferral intervention teams evolved, many adopted components of behavioral consultation that structured the problem-solving process and relied on student monitoring data to inform intervention design and revision. A major facilitator to this evolution was the emerging literature supporting the use of Curriculum-Based Measurement (CBM) procedures and behavioral observation methods to monitor student's academic and behavioral progress in the schools. Research has generally indicated that team consultation procedures and quality prereferral interventions can lead to increased student performance and decreases in special education (Graden, Casey, & Bonstrom, 1985; Flugum & Reschly, 1994; Rosenfield, 1992).

Perhaps the most comprehensive evaluation of prereferral intervention teams was conducted by Doug and Lynn Fuchs and colleagues. These researchers, supported by the Office of Special Education Programs, developed and evaluated a Mainstream Assistance Team (MAT) model implemented in the Metro-Nashville school district in the mid to late 1980s. The Fuchs utilized graduate students, a scripted behavioral consultation process, and prescriptive interventions to address teacher concerns of referred students. Over the three-year project the Fuchs demonstrated that these procedures lead to a significant decrease in special education referrals, 75 percent or more of referred students meeting teacher generated goals, and high teacher perception of effectiveness. While effective, the MAT project did not sustain much past the life of the grant funding (Fuchs et al., 1996), due perhaps to the prescriptive nature of the program or the artificial/external development and infusion of the project into the host site.

Based on the work of the Fuchs the School Based Intervention Team (SBIT) model was developed and implemented in a large urban district in Central New York (McDougal, Clonan, & Martens, 2000). This team-based prereferral intervention model was similar to MAT's in that it followed the behavioral consultation process but was developed and implemented largely by in-district personnel. The authors' contention was that by creating an "in-house" model and by attending to principles of organizational

change an effective and sustained project would result. A two-year evaluation of four SBIT teams indicated that they were successful in decreasing special education referrals by 40 percent compared to similar non-SBIT schools and that referred students overall evidenced significant increases in academic and/or behavioral performance (McDougal et al., 2000). In terms of sustainability, while SBITs still function in the host district after the initial report, the functioning and effectiveness of these teams has not since been reported.

Although considerable research has documented the effectiveness of high-quality prereferral intervention, the process has some inherent structural limitations. Prereferral intervention teams generally provide intervention services toward individual students referred by the classroom teacher. This requires (1) that the student's level of functioning is poor enough to generate considerable teacher concern, (2) that the classroom teacher is willing to take the time required to complete the referral and intervention team process, and (3) that the team itself has adequate time to devote to the referral. In essence, even good models for prereferral intervention suffer some of the inherent limitations found in traditional approaches for special education identification, including an approach that waits for students to evidence failure; idiosyncratic student identification based on teacher referral; a focus on individual students rather than whole classrooms, grade levels, or schools; and the development of individualized interventions as opposed to systemic development of increasingly intense resources based on student need.

RTI: A GENERAL DEFINITION

Given the preceding concerns more systemic large scale implementations of Response-to-Intervention models have been initiated in the schools. In reviewing the literature, Fuchs et al. (2003) identified critical components of RTI implementation. In general Fuchs et al. suggest that:

"In broad terms RTI may be described as follows:

1. Students are provided with generally effective instruction by their classroom teacher;

2. Their progress is monitored;
3. Those who do not respond get something else, or something more from their teacher or someone else;
4. Again their progress is monitored; and
5. Those who still do not respond either qualify for special education or for special education evaluation" (p. 159).

Based on this general description four large-scale implementations have been identified and reported in the literature. Two large-scale implementations of RTI include Ohio's Intervention Based Assessment (IBA) and Pennsylvania's Instructional Support Teams (ISTs). These implementations focused on the provision of prereferral intervention services prior to the referral to special education. The other two models of implementation, Heartland Agency (Iowa) and Minneapolis Public School's Problem-Solving Model (MPSM) actually utilize student progress monitoring data to designate eligibility for a "non-categorical" designation into special education. Each of these large-scale RTI implementations has their roots in the team-based prereferral intervention model incorporating a collaborative team approach following a behavioral consultation model. Each model is briefly described below.

THE FIRST LARGE-SCALE IMPLEMENTATIONS OF RTI

The Ohio IBA and the Pennsylvania IST models were similar in that they were both large-scale implementations of structured prereferral intervention team initiatives. The IBA started in 1992–93 as a volunteer initiative supported by a special education waiver from the Ohio State Department of Education. In the beginning 35 schools from across the state were recruited to provide school-based intervention services to struggling students. They followed a behavioral problem-solving process including problem definition, collection of baseline data, setting specific goals, hypothesizing a reason for the student difficulty, developing an intervention and monitoring plan, and evaluating the intervention via student progress data compared to baseline levels (e.g., Telzrow, McNamara, & Hollinger, 2000). An evaluation of IBAs reported by Telzrow in 2000 indicated that by 1997, 329

school teams were running though only 227 were included in the study. In reviewing “best case” documentation from participating teams, Telzrow and colleagues found that most teams were not applying the problem-solving model with integrity especially as related to documenting that the developed student interventions had been implemented as designed (for discussion see Fuchs, Mock, Morgan, & Young, 2003).

The Pennsylvania IST model was also supported by the respective State Department of Education. In addition to the collaborative and behavioral problem-solving process, the IST model utilized a full-time support teacher responsible for assisting the classroom teacher to implement student interventions developed by the team. This student-directed support is monitored continuously with CBM and/or behavioral assessment and periodically evaluated to refine intervention procedures. The IST support is limited to 50 school days when the team meets to decide if further evaluation is warranted. Evaluations of the IST model suggest that teams successfully follow the prescribed model, that ISTs lead to decreases in special education referrals and placements, reductions in the use of grade retentions, and increases in general measures of student behavior and academic performance (e.g., Hartman & Fay, 1996; Kovaleski, Gickling, Morrow, & Swank, 1999). Overall while these results seem promising the IST evaluations have been criticized for a lack of direct measures both of team functioning and student outcomes, a lack of inter-rater reliability data, and a lack of specific descriptions of the interventions utilized (Fuchs et al., 2003).

Perhaps the pioneer in using RTI procedures for eligibility determinations is Heartland, Iowa’s largest educational agency providing technical assistance and training to 350 schools across 56 districts. Heartland’s reform dates back to the mid 1980s when state support for noncategorical models of special education and direct assessments of student performance emerged. The Heartland model utilized a four-level (tier) model for intervention and assessment. The levels include (1) collaboration between the teacher and the parent, (2) referral to the Building Intervention Team, (3) referral to district staff (e.g., school psychologists and special educators), and (4) considerations of special education. In the Heartland model student academic level and learning rate are

compared to local classroom or grade-level norms to ascertain the need for increasing levels of support. This model is noncategorical in that low-performing students are not ultimately labeled as LD, MR, and so on, but rather as students eligible for special education services. Again, evaluations of the Heartland model suggested generally positive results in terms of reductions in special education referrals and placements and with regard to student performance, though these studies too were critiqued for a lack of empirical rigor (i.e., Ikeda, & Gustafson, 2002; Fuchs et al., 2003).

The Minneapolis Public School's Problem-Solving Model (MPSM) was developed in the early 1990s as an assessment and intervention model to in part reduce the overrepresentation of minorities in special education and also to create a focus on instruction and student performance. Similar to the Heartland model, MPSM began as a four-tier behavioral problem-solving process. As with the Heartland model, student academic level and rate of progress as compared to local norms is used to assign the need for increasingly more intense levels of service. In addition, MPSM too uses lack of student progress to decide eligibility for special education placement and also employs a noncategorical approach to identification. Published evaluations of MPSM have suggested more proportionate representation of minorities in special education, a stable overall identification rate of approximately 7 percent, and increases in referred students' academic performance especially in the area of reading (Marston, Muyskens, Lau, & Canter, 2003). These studies too were critiqued with respect to the empirical rigor of the employed measures and design (Fuchs et al., 2003).

SUMMARY

In reviewing the major field-based implementations of RTI, all utilized a collaborative team-based approach and followed a behavioral model of consultation to format the problem-solving process. The IBA and IST initiatives were large-scale, state-supported models for providing prereferral interventions to students prior to (or instead of) referral for special education eligibility determination. The Heartland and MPSM projects

were implemented in large district (or “agency”) settings, and while similar to IBA and ISTs, these two models utilized student progress data compared to class or grade level norms to ascertain eligibility for special education. In addition both Heartland and MPSM employed a noncategorical approach to special education, not requiring school professionals to conduct further diagnostic assessment to assign the student to a diagnostic category. In general, data from these implementations are promising though far from complete. While reductions in special education referrals and placements are noted along with increases in students’ academic and behavioral performance, most of these studies suffer methodological difficulties inherent in field-based evaluations. These difficulties include reporting on incomplete and restricted samples, lack of direct performance or integrity measures, lack of detailed intervention protocols, use of “convenience” data sets, and a lack of consistency in measures/outcomes employed across studies. Further, while not discussed here, prior reports of these implementations also include considerable concerns with the amount of professional development required for implementation and the difficulty maintaining consistency in model implementation both across time and school setting.

RESEARCH-BASED RTI MODELS

In addition to field implementations several research-based RTI models have been implemented. These research models typically employ a standard protocol approach to intervention as opposed to a problem-solving approach. This standard protocol approach offers the same empirically based treatment to all children identified with low skills. The advantages to a standard protocol procedure is that it is easier to validate, train practitioners, and measure the integrity of one intervention being implemented as opposed to many possibilities derived from the problem-solving models (e.g., Fuchs et al., 2003).

Research-based models have generally been implemented in the primary grades with struggling readers. Vellutino et al. (1996) tracked the literacy development of a significant sample ($n = 1407$) of children from kindergarten through fourth grade. In the study intense reading intervention was provided to low readers