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## ABSTRACT

A study reviewed recent trends, issues, and changes within the states related to the use of discrepancy formulas and other approaches for determining eligibility of students with learning disabilities (LD) for special education and related services. A survey of the 50 states and the District of Columbia found they all have a statement in their regulations that requires a severe discrepancy between ability and achievement for purposes of LD special education eligibility. The following discrepancy approaches are used: 22 states use a standard score comparison model, 26 states use a standard deviation from the test mean model, 17 states use a regression formula model, 4 states use a verbal versus performance discrepancy model, 3 states use a grade-level discrepancy approach, and 3 states use comparisons within or across academic achievement areas. Survey responses indicated continuing support for the use of a specific discrepancy formula or approach because this objectivity has increased the consistency of identification across school districts and limited the number of students incorrectly identified as having a learning disability (LD). Issues surrounding the use of LD discrepancy formulae are discussed and a chart is included that indicates LD eligibility criteria for special education in the different states. (CR)

NATIONAL ASSOCIATION OF STATE DIRECTORS OF  
SPECIAL EDUCATION

QUICK TURN AROUND  
PROJECT FORUM

OCTOBER 2000

DISCREPANCY APPROACHES FOR IDENTIFYING  
LEARNING DISABILITIES

By

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QTA – A brief analysis of a critical issue in special education

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## Discrepancy Approaches for Identifying Learning Disabilities

October 2000

By Judy A. Schrag, Ed.D

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### Purpose

This QTA is a brief review of recent trends, issues, and changes within the states related to the use of discrepancy formula and other approaches for determining eligibility of students with learning disabilities (LD) for special education and related services.

Project FORUM at the National Association of State Directors of Special Education (NASDSE) conducted a survey of the 50 states and the District of Columbia, and prepared this document as part of its Cooperative Agreement with the Office of Special Education Programs (OSEP).

### Background

In 1975, Congress passed *The Education for All Handicapped Children Act* (Public Law 94-142), which was later re-authorized as the *Individuals with Disabilities Education Act* (IDEA). On December 29, 1977, Federal implementing rules and regulations were published requiring specific evaluation requirements for determining the existence of a specific learning disability and for determining special education eligibility. These additional requirements have essentially remained the same in subsequent Federal regulations, including those published in 1999 that implemented the 1997 Amendments to IDEA.

Federal regulations state that a team may determine that a student has a specific learning disability if a severe discrepancy between achievement and intellectual ability can be documented 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
  - vii. Mathematics reasoning
- [34 CFR §300.541(a)(2)]

Further, as required by 34 CFR §300.541(b)(1-4), the team must determine that the severe discrepancy is not primarily the result of:

- A visual, hearing, or motor impairment;
- Mental retardation;
- Emotional disturbance; or
- Environmental, cultural, or economic disadvantage.

Whereas no single method for determining a severe discrepancy is Federally mandated, the following six are the most common methods used across the country over the past 23 years: standard score comparison, standard deviation measurement, regression formula, verbal/performance score comparison, grade level discrepancy, and percentage

discrepancies between and among academic achievement areas. These methods are defined later in this document. Some states have required a statewide discrepancy approach, while others have left the selection of discrepancy approaches up to the local education agencies (LEAs). Most states also allow and/or encourage team professional judgment.

Since 1977, these discrepancy approaches have been the source of much discussion and controversy across the country as the population of students with LD has increased over the years. This population now makes up more than half of all students with disabilities served under the provisions of IDEA.

The 1997 amendments to the IDEA emphasize that functional and developmental information about the child from a variety of sources be part of the evaluation process. This includes information provided by the parent and information related to enabling the student to be involved in and progress in the general curriculum [34 CFR §300.532(a)(2)(b)]. In addition, the implementing rules of IDEA require IEP teams to document that a student's disability, including a learning disability, is not due to lack of instruction in reading or math, or to limited English proficiency [34 CFR §300.534(b)(1)(i-ii)]. These new requirements specify the assessment and eligibility determination process for students with LD.

### **Project FORUM Survey**

In an attempt to identify current practices and issues regarding the use of discrepancy approaches for students with LD, Project FORUM developed a survey and emailed it to all state education agencies (SEAs) in the 50 states and the District of Columbia during the spring of 2000. The survey included

a chart summarizing practices used to determine special education eligibility for students with LD. This chart was created by using survey data from Cecil Mercer and colleagues (1996) and verifying the data against information in the National State Policy Database—a collaborative project between NASDSE and the Regional Resource and Federal Center network ([www.csnp.ohio-state.edu/glarcc/nspd.htm](http://www.csnp.ohio-state.edu/glarcc/nspd.htm)). Each state director of special education or designee verified the accuracy of the data in the chart or provided more accurate/more current information. The updated information is displayed in Table 1.

Survey respondents were also asked to describe any current or planned activities to revise their state LD discrepancy approaches, and provide their observations regarding current issues and concerns in the use of discrepancy formulae for identifying students with LD.

All 50 states and the District of Columbia responded to the Project FORUM survey via email or telephone.

### **Survey Results**

#### *Discrepancy Approaches*

As can be noted in Table 1, all 50 states and the District of Columbia have a statement in their regulations that requires a severe discrepancy between ability and achievement for purposes of LD special education eligibility. Keeping in mind that some states utilize more than one discrepancy approach, the following is a brief description of each approach and the number of states that utilize the approach:

**Standard Score Comparison** – 22 states. When this discrepancy approach is used, test scores are converted into standard scores with the same mean and standard deviation. The standard scores from different tests and subtests can then be compared, and if there is a discrepancy between ability and achievement it can be more easily identified.

**Standard Deviation from the Mean** – 26 states. Using this approach, the presence of a learning disability is based on whether the student's test score is discrepant by an established standard deviation from the test mean (e.g., 1.50 or 1.75).

**Regression Formula** – 17 states. Regression discrepancy models use statistics to correct some of the measurement problems inherent in less sophisticated standard score comparison models. A regression formula is basically a statistical procedure that provides an achievement range for a specific intelligent quotient, adjusted for regression toward the mean.

**Verbal vs. Performance Discrepancy** – 4 states. This discrepancy model provides a comparison of verbal and performance measures that yield inter- and intra-cognitive differences.

**Grade-Level Discrepancy** – 3 states. Using this approach, a discrepancy is determined by comparing grade level placement and achievement. For example, the grade-level discrepancy criterion might be that a student's scores are 2 years or more below current grade placement.

**Comparisons Within or Across Academic Achievement Areas** – 3 states. An academic comparison model allows a review of the scatter or patterns of performance by students among and/or across academic areas. An example of an academic comparison

criterion would be a 40-60 percent discrepancy between performance across one or more academic areas such as reading and math.

Whereas the majority of states have a required discrepancy approach, at least six states (Alaska, Arizona, Michigan, Oregon, North Dakota, and Virginia), allow LEAs to select the method(s) and criteria for determining a severe discrepancy and eligibility for special education.

In addition to the above discrepancy approaches, at least six SEA respondents reported the use of other discrepancy approaches. For example, Colorado and Missouri require documentation of the presence of cognitive, language, or psychological processing difficulties.

Iowa has moved to a problem solving approach that focuses on assisting the child. Four levels of problem solving are utilized. Problem Solving Level I begins when a parent or classroom teacher has concerns about an individual child's performance and consultation is provided to teachers and parents. The purpose of Level II Problem Solving is (1) to gather and summarize information about the type and severity of the concern, (2) to define the problem, and (3) to develop and monitor interventions that address the problem. Level III Problem Solving is provided when students demonstrate more severe difficulties. This level involves determining the appropriateness of additional support and has a more stringent validation of student learning problems. Finally Level IV Problem Solving involves the collection of information from multiple sources. Time is spent determining what the child's needs are and how to best serve the child, rather than on diagnosing the child's disability and labeling the child. Using the Problem Solving approach, the supports needed by a stu-

dent are determined systematically and monitored for effectiveness over time.

Minnesota has a three-part eligibility criteria: severe underachievement, severe discrepancy using a regression formula, and an information-processing deficit.

Texas utilizes an eligibility determination process that allows the multidisciplinary team to determine the existence of a severe discrepancy when appropriate assessment instrumentation is not available.

#### *Current Activities in the States Related to the Use of Discrepancy Approaches*

Sixteen states reported that they have developed guidance for LEAs regarding LD assessment and eligibility determinations. These states include Arizona, California, Colorado, Connecticut, Iowa, Kansas, Massachusetts, Minnesota, Missouri, Nevada, North Carolina, North Dakota, Oregon, Pennsylvania, Rhode Island, and Utah.

As an example of guidelines provided to LEAs, the Connecticut SEA disseminates worksheets to local assessment teams for documenting that a student's learning problem in reading or math is not due to lack of instruction, but to a specific disability. The Rhode Island SEA provides a guidelines chart for use by local assessment teams in determining a discrepancy between ability and achievement as well as using professional judgment.

These changes are being made or planned in the area of LD discrepancy approaches and eligibility determinations, as reported by SEA respondents:

- Expanding the data sources and indicators to support the eligibility of a student with LD. Multiple data sources include

classroom performance, record reviews, interviews, performance on benchmark assessments, and performance toward curricular objectives or state assessments (Kansas, and Wisconsin).

- Broadening the developmental delay age range to prevent early labeling of a student as having LD (Delaware).
- Increasing emphasis or providing specific instructions on the use of professional judgement (Ohio).
- Dropping a specific discrepancy formula or approach in favor of using only the federal definition and eligibility criteria for LD (Massachusetts, Maine, and New Mexico).
- Documenting that LD is not the result of a lack of instruction in reading, math, or English (Connecticut and Oregon).
- Shifting from a formula or score driven process to determination about how students are doing in relation to their current instruction or progress assessments (Pennsylvania).
- Refining existing discrepancy formulae/approaches (e.g., use of age norms on assessments, rather than grade norms) (Vermont).
- Adding regression to the mean and differential discrepancy criteria by age level, as well as documenting cognitive processing difficulties (Tennessee).

Seven SEAs reported research and/or study activities are planned or in progress that may result in changes in current LD discrepancy approaches. These SEAs include California, Delaware, Illinois, Louisiana, Montana, Oregon, and South Carolina.

Five respondents reported emerging activity concerning the development of new and/or revised guidelines for school districts (Colorado, Indiana, Maine, Maryland, and Massachusetts). Reasons for revising LD assessment and eligibility guidelines include

the need to incorporate more current research and practice, incorporation of changes in the 1997 amendments to IDEA, and better alignment with state standards and assessment.

### *Satisfaction with Use of LD Discrepancy Formulae*

Respondents from 12 SEAs reported satisfaction with the discrepancy approach being used, and/or indicated there are no current efforts within their states to change or modify their LD discrepancy approach(s). These states include: Arizona, Colorado, Florida, North Carolina, Maryland, Michigan, Minnesota, New Hampshire, North Dakota, South Dakota, Texas, and Utah.

Five SEA respondents reported satisfaction with the use of a specific discrepancy formula that provides an objective measure and consistency in identification across school districts (Alabama, Delaware, Illinois, South Dakota, and Utah). Colorado reported that the use of an objective discrepancy formula approach has reduced the number of students identified as having learning disabilities in spite of pressures from such factors as state standards and state assessments. Illinois and Alaska respondents indicated that a discrepancy formula is an objective tool in determining LD eligibility; however, other evidence should be considered in the decision-making process.

### *Issues and Concerns*

Several SEA respondents reported that the use of a discrepancy formula continues to yield excessive false negative and false positive eligibility determinations. False positives may result when a discrepancy is documented for students who have learning problems because there is a lack of general education supports in the schools. System-

atic efforts need to be made to rule out factors such as lack of appropriate reading and math instruction and cultural/language differences, as required by IDEA.

False negatives may result because a learning disability can impact performance on both tests that measure cognitive ability and tests that measure achievement. This challenges the value of using a discrepancy model.

Other respondents reported that the continued use of a discrepancy formula for special education assessment and eligibility determinations requires, at a minimum, that regression to the mean be taken into consideration. Regression to the mean assumes that an individual's score on the predicted variable will fall closer to the mean than his/her known score on that variable. A second statistical phenomenon that SEA respondents indicated should be taken into consideration is the standard error of measurement—the standard deviation of a person's hypothetical distribution of scores over measurement occasions.

The use of professional judgment was also raised as an issue by survey respondents who noted that such judgment should be applied more consistently within and across states. Use of professional judgment results in expanded variability across school districts and states so that, in effect, a student with a learning disability could be determined eligible for special education in one school district or state, but not in another due to the extent and/or type of professional judgment utilized by the IEP team.

Survey data pointed to the importance of using more functional approaches to identify processing difficulties. Five respondents expressed concern about the continued use of intelligence measures and other standardized

test scores, indicating that such use is questionable based on established research and practice. There is also concern that continued use of discrepancy formulae draws upon resources that could be utilized to conduct functional assessments and to gather other information regarding classroom performance, as well as resources for district and statewide assessments.

SEA respondents indicated that the 1997 amendments to IDEA support a shift away from the use of discrepancy approaches that rely on standardized achievement and ability tests. Consequently, some states are extending the developmental delay category through age nine to prevent unnecessary and premature labeling of younger children as having a learning disability. In addition, SEAs are stressing the importance of documenting that a learning disability is not due to a lack of instruction.

Several SEA respondents recommended that the Federal regulations be changed to require that a severe discrepancy model be modified in favor of more functional options.

## Summary

Since 1977, Federal regulations for IDEA (and its predecessors) have required that assessment teams document the presence of a severe discrepancy between ability and achievement to determine whether students have a learning disability and are, consequently, eligible to receive special education and related services. The more common discrepancy formulae/approaches and the extent of their use have been discussed in this QTA.

Feedback provided by survey respondents, however, indicated that there are continued discussions and concerns regarding the use

of discrepancy formulae and their classroom relevancy. A number of these issues and concerns are summarized by the following three SEA responses:

- The use of a discrepancy formula, as a method of documenting a severe discrepancy for identifying the presence of a learning disability and for purposes of special education eligibility determinations, is outdated and ill advised. Specifically, there is a need for procedures that focus on how the student is performing in the classroom, in the general curriculum, and in district and statewide assessments.
- Regression and other discrepancy formulae are statistical methods designed only for obtaining consistency and have no value in determining or understanding student needs, since standardized intelligence and cognitive measures utilized in determining a severe discrepancy are not generally correlated to the student's curriculum and to improving teaching and learning.
- Rigid use of LD discrepancy formulae/approaches takes away the decision-making responsibility from the assessment team where the decisions regarding special education eligibility should be made.

Survey respondents also reported that a number of SEAs are encouraging or requiring the use of the following multiple measures for identifying a student with a learning disability: professional judgment, functional assessment linked to instruction and curriculum, and clearer links to information in the classroom and statewide assessments.

Despite the concerns described above, survey responses indicated continuing support



for the use of a specific discrepancy formula or approach because this objectivity has increased the consistency of identification across school districts, and limited the number of students incorrectly identified as learning disabled.

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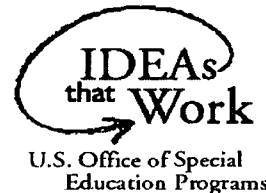


Table 1. State Departments of Education LD Eligibility Criteria for Special Education<sup>1</sup>

Factors	AL	AK	AZ	AR	CA	CO	CT	DE	DC	FL	GA	HI	IA	ID
Discrepancy Requirement in State Regulations <sup>2</sup>	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Discrepancy Criteria: Standard Score Comparison				X		X		X	X	X	X	X		
Standard Deviation from the Mean		X				X	X	X		X	X	X		
Regression Formula	X	X		X		X								X
Verbal/Nonverbal vs. Performance									X					
Grade-level Discrepancy									X					
Academic Achievement Discrepancy (e.g., 40 – 60%)														
Non-Regulatory Guidance Provided for School Districts			X		X	X	X						X	
Other						X <sup>3</sup>							X	

<sup>1</sup> SOURCES:

Subset of data updated from Cecil D. Mercer, et al. *Learning Definitions and Criteria Used by State Departments of Education Learning Disabilities Quarterly* Volume 19, Fall 1996. Results taken from survey of 51 state departments of education on definition, identification criteria and operationalizing procedures; and the National State Policy Database, a collaborative project between NASDSE and the Regional Resource Centers

<sup>2</sup> Regulations at §300.541(a)(2) require a severe discrepancy between ability and achievement to document a learning disability.

<sup>3</sup> Colorado requires documentation of the presence of a cognitive or language processing difficulty.

Table 1. State Departments of Education LD Eligibility Criteria for Special Education (Cont.)

Factors	IL	IN	KS	KY	LA	MA	ME	MD	MI	MN	MS	MO
Discrepancy Requirement in State Regulations	X	X	X	X	X	X	X	X	X	X	X	X
Discrepancy Criteria: Standard Score Comparison	X		X	X				X			X	
Standard Deviation from the Mean	X			X	X					X		X
Regression Formula	X			X						X	X	
Verbal/Nonverbal vs. Performance												
Grade-level Discrepancy												
Academic Achievement Discrepancy (e.g., 40-60%)												
Non-Regulatory Guidance Provided for School Districts			X			X				X		X
Other			X <sup>4</sup>	X						X		X <sup>5</sup>

<sup>4</sup> Kansas has guidance for the use of multiple sources of data and criteria, which are not required.

<sup>5</sup> Missouri requires documentation of a basic processing difficulty.

**Table 1. State Departments of Education LD Eligibility Criteria for Special Education (Cont.)**

Factors	MT	NE	NV	NH	NJ	NM	NY	NC	ND	OH	OK	OR	PA
Discrepancy Requirement in State Regulations	X	X	X	X	X	X	X	X	X	X	X	X	X
Discrepancy Criteria Standard Score Comparison		X						X		X		X	
Standard Deviation from the Mean	X	X						X		X	X	X	
Regression Formula	X		X								X		
Verbal/Nonverbal vs. Performance												X	
Grade-level Discrepancy											X		
Academic Achievement Discrepancy (e.g., 40 – 60%)							X						
Non-Regulatory Guidance Provided for School Districts			X					X				X	X
Other													

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Table 1. State Departments of Education LD Eligibility Criteria for Special Education (Cont.)

Factors	RJ	SC	SD	TN	TX	UT	VT	VA	WA	WV	WI	WY
Discrepancy Requirement in State Regulations	X	X	X	X	X	X	X	X	X	X	X	X
Discrepancy Criteria: Standard Score Comparison	X		X	X	X	X	X					X
Standard Deviation From the Mean	X		X	X	X	X	X			X		X
Regression Formula	X		X			X				X		X
Verbal/Nonverbal vs. Performance		X	X									
Grade-level Discrepancy									X			
Academic Achievement Discrepancy (e.g., 40 - 60%)											X	
Non-Regulatory Guidance Provided for School Districts	X					X						
Other		X			X <sup>6</sup>							

<sup>6</sup> Texas also uses a method that involves team professional judgment and documentation of a severe discrepancy between ability and achievement.



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