Research-based Approaches to Specific Learning Disability Identification and Assessment

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Third Method Approaches
Multiple Methods/Multiple Data Sources

**THEME: Multi-method, Multi-source Approach to SLD Identification**

**Contributors:** Berninger; Fiefer; Flanagan and Alfonso; Fletcher, Barth, and Steubing, Geary; Hale and Fiorello; Mather and Wendling; Naglieri; Ortiz; Wiig
<table>
<thead>
<tr>
<th>Level</th>
<th>Nature of SLD&lt;sup&gt;1&lt;/sup&gt;</th>
<th>Focus of Evaluation</th>
<th>Examples of Evaluation Methods and Data Sources</th>
<th>Criteria for SLD Classification and Eligibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Difficulties in one or more areas of academic achievement (not limited to Basic Reading Skill, Reading Comprehension, Reading Fluency, Oral Expression, Listening Comprehension, Written Expression, Math Calculation, Math Problem Solving)</td>
<td>Academic Achievement: Performance in specific academic skills (e.g., Gw, Gv, Gq, Gf, Gs) may also include performance on measures of phonological and orthographic processing</td>
<td>Response to quality instruction and intervention via progress monitoring with appropriate use of standardized achievement tests, evaluation of work samples, observations of academic performance, teacher parent-child interview, history of academic performance, data from other members of Multidisciplinary Team (MDT) (e.g., speech-language pathologist, special education teacher, reading specialist)</td>
<td>Necessary</td>
</tr>
<tr>
<td>II</td>
<td>SLD does not include a learning problem that is the result of visual, hearing, or motor disability; of mental retardation; of social or emotional disturbance, of environmental, educational, cultural, or economic disadvantage</td>
<td>Exclusionary Factors: Identifications of other primary causes of academic skill weaknesses or deficits, including Intellectual Disability, cultural or linguistic difference, sensory impairment, insufficient instruction or opportunity to learn, organic or physical health factors, social emotional or psychological disturbances</td>
<td>Data from the methods and sources listed at Levels I and III, Behavioral Rating Scales, medical records, prior evaluations, interviews, current or past counseling, psychiatrists, etc.</td>
<td>Performance is not primarily attributed to these exclusionary factors, although one or more of them may contribute to learning difficulties</td>
</tr>
<tr>
<td>III</td>
<td>A disorder in one or more of the basic psychological processes or psychological processes involved in understanding or in using language, spoken or written, such disorders are presumed to result from central nervous system dysfunction</td>
<td>Cognitive Abilities &amp; Processes: Performance in cognitive abilities (e.g., Gq, Gf, Gv, Gs, Gh, Go, Gw, Gd, Gu, Gx), neurocognitive processes (e.g., attention, executive functioning) and learning efficiency</td>
<td>Performance on norm-referenced tests in the evaluation of teacher, parent, and professional observations of cognitive performance, task analysis, testing limits, teacher-parent-child interview, history of academic performance, records review</td>
<td>Performance is one or more cognitive abilities and/or neurocognitive processes related to academic skill deficits weak or deficient as evidenced by converging data sources</td>
</tr>
</tbody>
</table>


| IV    | Unexpected Underachievement - the specific learning disability is a discrete condition differentiated from generalized learning failure by average or better cognitive ability and a learning skill profile exhibiting significant variability indicating processing mechanisms of strength and weaknesses. | Data Integration — Analysis of a Pattern of Strengths and Weaknesses Consistent with SLD | Data gathered at all previous levels as well as any additional data following a review of initial evaluation results (e.g., hypothesis testing, demand analysis) | No statistically significant or clinically meaningful difference between cognitive and academic deficits (e.g., circumscribed aptitude-achievement discrepancy), statistically significant or clinically meaningful difference between (cognitive and academic) deficits and (cognitive and academic) strengths (e.g., circumscribed ability-achievement discrepancy with cognitive areas of strength represented by standard scores ≥70); clinical judgment supports the impression that the child’s overall ability to think and reason will enable him or her to benefit from specialized instruction intervention, comprehensive strategies and accommodations, such that his or her performance rate and level will likely approximate more typically achieving, non-disabled peers. |

| V     | Specific learning disability has an adverse impact on educational performance | Special Education Eligibility<sup>2</sup> Determination of Local Respite Environment (LRE) for delivery of instruction and educational resources. | Data from all previous levels and MDT meeting, including parents | Child demonstrates significant difficulties in daily academic activities that cannot be remediates, accommodated, or otherwise compensated for without the assistance of individualized special education services. | Necessary for Special Education Eligibility |

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<sup>1</sup>This column includes concepts inherent to the federal definition (IDEA, 2004) and to Kavale, Sprauling, and Bran’s (2009) definition of Specific Learning Disability.

<sup>2</sup>Poor spelling with a adequate ability to express ideas in writing is often typical of dyslexia and/or dysgraphia. Even though IDEA 2004 includes only the broad category of written expression, poor spelling and handwriting are often symptomatic of a specific writing disability. This definition should not be ignored (Musich & Wonhoff, in press).

<sup>3</sup>Weak or deficient performance (also called, normative weakness) is defined typically by standard score performances that are low average (i.e., ±1.5 SD) or significantly below average (i.e., ±3 SD) and that have a ecologically valid (e.g., standardized test performance in concert with performance observed in the child’s everyday classrooms or educational environment).

<sup>4</sup>The major specific learning disability may be accompanied by secondary learning difficulties that also may be considered when planning more intensive, individualized special education and instruction directed at the primary problem. For information on linking assessment data to intervention, see Rapid Reference 10.9.

Select a Classification System for Use with All Standardized, Norm-referenced Tests

<table>
<thead>
<tr>
<th>Standard Score</th>
<th>Percentile Range</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 70</td>
<td>&lt;2&lt;sup&gt;nd&lt;/sup&gt;</td>
<td>Extremely Below Average/Intellectual Disability Range</td>
</tr>
<tr>
<td>70-79</td>
<td>2&lt;sup&gt;nd&lt;/sup&gt; to 8&lt;sup&gt;th&lt;/sup&gt;</td>
<td>Well Below Average/Normative Deficit</td>
</tr>
<tr>
<td>80-89</td>
<td>9&lt;sup&gt;th&lt;/sup&gt; to 24&lt;sup&gt;th&lt;/sup&gt;</td>
<td>Below Average/Relative to Normative Weakness</td>
</tr>
<tr>
<td>90-109</td>
<td>25&lt;sup&gt;th&lt;/sup&gt; to 74&lt;sup&gt;th&lt;/sup&gt;</td>
<td>Average</td>
</tr>
<tr>
<td>110-119</td>
<td>75&lt;sup&gt;th&lt;/sup&gt; to 90&lt;sup&gt;th&lt;/sup&gt;</td>
<td>Above Average/Relative to Normative Strength</td>
</tr>
<tr>
<td>120-129</td>
<td>91&lt;sup&gt;st&lt;/sup&gt; to 97&lt;sup&gt;th&lt;/sup&gt;</td>
<td>Well Above Average/Normative Strength</td>
</tr>
<tr>
<td>≥130</td>
<td>≥98&lt;sup&gt;th&lt;/sup&gt;</td>
<td>Extremely Above Average/Intellectually Gifted Range</td>
</tr>
</tbody>
</table>

Note: On standardized norm referenced tests, most people perform within the range of normal limits (i.e., standard scores of 85 to 115, inclusive). Performances that fall outside and below the range of normal limits are considered normative weaknesses; performances that fall outside and above normal limits are considered normative strengths.

Level IV of Flanagan et al.’s Operational Definition:
*Pattern of Strengths and Weaknesses Consistent with SLD*

"the key deficit must be a vertical faculty rather than a horizontal faculty – a domain-specific process rather than a process that operates across a variety of domains" (Stanovich, 1993, p. 279)

Note: On standardized norm referenced tests, most people perform within the range of normal limits (i.e., standard scores of 85 to 115, inclusive). Performances that fall outside and below the range of normal limits are considered normative weaknesses; performances that fall outside and above normal limits are considered normative strengths.

Level IV of Flanagan et al.’s Operational Definition of SLD: Pattern of Strengths and Weaknesses

Below Average Aptitude-Achievement Consistency
(scores approximately 1SD below the mean or lower)

Differences between related cognitive areas of weakness or deficit and academic areas of weakness or deficit are not statistically significant


Level IV of Flanagan et al.’s Operational Definition of SLD: Pattern of Strengths and Weaknesses

Below Average Aptitude-Achievement Consistency
(scores approximately 1SD below the mean or lower)

Difference between related cognitive areas of weakness or deficit and academic areas of weakness or deficit are statistically significant

Student may be using compensatory strategies or benefiting from accommodations or curricular modifications

Level IV of Flanagan et al.’s Operational Definition of SLD: Pattern of Strengths and Weaknesses

Below Average Aptitude-Achievement Consistency
(scores approximately 1SD below the mean or lower)

There may be one or more exclusionary (or other) factors inhibiting performance

Difference between related cognitive areas of weakness or deficit and academic areas of weakness or deficit are statistically significant

Factors that may affect learning

1. Executive functioning (e.g., time management skills, organizational skills)
2. Ability to complete tasks within a specified time period (e.g., classwork, tests, homework)
3. Sensory-motor integration (e.g., visual-motor coordination)
4. Ability to attend and concentrate on academic tasks in school
5. Match between student’s learning needs and instructional environment
6. Relationships with same age and grade peers
7. Receptive to corrective feedback
8. Uses educational supports in school (e.g., before/after school programs)
9. Uses educational supports outside of school (e.g., tutoring, community programs)
10. Familial support (e.g., parent involvement, assistance from family members)
11. Self-esteem or self-concept
12. School climate (e.g., safety, peer group)
13. Motivation and level of effort

Level IV of Flanagan et al.’s Operational Definition of SLD

Review: SLD Pattern

Pattern not consistent with SLD construct

Domain-specific aspect of SLD is not present.

Similar to traditional ability-achievement discrepancy

Level IV of Flanagan et al.’s Operational Definition of SLD: Pattern of Strengths and Weaknesses

*Pattern not consistent with SLD construct:*

Unexpected underachievement is not present.

Area of cognitive weakness or deficit is likely not particularly important for academic skill acquisition and development at this age/grade level.

Alternatively, student compensates well for area of cognitive weakness or deficit (history is important in making SLD determination).

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Level IV of Flanagan et al.’s Operational Definition of SLD: Pattern of Strengths and Weaknesses

Scores appear to be in the “right” ranges – 90=Average; 80=Below Average/weakness/deficit

Variation is not statistically significant; variation is common in general population

Little to moderate variation in cognitive/academic ability profile


Level IV of Flanagan et al.’s Operational Definition of SLD: Pattern of Strengths and Weaknesses

All Scores/Areas Approximately 85 or Lower

Pattern of Discrepancy-Consistency Aligns with SLD Construct, but all performances suggest Below Average or Deficient Ability – not SLD

General Learning Difficulty – Goal of intervention is to
*Remediate cognitive/academic deficits
*Teach compensatory strategies to assist in bypassing cognitive deficits
*Achieve overall cognitive ability-achievement consistency

Level IV of Flanagan et al.’s Operational Definition of SLD: Pattern of Strengths and Weaknesses

All Scores/Areas Suggest Deficiency (generally 70 or lower)

**Pattern is Not Consistent with SLD**
- Construct – All scores suggestive of deficiency

**Consider Intellectual Disability**
- Assess adaptive behavior

OVERALL COGNITIVE ABILITY
Well Below Average

SPECIFIC COGNITIVE ABILITY
Cognitive Ability or Processing Disorder

SS = 65-75

ACADEMIC ABILITY
Academic Skills/Knowledge Deficits

SS = < 70

Not Discrepant

Not Discrepant

Not Discrepant


Little to no variation in cognitive/academic ability profile

Level IV of Flanagan et al.’s Operational Definition of SLD:
Pattern of Strengths and Weaknesses

All Scores/Areas Approximately 90 or higher
LIKELY SUGGESTS NORMAL VARIATION


Normal Variation: To Err is Human

- *To Err is Human: “Abnormal” Neuropsychological Scores and Variability are Common in Healthy Adults*
  - Binder, Iverson, and Brooks (2009)
- At least two statistically significant differences in one’s cognitive ability profile is common in the general population
  - Oakley (2000)
Level IV of Flanagan et al.’s Operational Definition of SLD: Pattern of Strengths and Weaknesses

Pattern of Discrepancy-Consistency Aligns with SLD Construct (particularly when supported by history), and may suggested Gifted SLD, especially if overall cognitive ability is 130 or higher, cognitive area(s) of deficiency is approximately 1SD below the mean (or lower), achievement is significantly lower than what is expected based on overall cognitive ability (particularly in the absence of intervention/compensatory strategies/accommodations etc). If individual has been receiving intervention and has learned compensatory strategies, for example, the pattern may not show a discrepancy between predicted and actual achievement.

Research on G/LD (Lovett & Sparks, 2010, in press)

- Nearly 1000 studies on G/LD since 1970’s
  - Only about 5% were data based
  - Most were case studies
- Data show that samples of G/LD have IQ’s of about 120 and achievement in the Average range
Research on G/LD (Lovett & Sparks, 2010, in press)

- Most G/LD met 1SD ability-achievement discrepancy criterion
- The higher the IQ, the greater the likelihood of meeting discrepancy criterion
- Very few met DSM criteria due to absence of low achievement

<table>
<thead>
<tr>
<th></th>
<th>IQ &lt; 120</th>
<th>IQ &gt; 120</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0 SD</td>
<td>35.6</td>
<td>66.3</td>
</tr>
<tr>
<td>1.5 SD</td>
<td>16.2</td>
<td>47.1</td>
</tr>
<tr>
<td>2.0 SD</td>
<td>6.3</td>
<td>19.2</td>
</tr>
<tr>
<td>DSM-IV</td>
<td>8.3</td>
<td>4.8</td>
</tr>
</tbody>
</table>

No Consensus on How to Identify Students Who Should be G/LD

Evidence of Impairment Relative to Most People (or the Average Person) is Necessary (Lovett & Sparks)
Defining Processes in a Cognitive Context

- Processes and Abilities both refer to *mental capacities that enable learning and production*
- Processes are narrower, more specific mental capacities; Abilities are broader, more overarching mental capacities

(McCloskey, 2007)
Defining Processes in a Cognitive Context

- Ability deficits *constrain learning and production*; the degree of deficit places an upper limit on learning and production; compensatory or by-pass strategies typically are not very effective in countering ability deficits
- Severe ability deficits result in *cognitive impairments*, that greatly constrain learning and production, such as severe language impairment or mental retardation


Defining Processes in a Cognitive Context

- Process deficits *obstruct learning and production*, but often can be by-passed or compensated for at least to some degree; in some instances their effects can be significantly reduced if addressed during early developmental stages with a good intervention program
- Severe process deficits result in *learning disabilities and/or producing disabilities* involving slowed and/or inconsistent learning and production

### Identification of Learning and Producing Difficulties Related to Reading Achievement

<table>
<thead>
<tr>
<th>Ability to Reason with Verbal Info (g)</th>
<th>Basic Processing (PA, OP, OMP)</th>
<th>Working Memory</th>
<th>Executive Function Processing</th>
<th>McCloskey, 2007, 2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deficit</td>
<td>OK</td>
<td>OK</td>
<td>OK</td>
<td>Ability Deficit</td>
</tr>
<tr>
<td>Deficit</td>
<td>Deficit</td>
<td>OK</td>
<td>OK</td>
<td>Ability Deficit</td>
</tr>
<tr>
<td>Deficit</td>
<td>OK</td>
<td>Deficit</td>
<td>OK</td>
<td>Ability Deficit and Process Deficits</td>
</tr>
<tr>
<td>Deficit</td>
<td>Deficit</td>
<td>Deficit</td>
<td>OK</td>
<td>LD Only</td>
</tr>
<tr>
<td>OK</td>
<td>Deficit</td>
<td>OK</td>
<td>OK</td>
<td></td>
</tr>
<tr>
<td>OK</td>
<td>OK</td>
<td>Deficit</td>
<td>OK</td>
<td></td>
</tr>
<tr>
<td>OK</td>
<td>Deficit</td>
<td>Deficit</td>
<td>OK</td>
<td></td>
</tr>
</tbody>
</table>


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<th>Executive Function Processing</th>
<th>McCloskey, 2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>OK</td>
<td>Deficit</td>
<td>OK</td>
<td>Deficit</td>
<td>LD and PD</td>
</tr>
<tr>
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<td>OK</td>
<td>Deficit</td>
<td>Deficit</td>
<td></td>
</tr>
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<td>Deficit</td>
<td>Deficit</td>
<td>Deficit</td>
<td></td>
</tr>
<tr>
<td>Deficit</td>
<td>Deficit</td>
<td>OK</td>
<td>Deficit</td>
<td>Ability Deficit and Process Deficits</td>
</tr>
<tr>
<td>Deficit</td>
<td>OK</td>
<td>Deficit</td>
<td>Deficit</td>
<td></td>
</tr>
<tr>
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<td>Deficit</td>
<td>Deficit</td>
<td>Deficit</td>
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</tbody>
</table>

**Identification of Learning and Producing Difficulties Related to Reading Achievement**

<table>
<thead>
<tr>
<th>Ability to Reason with Verbal Info</th>
<th>Basic Processing (PA, OP, OMP)</th>
<th>Working Memory</th>
<th>Executive Function Processing</th>
<th>PD</th>
<th>Inconsistent achievement Only</th>
<th>Likely due to EF deficits</th>
</tr>
</thead>
<tbody>
<tr>
<td>OK</td>
<td>OK</td>
<td>OK</td>
<td>Deficit</td>
<td></td>
<td>OK</td>
<td>OK</td>
</tr>
</tbody>
</table>


**Mather and Gregg (2006)**

Attention should be directed at “the specific cognitive and linguistic processes [that] are accessed and used by individuals to collect, sort, process, store, and retrieve various types of information...[b]y analyzing the pattern of strengths and weaknesses that exist within a person or the intraindividual discrepancies, one can begin to determine how specific differences influence functioning and academic performance” (p. 99)
Identification of SLD

• **Involves more than just examining scores from standardized tests**
  – A convergence of data sources is necessary
  – Data should be gathered via different methods
  – Exclusionary factors must be considered and examined systematically

**Flanagan et al.’s Operational Definition: Level I Based on a Convergence of Data Sources**

- Examples
  - Standardized Achievement Tests (Indiv. and Group)
  - Progress Monitoring Data; CBM Data
  - Work Samples; Classroom Observations: Parent/Teacher/Student Report
  - Criterion Referenced: Benchmark Assessment

**ACADEMIC WEAKNESS-FAILURE**
About ONE Standard Deviation below the mean or lower

**Other Factors (e.g., Exclusionary)**
**Flanagan et al.’s Operational Definition: Level II – Review of Exclusionary Factors**

**Evaluation and Consideration of Exclusionary Factors for SLD Identification**

An evaluation of specific learning disability (SLD) requires an evaluation and consideration of factors, other than a disorder in one or more basic psychological processes that may be the primary cause of a student's academic skill weaknesses and learning difficulties. These factors include (but are not limited to), vision/hearing, or motor disabilities, intellectual disability (ID), social/emotional or psychological disturbance, environmental or economic disadvantage, cultural and linguistic factors (e.g., limited English proficiency), insufficient instruction or opportunity to learn and physical/health factors. These factors may be evaluated via behavior rating scales, parent and teacher interviews, classroom observations, attendance records, social/developmental history, family history, vision/hearing exams, medical records, prior evaluations, and interviews with current or past counselors, psychiatrists, and paraprofessionals who have worked with the student. Noteworthy is the fact that students with (and without) SLD often have one or more factors (listed below) that contribute to academic and learning difficulties. However, the practitioner must rule out any of these factors as being the primary cause of a student’s academic and learning difficulties to maintain SLD as a viable classification/diagnosis.

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**Flanagan et al.’s Operational Definition: Level II – Review of Exclusionary Factors**

| Vision (Check All that Apply): |  |
|--------------------------------|  |
| □ Vision test recent (<1 year) | □ History of visual disorder/disturbance |
| □ Vision test outdated (>1 year) | □ Diagnosed visual disorder/disturbance |
| □ Passed | Name of disorder: ___________________ |
| □ Failed | □ Vision difficulties suspected or observed |
| □ Wears Glasses | (e.g., difficulty with far or near point copying, misaligned numbers in written math work, squinting or rubbing eyes during visual tasks such as reading, computers) |

NOTES:

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Flanagan et al.'s Operational Definition: Level II – Review of Exclusionary Factors

**Hearing (Check All that Apply):**
- [ ] Hearing test recent (within 1 year)  
- [ ] Hearing test outdated (> 1 year)  
- [ ] Passed  
- [ ] Failed  
- [ ] Uses Hearing Aids  

**NOTES:**


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**Flanagan et al.'s Operational Definition: Level II – Review of Exclusionary Factors

**Motor Functioning (Check All that Apply):**
- [ ] Fine Motor Delay/Difficulty  
- [ ] Gross Motor Delay/Difficulty  
- [ ] Improper pencil grip (Specify type: ____________)  
- [ ] Assistive devices/aids used (e.g., weighted pens, pencil grip, slant board)  

**NOTES:**

Flanagan et al.’s Operational Definition: Level II – Review of Exclusionary Factors

Cognitive and Adaptive Functioning (Check All that Apply):

☐ Significantly “subaverage intellectual functioning” (e.g., IQ score of 75 or below)
☐ Pervasive cognitive deficits (e.g., weaknesses or deficits in many cognitive areas, including Gf and Gc)
☐ Deficits in adaptive functioning (e.g., social, communication, self-care)

Areas of significant adaptive skill weaknesses (check all that apply):

☐ Motor Skill          ☐ Communication          ☐ Socialization
☐ Daily Living Skills ☐ Behavior/Emotional Skills ☐ Other

NOTES:


Social-Emotional/Psychological Factors (Check All that Apply):

☐ Diagnosed psychological disorder (Specify: ______________________)
☐ Date of Diagnosis
☐ Family history significant for psychological difficulties
☐ Disorder presently treated - specify treatment modality (e.g., counseling, medication): ______________
☐ Reported difficulties with social-emotional functioning (e.g., social phobia, anxiety, depression)
☐ Social-Emotional/Psychological issues suspected or suggested by referral
☐ Home-School Adjustment Difficulties
☐ Lack of Motivation
☐ Emotional Stress
☐ Autism
☐ Present Medications (type, dosage, frequency, duration) _____________________________
☐ Prior Medication Use (type, dosage, frequency, duration) _____________________________
☐ Hospitalization for psychological difficulties (date(s): _____________________________
☐ Deficits in social, emotional, or behavioral [SEB] functioning (e.g., as assessed by standardized rating scales)

Significant scores from SEB measures: _____________________________

NOTES:


Flanagan et al.’s Operational Definition: Level II – Review of Exclusionary Factors

Environmental/Economic Factors (Check All that Apply):

☐ Limited access to educational materials in the home
☐ History of educational neglect
☐ Caregivers unable to provide instructional support
☐ Frequent transitions (e.g., shared custody)
☐ Economic considerations precluded treatment
☐ Environmental space issues (e.g., no space
  of identified issues (e.g., filling a prescription,
  replacing broken glasses, tutoring)
☐ Temporary Crisis Situation

NOTES:

Flanagan et al.’s Operational Definition: Level II – Review of Exclusionary Factors

Cultural/Linguistic Factors (Check All that Apply):

☐ Limited Number of Years in U.S. (___)
☐ Language(s) Other than English Spoken in Home
☐ No History of Early or Developmental
  Problems in Primary Language
☐ Lack of or Limited Instruction in Primary Language
  (# of years ___)
☐ Current Primary Language Proficiency:
  (Dates: __________ Scores: __________)
☐ Current English Language Proficiency:
  (Date: __________ Scores: __________)
☐ Acculturative Knowledge Development
  (Circle one: High – Moderate – Low)
☐ Parental Educational and Socio-Economic Level
  (Circle one: High – Moderate – Low)

NOTES:

Flanagan et al.’s Operational Definition: Level II – Review of Exclusionary Factors

**Physical/Health Factors (Check All that Apply):**
- □ Limited access to healthcare
- □ Minimal documentation of health history/status
- □ Chronic health condition (Specify: ___________)
- □ Migraines
- □ Temporary health condition (Date/Duration: ___________)
- □ Hospitalization (Dates: ___________)
- □ History of Medical Condition (Date Diagnosed ___________)
- □ Medical Treatments (Specify: ___________)
- □ Repeated visits to the school nurse
- □ Repeated visits to doctor
- □ Medication (type, dosage, frequency, duration: ___________)

**NOTES:**

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Flanagan et al.’s Operational Definition: Level II – Review of Exclusionary Factors

**Instructional Factors (Check All that Apply):**
- □ Interrupted schooling (e.g., mid-year school move) Specify why: ___________
- □ New teacher (past 6 months)
- □ Nontraditional curriculum (e.g., homeschooled)
- □ Accelerated curriculum (e.g., AP classes)
- □ Days Absent ___________

**NOTES:**

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**Determination of Primary and Contributory Causes of Academic Weaknesses and Learning Difficulties (Check One):**
- □ Based on the available data, it is reasonable to conclude that one or more factors is primarily responsible for the student’s observed learning difficulties. Specify: ___________
- □ Based on the available data, it is reasonable to conclude that one or more factors contributes to the student’s observed learning difficulties. Specify: ___________
- □ No factors listed here appear to be the primary cause of the student’s academic weaknesses and learning difficulties

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Flanagan et al.’s Operational Definition: Level III Based on a Convergence of Data Sources

Examples

- Standardized Intelligence or Cognitive Tests
- More than one subtest of the presumed ability deficit
- Manifestations of the deficit
- Previous reports/evaluation corroborate finding

Level IV of Flanagan et al.’s Operational Definition of SLD

Examples

- Total Test Score on Intelligence Test (e.g., FSIQ)
- Alternative Ability Score (e.g., GAI)
- g-value of \( \geq 1.0 \)
- Strengths in Some Academic Areas

Other Factors (e.g., motivation/effort, familial support; language; early enrichment; creativity)
Is Average or Better Overall Ability Consistent with the SLD Construct?

**ONCAP** – Otherwise Normal Cognitive Ability Profile

Individuals with SLD have At Least Average Overall Ability

- The children often have average or above intelligence and good memory in other respects
- Hinshelwood, 1902

“**Historical Perspective**” Information from Nancy Mather, NYASP 2011
Individuals with SLD have At Least Average Overall Ability

Many of the children have a high degree of intelligence

Orton, 1937

“it seems probably that psychometric tests as ordinarily employed give an entirely erroneous and unfair estimate of the intellectual capacity of these children” (p. 582)

Orton, 1925

“Historical Perspective” Information from Nancy Mather, NYASP 2011
Individuals with SLD have At Least Average Overall Ability

• “The children of superior mental capacity who fail to learn to read are, of course, spectacular examples of specific reading difficulty since they have such obvious abilities in other fields.” (p. 23)
• Monroe, 1932

“Historical Perspective” Information from Nancy Mather, NYASP 2011

Individuals with SLD have At Least Average Overall Ability

• Remedial training must continue until reading is in harmony with the child’s other capacities and achievement
• Some children of superior intelligence struggle to learn to read
• Monroe, M. (1932)

“Historical Perspective” Information from Nancy Mather, NYASP 2011
Individuals with SLD have At Least Average Overall Ability

• “Sometimes children of good general intelligence show retardation in some of the specific skills which compose an intelligence test” (p. 22)

• Monroe and Backus (1937)

“Historical Perspective” Information from Nancy Mather, NYASP 2011

Individuals with SLD have At Least Average Overall Ability

“The clearest expression of a special disability is consistently low scores on a series of tests in a given subject conjoined with average or superior scores on tests in other subjects. Such scores can be arranged in an ‘educational profile.’ For example, in case of a reading disability, a child might obtain scores placing him in the ninth grade in arithmetic...and in the third grade in reading. Here we would have evidence of a striking reading disability.” (p. 43).


“Historical Perspective” Information from Nancy Mather, NYASP 2011
Overall Ability and RTI


**IMPLICATIONS FOR RESEARCH AND PRACTICE**

So, findings from our review suggest that IQ frequently predicts responsiveness to reading instruction, and it can explain important variance in such responsiveness. Put differently, IQ often mediates or influences the effectiveness of reading instruction such that it is more or less effective for children with higher versus lower IQ scores. By

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The rate of progress under remedial instruction was found to be a function of:

- the child’s intelligence
- how early intervention is provided
- number of hours of training
- severity of the disability
- behavior and personality difficulties
- supervision of the remedial techniques

(Source: Monroe, 1932, p. 157)

“Historical Perspective” Information from Nancy Mather, NYASP 2011
When a student does not meet the discrepancy criterion and, therefore, cannot be deemed an underachiever, there is the strong possibility that the student is a “slow learner” (SL; i.e., a student with an IQ level between about 70 and 85). About 14% of the school population may be deemed SL, but this group does not demonstrate unexpected learning failure, but rather an achievement level consonant with IQ level. Although NCLB makes such low achievement problematic, slow learner has never been a special education category, and “What should not happen is that a designation of SLD be given to a slow learner” (Kavale, 2005, p. 555).

Level IV of Flanagan et al.’s Operational Definition of SLD

**What are the Criteria for Discrepancy and Consistency? See PSW-Analyzer Program**
Level V Criteria for Eligibility Under SLD Label

- Child demonstrates significant difficulties in daily academic activities that cannot be remediated, accommodated, or otherwise compensated for without the assistance of individualized special education services.

On the Flanagan et al. Operational Definition of SLD...

[This] operational definition provides an inherently practical method for SLD identification that carries the potential for increased agreement about the validity of SLD classification

Kavale, Holdnack, & Mostert (2005, p. 12)
The Importance of Assessing Cognitive Abilities and Processes and Academic Skills...

By identifying specific targets for remediation, the possibilities for truly individualized intervention are increased significantly.

Kavale, Holdnack, & Mostert (2005, p. 12)

The Value of Assessing Cognitive Abilities and Processes...

Even if a student never enters the special education system, the general education teacher, the student’s parents, and the student him- or herself would receive valuable information regarding why there was such a struggle in acquiring academic content, to the point of possibly needing special education

Kavale, Holdnack, & Mostert (2005, p. 12)
Determining a Specific Learning Disability

- Discrepancy between “ability” and “achievement”
- Failure to respond to scientific research-based intervention
- May permit the use of other alternative research-based procedures for determining whether a child has a specific learning disability [PSW], as defined in §300.8(c)(10) (OSERS Final Regulations-8/06)
  - Flanagan and colleagues
  - Hale and Fiorello
  - McCloskey
  - Naglieri
  - Feifer and Della Tofallo
  - Miller
  - Berninger
  - Geary
  - Mather

On Third Method Approaches

- Della Tofallo (2010; pp. 180-181) – RTRI or Response to the Right Intervention

- Make no mistake...integrated models [third method approaches] of identifying (and serving) students with LDs do not arrive prepackaged along with dozens of studies touting their “scientific validation.” However, they are evidence-based because they emanate from the marriage of a collective body of knowledge that has been acquired through research in the fields of neuroscience, pedagogy, assessment, and intervention.
“At the current state of scientific knowledge, it is only through a comprehensive evaluation of a student’s cognitive and psychological abilities and processes that insights into the underlying proximal and varied root causes of [academic] difficulties can be ascertained and then specific interventions be provided targeted to each student’s individual needs, a process long advocated”

From Reynolds and Shaywitz (2009)

Don’t Forget

• There is no LD litmus test; the more well-versed you are in different approaches and methods, the more information you will gain about the child (including how to best help him or her)
Don’t Forget

- Not all children are Average and Above Average

"all the women are strong, all the men are good looking, and all the children are above average."


Differential Diagnosis is Important

- A diagnosis identifies the nature of a specific learning disability and has implications for its probable etiology, instructional requirements, and prognosis. Ironically, in an era when educational practitioners are encouraged to use evidence-based instructional practices, they are not encouraged to use evidence-based differential diagnoses of specific learning disabilities.
Don’t Forget

• Comprehensive evaluation (including cognitive assessment) is important and necessary for students who do not respond well to instruction and intervention.

… there is a demand for the comprehensive assessment to drive intervention. This is the way it has always been, and this is the way it will always be because the referral questions for children with SLD have always asked, What is wrong? And how can we help? These questions demand differential diagnosis, a large part of which is determined by the cognitive abilities present in the individual child (p. 211).