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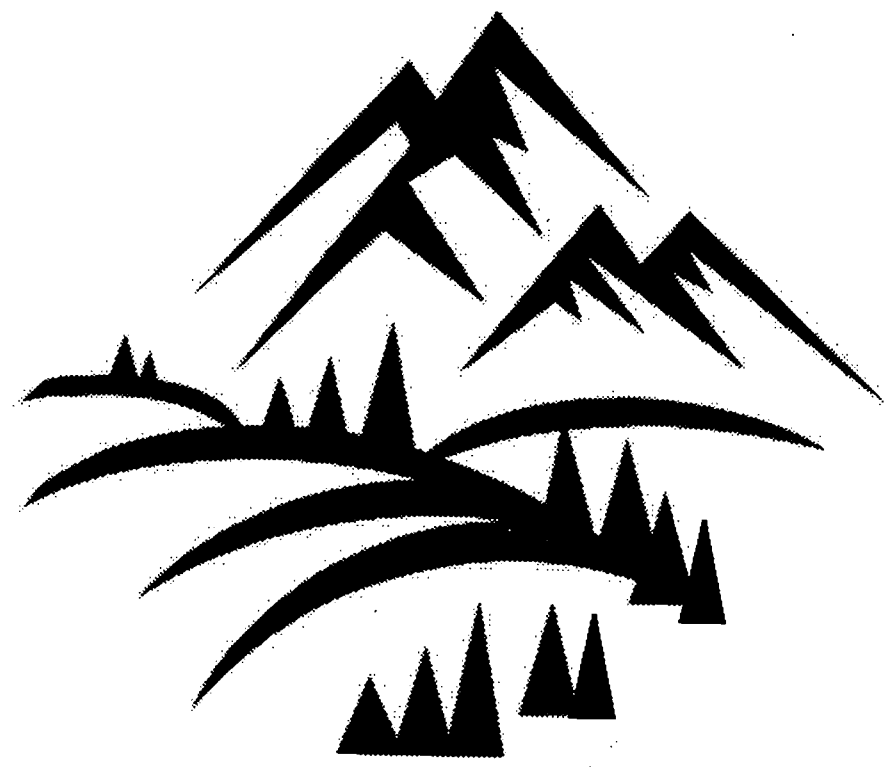DESCRIPTORS   Check Lists; Communication Disorders; Communication
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                 *Symptoms (Individual Disorders)

ABSTRACT
         This handbook is designed for use by trained educational
diagnosticians and special educators as they go about the complex task of
identifying students with perceptual/communicative disabilities (PCD) and
determining eligibility for special education services. Section 1 of the text
discusses federal criteria for determining the existence of a special
learning disability and state criteria for identification of a child with
PCD. Section 2 addresses the identification of a student with a PCD. The
presence of a processing difficulty impairing the students' ability to
listen, think, attend, speak, read, write, spell, or do mathematical
calculations is discussed, as well as the determination of the effect on
educational achievement. A discrepancy conversion table is provided showing
IQ scores and corresponding achievement test cutoff scores, and formal
evaluation instruments are described. Section 3 explores the special
education eligibility process for students with PCD, including pre-referral,
multidisciplinary evaluation, and reevaluation. Section 4 provides specific
guidelines for identifying students with PCD from kindergarten through age 7,
and Section 5 discusses special challenges that arise in the determination of
eligibility for students with PCD. Appendices include evaluation instruments,
checklists for informal assessments, descriptions of standardized test tools,
and conversion tables. (Contains 39 references.) (CR)

Guidelines for Identifying Students with Perceptual/Communicative Disabilities

Colorado Department of Education
Special Education Services Unit

cde

August 2001

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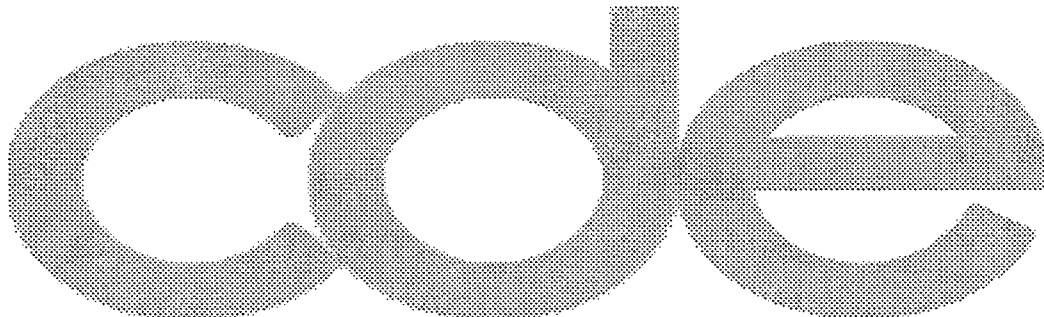responsibilities as described in the Colorado law.

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the 2001 PC Work Group and the Colorado Directors of Special Education.*

Primary Editor and Project Coordinator

Jeanette Cornier
Moderate Needs Consultant
Colorado Department of Education

Primary Contributors

Lois Adams
Supervisor
Colorado Department of Education

Jane L. Amundson
Early Childhood Special Education Consultant
Colorado Department of Education

Nella B. Anderson
Associate Professor
Western State College of Colorado

Barbara Bieber
School Psychology Consultant
Colorado Department of Education

Jo Bond
Pikes Peak BOCES

Beth Dickson
School Psychologist
Thompson Valley School District

Denise Ensslin
Learning Disabilities Specialist
Private Consultant

Kathy Fahey
Speech-Language Consultant
Colorado Department of Education

Cindy Grubbs
School Psychologist
Northeast BOCES

Julie Holiday
Moderate Needs Specialist
Academy District 20

Cheryl Johnson
Audiology / Deaf & Hard of Hearing Consultant
Colorado Department of Education

Lynn Kuhn
Literacy Consultant

Mel Lane
Professor, Special Education
University of Northern Colorado

Patty Luttrell
P/C Teacher
Colorado Springs School District 11

Kiki McGough
Special Education Coordinator
Adams County School District 14

Daphne A. Pereles
District Learning Disabilities Specialist
Cherry Creek School District

Meredith Puls
Coordinator of Learning Services
The Children's Hospital

Juanita Regehr
Child Find Coordinator
Jefferson County School District

Leslie Scranton
Special Education Teacher
Gunnison School District

Connie Marie Sperberg
Educational Consultant
Jefferson County School District

Nancy Steele
Special Education Program Coordinator
Douglas County School District

Patricia S. Tomlan
Director
PST Educational Consultants

Jenny Zichterman
Layout design and Formatting
Z Consulting

INTRODUCTION

Learning disabilities have been accepted as an identifiable category of disability since the 1976 Individuals with Disabilities Education Act (PL 94-142). How students are identified as having learning disabilities remains somewhat controversial. In Colorado, students with learning disabilities qualify for special education under the label perceptual/communicative disabilities (PCD). Years ago, Colorado students were determined to be eligible for services as PCD primarily through a discrepancy between intellectual potential and academic achievement. As a result, problems developed relative to the over-identification of students who received limited or poor instruction and students who were English language learners, and misidentification of slow learners. In addition to incorrect identification of students, these limited criteria for the identification of PCD provided minimal information about the students' strengths and weaknesses and, therefore, did not support the development of appropriate instructional plans.

In 1995, the Colorado Department of Education, under the guidance of Lois Adams and Kay Cessna, moved to a theory-based model including identification of the psychological processes that impact academic achievement in order to identify PCD. After in depth analysis and field-testing, the regression-based discrepancy formula was adopted to determine when a significant discrepancy between intellectual potential and actual level of achievement exists while statistically controlling for regression toward the mean.

A special thank you to Lois Adams for her mentoring and guidance on this project. Her leadership has made great contributions to the field of learning disabilities.

Through the work of the many people acknowledged on the previous page, this publication of the Colorado Guidelines for the Identification of Students with Perceptual/Communicative Disabilities has been updated to reflect current literature and recommended practices. The emphasis of this update is on identifying processing strengths and weaknesses for the purpose of informing effective instructional practices. No changes have been made to the discrepancy formula.

These guidelines are intended to be used by trained educational diagnosticians and special educators as they go about the complex task of identifying students with perceptual/communicative disabilities and determining eligibility for special education services. We hope that special educators will find these guidelines informative, practical and easy to use.

Jeanette Cornier
Project Coordinator
August 2001

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DEFINITION / LAWS

Section 1

DEFINITION
"Learning disabilities is a generic term that refers to a heterogeneous group of disorders manifested by significant difficulties in the mastery of one or more of the following: listening, speaking, reading, writing, reasoning, mathematical and other skills and abilities" (National Joint Committee on Learning Disabilities, January 1981). The category, perceptual/communicative disabilities, encompasses the many different subtypes of learning disabilities. While there is not general agreement in the field about the delineation of these subtypes, learning disabilities are often divided into broad categories of verbal and nonverbal.

Verbal learning disabilities refer to those general verbal and/or language deficits. Behavioral manifestations of verbal learning disabilities may include difficulties in the acquisition of basic reading, writing, and/or oral language processes.

Nonverbal learning disabilities refer to visual-spatial-organizational, motoric, social, and higher order language functioning deficits. Behavioral manifestations of nonverbal learning disabilities may include performance IQ significantly lower than verbal IQ, and/or difficulties with early speech and vocabulary development, math concept development, fine motor skills, special perceptions, and social judgment.

LAWS
Both federal and state rules require documentation of a significant discrepancy between estimated intellectual potential and actual level of performance. The documentation of a disorder in the psychological processes affecting language and/or cognition is also specified.

Federal criteria for determining the existence of a specific learning disability found in the **Individuals with Disabilities Education Act** (IDEA) Rules and Regulations

Sec. 300.541 Criteria for determining the existence of a specific learning disability

(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 for 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

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(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 impairment;
    (2) Mental retardation;
    (3) Emotional disturbance; or
    (4) Environmental, cultural or economic disadvantage.

State criteria for identification of a child with perceptual/communicative disability found in the Rules for Administration of the **Exceptional Children's Education Act** (ECEA):

2.02 (6)	A child with <u>perceptual or communicative disability</u> shall have a disorder in one or more of the psychological processes involved in understanding or in using language which prevents the child from receiving; reasonable educational benefit.
2.02 (6)(a)	A basic disorder in the psychological processes affecting language and/or learning may manifest itself in an impaired ability to listen, think, attend, speak, read, write, spell or do mathematical calculations. The term perceptual/communicative disability does not include students who have learning problems which are primarily the result of visual, hearing, or motor handicaps, or limited intellectual capacity or significant identifiable emotional disability, or who are of environmental, cultural, or economic disadvantage.

2.02 (6) (b)	Criteria for a perceptual or communicative disability preventing a child from receiving reasonable educational benefit from regular education shall include documentation of both. 2.02 (6) (b) (i) A disorder in the psychological process which affects language and learning consisting of:
	  ➢ Significant discrepancy between estimated intellectual potential and actual level of performance.
	  ➢ Difficulty with cognitive and/or language processing.

2.02 (6) (b) (ii) And significantly impaired achievement in one or more of the following areas:
    ➢ Prereading and/or reading skills.
    ➢ Reading comprehension.
    ➢ Written language expressions, such as problems in handwriting, spelling, sentence structure and written organization.
    ➢ Comprehension, application and retention of math concepts.

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IDENTIFYING STUDENTS WITH PCD

Section 2

Eligibility and Evaluation of Perceptual/Communicative Disabilities

Previously, the acronym 1+1+1=PC was used with the three 1's standing for ability, impact on achievement and PC indicative behaviors. You'll find that while the acronym is no longer used, all three parts are still contained in the identification process.

The following are recommended approaches and tools for the evaluation of perceptual/communicative disabilities. Special education eligibility for perceptual/communicative disabilities is based upon (a) evidence and documentation of significant processing deficits, and (b) a regression formula which determines the significance of the impact of processing deficits upon academic achievement. Thus, the necessary information includes:

I.   **Evidence of a <u>PROCESSING DIFFICULTY</u> impairing the student's ability to listen, think, attend, speak, read, write, spell and/or do mathematical calculations.**

II.   **Determination of the <u>IMPACT ON EDUCATIONAL ACHIEVEMENT</u> as measured by a significant discrepancy between IQ cluster scores and achievement cluster scores on the Colorado regression formula.**

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I. PROCESSING DIFFICULTY

When identifying perceptual/communicative disabilities, there must be evidence that the processing difficulties are related to the area of achievement deficits. Informal and formal assessments are necessary to document processing difficulties. To review the theoretical base for perceptual, linguistic and cognitive processing, see Appendix A.

> **PERCEPTUAL PROCESSING:**
> When students have difficulty in one or more of the following areas, it may be related to a perceptual processing disorder:
> 1. visual processing (discrimination, sequencing, tracking, figure-ground, spatial)
> 2. visual-motor integration
> 3. auditory processing (discrimination, sequencing, closure, figure-ground)
> 4. phonological processing
> 5. temporal processing
> 6. kinesthetic processing
> 7. tactile processing
> 8. spatial processing

> **LANGUAGE PROCESSING:**
> When students have difficulty in one or more of the following areas, it may be related to a language processing disorder:
> 1. phonemic awareness
> 2. semantics / vocabulary
> 3. rapid naming / word retrieval / fluency
> 4. syntax / sentence complexity
> 5. figurative language
> 6. listening comprehension and memory
> 7. text structure
> 8. pragmatics
> 9. meta-linguistic abilities

> **COGNITIVE PROCESSING**
> When students have difficulty in one or more of the following areas, it may be related to a cognitive processing disorder:
> 1. attention
> 2. memory (short-term, working, long-term)
> 3. speed of processing
> 4. executive function:
>   - problem solving
>   - organizing, planning
>   - generalization of skills
>   - metacognitive skills (self-monitoring, strategic thinking)
> 5. social cognition

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II. IMPACT ON EDUCATIONAL ACHIEVEMENT

In addition to a processing difficulty, there must be evidence of the impact on educational achievement. The following are the academic areas listed in state and federal laws.

READING: DECODING

Decoding refers to the process of converting the printed word into its spoken form, essentially working from print to speech. Individuals use their knowledge of speech sounds and word parts (syllables, root words and affixes, inflectional endings) to "break the code" of written text. Current research suggests decoding at the single word level is most helpful when developed to an automatic level in order to facilitate fluent reading and comprehension. The ability to decode relies on a number of processes including phonemic awareness and understanding of the alphabetic principle. The role of a variety of other processes, among them rapid naming and orthographic awareness (the ability to recognize the letter patterns of the various speech sounds) is currently being researched. The ability to decode accurately and efficiently is a major factor in the development of successful reading skills. The inability to develop automatic decoding skills is a significant contributing factor in the development of reading disorders and may be related to a processing difficulty. Decoding instruction for a large number of readers is most successful when provided in a systematic, structured, multisensory manner. The efficacy of a variety of reading methodologies, which programs work best for which students, are currently under investigation.

READING: COMPREHENSION

Reading comprehension refers to the ability to understand what has been decoded. Beyond decoding, the ability to take meaning from text requires vocabulary knowledge, the use of morphological and syntactic cues, and an understanding of cohesive devices, words or phrases that tie ideas together. Understanding text involves literal comprehension (understanding what has been explicitly stated), reorganization (analysis, synthesis, and manipulation of explicitly stated information), inferential reasoning (combining explicitly stated information with experience and intuition to form hypotheses and draw conclusions), and the critical evaluation of information read. Challenges to reading comprehension may stem from; weak decoding skills, difficulties with attention, problems with short term and working memory, limitations in prior knowledge and experience, difficulties with higher order linguistic development (semantic and syntactic development – higher level vocabulary and more complex sentence structure), and global language processing difficulties, including the accuracy and speed of language processing, the ability to visualize, and the ability to develop conceptual frameworks for information read. Current research suggests comprehension is promoted by direct instruction in comprehension strategies and is facilitated by regular exposure to both supported and independent reading.

WRITTEN LANGUAGE

Written language is the most complex language task individuals face. It requires the development of numerous fundamental skills, including handwriting, spelling, and expressive language formulation. Further, these foundation skills must be integrated with more complex organizational and structural elements, such as text structure, text coherence, and sense of audience. The development of written language is a lengthy process which extends from childhood through the adult years. Writing is a cognitive task involving simultaneous attention to multiple demands which requires formal instruction to develop. Individuals can experience difficulty in the development of written language skills in any of the fundamental or more complex aspects of writing. Research in the area of written language and individuals with learning disabilities is not yet as extensive as the reading research. To date, however, research indicates the writing process becomes more manageable when students are exposed to instruction which teaches specific skills and which facilitates a systematic, step-by-step writing approach. Students also benefit from the opportunity for frequent practice.

MATH COMPUTATION

Math computation involves the integration of a number of cognitive components including counting knowledge, working memory, counting speed, procedural knowledge and fact retrieval. Breakdowns in computational skills tend to involve difficulty with semantic memory (fact retrieval), difficulty with procedural approaches, or visual-spatial difficulties. Research in mathematical disorders is not yet as extensive as the research in reading but does suggest students benefit from direct instruction moving from concrete to the pictorial / representational and on to the abstract.

MATH REASONING

Math reasoning involves both the understanding of basic and more complex mathematical concepts and the ability to apply these concepts in a variety of situations. Due to heavy language demands, math reasoning often requires listening and reading comprehension skills. Difficulties with math reasoning can stem from limitations in concept development, delays or deficits in language processing, and difficulties with creating and manipulating visual information. While still developing, the current body of research in mathematics suggests math education must focus on both conceptual development and the development of more automatic procedural and computational skills, again, from the concrete through the representational and on to the abstract. Current research suggests procedural skills appear to be best learned with frequent review and rehearsal while conceptual knowledge appears to be acquired through principles of guided discovery.

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Regression Formula

Colorado has developed a regression formula to be used in determining significant discrepancy between ability and achievement. Statistically, it has been shown that extreme scores on one measure will not be as extreme on another measure. If an individual has an extreme score on one measure, chances are excellent that a score on a second measure will be closer to the mean. When not accounted for properly, this can result in misleading information. The statistical purpose of a regression formula is to predict one score from another. A regression formula statistically controls for the regression to the mean effect that occurs when two measures are not perfectly correlated. Regression-based discrepancy formulas are both psychometrically and statistically sound and currently the best way to implement the Federal requirement to measure ability/achievement discrepancies. Colorado's regression formula represents a 1.75 SD discrepancy between ability and achievement.

The formula used to derive the scores listed on the <u>Discrepancy Conversion Table</u> is:

$$\hat{Y} - Y_1 \geq 1.75 * 15 \sqrt{1 - .4225}$$

In order to use the CDE regression formula reliably, test scores must be available as standard scores with a mean of 100 and a standard deviation of 15. Application of other types or variations of standard scores is inappropriate.

To apply the regression formula, the discrepancy table can be found on page 9 and 10:

1. In the first column on the left, labeled IQ, find the score corresponding to the student's IQ cluster score that is best representative of overall cognitive ability, usually full scale IQ score (see Special Challenges section about IQ Options for exceptions).

2. Down the column on the right, labeled Cutoff Score, is the student's regression-based cutoff. If a student's standard score cluster in reading decoding, reading comprehension, written expression or mathematics is at or below this cutoff score, the student may be eligible for special education services.

For example, if a student has an IQ of 105, find 105 in the first column to the left labeled IQ. Trace across to the right and find the corresponding number under "Cutoff Score." The cutoff score for IQ of 105 is 83. This student's academic achievement scores would need to be at or below 83 to meet criteria for this portion of eligibility determination.

Use of the regression formula must be supplemented with informal assessment, classroom observations, and family interviews before any conclusions about impact on education can be made. In addition, evidence of a processing difficulty must be documented.

Discrepancy Conversion Table

IQ SCORES AND CORRESPONDING ACHIEVEMENT TEST CUTOFF SCORES

IQ	CUTOFF SCORES
160	119
159	118
154	115
153	115
152	114
151	113
150	113
149	112
148	111
147	111
146	110
145	109
144	109
143	108
142	107
141	107
140	106
139	105
138	105
137	104
136	103
135	103
134	102
133	102
132	101
131	100
130	100
129	99
128	98
127	98
126	97
125	96
124	96
123	95
122	94
121	94
120	93
119	92
118	92
117	91

116	91
115	90
114	89
113	89
112	88
111	87
110	87
109	86
108	85
107	85
106	84
105	83
104	83
103	82
102	81
101	81
100	80
99	79
98	79
97	78
96	78
95	77
94	76
93	76
92	75
91	74
90	74
89	73
88	72
87	72
86	71
85	70
84	70
83	69
82	68
81	68
80	67
79	66
78	66
77	65
76	65
75	64
74	63
73	63
72	62
71	61
70	61

FORMAL EVALUATION INSTRUMENTS

The following are tools for assessment of PCD eligibility that are efficient and effective. The use of these tools will allow examiners to document perceptual judgment relative to a student's perceptual, linguistic and cognitive information processing profile, as well as, to apply the regression formula in the determination of discrepancy between ability and achievement. Remember, under federal and state law, the determination of eligibility for special education services is a multidisciplinary <u>team</u> decision.

I. PSYCHOLOGICAL / INFORMATION PROCESSING PROFILE

"PC Indicative Behaviors" is a CDE coined term for the information processing strengths and weaknesses that are central to a diagnosis of learning disabilities. These are the perceptual, language and cognitive domains where students with PCD may typically experience processing difficulties. Thus, data about a student's processing provides important information for curricular and instructional needs and strategies.

It is anticipated that the results from assessments of PC Indicative Behaviors will be used to support the team's professional judgment. In Colorado, documentation of a deficit in perceptual, language or cognitive processing is required for a student to qualify for special education with a PCD label. Documentation may be (a) available from tests or observations used during pre-referral (b) collected during formal assessment, (c) gathered through additional tests, observations, checklists, or interviews.

A. The following are instruments with appropriate norms, validity and reliability to be used confidently in assessing information processing deficits. Criteria for assessment selection, test tool descriptions and age norms can be found in Appendix G. Choose those instruments that are most appropriate to document the student's processing deficits. Refer to the Guide in Appendix E if you need assistance in selecting subtests. Subtask analysis and error analysis should be used in examining student performance, arriving at professional judgment and documenting clinical impressions.

PERCEPTUAL PROCESSING:

    a. Beery Buktenica Test of Visual Motor Integration IV

    b. Detroit Test of Learning Aptitude -4

    c. Differential Ability Scale

    d. Test of Phonological Awareness

    e. Test of Visual Motor Skills

    f. Woodcock-Johnson-R Tests of Cognitive Ability

    g. Woodcock-Johnson III Tests of Cognitive Ability

    Language test tools with subtests tapping spatial/temporal concepts are found in

        a. Clinical Evaluation of Language Fundamentals III

        b. Bracken Basic Concepts or Boehm Basic Concepts

LANGUAGE PROCESSING:

    a. Clinical Evaluation of Language Fundamentals III

    b. Detroit Test of Learning Aptitude – 4, Primary - 2

    c. The Diagnostic Achievement Battery (DAB-2/DAB-3)

    d. The Diagnostic Achievement Test for Adolescents (DATA-2/DATA-3)

    e. Differential Ability Scale

    f. Gray Oral Reading Test (GORT–D or GORT 3)

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g. Illinois Test of Psycholinguistic Abilities-3 (ITPA-3)

h. Wechsler Intelligence Scale for Children (WISC III)

i. Woodcock-Johnson Tests of Achievement and Cognitive Ability (WJ-R / WJ III)

j. Test of Auditory Perceptual Skills – R (TAPS-R)

k. Test of Adolescent Language (TOAL-2/3)

l. Test of Language Development – 2/3

m. Test of Written Language (TOWL-2)

n. The Wechsler Individual Achievement Test (WIAT)

COGNITIVE PROCESSING:

a. Cognitive Assessment System (CAS)

b. DTLA-4/DTLA-3/ Primary

c. Differential Ability Scale (DAS)

d. Hammill Multiability Intelligence Test

e. Test of Memory and Learning (TOMAL)

f. Wechsler Intelligence Scale for Children (WISC-III)

g. Weschler Memory Scale III (WMS III)

h. Woodcock-Johnson Tests of Cognitive Ability (WJ-R / WJ-III)

i. Universal Nonverbal Intelligence Test (UNIT)

II. IMPACT ON EDUCATIONAL ACHIEVEMENT

INTELLECTUAL POTENTIAL

A. The following are instruments with appropriate norms, validity and reliability to be used confidently in assessing intellectual potential:

➢ Differential Abilities Scale (DAS)
➢ Kaufman Adolescent and Adult Intelligence Test (KAIT)
➢ Wechsler Intelligence Scale for Children-Third Edition (WISC-III),
➢ Wechsler Preschool\Primary Scale of Intelligence Revised (WPPSI- R)
➢ Wechsler Adult Intelligence Scale-III (WAIS-III)
➢ Woodcock Johnson Tests of Cognitive Ability- Revised (WJ Cognitive-R)
➢ Woodcock Johnson Tests of Cognitive Abilities, III (WJ Cognitive-III)

B. The following guidelines represent best practice:

Total scores from tests of intelligence are generally used for the initial evaluation of students for whom there are concerns. However, the following need to be considered...

➢ The actual IQ test scores need to be made available to special education team members. Professional interpretation of scores should be included.
➢ If using the WJ Cog-R or the WJ Cog III as a measure of intellectual ability, best practice is the General Intellectual Ability cluster reflecting the Extended Scale (GIA ext), which encompasses 14 subtests. The GIA standard, reflecting the first 7 subtests, is best used for triennial evaluations.
➢ If a significant discrepancy exists between the primary core cluster scores (i.e. on the WISC III, the verbal IQ vs. performance IQ), refer to test's manual for the required point discrepancy reflecting a .05 significance level. If the required discrepancy is met, the staffing team has the option to use the higher IQ core cluster score to determine eligibility for PCD. (See Special Challenges IQ Options.)
➢ The Stanford Binet IV and the Kaufman Assessment Battery for Children are now not recommended in that the date of norm data collection is close to/over the recommended 15 years. When new updated norms

become available, these test tools will move to recommended status. Further, with the SB IV, the SD of 16 must be converted to a SD of 15. Application of Stanford Binet scores with its SD of 16 to the regression formula will skew findings.

➢ A brief measure of intelligence may be used for triennials if:

     (a) the student was at least 10 at the time of the last comprehensive evaluation,

     (b) there is evidence that the student's pattern of cognitive processes has not shifted,

     (c) scores from the brief measure of intelligence are within two-thirds of a standard deviation (i.e. 10 points on the WISC-III) of the previous comprehensive measure of intelligence.

C. When considering special education eligibility, the school's psychologist has the primary responsibility for assessment of intellectual potential. The psychologist may opt to use the results of tests administered by other professionals who are competent in test administration and knowledgeable about procedures and instructions provided by the test publishers when making interpretations.

ACHIEVEMENT

A. The following are instruments with appropriate norms, validity and reliability to be used confidently in assessing academic achievement:

READING:

a. The Diagnostic Achievement Battery (DAB-2/DAB-3)

b. The Diagnostic Achievement Test for Adolescents (DATA-2/DATA-3)

c. Gray Oral Diagnostic Test – R, Gray Oral Reading 3 or 4, Gray Silent Reading Tests

d. Kaufman Test of Educational Achievement (KTEA-NU)

e. Peabody Individual Achievement Test-R (PIAT-R-NU)

f. Test of Reading Comprehension - 3 (TORC-3)

g. Woodcock Johnson Achievement Tests (WJR/WJ III)

h. Woodcock Reading Mastery Test-R-NU

i. Wechsler Individual Achievement Test (WIAT)

j. Woodcock Language Proficiency-R

MATH:

a. The Diagnostic Achievement Battery (DAB-2/DAB-3)

b. The Diagnostic Achievement Test for Adolescents (DATA-2/DATA-3) KTEA

c. Key Math Diagnostic Test

d. Kaufman Test of Educational Achievement (KTEA-NU)

e. Wechsler Individual Achievement Test (WIAT)

f. Woodcock Johnson Achievement Tests (WJR/WJ III)

WRITTEN LANGUAGE:

a. The Diagnostic Achievement Battery (DAB-2/DAB-3)

b. The Diagnostic Achievement Test for Adolescents (DATA-2/DATA-3) KTEA

c. Peabody Individual Achievement Test-R (PIAT-R-NU)

d. Test of Adolescent Language (TOAL-2/TOAL-3)

e. Test of Written Language (TOWL-2/TOWL-3)

f. Wechsler Individual Achievement Test (WIAT)

g. Woodcock Johnson Achievement Tests (WJR/WJ III)

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B. Recommendations and best practice:

    a.   Assessment data and information in achievement areas needs to be sufficient to determine a student's abilities in reading, written language expression and mathematics. It is necessary that tests be chosen judiciously, have adequate reliability and validity, reflect recent norming, and provide standard scores with a mean of 100 and a SD of 15.

    b.   Students should not be determined eligible for special education services based upon the results of one subtest. A composite score reflecting a minimum of two subtests from a standardized instrument are needed to document achievement in the area(s) of concern.

    c.   When determining the focus of assessment, an appropriate balance must be achieved between cost effectiveness, specificity and thoroughness. A choice as to which test instruments will best tap areas of concern needs to be made on a case-by-case basis. Based on findings from preliminary screening, work samples and reports of classroom performance, some approaches to assessment may be deemed more suitable than others.

References:

Buros Mental Measurement Yearbook, Vol. 10, Vol. 11, Vol. 12, Vol. 13.

Hammill, D, Brown, L. & Bryant, B. 1992. A Consumer's Guide to Tests in Print, 2nd Edition. Texas: Pro-Ed.

Keyser, D. & Sweetland, R. 1994. Test Critiques Vol X. Texas: Pro-Ed.

Sattler, Jerome, (2000). Assessment of Children: revised and updated fourth edition. Jerome Saltier Publisher, Inc.: San Diego, CA.

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SPECIAL EDUCATION ELIGIBILITY PROCESS   (Graphic 1)

SECTION 3
DEVELOPED FOR THE IDENTIFICATION OF PERCEPTUAL AND COMMUNICATIVE DISABILITIES

Pre-referral

Teacher Classroom Interventions

Child Study Team / Child Find

Parent Request

Referral To Special Education

Evaluation Planning

Multidisciplinary Evaluation

Evaluation Findings

Staffing IEP Meeting

Triennial Review (Every 3 Years)

Annual Review

Review IEP

Monitor Progress Quarterly

Special Education Services

Develop Individual Education Plan

Special Education: Eligible for Services

General Education: Eligible for 504 Plan

General Education: Eligible for Classroom Strategies

YES TO 1 & 2 or 1 & 3

YES TO 1 NO TO 2 & 3

NO TO 1

PCD
1. Documented Processing Difficulties
2. Documented Discrepancy between ability and achievement
3. Documented Professional Judgment when Discrepancy does not exist (early childhood / English language learners)

Determining the Need for Special Education Evaluation: Pre-referral Process

Rules for the Administration of the Exceptional Children's Education Act:

4.01 (1) (c) (v) ...The building level process is to consider all pertinent information, the unique needs of the child and to generate alternative strategies for meeting these needs in non-special education settings or to determine the need for special education referral.

(2) A special education referral shall be clearly distinguished from a building level referral or a referral for screening both of which are regular education processes.

Each building should have a general education process in place for addressing teacher or parent identified concerns about students. This process should include the implementation of alternative strategies in the regular classroom for a designated period of time. Documentation of the intervention, duration and outcome will be included in the special education referral, if a referral is found to be necessary.

Multidisciplinary Evaluation Planning Process

After a referral to special education has been made and before individual evaluators begin their assessment of students, the multidisciplinary team needs to develop a plan to ensure that sufficient information will be obtained to make a determination of whether or not the student is in need of special education due to a perceptual and/or communicative disability. This planning may take place via a meeting or through distance correspondence. The prereferral information should be reviewed and questions about the student's strengths and weaknesses in processing (perceptual, language and cognition) and in achievement (reading, writing, and math) should guide decisions about evaluation. Multidisciplinary evaluation planning will reduce the redundancy of assessments typically done and will increase the overall understanding of the complex nature of PCD.

The Multidisciplinary Evaluation Planning Worksheet (Page 17) may be used as a tool for documenting the planning process, as well as, used as a simple way of reporting and comparing findings at the IEP meeting.

Multidisciplinary Evaluation Report

The Multidisciplinary Assessment Graphics (Page 18 and 19) may be used as tools for providing IEP participants with a visual representation of formal assessment data. A graphic representation may be used to illustrate 1) the peaks and valleys processing profile of students with PCD and 2) the discrepancy between achievement and ability.

The IEP contains a multidisciplinary report of the evaluation findings. Providing that the "documentation of evaluation data" section of the IEP contains all of the required information, a separate report is not necessary.

As per federal regulations, the following is required on the evaluation report:
  (1) Whether the child has a specific learning disability
  (2) The basis for making the determination
  (3) The relevant behavior noted during the observation of the child

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(4) The relationship of that behavior to the child's academic functioning

(5) The educationally relevant medical findings (if any)

(6) Whether there is a severe discrepancy between achievement and ability that is not correctable without special education and related services

(7) The determination of the team concerning the effects of environmental, cultural, or economic disadvantage.

> Each team member shall certify in writing whether the report reflects his or her conclusion. If it does not reflect his or her conclusion, the team member must submit a separate statement presenting his or her conclusions.

Re-evaluations

A re-evaluation is required once every three years.

When reevaluating students, the IEP team needs to review existing data and current information and determine what additional data is needed in order to determine; 1) whether the child continues to have a disability, 2) the present levels of performance and educational needs, 3) whether the child continues to need special education and related services, and 4) whether any additions or modifications to the special education and related services are needed.

If the IEP team determines that additional data is not necessary, this determination needs to be documented with the specific rationale. In addition, the child's parents need to be notified of the determination and the reasons for it and of their right to request assessment.

Documenting Professional Judgment

If the IEP team has reason to believe that the use of the discrepancy formula is inappropriate, as is often the case with young children and second language learners, the "eligible by variance from standard criteria" box is checked on the Determination of Disability page of the IEP. The rationale for the variance must be supported by the following documentation. Choose one.

1) The Documentation of Evaluation Data page of the IEP must include the assessment tools used and the findings, the justification for the variance and which evaluators made the determination.

2) The Documentation of Professional Judgment form (page 21) could be adapted and included in the IEP as documentation.

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MULTIDISCIPLINARY EVALUATION PLANNING WORKSHEET
Developed for the Identification of PCD

Student Name: _____ Age: _____ Date of Birth: _____ Date: _____

School: _____ Grade Level: _____ Case Manager: _____

Reason for Evaluation: _____

Questions Consider information needed about strengths and concerns in perceptual, language or cognitive processing and reading, writing, and math achievement.	Assessment Data Formal & Informal (Subtests, Observations, Interviews, etc.)	Person Responsible	Findings

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SAMPLE
MULTIDISCIPLINARY PCD ASSESSMENT GRAPHIC

150
140
130
120
110
100
90
80
70
60
50

Attention
Auditory Perception
Visual Perception
Visual-motor Integration
Language Vocabulary
Language Syntax
Memory
Problem Solving
Executive Functioning

SAMPLE

27

26

18
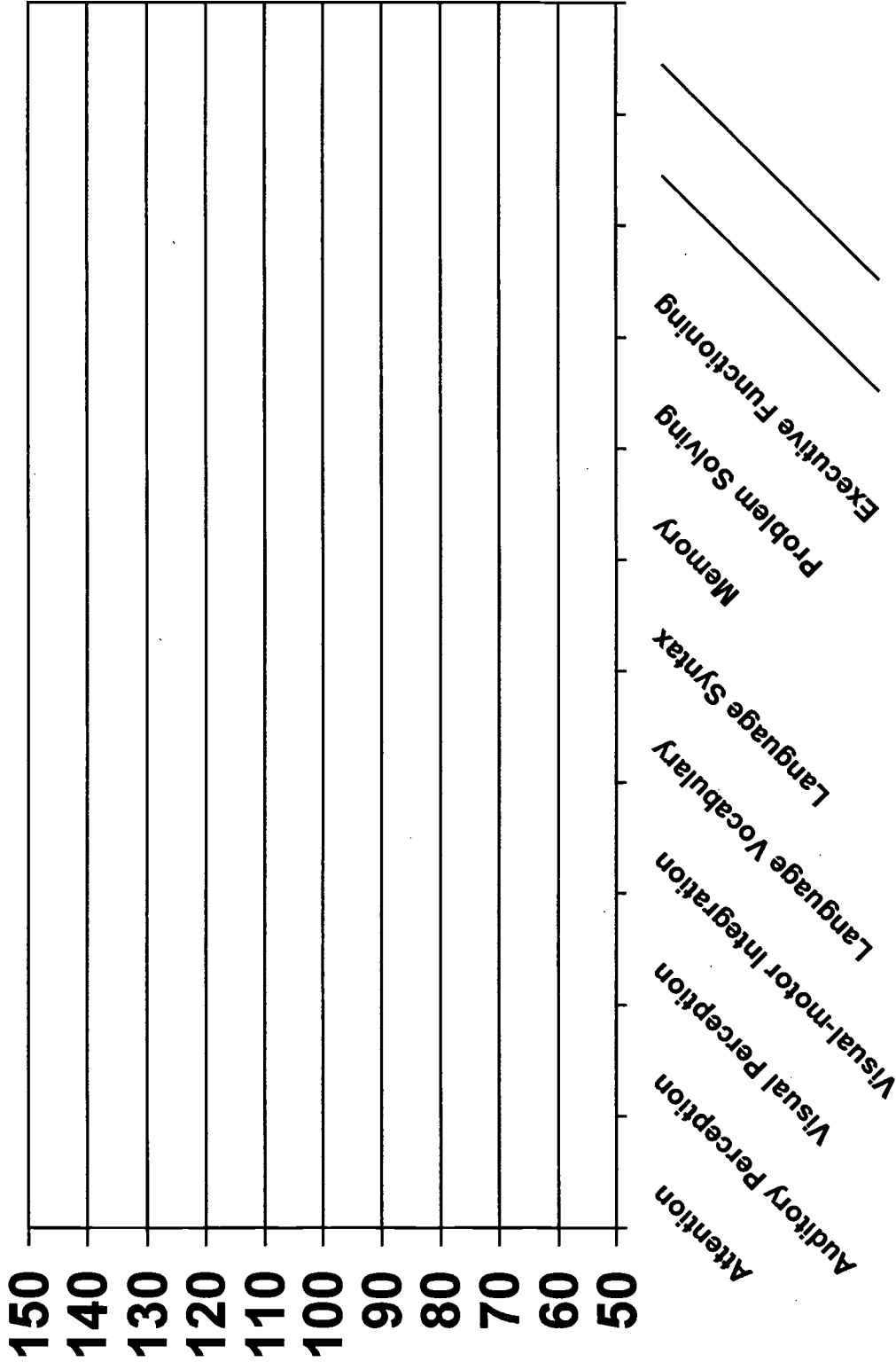
ACHIEVEMENT CLUSTER / ABILITY CLUSTER DISCREPENCY GRAPHIC

Reading
Decoding
Comprehension
Written Expression
Mathematics

Full Scale IQ
Verbal IQ cluster
Performance IQ cluster

150
140
130
120
110
100
90
80
70
60
50

28

29
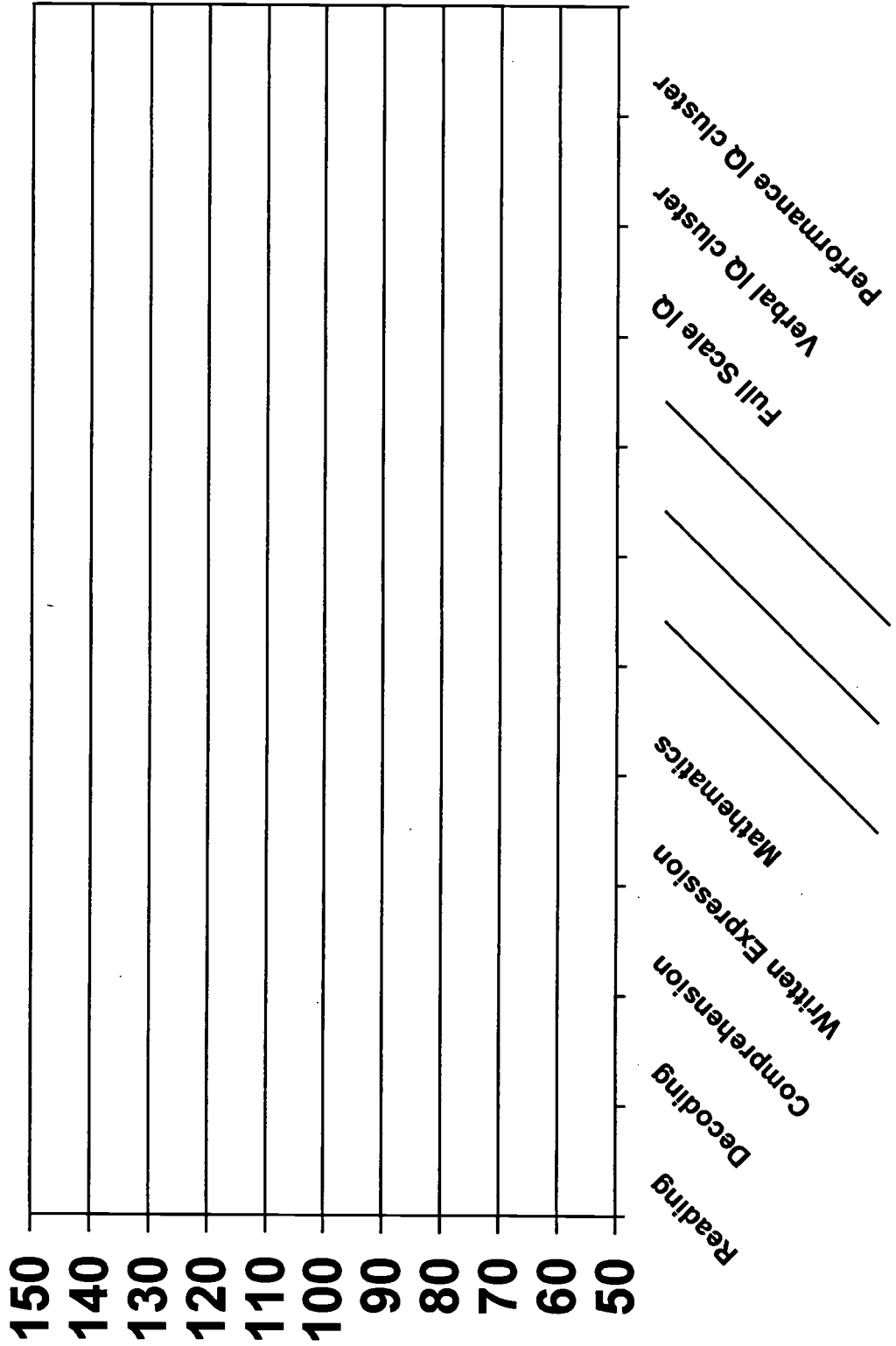
Determination of Disability

Legal Name of Child/Student	Child/Student ID	DOB	Date of Meeting

DEFINITION: A child with a *perceptual or communicative disability* shall have a disorder in one or more of the *psychological processes* involved in understanding or in using language, which prevents the child from receiving reasonable educational benefit.

Criteria for perceptual or communicative disability preventing the child/student from receiving reasonable educational benefit from general education shall include documentation of BOTH of the following:

1. A disorder in the psychological processes which affects language and learning consisting of:

☐ Significant discrepancy between estimated intellectual potential and actual level of performance.
Discrepancy Criteria:

☐ Difficulty with cognitive and/or language processing.
PC Indicative Behaviors:

AND

CHECK those that apply
2. Significantly impaired achievement in one or more of the following areas:

☐ Pre-reading and/or reading skills.

☐ Reading comprehension.

☐ Written language expression, such as problems in handwriting, spelling, sentence structure, and written organization.

☐ Comprehension, application, and retention of math concepts.

A basic disorder in the **psychological processes** affecting language and/or learning may manifest itself in an impaired ability to listen, think, attend, speak, read, write, spell, or do mathematical calculations.

The child's/student's learning problems are not primarily the result of: *(all must be checked)*

☐ Limited intellectual capacity

☐ Significant identifiable emotional disability

☐ Hearing Disability

☐ Vision Disability

☐ Physical Disability

☐ Environmental, cultural, linguistic or economic differences

☐ **Or is eligible by variance from standard criteria according to the following rationale:**

Required for Determination of a Perceptual or Communicative Disability.

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Documentation of Professional Judgment

If the "eligible by variance from standard criteria" box is checked on the Determination of Disability page of the IEP, the rationale must be supported by the following documentation. Choose one.

1) The Documentation of Evaluation Data page of the IEP must include the assessment tools and findings, the justification for the findings and which evaluators made the determination.

2) The following form could be adapted and included in the IEP as documentation.

Student Name _____

Date of Birth _____   Date of IEP_____

This team has reason to believe that the standard criteria used to determine eligibility for special education services is not an accurate representation of the student's needs. The following is documentation of the professional judgment of the following evaluators used to determine eligibility for this student.

_____ _____ _____ _____
signature   date   signature   date

_____ _____ _____ _____
signature   date   signature   date

TOOLS USED	FINDINGS/JUSTIFICATION
Formal Cognitive Measures (by subtest)	
Formal Achievement Measures (by subtest)	
Formal Perceptual/Communicative Assessment	
Informal Assessment (list specific information	

IDENTIFYING STUDENTS WITH PCD: KINDERGARTEN TO AGE SEVEN

Section 4

Editors for August 2001

Jeanette Cornier
Moderate Needs Consultant
Colorado Department of Education

Jane Amundson
Early Childhood Special Education Consultant
Colorado Department of Education

Original Contributors 1995

Lois Adams
CDE

Reta Nass
Littleton Public Schools

Jane Amundson
CDE

Pam Parker-Martin
Douglas County Schools

Darcy Allen-Young
Loveland Public Schools

Carolyn Prater
Littleton Public Schools

Ruth Berenbeim
Littleton Public Schools

Dana Pyle
Littleton Public Schools

Donna Brovsky
Adams District 12

Juanita Regehr
Jefferson County Schools

Mary Camp
Loveland Public Schools

Mary Schmitt
Littleton Public Schools

Kay Cessna
Jefferson County

Pat Tomlan
PST Consultants

Kathy Hatz
Adams District 12

Billie Webb
Adams District 12

Kathy Hofmann
Poudre Valley Schools

Janet Whonsetler
Littleton Public Schools

Bonnie Leaf
Adams District 12

The above task force developed the information found in this section in 1995. The content was updated to fit with the current guidelines.

Early childhood special educators are responsible for knowing the content in the rest of the guidelines, as well as, the content in this section.

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General Guidelines for Assessing Young Children

Because clinical expertise is so crucial in the assessment of young children, a thorough developmental history is a key factor in gathering information. Collaborating with and including the referring teacher in the staffing is important.

In the interest of obtaining valid assessment results, establishing rapport with the child prior to testing is important. Meeting with the child informally and including the parents is beneficial. Determining what time of day is optimal and where to test (home, classroom, office) is also important.

The assessment process should examine the impact of hearing and vision prior to assessing impact of motor skills, emotional status, health, culture and environment on the child's intellectual and cognitive performance. Language and communication skills can also be affected by these factors.

It is important to utilize positive reinforcement for the child's attempts during play based assessment to obtain optimal performance. If using a standardized assessment tool, be aware of how your interactions with the child impact the validity of the test.

When evaluating young children it is important to consider self-concept, maturity and primary language. Determination of whether there is a primary language other than English is required. A language sample such as dialogue between a parent and a child is helpful in ascertaining a child's expressive language abilities. Do they communicate in sentences? Does the parent accept gestures instead of language'? Is the child encouraged to expand on one-word answers? Analysis of this sample can provide insight into the language modeling, expectations and demands of his or her environment.

It is also important to rule out any physical or structural abnormalities that could be the cause of an inability to produce sound adequately. For example determine whether the oral structure is intact. The lips, tongue, teeth, palate, larynx, pharyngeal walls and related muscles all contribute to the production of sound.

A young child may react sensitively to an examiners sex, age, voice, tone, patience, based on his/her experiences and culture. Therefore, it is important to develop rapport with the child before beginning an evaluation. If you suspect that factors may be negatively affecting the testing situation, it is appropriate to choose a new evaluator.

Observations of young children are valuable as a part of the clinical assessment. Observation across several settings, if possible, is recommended.

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* Many of these suggestions were adapted from A Review of Assessment Instruments and Procedures for Young Exceptional Children, a product of the Wisconsin Department of Public Instruction, Madison, WI.

Determining PC Eligibility for Students Kindergarten to Age Seven

I. Evaluation tools and processes should be:
1. Appropriate for young children,
2. Helpful in determining whether a young student has a significant perceptual-communicative disability, and
3. Efficient and effective procedures.

II. Recommendations

When assessing students who are ages five through seven it is recommended to:

1. Use the two part identification process.
    1) Processing Profile of the Student
    2) Documented Impact on Educational Achievement / Preacademic Skills

2. Use clinical expertise. Due to the lack of standardized assessment tools with age appropriate norms, professional judgment is an important part of identifying students ages five through seven with perceptual / communicative disabilities. (See Documenting Professional Judgment, Page 21)

Documented observation, teacher and parents' report and work/samples are excellent sources of information. There are also a variety of appropriate tests and tools available to support clinical judgment. At least two sources of information should be used to provide evidence of a deficit.

3. Assess potential ability using the recommended assessment tools. They are appropriate for this population of students. Use appropriate procedures and interpretation strategies.

4. Use multiple sources of data to reach decisions. **For this age group there is a scarcity of valid and reliable instruments, thus it is important to use multiple sources of data to assess academic and pre-academic skills.** (See Checklists for Informal Assessment, Appendix F)

In documenting student performance in pre-academic areas, use data from at least two sources to describe present performance level in each academic area (reading, writing, and math).

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5. Apply the standard-score based regression formula as only one factor in considering eligibility. Use the formula and the scores from the standardized tests for determining discrepancy between ability and achievement. The formula does not apply to the PC Indicative Behaviors.

Because of the scarcity of good standardized pre-academic tools, if a student does not qualify using the regression formula, but there is strong evidence and team consensus of the presence of PC indicative behaviors impacting academic achievement, use professional judgment to make the determination of eligibility. The basis of this determination must be documented.

For students who are in kindergarten and still 5 years old, if they do not qualify under the PC criteria, they may still qualify for special education using the preschool disability criteria. If you begin with the PC criteria and the student qualifies, it will reduce the amount of testing necessary when the student turns six. Since one of the categories in the early childhood special education rules is the state categorical definition of PC, the 5 year old child may still be counted for early childhood funding.

6. If the standardized test scores in the academic areas are not validated by the other two data sources, then use group consensus and clinical judgment to make determinations of eligibility. It may be necessary to use non-standardized data to justify placement decisions in these cases. Documentation and justification of rationale is required. Team expertise and skills, and clinical judgment is critical in order to pull the information from all these data sources together and make responsible decisions.

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Standardized Tests Appropriate for 5 - 7 Year Olds

Criteria for test tools:

- are normed for the early childhood population
- include students 5 - 7 years old
- are reliable and valid
- receive at least a B rating in the Consumer's <u>Guide to Tests in </u>Print, 2nd Edition, by D. Hammill, L. Brown, B. Bryant, 1992.

Many of these instruments are available on 30-day approval so that you can evaluate them before purchase:

Detroit Tests of Learning Aptitude – Primary 2

Peabody Picture Vocabulary Test- Revised

Test of Early Language Development - 2

Test of Early Mathematics Ability - 2

Test of Early Reading Ability - 2

Test of Early Written Language - 2

Test of Language Development- Primary - 2

Utah Test of Language Development

Woodcock Language Proficiency Battery- Revised

Woodcock- Johnson III Tests of Achievement and Cognitive Ability

Checklists may be used as informal assessment to document perceptual, linguistic and cognitive processing ability impacting pre-academic skills (see Appendix F).

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SPECIAL CHALLENGES

Section 5

At times, there are special challenges that arise in the determination of eligibility for students with PCD. This section addresses common challenges.

DIFFERENTIATING CLINICAL DIAGNOSIS & SPECIAL EDUCATION ELIGIBILITY

Many parents take their children to be evaluated in clinical settings such as private evaluators, hospitals and universities. The terminology used in clinical reports is drawn from the medical and mental health fields and is, therefore, often not the same terminology used by school evaluators in the determination of special education eligibility. Terms frequently used in clinical reports that are not commonly used in school evaluations include; dyslexia, dyscalculia, dysgraphia, central auditory processing disorder, nonverbal learning disabilities, sensory motor integration deficits, executive dysfunction, pervasive developmental disorders and attention deficit disorders. Brief definitions of these terms are included in the appendices under terminology and definitions. Information from clinical evaluations, outside the school district, may be seen as adequate and may be used in lieu of a school evaluation if adequate and appropriate assessment tools (per state guidelines) have been used. However, a clinical diagnosis of a specific learning problem does not determine that the student is eligible for special education services in the schools.

IQ CLUSTER SCORE OPTIONS

While the Full Scale IQ is generally used in the discrepancy table, the IQ score used to determine eligibility may be other than the Full Scale IQ score when the FSIQ is not the best representation of the student's ability. Alternatives to the FSIQ must be a core cluster score, not a factor or a secondary cluster.

If there is a significant discrepancy between core IQ cluster scores, it may be indicative of perceptual/communicative disabilities and the higher IQ score should, therefore, be considered for use in the discrepancy formula as the better predictor of student ability.

To determine a significant discrepancy on a specific test tool, refer to the test publisher. The general rule of thumb is that if the difference between scores is not significant at, at least, the .05 level, the scores are to be treated as if no difference exists.

In no case is the difference between two cluster scores (for example; verbal and performance), to be used to determine eligibility for special education services. The discrepancy used to determine eligibility is between ability and achievement, not between two ability cluster scores.

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Method #1: using the WJ III Tests of Achievement
When using the WJ-III, because there are three subtests within the Broad scores for Reading, Math and Written Language, **WJ III Broad scores may be used** with the Discrepancy Table to determine PCD eligibility.

WJ III	subtest standard scores	cluster standard scores
Broad Reading...		_____
word identification		
reading fluency	_____	
passage comprehension	_____	
Broad Math..		_____
calculation		
math fluency	_____	
applied problems	_____	
Broad Written Language..		_____
spelling		
writing fluency	_____	
writing samples	_____	

Note: If there is reason to believe that a fluency subtest is artificially inflating the Broad Score, or if the examiner needs to separate reading decoding skills from reading comprehension or math calculation skills from math reasoning then use the Score Conversion Process as described below for **Method #2**.

Method #2: using the WJ Revised Tests of Achievement
The WJ-R Achievement Battery does not allow separate cluster scores to be combined into a single score. Therefore, **broad scores from the WJ-R may not be used.** When using the WJ-R, it remains necessary to convert cluster standard scores to scaled scores, sum the scaled scores, and convert the sum to standard score quotients. (Tables can be found in Appendix J.)

Now, the same conversion process may be used with the WJ-III when the examiner seeks to separate reading decoding from reading comprehension or math calculation from math reasoning.

WJ-R	Compuscore Cluster SS	Scaled Scores Table 1.	SS Quotients Table 2.
Basic Reading Skills	___ *	____	
Reading Comprehension	___ *	____	
Reading	sum........... _____	.... _____	
Math Calculation	___ *	____	
Math Reasoning	___ *	____	
Math	sum.......... _____	.... _____	
Basic Writing Skills	____	____	
Written Expression	____	____	
Written Language sum........... _____		.... _____	

*NOTE: These cluster scores combine only two subtests, therefore, if any of these cluster scores is used to determine eligibility, additional assessment is needed to confirm findings. Written language may NOT be divided into separate clusters to determine eligibility.

Student Name_____ Date_____

Documentation completed by_____

Woodcock Johnson Tests of Achievement

WJ III	subtest standard scores	cluster standard scores
Broad Reading.._____		
word identification	_____	
reading fluency	_____	
passage comprehension	_____	
Broad Math..._____		
calculation	_____	
math fluency	_____	
applied problems	_____	
Broad Written Language..................................._____		
spelling	_____	
writing fluency	_____	
writing samples	_____	

WJ-R / WJ-III (optional)	Cluster SS		Scaled Scores		SS Quotients
Basic Reading Skills	___*		_____		
Reading Comprehension	___*		_____		
Reading		sum.............._____.................._____			
Math Calculation	___*		_____		
Math Reasoning	___*		_____		
Math		sum.............._____.................._____			
Basic Writing Skills	___		_____		
Written Expression	___		_____		
Written Language	sum.............._____.................._____				

*NOTE: These cluster scores combine only two subtests, therefore, if any of these cluster scores is used to determine eligibility, additional assessment is needed to confirm findings. Written language may NOT be divided into separate clusters to determine eligibility.

Discrepancy Calculation & Statement

FS IQ/Cluster IQ (at .05 level) = _____   Cut-Off Score (according to Regression Table) = _____

Student's Academic Ability in _____ = _____

PC Indicative Behaviors are _____

          This student   **does qualify   does not qualify**   (circle correct response)
   for special education services as a youngster with perceptual-communicative disorders.

EVALUATING ENGLISH LANGUAGE LEARNERS

The identification guidelines recommended in this book are excellent for students who are native English speakers. Unfortunately, when a student is learning English as a second language many of the assessment tools and strategies are not appropriate. Special considerations are needed for students who are English Language Learners (ELL).

First, English Language Learners often need support in acquiring English and learning academic content. Before an ELL student is evaluated for special education it is important for the **school community** to provide appropriate instruction and support for second language and content acquisition.

Once appropriate supports and services are provided for an appropriate period of time, if the student continues to have difficulty, a referral may be made. The following key concepts are important in determining whether an English Language Learner is eligible for special education with the label of Perceptual-Communicative Disability (learning disability).

➢ *It is generally inappropriate to use standardized tests to determine eligibility.*
English Language Learners have diverse educational, linguistic, and cultural backgrounds and there is a paucity of tests in other languages, while those that do exist have inadequate standardization to represent the diversity.
There are a few appropriate standardized tests for Spanish speakers, but it is important to be aware of and consider the population used for norming.
Standardized tests may be used to gather information through observation but scores should not be reported.

➢ *It is critical to collect information from a wide variety of sources in order to make informed decisions. These are particularly helpful:*
    Family interviews
    Record reviews
    Classroom and social observations
   *Work samples*
    Mini-lessons

➢ *A pattern of processing disability must be documented in both languages to determine eligibility.*
This is critical because a student acquiring a second language may demonstrate similar difficulties when using the new language as a student with a learning disability.

➢ *Use of the discrepancy formula is not appropriate when the standardized tests are invalid.*
Professional judgment reflecting a wide variety of information must be utilized when making a determination of cognitive, academic or language functioning and processing difficulties. Thus, a discrepancy and a processing difficulty are documented via rich description and insight rather than reporting test scores. These impressions and resulting decisions need to be documented on the IEP.

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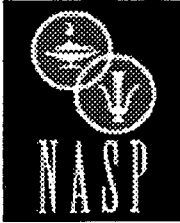
National
Association of
School
Psychologists

"Slow Learners" in the Regular Classroom
A Handout for Teachers

by Servio Carroll, Ed.S., NCSP, Sheridan (Wyoming) School District No. 2

Background

Slow learners are students with below average cognitive abilities who are not disabled, but who struggle to cope with the traditional demands of the regular classroom. Their slower learning rate typically requires accommodations to insure their success in school. These students are typically not eligible to receive special education services or included in Section 504 regulations. Comparatively, because they learn more slowly, they are "handicapped" in the regular classroom to approximately the same degree as students with average abilities when competing with gifted students. Statistically, these children comprise about 15% of the population and a far greater proportion of the enrollment in some schools.

"Slow learners" can be easily misidentified, so it is critical that teachers and parents consider a variety of sources of information before they assume that poor school performance is due to a slower rate of learning rather than to a real disability or situational factors. Results from intelligence tests alone should not be used to confirm that a student has "below average" ability, but should be confirmed or disproved with other information about the student's ability to learn – such as observations in familiar settings, review of school records and test scores, interviews with parents, etc. Students who are significantly behind their classmates academically, and who have not responded well to teacher and parent efforts to stimulate achievement, should be referred for a comprehensive evaluation to rule out a disability (such as learning disability, cognitive impairment) that would qualify the student for special education or accommodations under Section 504. Poor motivation, lack of consistent instruction (due to frequent moves or absences), limited English proficiency and a variety of health factors should also be ruled out as contributing to slow academic progress.

What can I do as a teacher?

The following accommodations may be helpful for not only "slow learners" but for other students who are performing below grade expectations:

1. Expect this child to require 3 to 5 times as much repetition of content as necessary for the "average" students. Basic facts may be adequately covered in the regular classroom by depth and breadth of content will not usually be absorbed unless the concept is reinforced through practical and familiar activities that foster generalization.

2. Slow learners who are underachieving in the basic academic areas may benefit from tutoring at school or privately. The goal of tutoring is certainly not "to get him to grade level" but to help her optimize her abilities, to meet the highest, realistic expectations.

3. It is perfectly reasonable and justified to give the slow learner shorter class and homework assignments, or to break up assignments in order to avoid overwhelming the student.

4. Strive to help the child develop a basic understanding of new concepts rather than require rote memorization of meaningless materials and facts.

5. Use demonstration and visual cues as much as possible. Do not distract with too much verbalization. Often, the use of multisensory approaches is beneficial.

6. Do not force the slow learner to compete with children of higher ability. Try to provide less competitive academic programs that will not cause negative attitudes and rebelliousness towards learning. Cooperative learning groups can foster optimal learning for both low and high achievers while encouraging appropriate social interactions in a heterogeneous group of students.

7. It is important that key, simple concepts be presented to children at the onset of any instructional unit to help provide "advance organizers" of the material that follows. The slow learner may encounter difficulties if too many concepts are presented at one time – keep it simple and focused. Materials, language, directions and verbal information should all be within the child's comprehension. This might require some modification or restatement for the slow learners in the classroom.

8. The slow learning child should be given assignments, particularly in social studies and science, that are highly structured and concrete. Large projects requiring mature organizational and conceptual ability should be eliminated (or substantially modified) and the child should be expected to perform within his capabilities. When working on cooperative learning projects, slow learners should be encouraged to assume responsibility for the more concrete, focused tasks while high achieving students assume responsibility for the more abstract components.

9. Emphasize over-learning and use a variety of incentives and motivators.

10. Provide many opportunities for the child to experiment and practice new concepts with concrete materials in real or simulated situations.

11. At the beginning of any instructional unit, the child should be presented with familiar material. This should facilitate new learning and generalization.

12. Simplify directions given to the child and be sure that directions are understood and remembered by having the child repeat the directions back. Maintenance of eye contact is very important.

13. Some children respond well to the guidance of a friendly but higher performing "buddy" in the class to remind them of page numbers, assignments, tests, directions, etc.

14. Be sure to hold appropriately high expectations for all students. This does not mean that you should expect the same performance from all students, but that you should encourage all students to "reach" a bit higher each time. Student achievement goes up for all students when teacher expectations are relatively high and clearly stated.

15. Encourage parents to be involved in their child's education, through supporting homework, attending school functions, communicating with teachers, etc. Send home frequent notes about the child's accomplishments. Parent involvement enhances performance of all students.

<u>Resources</u>

Bear, G., Minke, K., & Thomas, A. (Eds.). (1997). *Children's needs II: Development, problems and alternatives.* Bethesda, MD: National Association of School Psychologists.

Christenson, S. & Close-Conoly, J. (Eds.). (1992). *Home-school collaboration: Enhancing children's academic and social competence.* Silver Springs, MD: National Association of School Psychologists.

Martin, M. & Waltman-Greenwood, C. (Eds.). (1995). *Solve your child's school-related problems.* Bethesda, MD: National Association of School Psychologists.

Stoner, G., Shinn, M., & Walker, H.M. (Eds.). (1991). *Interventions for achievement and behavior problems.* Silver Springs, MD: National Association of School Psychologists.

CENTRAL AUDITORY PROCESSING DISORDER AND PCD

Children referred for special education evaluation due to learning difficulties are assessed by a multidisciplinary team utilizing a general processing paradigm. Sufficient information is usually available to determine eligibility, special education and related services, and IEP goals and objectives. However, in some cases, additional focused assessment in the auditory domain may be necessary to isolate certain auditory functions in order to develop an appropriate intervention plan. When necessary, the school audiologist should conduct this auditory processing assessment and should therefore be involved in the assessment planning process. It may also be appropriate to have the audiologist assess children with auditory processing deficits who have been receiving special education services when inadequate progress is made on IEP goals or when performance has plateaued. Specific guidelines for screening, assessment and intervention are available in the CDE document *Central Auditory Processing Disorders: A Team Approach to Screening, Assessment & Intervention Practices* (1997).

SPEECH - LANGUAGE DISABILITIES AND PCD

A speech-language disability is determined when evidence from the evaluation (including educational impact) meets the criteria for a communication rating of 3 or 4. A student who also meets the PCD criteria may also meet the speech-language criteria. In most cases, PCD will be the identified disability. Speech-language services may be provided, when appropriate, without a label of speech-language disability.

A speech- language disability can co-occur with PCD when the speech-language disability is not the language issue involved in the PCD. For example, articulation and resonance problems due to a cleft lit and palate condition may co-occur with PCD. In this case, both disabilities would be identified. For more information on speech-language disabilities, see the CDE document *Colorado Guidelines for Speech-Language Assessment and Eligibility* (January, 2001).

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Appendix A

PRETEST YOUR KNOWLEDGE OF
PERCEPTUAL, LINGUISTIC AND COGNITIVE PROCESSING

I.   Definitions of PC Indicative Components

Match Column A to Column B

A. Visual memory	1. Word knowledge
B. Auditory sequencing	2. The ability to hold information for simultaneous processing
C. Visual Motor Integration	3. Having and holding a steady state of concentration
D. Vocabulary	4. The ability to come up with strategies to get something done
E. Syntax	5. The ability to perceive the order of sounds
F. Attention	6. The ability to accurately copy what is seen.
G. Working memory	7. The ability to understand different sentence structures
H. Executive function	8. The ability to retain what is seen

II.   Subtest Selection based upon PC Indicative Components

Choose the best three (3) subtests from the box for each of the following PC Indicative domains. You will need to use some items twice.

a. To assess Auditory Perception, you would administer the following types of subtests:

_____

_____

_____

b. To assess Syntax, you would administer the following types of subtests:

_____

_____

_____

c. To assess Working Memory, you would administer the following types of subtests:

_____

_____

_____

d. To assess Visual Motor Integration, you would administer the following types of subtests:

_____

_____

_____

Subtest Options:	Sentence combining subtest
Spelling subtest	Listening to directions subtest
Decoding subtest	Handwriting subtest
Drawing subtest	Paragraph writing subtest
Reading comprehension of sentences subtest	Sound sequencing subtest
Reading comprehension of paragraphs subtest	Math word problems subtest

Answer Key

Part I.

A. –8
B. –5
C. –6
D. –1
E. –7
F. –3
G. –2
H. –4

Part II.

Auditory perception would be tapped through
      Spelling
      Decoding
      Sound sequencing

Syntax would be tapped through
      Reading comprehension of sentences
      Sentence combining
      Listening to directions
      Math word problems

Working memory would be tapped through
      Reading comprehension of paragraphs
      Listening to directions
      Paragraph writing

Visual Motor Integration would be tapped through
      Drawing
      Copying
      Handwriting

Appendix A

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THEORY OF PERCEPTUAL, LINGUISTIC AND COGNITIVE PROCESSING

Written by Patricia S. Tomlan, Ph.D., PST Educational Consultants
for the Guidelines for Identifying Students with Perceptual/Communicative Disabilities

This information is designed to support special educators in Colorado to identify the psychological processing difficulties associated with learning disabilities. An understanding of the framework of learning disabilities is necessary to identify the need for special education services and to plan for and teach students with learning disabilities. The framework presented here is based on an information processing model of learning disabilities.

The brain, in all its complexity and wonder, is responsible for our ability to conceptualize any given task. The key to unlocking the information processing strengths and weaknesses of individuals with learning disabilities is recognizing that functional variations within areas of the brain determine the nature of the learning disability. Thus, **neurological functioning** is the basis for all mental processing. Such neurological functioning is affected by anatomical and environmental factors that serve to facilitate or limit what an individual brings to a given experience and what he/she gains from that experience. These **anatomical factors** relate to the structure of and the interconnections within the brain. The specific lobes, gyri and sulci, and the pathways between and among these structures, determine the speed and integrity with which information is acquired and utilized. Much of this is determined by genetics, prenatal factors and early development. **Environmental factors** are those that are artificially and/or externally imposed upon the individual and affect neurological functioning. These include, but are not limited to, the influence of medications, alcohol and/or drug use, and ongoing language exposure and experience.

AN INFORMATION PROCESSING MODEL OF LEARNING DISABILITIES

The domains of information processing involved in acquiring, assimilating and using information are three: **perceptual, linguistic and cognitive.** The individual with learning disabilities can show any constellation of strengths and weaknesses across these three information processing domains. Current research suggests that learning is a complex task requiring interaction between and across these three domains. There is rarely a single, exclusive processing deficit.

1) Perceptual processing reflects the brain's ability to take in information through the senses. At its most concrete level, perceptual processing is responsible for our ability to take in the basic information necessary to perform the simplest task. At its most abstract level, perceptual processing underlies the development of both language and cognitive processes. Perceptual processing includes; visual, auditory, kinesthetic, tactile, temporal, and spatial processing.

a. **Visual processing:**
  ➢ **visual discrimination** (the ability to distinguish one item from another {i.e. "b" from "d", "p" or "q", "m" from "w", "t" from "f"})

> **visual sequencing** (the ability to keep visual information in order {i.e. " 135" as opposed to " 153})

> **visual tracking** (the ability to follow along a line) and

> **visual figure-ground** (perceiving foreground from background)

> **visual spatial abilities (**aligning what is seen is space, perceiving perpendicular v. diagonal lines)

Visual memory (the ability to retain what has just been seen)

Visual processing speed (how quickly visual information is processed)

Visual-motor integration (the ability to control movements in order to match what your hand does in space (or on a sheet of paper) with what your eyes see) It is the underlying perceptual ability necessary to write. An individual with visual-spatial-motor integration difficulties can be looking at a figure, or a number, or a letter, and be unable to reproduce that image despite his/her best efforts.

These are the drawings of a 16 year old with visual-spatial-motor integration difficulties. The figures on the top are part of the test stimuli.
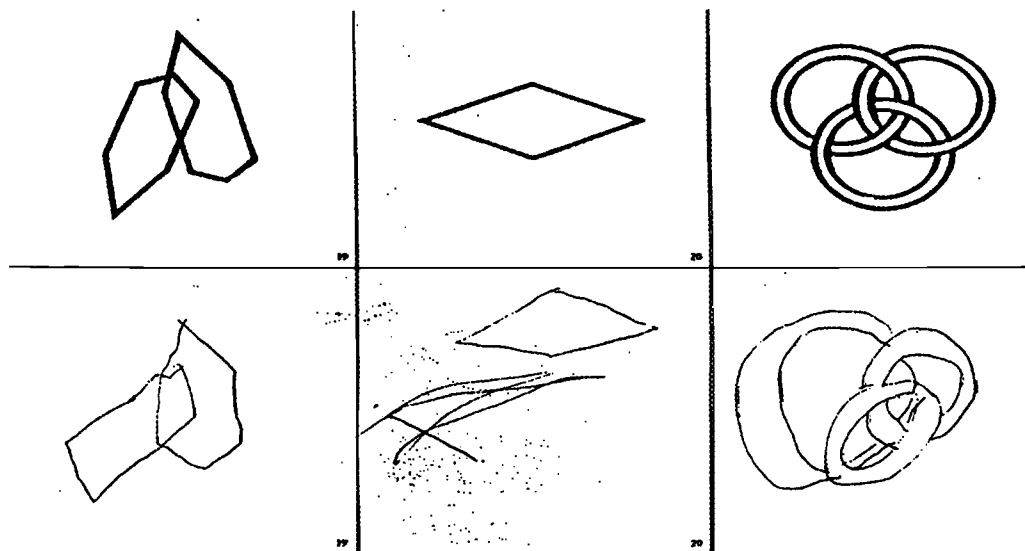
Many times, what is most frustrating to the individual with VMI difficulties is his/her inability to correct mistakes. This student can see the difference between the stimulus and his production, but is powerless to fix it. Add to these difficulties retaining visual-motor information and slowness in speed of processing, and you have someone who is going to find writing and drawing extremely frustrating.

b. Auditory processing:

> **auditory discrimination** (the ability to distinguish one sound from another, e.g., "d" from "t")

> **auditory sequencing** (the ability to hear sounds in order)

> **auditory closure** (the ability to blend sounds together) and

> ➤ **auditory figure-ground** (the ability to tune into relevant auditory input, while screening out background noise)

Auditory memory (the ability to retain what has just been heard)

Auditory processing speed (the rate at which auditory information is processed)

Auditory processing is closely connected with the articulation of sounds; an individual who has difficulty perceiving the individual speech sounds will often have difficulty articulating a sequence of sounds.

If a student has a history of early ear infections, they may be at risk for auditory processing difficulties. Auditory processing difficulties may be distinguished from auditory acuity in that acuity refers to the ability to hear or detect the presence of sound while auditory processing refers to what the brain does with the sound it hears.

c. Other perceptual processing:

> ➤ **tactile processing** (information received through the sense of touch)
> ➤ **temporal-sequential processing** (the awareness of order in time and sequence)
> ➤ **kinesthetic / motoric processing** (information received through motor input)
> ➤ **spatial processing** (information related to position in space)

It is important to note that when perceptual processing is less than optimal:
> ➤ The individual may not appropriately receive the information necessary to the task at hand.
> ➤ The individual may alter his/her problem solving response to match his/her understanding of the initial input.
> ➤ Therefore, the impact on future situations is exponentially compounded by the individual's inability to master a task in the same way as his/her peers.

2) Language processing For theoretical purposes, language processes incorporate 1) meta-linguistic awareness, 2) knowledge of the systems for creating meaning, 3) the coordination of thought and language, and ultimately 4) purposeful communication. Each of these language constructs is demonstrated as individuals listen and read (referred to as receptive language processes) and as individuals speak and write (referred to as expressive language processes).

Greater understanding of language processing leads to more accurate diagnosis and remediation. Given that most of the "invisible" neurological/cognitive/emotional disabilities have some form of language overlay, assessment that does not include an investigation of language processes is a significant issue.

Language is the representation of ideas and meaning utilizing a symbol system. Language is the key to thought. As human beings, we are unique in our ability to make our thoughts known through the use of words and sentences, and to understand another's use of words and sentences. It is through an analysis of language processes that diagnosticians are able

to gather evidence about another individual's thinking and how this thinking may vary from the norm.

Sometimes language processing difficulties are not evident until the middle school years. It is then that students are asked to write answers to questions based upon their understanding of what has been read or heard. Both reading and writing are heavily integrated with language processing.

a. Metalinguistic Awareness represents a person's recognition that language has consistencies and that its patterns can be manipulated to make and change meaning. Meta-linguistic awareness is what supports the spontaneous ability to correct inappropriate word usage or sentence construction when listening, reading, speaking or writing.

b. Language Components

> ➤ **Phonological system -** the sound system of the language. Phonological processing is a subset of auditory perception in that it involves the sounds an individual perceives as components of a language. The progression within the phonological system is generally from word to syllable to individual speech sound.

> ➤ **Semantics -** the way the meaning of a word changes depending on the sentence, reflects depth and breadth of vocabulary knowledge. For example, "run" has multiple meanings; a dog run, a jogger who will run, the run in hose, a computer run.

> ➤ **Morphological system -** the rules for the formation of words and the rules for changing word meaning. Morphology is the term used to describe what makes the meaning of **unrecoverable** different from the meaning of **cover.** Morphology is what distinguishes "The dog smells bad" (i.e. the dog stinks...) from "The dog smells badly" (i.e. puppy has a stuffy nose). Morphology also dictates how the word is to be used appropriately in a sentence; I went for a walk (noun) is a different sentence from I walked (verb) home.

> ➤ **Syntactical system -** represents the pattern or order of words in sentences which conveys meaning (sentence structures). Two sentences, **Jim has been eating this soup** and **This soup was eaten by Jim** mean the same but have very different syntactic forms. Interpreting the meaning of *"Before he went swimming, he fixed the car"* may be difficult for an individual with syntactic difficulties because he/she will rely on the word order of the sentence (first comes **swimming**, then comes **fixed the car**) and not know to translate this sentence into an understanding the he fixed the car first, then went swimming.

> ➤ **Pragmatics -** dictates what is appropriate and purposeful language for a given situation. Pragmatics involves appropriately balancing consideration for whether the expression is written or spoken, verbal or nonverbal with the goal of the communication, this in light of the audience and the situation. Speaking or listening in a social context, pragmatics also incorporates the changes in oral intonation that convey changes in meaning (i.e. the difference between *I saw her* {as opposed to

someone else} and *I __saw__ her* {as opposed to just hearing her} and facial and body gestures, timing, proximity to others, and personal and environmental cues.

c. The Meta-Linguistic Executor monitors language for both comprehension and expression. As the coordinator, it directs the other language functions by:
  ➢ tapping memory to receive, store, recognize, and retrieve language patterns, individually or in combination, for reception and transmission of ideas and thoughts.
  ➢ synthesizing information from each of the components for reception and transmission of ideas and thoughts.
  ➢ listening, it performs all activities within the time constraints of spoken language.
  ➢ speaking, reading and writing, it regulates speed of processing.
  ➢ providing meta-linguistic feedback to facilitate self-correction.

Students with language processing deficits do not inherently have the ability to step back and examine the language, group concepts and manipulate meaning. These deficits contribute significantly to their overall functioning in the academic arena.

3) Cognitive processing represents an individuals sense of what is known, what needs to be learned, and how to act upon it. It incorporates every form of thinking and learning and represents multiple interrelated processes that appear to be unique to the human mind. The degree of cognitive effectiveness and efficiency is highly linked to perceptual and language processes.

Levels of Cognitive Functioning

a. Attention represents the ability to selectively focus on a particular stimulus. **Focused attention** refers to the ability to direct concentration toward one particular activity. **Selective attention** refers to the ability to ignore competing stimuli while focusing on a prioritized activity. **Sustained attention** refers to the ability to hold that concentration with consistent mental effort over time. When attention is compromised, all other cognitive efforts are sabotaged.

b. Metacognitive Awareness represents the knowledge that one possesses about his/her own unique cognitive processes. The awareness function involves recognizing one's own abilities and limitations in relationship to the constraints of the environment and the inherent demands of the task. The individual's perception of a task's variables, the individual's perception of his/her own abilities to accomplish a task, his/her knowledge of the strategies available and his/her awareness of the need to utilize feedback from previous attempts, are included.

MODEL OF INFORMATION PROCESSING

Executive Function

Sensory Register	→	Short-term Memory	↔	Working Memory	↔	Long-term Memory
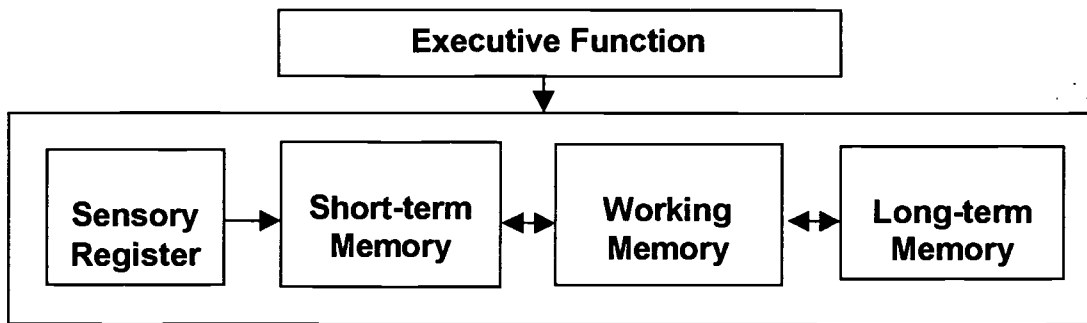
Adapted from Swanson, H.L.

c. **The sensory register** stores the information received by the receptors (I.e. eyes. ears. nose. tongue, etc.). The register has a large capacity and briefly holds information as exact replications of what has occurred at visual, auditory, tactile, motor levels. Because not all sensory information can be attended to, a selection process occurs and decisions are made to recognize specific patterns/associations.

d. **Short-term memory** holds condensed, paraphrased information for a finite length of time (approximately 30 seconds). Short-term memory has a finite capacity (6 +/-1 items). Information is maintained at a surface level that does not consciously rely on permanent knowledge structures for its operation. In order to maintain information in short-term storage, it is necessary to strategically group and/or categorize information as well as continuously rehearse and/or elaborate upon that information. Without this rehearsal, information in short-memory is either displaced or lost.

e. **Working memory** involves the workspace where one rehearses, codes, chunks, and retrieves information. It is a system in which information is temporarily held while being manipulated or transformed. It is that memory which serves to pull together information from long-term storage to assimilate and accommodate new learning entering short-term store. It has a finite capacity that allows one to hold a given amount of information in mind for a short time while simultaneously carrying out other operations. It is the ability to "suspend" portions of information while using related/unrelated information in order to problem-solve at another level. Because working memory capacity is limited, an individual must strategize ways to maximize that capacity by discovering meaningful patterns and chunking data. Thus, working memory efficiency is highly dependent upon the use of strategies for grouping, categorizing and prioritizing information.

f. **Long-term memory** is that large storage capacity that holds information that has been organized, expanded and elaborated upon in such a way as to be "connected" to previously learned information. Storage is in terms of meaningfulness and is the basis for the knowledge base discussed earlier. It consists of highly interconnected units of representation. How information is stored depends upon links, associations and general organization plans

g. **Knowledge base** represents the amount of information that has been learned through both informal and formal means that is stored in long-term memory. There are two types of knowledge. *Declarative knowledge* is the knowledge of facts, concepts and ideas. Examples of declarative knowledge include knowing math multiplication facts, specific dates in history or the cost of a favorite car. *Procedural knowledge* is knowledge about "how to do" things, the steps that are necessary to complete a given task. Examples of procedural knowledge include knowing how to correctly move the decimal point when multiplying, using a mnemonic device to learn specific dates in history or remembering how to operate the lawn mower.

h. **Strategy implementation** represents the purposeful and specific action(s) that an individual will carry out in order to complete a task. Some people do not always know how to "attack" a problem. They do not spontaneously create relationships among concepts through association, sequencing, grouping, categorization and prioritizing. They instead attempt to learn new information as discreet units. Other people may recognize what strategies would be useful under what circumstances, but don't have the ability to process that information simultaneously. Strategy abstraction and generalization is the ability to transfer and expand upon known strategies to meet the unique needs of a different circumstance, the ability to see similarities and differences in situations and make appropriate adjustments. Effective strategy use includes the ability to recall previous strategies that are known, revise a known strategy to meet the new context, operationalize that strategy and then evaluate that strategy for effectiveness.

i. **The Executive Function** includes the process of coordinating (e.g., prioritizing, organizing, evaluating, directing) all other mental activities. The executive function oversees multiple tasks: planning activities, assimilating and accommodating new information, monitoring performance, reorganizing strategies, maintaining on-task behaviors, evaluating the outcomes of any strategic action and utilizing a degree of flexibility to alter strategies/approaches as necessary. It includes both simultaneous (doing more than one thing at a time) and sequential (performing a series of tasks in a specific order) processing capacities. The strength and integrity of the executive function determines whether the individual can review his/her own cognitive strategies, select and reject them appropriately, and/or persist in searching for the most suitable task approaches at various stages of performance. Many people with neurologically-based disabilities do not have the cognitive strength required to monitor all the various aspects of the tasks they are asked to perform.

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Appendix B

EXAMINER QUALIFICATIONS
FOR EDUCATIONAL ASSESSMENT

Determining whether or not a student has a disability that entitles him/her to special education is a decision that has significant impact on the student. It is the responsibility of the Administrative Unit to ensure that professionals in positions that require them to administer standardized assessment have the appropriate training.

IT IS ESSENTIAL THAT ASSESSMENT USED IN THE IDENTIFICATION OF PCD BE CONDUCTED BY QUALIFIED EXAMINERS.

Federal Regulations 300.532 state: (c) (1) Any standardized tests that are given to a child- (i) have been validated for the specific purpose for which they are used; and (ii) are administered by trained and knowledgeable personnel in accordance with any instructions provided by the producer of the tests.

1. In most cases, a three to five credit college course specific to the administration and interpretation of standardized assessments will be sufficient for tests of achievement. A TEACHING LICENSE OR A DEGREE IN SPECIAL EDUCATION DOES NOT, HOWEVER, GUARANTEE THAT THE INDIVIDUAL HAS BEEN TRAINED IN ADMINISTRATION AND INTERPRETATION OF STANDARDIZED ASSESSMENTS. Some assessment courses focus only on familiarization with standardized assessment or use of informal assessments, portfolio assessments, or criterion-referenced assessments.

2. If a teacher is not qualified to administer and interpret assessments, he/she will need specific training prior to being asked to do so. Guidelines for training of examiners are found on the following page.

3. If for any reason a teacher is unable to administer the assessment in a standardized way (for example a teacher with a Spanish accent administering a phonemic processing test), a partnering teacher should be assigned to administer the assessment.

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EXAMINER QUALIFICATIONS
FOR EDUCATIONAL ASSESSMENT

ASSUMPTIONS

1. The determination of a disability that affects academic achievement has a significant impact on a student's life.
2. Prior to determining that a student has a disability, it is critical to document learning characteristics and responses to interventions conducted over a period of time sufficient to impact student learning.
3. In order to determine if a student qualifies for special education due to perceptual or communicative disability, evaluation of processing abilities must occur and educational impact must be documented.
4. Evaluators / Assessors / Examiners must demonstrate knowledge and skill in "Critical Components".
5. Training is required in administration and interpretation of standardized assessments in order to develop the necessary knowledge and skills.

TRAINING IN ADMINISTRATION SHOULD INCLUDE:

➤ Observed Practice with Feedback

➤ Several Independent Practice Administrations (5 administrations recommended on students not being evaluated for special education)

➤ Instruction in **Critical Components**
Knowledge of:
- descriptive statistics related to assessment (e.g. age and grade equivalents, standard scores, percentiles, ranks, RPI...)
- observation and documentation of test behaviors
- characteristics of learning disabilities (theory)
- selection and administration of subtests to gain insight into processing abilities
- administration guidelines contained in test manuals
- validity and reliability
- techniques to establish rapport including giving info to student about the test
- importance of adhering to the directions provided by the test developer
- scoring – basals, ceilings, and continuation rules
- documentation of errors and recording of student responses for error analysis
- determination of when a test is inappropriate (e.g. language differences, age appropriate...)

➤ Documentation of Competency

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TRAINING IN INTERPRETATION SHOULD INCLUDE

➤ Mentored Interpretation with Feedback

➤ Instruction in the **Critical Components**
   <u>Knowledge of:</u>
   - interpretation of basic statistics
   - in-depth understanding of disabilities and specifically learning disabilities
   - knowledge of and skills in; task, item, and error analysis
   - interpretation of behavior during testing
   - how to synthesize information in a written format
   - integration of results with other assessment data and with general curriculum standards
   - ability to interpret findings and inform parents and staff of unique needs and instructional implications
   - knowledge of eligibility process / how data fits

➤ Practice with Case Studies

➤ Guided Practice Explaining Results

➤ Practice Writing Report of Findings

➤ Practice Writing IEP based on Data Interpretation

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Appendix C

Terminology and Definitions

PERCEPTUAL PROCESSING:

➢ Auditory Processing: The ability to process what is heard. The ability to discriminate sounds, to separate sounds in the foreground from background noise, to sequence sounds to form units of meaning and ultimately to analyze and synthesis those sounds. In order to extract meaning from what is heard auditory memory will play a key role. The levels of memory are discussed under cognition. Auditory perception not only encompasses and interrelates such functions as auditory discrimination, auditory figure-ground, auditory closure, auditory analysis, auditory synthesis and auditory memory functions, but auditory motor skills as well. The other perceptual areas are listed under cognition.

➢ Visual Processing: visual, visual-spatial, visual-motor: The process of receiving information through visual processing. Subskills include visual discrimination, visual figure-ground and visual memory. When visual processing incorporates awareness of spatial relations (i.e. perception of geometric forms, discriminating the difference between a b and a p), visual-spatial processing is involved. A task which requires visual perception with a written/drawn response reflects visual-motor integration.

➢ Temporal-sequential processing represents one's awareness of time and sequence and their role in all activities. Temporal processing includes the ability to read a clock, estimate time passing, self-regulate pacing, follow multistep directions, motor planning, and holding sequences of data in short term or working memory.

LANGUAGE PROCESSING:

➢ Phonemic Awareness: The ability to distinguish one phoneme from another and to realize that phonemes sequenced together form words and patterns. In addition, those patterns can be altered to change meaning. Phonemes are the smallest unit of language that distinguishes one word from another, (i.e., the "m" in "mat" from the "V" in "bat").

➢ Vocabulary/Semantics: Vocabulary is comprised of all the words or phrases in language and semantics is the meaning of those words/phrases. In reference to a child's vocabulary, it would mean all the words that he or she knows. The meaning of words often depends on context. The contextual meaning of an expression can occur at the word, sentence or discourse level. There are both receptive and expressive vocabularies. Receptive language comprises what a student knows, recognizes and understands. Expressive language what a student actually utilizes in speaking or writing. Skill deficiencies and fear of misspelling, mispronunciation or misuse of certain words in context can often limit a PC student's expressive language.

➢ Fluency/Word Retrieval: The ability to retrieve vocabulary or expressions from memory and to produce them in a cohesive and fluid manner without pauses, hesitations, stammering or conceptual gaps when speaking or writing.

➢ Syntax/Sentence Complexity: The pattern or order of words in sentences and the meaning they convey. Utilizing words out of sequence or defining more clearly can often alter or change a meaning.

➢ Figurative Language: Based on using a figure of speech or metaphorical language. Generally, a term is transferred from the object it ordinarily designates to an object it may designate only in comparison, analogy or symbolism (i.e., "The sands of time" or "The autumn of our years"). Often, PC students interpret figurative language in a very literal context.

➢ Listening Comprehension: The ability to understand **what** is heard. This may be affected by auditory perception, memory or the ability to focus **one's** attention for periods of time.

➢ Discourse Organization: The patterns for oral and written language. When communication is to serve a particular purpose, there is a hierarchical structure of ideas. For example, talking with a friend on the telephone versus giving a persuasive speech or writing an essay. Examples of written discourse organization are problem-solution, cause-effect and time order.

➢ Meta-linguistic Abilities: The awareness or recognition that language has patterns and that those patterns can be altered to change meaning. To put it simply, it is the ability to analysis or talk about how you use language. To elicit meta-linguistic information from a student, one might probe, "I noticed you were hesitating when you explained your project to me. **Did** you find the word you were looking for; or, did you substitute another one? How do you look for words you want to use, but can't think of? How do you remember or learn new words? Do you put similar words together in your memory? Do you group words by picturing them?"

➢ Language and Cognitive processes are interrelated and it is often impossible to separate them out. Remember that Language is the vehicle for thinking. It is the basis of all academic and social skills. If a student is experiencing difficulty with academic content or output, a diagnostician should examine the basic language processes required for such tasks.

COGNITIVE PROCESSING:

➢ Attention: The ability to sustain focus for a period of time on a task, an activity or instructional lesson. Attention can be quantified in terms of span (how ong), maintenance (intensity), selectivity and shifting ability (changing from one topic to another).

➢ Speed of Processing: The rate at which a learner can process information gained from the senses. This may be stronger in one sensory modality than another.

➢ Problem-solving: The ability to assimilate new information with old information in order to employ a strategy or strategies to arrive at a solution to a problem. The sequence or hierarchy of the strategies also has important indications. For certain tasks, steps employed out of sequence will yield a different answer; for other tasks, the sequence will not matter or alter the final product. This is where a diagnostician's skills in subtask analysis will be valuable.

➢ Organizing, Planning: To arrange and assemble information, knowledge or strategies into a coherent form; to complete assignments or projects by coordinating, prioritizing and arranging information; to plan a structural approach to attack a problem, project or assignment.

➢ Strategic Thinking: The purposeful and specific action(s) that a student will carry out in order to

complete a task. This includes the ability to match specific strategies to specific task requirements and the unique characteristics of the learner. It is also important to be able to expand upon and transfer strategic thinking to a new person, new task or new setting (strategy abstraction and generalization).

➢ Generalization Skills: The ability to utilize information, knowledge or strategies learned or employed in one setting or task to a new setting or task. Generalization not only includes an application of skills to a new situation, but also a decision as to whether or not to utilize certain information or strategies.

➢ Memory: Memory abilities are the building blocks of cognitive processing. The capacity to retain what is known is necessary for learning and production. There are three levels of memory:

➢ Short-term memory which holds condensed information for approximately 30 seconds.

➢ Working memory where one rehearses, chunks, codes, organizes and assimilates information.

➢ Long-term memory that stores information that has been organized and elaborated on so that it is connected to previously learned information.

➢ Metacognitive Skills/Self-monitoring: The ability to know about knowing. The awareness that one possesses about one's own cognitive processing. To employ meta-cognitive skills or self-monitor, one must know their own abilities and limitations in relationship to the demands of the task and the constraints of the environment.

Appendix D   Improving Your Diagnostic Skills

Understanding of perceptual, linguistic and cognitive processes is necessary to differentiate a perceptual/communicative disability from underachievement and other disabilities. It is crucial to identify specific processing deficits in order to understand a student's unique learning needs and to plan an instructional program that will meet those needs. The student should demonstrate a processing deficit that is chronic and intrinsic in nature. This deficit should exist across settings and situations as determined by multiple measures. Multiple measures could include test scores, error analysis, subtask analysis, observation, interview, curriculum-based measures, records review, etc. Processing deficits should not be determined solely through formal assessment. They should not be viewed in the framework of a statistical formula. The regression formula does not apply to the documentation of PC Indicative behaviors.

To assist with your diagnostic skills:
1. Analyze students work samples. Through subtask analysis, item analysis and error analysis, try to arrive at a pattern of problem solving strategies that would be indicative of a processing disability. Analysis of test, class work and performance is appropriate.
    ➤ What are the sequential parts of the task?
    ➤ What language and/or cognitive processing skills does the task or item require?
    ➤ What are areas of strength for the student?
    ➤ What specific errors did the student make?
    ➤ Is there a pattern?
    ➤ What strategy did he or she employ? Does that strategy rely more heavily on one type of processing ability? (This might suggest a weakness in another processing area.)
    ➤ What tasks seem difficult? What processing skills do they require?
    ➤ Are there strategies the student seems to avoid or not utilize?
    ➤ At what point does the employed strategy break down or become inefficient?
    ➤ What skills would the student need to utilize other strategies?

2. <u>Observe</u> the student in an academic setting and also in social situations. Although the law requires observation in an academic setting, a processing deficit will be pervasive across settings and will be apparent in social situations also. Remember, art observation by a team member other than the child's regular teacher is required as part of the eligibility assessment. However, ongoing observations--both formal and informal--will provide great insight. Watch how the student learns. Watch how he or she attacks and solves problems. Compare that success rate to your style of teaching or the instructional delivery mode at the time of observation.

3. <u>Ask</u> students how they problem solve. Use informal interview protocols with a student. For further indications of how a student processes and stores information both linguistically and cognitively, ask the student:
    ➤ What problem are you trying to solve?
    ➤ What are the strategies or steps you are using?
    ➤ Why did you use that particular strategy?
    ➤ Talk me through what you said in your head as you solved that problem.

Asking students how they learn seems simple, but it makes a great deal of sense. Students know better than anyone how they take in information and utilize it to solve problems. They will require assistance in expressing learning modes and preferences, but the first step is getting them to think about it through an informal interview. Students may discover new information about how they learn as this interview progresses. This is meta-analysis. Meta-cognitive and meta-linguistic skills are thinking about how one thinks or talking about how one learns or uses language. Developing this ability in students is an important skill in the implementation of compensatory techniques and the acquisition of self-advocacy abilities.

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Appendix E

Checklists for Informal Assessment (K – Age 7)

Perceptual Prerequisites
- ➤ visual processing
  - _____ discrimination
  - _____ sequencing
  - _____ orientation & tracking
  - _____ memory
  - _____ visual-motor
- ➤ auditory processing
  - _____ discrimination
  - _____ sequencing
  - _____ phoneme awareness & segmentation

Language Prerequisites
- ➤ the ability to comprehend questions & directions
- ➤ the ability to formulate appropriate responses
- ➤ depth of vocabulary
  - _____ word retrieval
  - _____ variations in semantic interpretation
- ➤ the ability to appropriately use syntax/grammar
  - _____ length of sentences
  - _____ complexity of sentence construction
- ➤ verbal memory

Cognitive Prerequisites
- ➤ general concepts, including
  - _____ identification of colors
  - _____ determination of similarities/differences
  - _____ determination of cause/effect
  - _____ recognition of part/whole relationships
  - _____ ability to sort, group and categorize and recognize patterns
  - _____ demonstration of the beginnings of abstraction (prediction)
  - _____ ability to generalize
- ➤ short-term memory
- ➤ long-term memory
- ➤ length of response time for output relative to
  - _____ problem solving
  - _____ motor responses & motor planning
  - _____ language
- ➤ perseverative tendencies across
  - _____ motor
  - _____ language
  - _____ problem-solving
- ➤ time on task
  - _____ self-monitoring
  - _____ task initiation, maintenance and completion
- ➤ symbolic representation evident through purposeful play with or without objects
  - _____ recognition of environmental symbols
  - _____ recognition of letters and numbers
  - _____ recognition of words
- ➤ ability to distinguish fact from fiction
- ➤ abilities to
  - _____ assimilate information; the ability to absorb and incorporate new
  - _____ information to formulate new awarenesses and knowledge.
  - _____ accommodate information: the ability to internalize new
  - _____ information such that what is new impacts what was old and
  - _____ knowledge is subsequently modified.

MOTOR SKILLS CHECKLIST

1) SENSORY INTEGRATION: The ability to take in information through the senses (tactile, visual, auditory, movement) and make an appropriate response.

➤ **The child who finds touching uncomfortable:**
_____ flinches or withdraws when touched or hugged avoids activities that
     require touching or close contact (i.e., sitting in circle, holding hands, line games)
_____ reacts with flight or fight responses (i.e., standing in line, circle time) when accidentally bumped

➤ **The child who compulsively craves being touched or hugged or the child who has to feel things to understand them:**
_____ always sits close to or touches other children in circle strongly prefers to
     lean against or sit in teacher's lap
_____ has a need for excessive oral stimulation (chews on shirt, hair, pencils, etc.)

➤ **The child who stands out from the group in structured and unstructured motor tasks:**
_____ avoids using playground equipment and/or physical games
_____ seeks excessive movement (rocks in chair, craves swinging or spinning)
_____ is particularly uncoordinated, having lots of accidents

➤ **The child with extraneous and involuntary movement:**
_____ uses two hands to paint or doesn't cross midline
_____ does chronic toe walking does twirling or rocking movements
_____ shakes or flaps hands or has unusual hand postures
_____ produces extremely heavy coloring

2) MOTOR PLANNING: The ability to plan and carry out activities that require any motor output in an automatic and efficient manner.

➤ The child who relies heavily on watching own and other peoples' movements in order to do them (movement activities, art projects, puzzles):
_____ may frequently misjudge distances in fine and gross motor tasks
_____ takes much longer to do the task, even when trying hard and produces a
     final result that is still not as sophisticated compared to peers
_____ shows a lot of repetitive trial and error when trying to do gross motor
     (maneuver through room); fine motor (puzzles, cutting projects)
_____ mix up top/bottom, left/right, front/back, on simple project where a model is to be copied
_____ when working on art project can't organize space or materials

➤ **The child who has reasonable amount of experience with gross motor activities but who shows little improvement:**
_____ leans on table or holds head in hand during table top
_____ ball handling skills are low
_____ uses tongue, feet or other body parts excessively for high concentration activities
_____ shows poor bilateral motor skills (hopping, galloping, skipping, finger play, etc.)
_____ is awkward getting up/down, climbing, jumping, and getting around toys and people
_____ is consistently lethargic

➤ **The child who has a reasonable amount of experience with fine/visual motor activities but who shows little improvement:**
_____ a child who doesn't have a preferential hand or switches hands
_____ a child who has an immature grasp on markers and/or scissors
_____ a child who can't color within lines on simple projects or copy simple designs
_____ a child who produces simplistic or immature drawings
_____ a child who can't cut out simple shapes or lines
_____ consistently avoids manipulatives and puzzles.

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LANGUAGE SKILLS CHECKLIST

> ## AUDITORY PROCESSING

_____ able to recognize familiar sound (environment)
_____ able to respond in a reasonable length of time as compared to other children
_____ able to attend to the main auditory task in the presence of background noise

> ## RECEPTIVE LANGUAGE
_____ able to understand vocabulary used in the classroom
_____ appropriately follows directions as compared to other children
_____ appropriately answers question forms
_____ listens to a story and can retell accurately
_____ responses are "on target"

> ## EXPRESSIVE LANGUAGE

_____ uses appropriate number of words in a sentence as compared to other children
_____ uses a variety of words in a sentence (nouns, verbs, pronouns, adjectives)
_____ shows no difficulty in finding the right word (word retrieval)
_____ verbally sequences songs and finger plays

> ## PRAGMATICS

_____ in spontaneous conversation child stays on topic
_____ takes conversational turns appropriately
_____ able to initiate and terminate social interactions appropriately
_____ establishes and maintains eye contact appropriately with adults and peers
_____ uses appropriate intonation and vocal intensity for situation

> ## ARTICULATION

_____ speech is easily understood by unfamiliar listeners
_____ demonstrates use of age appropriate sounds
_____ able to put words and sounds in proper sequence
_____ child has history of few or no ear infections or middle ear problem

> ## FLUENCY

_____ shows excessive repetition or prolongation of sounds
_____ has long blocks or hesitations during speech
_____ avoids speaking situations
_____ demonstrates tension and/or struggle when speaking
_____ child is aware of dysfluent speech
_____ rate of speech is extremely fast or slow

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COGNITIVE PROCESSING SKILLS CHECKLIST

Cognitive processing skills reflect the ability to direct, coordinate, organize and integrate several kinds of "thinking". Few informal instruments are available with which to measure aspects of executive functioning. Listed below are suggested informal indicators of executive functioning.
Difficulties with the following are observed and informally evaluated in comparison to developmental norms/milestones:

➢ **Speed of Processing** - a student's ability to input, process and generate output in a reasonable length of time for his/her age/grade.

_____ speed shown when perceiving or working with visually-based information
_____ speed shown when perceiving or working with auditory and language-based information
_____ speed shown when problem-solving
_____ speed shown when asked to offer an oral response
_____ speed shown when asked for a visual-motor response
_____ speed shown when asked to perform a manual task

➢ **Problem-solving-** a student's ability to identify the problem, determine feasible paths of approach, and generate possible solutions.

_____ ability to distinguish fact from fiction
_____ ability to determine a logical, appropriate starting place
_____ ability to distinguish likenesses from differences, to compare / contrast
_____ beginning to understand alternative perspectives
_____ uses a planned approach to problem-solving
_____ shows persistence with difficult tasks
_____ does not become overly frustrated or shut down as tasks are more difficult
_____ willing to take risks
_____ finds more than one solution to a problem
_____ demonstrates flexibility in problem-solving strategies (e.g., uses trial and
        error, sequential, integrative, and reasoning)

➢ **Organization and Planning** - a student's ability to organize and participate in daily activities.

_____ ability to gather materials to participate in an activity
_____ ability to follow the classroom routine and adjust to changes
_____ breaks a task down into component parts
_____ awareness of the sequence of the day's activities and what happens next

➢ **Logical Thinking** - a student's ability to combine and use information to form meaningful associations and develop conceptual knowledge.

_____ recognizes things that belong together conceptually
_____ groups and categorizes attributes based on similarities / differences/ size
_____ groups and categorizes based on two or more features
_____ ability to do or think about more than one thing at a time
_____ ability to think sequentially and follow a 1-2-3 order of occurrence
_____ ability to think abstractly or concretely, depending on the needs of the situation
_____ recalls the sequence of events and anticipates what comes next
_____ provides information specific to requests or the situation
_____ understands cause and effect relationships
_____ recognizes arid copies patterns
_____ demonstrates knowledge of events or objects
_____ imitates verbal or motoric activities

➤ **Time-on Task, Task Completion**- a student's ability to establish and maintain a focus on the work at hand, a student's ability to work without interruption until the task is completed.

_____ ability to establish a focus
_____ ability to maintain concentration ongoing need for breaks in
     concentration
_____ ability to complete short-term structured goals
_____ ability to complete short-term, unstructured goals
_____ ability to complete long--term, structured goals
_____ ability to complete long-term, unstructured goals
_____ need for external (as. opposed to internal) task monitoring
_____ need for reinforcement

➤ **Generalization** - a student's; ability to take a defined set of skills and/or strategies and apply these to new situations; to be able to see where already mastered information can be applied/changed to fit new situation.

_____ willingness to take risks in application of skills to new situations
_____ ability to take what's known and apply it to different contexts
_____ ability to select out a piece of information and alter it
_____ an inability to select out important information and abandon extraneous
     information
_____ ability to distinguish between appropriate and inappropriate
     generalization (i.e., over generalizes)

➤ **Self-Monitoring** - a student's ability to adjust their own behavior when needed without external support.

_____ tendency to act impulsively
_____ reflecting before coming to a conclusion
_____ reformulate a position or approach
_____ ability to recognize when own thinking is incorrect
_____ ability to recognize when information is missing and ask for clarification

➤ **Play**

_____ sequencing (beginning/middle/end components)
_____ repetitiveness in play
_____ avoids certain play areas
_____ play about something that happened in past
_____ complexity
_____ takes roles

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Appendix F

A Guide for Identifying PC Indicative Behaviors

*Compiled by Patricia S. Tomlan, Ph.D., PST Educational Consultants
in collaboration with the PC Work Group 2000-2001*

Learning to administer tests according to standardized procedures is a relatively straightforward process that requires training and practice. Learning to understand and interpret assessment data is a far more complex process which requires a combination of theoretical knowledge, training, experience, and professional judgment.

The following guide is intended to assist school-based professionals in identifying and documenting "P/C Indicative Behaviors", the information processing strengths and weaknesses that distinguish a child with a learning disability from other struggling learners. Each page of this guide suggests a continuum of pre-assessment observations and behaviors, assessment tools, and post-assessment interventions for a specific concern.

With formal and informal assessment data in place, interpretation, determination of eligibility and development of individualized goals and objectives can occur. Interventions for students with PCD include development of differentiated instruction, adjustments in instructional content and presentation, and environmental accommodations and modifications.

This guide is not inclusive of all possible behaviors of, or assessments, and interventions for students with PCD. It is meant to serve as a framework and as a model of the problem-solving processes which underlie identification of PC Indicative Behaviors. Therefore, identification of perceptual and/or communicative disabilities should not be limited to the information found in this guide. Not all of the suggested test tools listed for each information processing domain need to be given. Best practice dictates that each domain be screened for possible difficulties. Further, two to three subtests within a deficient area are necessary for adequate documentation of a disability.

Special educators are invited to use this information to assist in assessment, identification and instruction of students with learning disabilities.

Observable Behavior	Formal Assessment	Hypothesis	Potential Intervention Strategies
academic performance...	**subtests assessing attention:**	**processing area...**	**Interventions...**
*difficulty focusing, sustaining focus on topic being discussed	WJIII: Numbers reversed, auditory working memory, auditory attention pair cancellation	Attention	*create routines
*difficulty maintaining a sequence, following a train of thought	CAS: expressive attention, number detection, receptive attention		*create cue sheets and mnemonics
*difficulty organizing/prioritizing information read/listened to	WISCIII: arithmetic, symbol search, coding, digit span	selective attention	*create flow-charts/graphs/webs to represent multi-task processing
*difficulty organizing/prioritizing what is to be written/spoken		sustained attention	*teach meta-cognitive / mental scripts that emphasize self-regulation
		working memory	*demonstrate and teach task-analysis and prioritization strategies
behaviors...	**subtests w/other factors:**		**Strategies for Students...**
	WJR Cog:visual matching, cross out, memory for words		*use self-talk/meta-cognitive strategies
*tendency to perform tasks by rote and/or as others do	WJR Ach: writing fluency		*create mnemonics, tactile/clapping cues
*questions asked are off-topic			*use strategies to help group and categorize information
*seems slower to grasp a concept, requires repetition	**Informal Assessment**		*generate cueing systems for task completion
*tends to perseverate	Observation		*recognize non-verbal cues around behavior
*easily distracted by movement or sound	Parent Interview		**Accommodations...**
*seems to prioritize unimportant details	Behavior Checklists		*assign seating away from distractions
*tends to 'daydream'	Rating Scales		*adjust schedule to allow breaks for physical activity to reduce mental fatigue
			*change activities frequently
			*use nonverbal cueing around behavior
			*plan for 20 minute instructional segments
			*chunk new learning into manageable subtasks
			*highlight, color-code to prioritize new info.
			*provide clear structure, expectations
			*prioritize content in readings
			*allow extended time as needed

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Observable Behavior	Formal Assessment	Hypothesis	Potential Intervention Strategies

academic performance...

subtests assessing auditory perception:

processing area:

Auditory
Perception

Interventions...

*use systematic multisensory approaches to word decoding/encoding; visual & fine motor

*difficulty w/ decoding & word attack

*mispronunciation of words

*difficulty w/ spelling

*difficulty following oral directions

*unresponsive to oral directions & requests

WJ R: incomplete words, sound blending

WJIII: auditory attention, sound awareness,

TOLD P-3; word disrimination.

phonemic analysis, speech production

CTOPP; elision, sound matching, blending

*introduce new vocabulary through written/visual methods

*provide adequate visual support for verbal explanations

*reduce rate of speech during instruction

Strategies for students...

auditory memory

auditory discrimination

auditory sequencing

subtests w/other factors:

behaviors...

*tends to talk too loud

*appears to be inattentive

*tends to lipread/watch the speakers mouth/face

*seems easily distracted

*inverts sound sequences when speaking, repeats words incorrectly

*difficulty with memorization of verbal information: times tables, abbreviations, etc.

*bothered by background noise

*tends to misinterpret/be left out of social conversation

WJ Ach. R/III; word attack, spelling of sounds, spelling

PIAT-R; reading recognition

DAB-2; alphabet/wd knowledge, spelling

TWS spelling; predictable words

GORT3; oral reading miscue analysis

GORTD; decoding

auditory closure

auditory figure-ground

phonological awareness

*self-advocate, ask questions

*relocate when needed

*create visual graphs/charts to support new learning, demonstrate interrelationships

*use nonverbal cues/environmental cues, lipread

Accommodations...

*computer spellcheck, thesaurus

*control of extraneous noise

*use of an FM system

*visual graphs/charts

*preferential seating to the front

*nonverbal cues

*speaker facing the child for lipreading

*check for understanding before answering

*individual & paired activities over groups

Informal Assessment

Individual Literacy Plans

TAAS

Phonological Awareness Test

Individual Reading Inventories

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Observable Behavior

academic performance...
* does not remember what was read
* requires multiple rereading
* math computation errors
* spelling errors, particularly for unpredictable words
* inconsistent mastery of info.; holes' in background knowledge
* difficulties with memorization of basic information: times tables, abbreviations, months

behaviors...
* difficulty identifying similarities and differences
* appears to be inattentive
* difficulty following lengthy directions
* difficulty doing two things at the same time.
* when working, if interrupted, has to start from beginning
* forgets what has been taught from day to day, over weekend

Formal Assessment

short-term mem assessments:
BT IV; bead memory, memory/digits fwd.
DAS; recall of digits, recall of obj (immed), recall of designs
WJ R; memory for names, vis.-aud. learning, memory for words, pict.rec.
DTLA2/3; word sequences
CAS: word series,

long-term mem assessments:
WISC R/III; information
DAS; recall of obj. (delayed)
WJR and III; delayed mem. for names, vis.-aud. learning & story recall
CELF-3; word assoc., listening para.

working mem assessments:
WISC R/III; arithmetic, digit span
SB IV; bead memory, memory for digits (bkwd), memory for objects
DAS; recog. of pictures
WJR; numbers reversed, mem. for names, analysis/synthesis
WJIII; story recall, auditory working mem., planning, numbers reversed, understand. directions
DTLA 2/3; reversed letters, oral directions
CAS: sentence repetition

Hypothesis

processing area...

| Memory |

Short-term Memory
...verbal short term mem
...visual short term mem

Long-term Memory
...experiential knowledge
...declarative knowledge
... procedural knowledge

Working memory &
Simultaneous Processing

Potential Intervention Strategies

Interventions...
* use multisensory strategies w/signif. repetition & student paraphrase
* use tactile, fine-motor, visual cueing systems
* use cognitive webs / graphic organizers
* create mnemonics for prioritized info.
* use content-related exercises that emphasize matching/grouping/categorizing
* emphasize individual over group work
* teach task analysis skills to break larger tasks into manageable parts

Strategies for students...
* create written "to-do" lists/reminders
* tape record lectures, directions, etc.
* use paraphrasing strategies
* create mnemonics, tactile cues, sound cues
* self-advocate, ask for repetition/visuals

Accommodations...
* repetition of information
* information in writing vs.oral presentation
* prioritized content bulleted / highlighted
* copies of overheads/handouts
* extended time to allow for rereading
* more difficult content taught in the A.M.
* segmented instruction with frequent breaks to reduce mental fatigue
* computer access for storage/retrieval of info

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10/00 pst

Observable Behavior

academic performance...

*limited reading comprehension
*limited listening comprehension
*difficulty with math word problems
*does not understand simple inter-relationships in science, soc. studies
*poorly formulated written sentences
*little or incorrect use of punctuation
*tends to respond in phrases or simple sentences

behaviors...

*tends to be quiet
*doesn't seem to pay attention
*difficulty following directions greater than 2 steps
*tends to be socially isolated
*requires several repetitions of information
*slow in response time
*difficulty understanding requests

Formal Assessment

subtests assessing syntax:
SB IV; quantitative, memory for sentences
WJR; memory for sentences, listen. comprehension
WJIII; understanding directions, story recall, delayed st.recall
DTLA 2/3; sentence imitation, story construction
CELF III; sentence structure, concepts & directions, formulated sentences, sentence assembly
TOLD-3; Grammatical understan., grammatical completion
TOLD-Inter; sentence combining, word ordering, grammatical compre.

subtests w/other factors:
DAS; verbal comprehension
WJR; passage comprehension, writing fluency, writing samples
PIAT-R; reading comprehension
DAB-2; grammatical completion, writing composition
GORT-D; paragraph reading, word ordering
CAS; sentence questions

Hypothesis

processing area...

Language
Syntax

Receptive (listening/reading)
Expressive (speaking/writing)

limited understanding of:
...kernel sentence structures
...phrases/prepositions
...clauses/conjunctions
...embedded concepts

Potential Intervention Strategies

Interventions...

*teach sentence structures w/visual cues, (i.e. diagramming)
*teach parts of speech and word function
*teach punctuation as it is tied to sentence, phrase, clause knowledge
*emphasize word meaning based on word function in the sentence (i.e. to tie, necktie)
*provide lecture notes or outline

Strategies for Students...

*use meta-linguistic self-question strategies: who, what, where, does this make sense?
*use paraphrase strategies
*self-advocate; ask for visual representations, and slower directions
*take notes, use shorthand, to capture ideas

Accommodations...

*repetition of key information
*rephrasing to simplify explanations
*tactile and visual cues to support new concepts, key interrelationships
*adjusted/alternative reading materials
*graphic organizers to initiate/guide writing
*extended time on written tests
*adjusted pace of instruction, speech

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Observable Behavior	Formal Assessment	Hypothesis	Potential Intervention Strategies

academic performance...

*limited reading comprehension
*limited listening comprehension
*difficulty with word problems
*limited written vocabulary
*difficulty with word retrieval in speaking and writing activities
*misinterpretation of common vocabulary

behaviors...

*tends to be quiet...
*doesn't seem to pay attention...
*doesn't seem to understand
*requires repetition of information
*slow in response time
*misuses words
*difficulty with figurative language and idioms
*misinterprets what is heard
*tends to be socially isolated

---

subtests assessing vocabulary:

WISC III; Vocabulary
SB IV; Voc.; Verbal relations
DAS; verbal comprehension, naming vocabulary, word definitions
WJR/III; Picture vocabulary, oral vocabulary, verbal comprehension, rapid picture naming
DTLA 2/3; word opposites
CELF 3; word structure, word classes
TOLD p-3; picture vocabulary, relational vocabulary, oral vocab.
TOLD inter.; vocabulary, generals, malapropisms

subtests w/other factors:

WJR/III Ach.; reading vocabulary
DAB-2; characteristics, synonyms
GORT D; morphemic analysis, contextual analysis, word identif.

Informal Assessment

---

processing area:

Language
Vocabulary

Receptive (listening/reading)

low vocabulary knowledge
low knowledge of semantics, connotative/denotative word meaning

Expressive (speaking/writing)

low vocabulary knowledge difficulties with word retrieval
low knowledge of semantics, connotative/denotative word meaning

---

Interventions...
*provide vocabulary development; root words, prefixes, suffixes, in context
*preteach new/content area vocabulary
*emphasize inferential / literal meanings
*provide visual graphs/diagrams/charts to accompany verbal concepts
*provide reading & listening comprehension instruction through visualization
*provide lecture notes or outline

Strategies for Students...
*paraphrase new learnings
*request repetition/self-advocate
*create their own graphs, flow-charts, webs
*use tactile cues, rythmn, clapping to accompany recitation/rote memory
*use a thesaurus/computer

Accommodations...
*repetition of key information
*visual graphs/charts to support concepts
*paraphrasing with simpler vocabulary
*advanced cueing and 'wait time' to allow for formulation of oral responses
*provide word cues or word bank for tests/quizzes

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Observable Behavior

academic performance...

*difficulty with word and number recognition

*tends to ignore operation signs and mechanics of written language

*limited spelling memory, sounds out

*difficulty with handwriting

*slow & inaccurate copying

*difficulty using graphs, maps, charts and blackboard demonstrations

*difficulty working w/ distance & space

*transposes numbers/letters

behaviors...

*appears to be inattentive

*difficulties with memorization of visual information: flash cards, etc.

*forgets what (s)he's just seen

*slower speed of processing for visual input

Formal Assessment

subtests assessing visual:
WISCIII - picture completion, symbol search

DAS - matching letter forms

WJR/III Cog - visual closure, visual matching, picture recognition

DTLA 3 - picture fragments

CAS - figure memory, matching numbers

subtests w/other factors:
WJ Ach - Let/Word Rec.

PIAT-R - Reading Rec., Spelling

GORT - 3 - Decoding

GORT - D - Word Attack

Word Identification

CAS: verbal-spatial relations

DAS: recall of designs

Informal Assessment

Hypothesis

processing area:

| Visual |
| Perception |

-visual memory
-visual discrimination
-visual sequencing

Potential Intervention Strategies

Interventions...
*use systematic multisensory phonemic approaches to decoding/encoding

*emphasize the rationale behind math computation/operations

*introduce verbal mnemonics, rhyme for automaticity

*teach measurement, time, spatial orient. concepts & words; preps, conjunctions.

Strategies for Students...
*create self-talk to accompany visual input

*create auditory/language cueing systems

*use color-coding & highlighting for visual focus (i.e. operations signs..)

*use a ruler and other tools for drawing

*master keyboarding/touch typing

*use guide (i.e. 3X5 cards, bookmark) to assist visual tracking

*enlargen print materials using photocopy

Accommodations...
*copies of texts for highlighting

*enlarged print, alternative books

*increased use of white space

*periodic breaks to reduce eye fatigue

*preferential seating

*copies of overheads, board work

*provide vertically lined paper for math

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Observable Behavior	Formal Assessment	Hypothesis	Potential Intervention Strategies

Observable Behavior

academic performance...

*difficulty coordinating multiple tasks simultaneously
*difficulties organizing/prioritizing information read/listened to
*unable to generalize from one situation to another (i.e. math skills to science experiment)
*unable to plan
*unable to task analyze

behaviors...
*inability to predict consequences
*tends to copy others behavior
*rigidity in approach
*slower to grasp a concept
*requires repetition
*difficulty self-monitoring/self-correcting
*difficulty with reflective thinking

Formal Assessment

subtests:

WJIII: concept formation, planning
pair cancellation, retrieval fluency,
decision speed, rapid picture naming
CAS; matching numbers, planned codes,
planned connections, figure memory,
sentence repetition

subtests w/other factors:
WISCIII; picture arrangement, block
design, mazes, digit span; symbol
search/coding for processing speed
SBIV: comprehension, matrices,
paper-folding & cutting, number
series
DAS; block building, pattern
construction, picture similarities,
matrices, sequential/quant. Reason
WJR Cog: analysis-synthesis,
concept formation, verbal analogies

Informal Assessment

Hypothesis

processing area:

Executive
Functioning

planning
organizing, prioritizing
speed of processing
simultaneous processing

Potential Intervention Strategies

Interventions...
*create flow-charts/graphs/cognitive webs
to represent multi-task processing
*chunk new learning into manageable subtasks
*highlight, color-code to prioritize new
information; tell rationale for prioritization
*obviously integrate new info with what
has previously been learned
*teach organizational strategies
*model, demonstrate, paraphrase
Strategies for Students...
*use self-talk/meta-cognitive cues to
accompany processing
*prioritize using another's point of view
*use strategies to group/categorize
*anticipate/predict when and where
difficulties may occur
*reflect on / evaluate outcomes
*use strategies to reduce anxiety/frustration
Accommodations...
*prioritized content
*clearly segmented instructional units
*cue sheets to represent multi-step
processes
*external structure (i.e. study guides,
graphic organizers)
*opportunities to express frustration appropriately
*extended time for assignments

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Observable Behavior	Formal Assessment	Hypothesis	Potential Intervention Strategies

academic performance...

*difficulty maintaining a sequence, following a train of thought

*inability to grasp the "big picture"

*inability to organize ideas when writing/speaking

behaviors...

*talks briefly about topics

*tends to be overly concerned about or ignore details

*inability to project consequences

*tends to perform tasks by rote and/or as others do

*rigidity in approach

*questions asked are irrelevant to concept taught

*slow to see connections, requires repetition and even then may not understand

*difficulty with certain types of problem-solving & no difficulty with others.

non-verbal problem-solving

WISC R/III; picture arrangement, object assembly, block design, mazes
SB IV; pattern analysis, matrices, paper-folding, number series
DAS; block building, pattern construction, picture similarities
matrices, sequential & quantitative reasoning
WJ R/III; analysis-synthesis, planning concept formation, spatial relations,
DTLA 3; story sequences, symbolic relations
CAS: nonverbal matrices

verbal problem-solving

DAS; similarities
WISC R/III; similarities, comprehen.
SB IV; comprehension, absurdities
WJ R/III; verbal analogies, verbal comprehension, following directions
CELF-3; rapid automatic naming
DAB-2; written composition
DATA-2; written composition

Informal Assessment

processing area:

Problem Solving

temporal processing
grouping/categorizing
analytical/top-down thinking
synthesis/bottom-up
critical thinking/
  multistep reasoning

Interventions...

*teach how & why a problem is done X way
*teach generalization and application across contexts
*emphasize if...then relationships across
*teach thinking about 2-3 alternative ways to complete a task, solve a problem
*teach use of flowcharts to represent multiple tasks
*provide direct instruction in chronological order, compare/contrast, cause-effect.
*use graphic organizers to represent interrelationships

Strategies for Students...

*use self-talk to accompany problem-solving
*use grouping/categorizing strategies
*self-generate cueing systems

Accommodations...

*prioritize content
*rephrase explanations
*cue sheets to represent multi-step processes
*mnemnic strategies to assist recall
*break tasks down into chunks with similar attributes, highlighting differences

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Lyon, Frames of Reference for the Assessment of Learning Disabilities, 1994
Lyon, Attention, Memory and the Executive Function, 1995

Observable Behavior	Formal Assessment	Hypothesis	Potential Intervention Strategies

Hypothesis — processing area:

Visual-motor Integration

visual-spatial-motor
visual-memory-motor
visual-motor speed

academic performance...

*difficulty using scissors, pens, tools
*illegible handwriting/size & formation
*slow & inaccurate copying
*slow written production
*inability to imitate body movements
*difficulty with numbers / letter formation
*difficulty making graphs, maps

behaviors...

*tends to bump into things
*transposes numbers/letters
*difficulty drawing straight lines, diagonals
*poor handwriting, letters formed using reversed fine-motor movements
*lots of scratch-outs/white out
*inability to stay within margins, on the line when writing/drawing/coloring
*inability to catch a ball
*poor athletic ability
*difficulty with puzzles

Formal Assessment

subtests:

WISC III - coding, symbol search
SB IV - PA, copying, quantitative thinking
DAS - copying, speed of information processing
WJ R/III - visual matching, cross-out, planning, handwriting
DTLA 2/3- design reproductions
BB VMI

subtests w/other factors:

PIAT R - written expression
DAB - 2 spelling
WJR/III - writing fluency, writing samples
DAS: recall of designs, pattern construct

Informal Assessment

Potential Intervention Strategies

Interventions...

*emphasize spelling recognition and rules over spelling production
*instruction in handwriting
*teach written language such that idea generation is separated from production
*provide direct instruction in the language related to visual-spatial concepts (i.e. under, over, top left, around..)

Strategies for Students...

*use audiotape in lieu of notetaking
*master the keyboard, computer
*use oral-input software for composing
*color-coding of margins
*use of ruler, protractor, etc.
*use common compensatory strategies for math, ie. lined paper turned sideways for number alignment, etc.

Accommodations...

*adapted physical education/electives
*computer adaptations to keypad/mouse
*extended time for any handwriting
*allowance for preferred writing mode
*grade papers for integrity of ideas, not quality of handwriting
*waive and/or extend time for shop, art, etc.
*accept oral responses in lieu of written

Lyon, Frames of Reference for the Assessment of Learning Disabilities, 1994
Lyon, Attention, Memory and the Executive Function, 1995

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APPENDIX G

DESCRIPTIONS OF STANDARDIZED TEST TOOLS

Criteria for Test Tool Selection

CDE has recommended specific assessment tools. Some test tools that once were recommended have been dropped either because the dates of norm data collection are earlier than the recommended 15 years, or because published critiques have indicated serious problems with reliability or validity. Because we can not project what new and different test tools may be published in the years ahead, and to foster continuity and decision-making, the following criterion are provided for use in test selection:

1. Scoring options for the test include standard scores (M=100, SD=15); a standard score has a specified position in the normal curve distribution that identifies the score's distance from the mean of the normative group relative to the standard deviation of the distribution (Hammill, Brown & Bryant, 1992, p.6).

2. Norm data were collected no more than 15 years ago, thus, no earlier than 1986. When more than 15 years have passed, one can assume that a full generation of students has passed through school since normative data were collected, which is too long a period of time to assume that the norms are still appropriate (Hammill, Brown & Bryant, 1992, p.8).

3. Norms representative of national census data; "representativeness rests on the extent to which test developers show that the important demographic characteristics of their normative sample approximate those of the reference population as a whole" (Hammill, Brown & Bryant, 1992, p.5). The normative group has (a) 75 of more subjects in most one-year age intervals or academic grade levels, and (b) there are 750 or more subjects in the total sample.

4. Adequate subtest floor and ceiling factors; an *adequate* floor at any given age level is represented by a raw score of 1 that is associated with a standard score that is more than two standard deviations below the mean (i.e. < or = 70). An adequate ceiling at any given age level is when the maximum raw score for the test is greater than 2 standard deviations above the mean (i.e. > or = 131). These are necessary to ensure differentiation among individuals who function well below the normative mean. (McGrew & Flanagan, 1998, p. 74)

5. Minimal cultural bias; evidence of procedures to eliminate cultural bias.

6. Reliability measures reflecting both internal consistency and stability have been calculated and show coefficients of .85 or higher at most ages; reliable tests yield relatively small standard error of measurement (SEMs) (Hammill, Brown & Bryant, 1992, p. 11).

7. Research supporting the test's content, criterion and construct validity have produce significant results at the .05 level or greater. Correlational research produced coefficients that reached at least .35 in magnitude. (Hammill, Brown & Bryant, 1992, p. 13)

cde/pst 2001.

Recommended Tools for Evaluation

Please note: There is no one test that will look at all possible factors that need to be considered for a quality assessment. Professional judgment needs to be used to determine how to best supplement an existing battery with additional subtests from other batteries in order to gather adequate and appropriate information. Please be aware that a test may be listed as recommended for one area and not for another. Some test tools, such as the KTEA, have been determined to adequately address some areas (in this example, reading and math), but are inadequate in other areas (written language).

Test tools are presented in alphabetical order.

Reading

Diagnostic Achievement Battery-2 (DAB-2); The Diagnostic Achievement Battery-3 (DAB-3)

Normed for youngsters 6.0 to 14.11. The DAB-2 provides two subtests that examine reading abilities, *alphabet/word knowledge* and *reading comprehension.* The reading comprehension subtest taps silent comprehension of paragraph reading; there are four to five questions for each paragraph read. Subtest scaled scores combine to provide a standard score composite therefore it is not possible to separate out decoding from comprehension using this test tool.

Diagnostic Achievement Test for Adolescents-2 (DATA-2);
Diagnostic Achievement Test for Adolescents –3 (DATA-3)
The DATA-2 and DATA-3 provides two subtests that examine reading abilities. Normed for students 12.0 to 18.11, this test provides a word identification subtest and a paragraph reading comprehension subtest. Reflective of average and above reading demands, the number of items at the low end of each subtest tend to be too difficult to provide good diagnostic information for low readers.

Gray Diagnostic Reading Tests; Gray Oral Reading Test III/IV; Gray Silent Reading Tests
The GORTs are normed for youngsters 5.6 to 12.11. It's entire focus is an indepth analysis of reading skills and abilities. Multiple tests of decoding skills and the test of paragraph reading is unique in that it looks at fluency, errors in decoding and comprehension simultaneously. The GSRT is normed for 7.0 to 25.11 years and a fairly extensive silent reading tool. Subtest titles can be misleading.

Kaufman Test of Educational Achievement (KTEA-NU) Normative Update

This instrument is an untimed test for youngsters from 6 to 22.11 years of age. The KTEA has updated norms published in 1998 that come as a separate manual and must be used (AGS: 1-800-328-2560). The KTEA Comprehensive Form contains five subtests, two of which tap reading: reading decoding and reading comprehension of paragraphs. The test offers guidance in item analysis and error analysis to gather processing strengths and weaknesses. Use the Reading Composite score for determining eligibility. The Brief Form is not appropriate for diagnostic purposes.

Peabody Individual Achievement Test – R (PIAT-R-NU) Normative Update

This instrument has been renormed and offers scores for ages 5.0 to 21.11. The PIAT norms published in 1998 come as a separate manual that must be used (AGS: 1-800-328-2560). This instrument offers a reading recognition subtest as well as a unique (picture identification) reading comprehension subtest. Use the Total Reading score to determine eligibility.

Test of Reading Comprehension - 3 (TORC-3)

The test provides eight subtests that are grouped to provide information on general vocabulary, syntactic awareness, paragraph reading and sentence sequencing. The reading composite score requires the administration of four subtests that are, as a composite standard score, appropriate for meeting eligibility criteria. There are also subtests that tap vocabulary knowledge in Math, Social Studies and Science as well as a subtest that measures student's understanding of written directions typical of school. Appropriate for ages 7.0 through 17.11; recommended for middle school and high school.

Wechsler Individual Achievement Test (WIAT)

This particular test is designed to assess youngsters from ages 5 through 19.11 years in academic areas. It contains eight subtests, two of which tap word decoding and reading comprehension skills. The reading comprehension subtest uses paragraph reading (one question per passage) and provides for analysis of errors. The screening version is not appropriate nor recommended for diagnostic purposes.

Woodcock Johnson Achievement Tests III.

Appropriate for ages 2 through 90, this battery offers new subtest options. The BROAD READING cluster is now appropriate for determining eligibility. This cluster includes 1 subtest of decoding (letter-word identification), 1 subtest of reading fluency (reading fluency) and 1 subtest of comprehension (passage comprehension). In addition, the examiner can choose to concentrate on reading decoding/encoding subtests (*word attack, spelling, spelling of sounds, sound awareness*) and the Basic Reading Skills cluster or reading comprehension subtests (*passage comprehension and reading vocabulary*) and the Reading Comprehension cluster. Clusters are judged to be appropriately discriminatory and can be used to separate decoding from comprehension. *Caution: there is no representation of paragraph reading comprehension within this instrument*

Woodcock Johnson – Revised Tests of Achievement

Given that the WJIII has been published, the WJ-R continues to meet date, reliability and validity criteria and continues to be a valid assessment tool. Appropriate for ages 2 through 90, this battery offers a number of subtest options. Reading decoding subtests include *letter-word identification* and *word attack;* reading comprehension subtests include *passage comprehension* and *reading vocabulary.* Using Method #2, the first two subtests combined to form the cluster score: *basic reading skills.* The second two subtests combine to form the cluster *reading comprehension.* Because there are two subtests within each cluster, this test meets criteria and can be used to separate decoding from comprehension. *Caution: there is no representation of paragraph reading comprehension within this instrument.*

Woodcock Language Proficiency - R

This test is appropriate for ages 2.0 through 90, and measures oral language, reading and written language. It is a subset of the larger WJR Battery and provides the same information/scoring options. Please refer to the CDE guidelines for the treatment of cluster scores if substituting this instrument for the WJR relative to reading and/or written language; Method #3 (conversion of standard scores to scaled scores to standard score quotients) will be required.

Woodcock Reading Mastery Tests – R –NU Normative Update

The WRMT-R norms published in 1998 come as a separate manual that must be used (AGS: 1-800-328-2560). This is the test tool that was the "mother" of the WJ tools customarily used in

schools today. It has visual-auditory learning, letter identification, word identification, word attack, word comprehension and passage comprehension subtests. There are error analysis worksheets with this tool, providing much indepth information in reading.

Math

Diagnostic Achievement Battery-2 (DAB-2); The Diagnostic Achievement Battery-3 (DAB-3)
This test is normed for youngsters 6.0 to 14.11. It provides two subtests that tap mathematics achievement, *math reasoning* and *math calculation. Math reasoning* incorporates both visual and mental computation as well as spatial and temporal concepts. Will pick up on youngsters with working memory deficits.

Diagnostic Achievement Test for Adolescents-2 (DATA-2);
Diagnostic Achievement Test for Adolescents –3 (DATA-3)
The DATA-2 provides two subtests that examine mathematics abilities. Normed for students 12.0 to 18.11, this test provides a math calculation subtest and a math problem-solving subtest. Neither tap mental computation, per se. The math problem-solving subtest does reflect "real life" situations and is sufficiently broad in scope.

Kaufman Test of Educational Achievement (KTEA-NU) Normative Update
This instrument is an untimed test for youngsters from 6 to 22.11 years of age. The KTEA has updated norms published in 1998 that come as a separate manual and must be used (AGS: 1-800-328-2560). The KTEA Comprehensive Form contains five subtests, two of which tap math achievement: mathematics applications and mathematics computation. The test offers guidance in item analysis and error analysis to gather processing strengths and weaknesses. Use the Math Composite Score for determining eligibility. The Brief Form is not recommended for diagnostic purposes.

Key Math – Revised-NU Normative Update
The Key Math – R norms published in 1998 come as a separate manual that must be used (AGS: 1-800-328-2560). Norms now range from 5.0 to 21.11. This test tool remains the most diagnostic tool on the market for examining mathematical processing.

Wechsler Individual Achievement Test (WIAT) This test is designed to assess youngsters from ages 5 through 19.11 years in academic areas. It contains eight subtests, two of which tap mathematics: mathematics reasoning and numerical operations. Mathematics reasoning is comparable to a test of word problems; numerical operations is comparable to a test of paper-pencil calculation. Both have an error analysis component for examiner use. The screening version is not appropriate for diagnostic purposes.

Woodcock Johnson III Tests of Achievement (WJ III)
Appropriate for ages 2 through 90, this battery offers a number of subtest options. The BROAD Math cluster is now appropriate for determining eligibility. The broad score includes a measure of calculation, math fluency and math applications. With this 2001 document, the examiner may choose to separate cluster scores for eligibility purposes.

Woodcock Johnson R- Tests of Achievement (WJ-R)
Appropriate for ages 2 through 90, this battery offers a number of subtest options. When using the WJ-R for determining eligibility, the three math subtests combine to provide information using Method #3. Calculation and Quantitative Concepts form one cluster score, *basic mathematics skills.* Applied Problems is used as the *mathematics reasoning* score.

Written Language

Diagnostic Achievement Battery-2 (DAB-2); The Diagnostic Achievement Battery-3 (DAB-3)
The DAB-2 is normed for youngsters 6.0 to 14.11. It includes four tests of written language expression; *capitalization, punctuation, spelling* and *writing composition*. The score for writing composition is determined through a writing sample that is examined for both a complex vocabulary count and a thematic content determination.

Diagnostic Achievement Test for Adolescents-2 (DATA-2);
Diagnostic Achievement Test for Adolescents –3 (DATA-3)
The DATA-2 and DATA-3 provides two subtests that examine written language; spelling and writing composition. The writing composition subtest score is determined via a cross-referencing a vocabulary count with a score on thematic maturity, both of which are easy to score. Normed for students 12.0 to 18.11, this test is reflective of average and above academic demands. There are few items at the low end of the spelling test; the first words are "banquet", "hesitation" and "geological".

Peabody Individual Achievement Test – R (PIAT-R-NU) Normative Update
This instrument has been renormed and offers scores for ages 5.0 to 21.11. The PIAT norms published in 1998 come as a separate manual that must be used (AGS: 1-800-328-2560). This instrument offers a spelling subtest as well as a written expression subtest (paragraph writing). The examiner will need to read the instructions carefully for administration of the written expression items. Use the Written Language score to determine eligibility.

Test of Adolescent Language-11, (TOAL-2); III (TOAL-3)
The TOAL-2 is normed for adolescents from 12.0 to 18.5, the TOAL-3 is normed from 12.0 to 24.11. The test items themselves are exactly the same. Either TOAL provides two subtests relevant to the assessment of written language; *writing vocabulary* and *writing grammar*. The writing grammar subtest uses sentence combining activities.

Test of Written Language-11 (TOWL-2) (TOWL-3)
This instrument is designed to assess students from 7.0 to 17.11. It is unique in that it's subtests tap both spontaneous and contrived writing performance, i.e. what the youngster does with and without structure. Vocabulary, syntactic maturity, spelling and style (capitalization, punctuation) are formally assessed across both types of writing.

Woodcock Johnson III Tests of Achievement (WJ III)
Appropriate for ages 2 through 90, this battery offers a number of subtest options. The Broad Writing cluster score is adequate for determining eligibility using the WJIII. This will include three subtests: spelling, writing samples and writing fluency. *Caution: Skills in spontaneous paragraph writing and text structure are not assessed with this tool.*

Woodcock Johnson Revised – Tests of Achievement
Appropriate for ages 2 through 90, this battery offers a number of subtest options. When using the WJ-R, all four subtests need to be administered and their cluster scores combined using Method #3. Two subtests, *dictation* and *proofing,* combine to form the *basic writing skills* cluster and measure spelling, punctuation and usage recognition and production. In addition, two subtests, *writing fluency* and *writing samples* which combine to form the *written expression* cluster, tap

syntactic construction and, at higher levels, discourse organization. *Caution: Skills in spontaneous paragraph writing and text structure are not assessed with this tool.*

Wechsler Individual Achievement Test (WIAT)
This particular test is designed to assess youngsters from ages 5 through 19.11 years in academic areas. It contains eight subtests, two of which tap written language: spelling and written expression. The spelling subtest requires the student to spell words from dictation; the written expression subtest uses a verbal descriptor to initiate the writing process, allows for 15 minutes of writing, and applies a wholistic grading process. The manual is necessary for grading the written expression subtest, and provides both rubrics and examples to guide the examiner. The screening version is not appropriate for diagnostic purposes.

Recommended Tools for Assessing PC Indicative Behaviors

Students with learning disabilities are known to have difficulties in information processing. According to Colorado rules, documentation of a processing deficit in perception, language or cognitive processing is required for a determination of PCD. Such may be obtained from information (a) already available from tests or observations used during pre-referral or formal assessment ,or (b)from additional tests, observations or checklists that are judged to be reliable, valid and appropriate. The following are brief descriptions of the recommended formal standardized instruments/subtests with appropriate norms, validity and reliability. Subtask analysis/error analysis should be used in examining student performance and arriving at/supporting clinical judgment. While the regression formula using standard scores is designed to ascertain the degree of discrepancy between potential and achievement as a result of information processing deficits, that same formula is not applied in the determination of significance around PC Indicative Behaviors.

PERCEPTUAL PROCESSING; auditory, visual, visual-motor, visual-spatial, temporal

Beery-Buktenica Development Test of Visual-Motor Integration IV. This is the renormed version of the original Beery with much improved reliability and validity. Test items are geometric forms that the student is to look at and copy (i.e. visual-motor task). Designed for individuals from ages 3 to 18, both the scoring system and the test's instructions for interpretation have been expanded.

Detroit Test of Learning Aptitudes. There are a number of versions of the DTLA tests. All versions have verbal and nonverbal tasks at perceptual as well as problem-solving levels. The DTLA-3 is appropriate for ages 6.0 to 17.0; the DTLA-4 is appropriate for ages 6 through 17; the DTLA-P2 is appropriate for ages 3.0 to 9.11. Each version contains the *design reproductions* subtest. Design reproductions is one of the few subtests that taps visual-memory-motor responses.

Differential Ability Scales (DAS) Two levels (preschool and school age; range from 3.6 to 17.11) with subtests that tap visual-motor processing.

Test of Phonological Awareness For ages 5-8. Determines whether a child can group or contrast words based on phonemic differences. At risk for bias if the dialect of the examiner doesn't match student. Relatively insensitve to differences when higher levels of phonological awareness are involved.

Test of Visual Motor Skills – Revised Untimed test of visual motor integration for children from 3

to 13. The test consists of 25 designs which the child is asked to copy. Looks at visual motor abilities in terms of closure, line intersection, angles, size, rotation and line length.

WJ III Tests of Cognitive Abilities Appropriate for ages 2 through 90, this battery offers a number of subtest options. A number of auditory processing subtests are now available, the majority of which tap phonological awareness. The visual perception subtests tap visual memory, visual sequencing and visual spatial processing, but not visual motor integration, per se. Visual motor integration is tapped through subtests in the Achievement Battery; early items in writing samples and handwriting comparisons.

WJ-R-Cognitive Tests of Ability Appropriate for ages 2 through 90, this battery offers a number of subtest options. Subtests tap phonological processing. There are subtests also subtests to tap visual memory, visual sequencing and visual-spatial processing, but visual motor integration is missing.

Language test tools that contain subtests for evaluation of spatial/temporal concepts:

Clinical Evaluation of Language Fundamentals (CELF-R or CELF III) Appropriate for ages 5.0 to 15.11, this instrument offers a number of diagnostic subtests that provide psycholinguistic information relative to perceptual processing. Item analysis and error analysis of specific subtests tap a number of spatial and temporal concepts. There are two levels of subtest administration; the 5 to 7 year old and eight year old and above.

Bracken OR Boehm Basic Concept Scale These particular instrument are appropriate for youngsters with significant deficits. They are designed to tap basic concepts ranging from direction/position to time/sequence. Tactile/pointing responses are required.

LANGUAGE PROCESSING: receptive or expressive, tapping phonological, morphological, syntactic and meta-linquistic aspects

Clinical Evaluation of Language Fundamentals III (CELF-III) Appropriate for ages 5.0 to 15.11, this instrument offers a number of diagnostic subtests that provide both linquistic and cognitive information. Subtests tap syntax, semantics and memory, including spatial and temporal constructs. There are two levels of subtest administration; the 5 to 7 year old and eight year old and above.

Detroit Tests of Learning Aptitudes II, III There are a number of versions of the DTLA tests. All versions have verbal and nonverbal tasks; vocabulary, sentence repetition, following directions. The DTLA-3 is appropriate for ages 6.0 to 17.0; the DTLA-4 is appropriate for ages 6 through 17; the DTLA-P2 is appropriate for ages 3.0 to 9.11.

Diagnostic Achievement Battery-2 (DAB-2); The Diagnostic Achievement Battery-3 (DAB-3) The DAB-2 is normed for youngsters 6.0 to 14.11. It includes a number of subtests relevant to the evaluation of language. In receptive and expressive language areas, four subtests are available: *story comprehension, characteristics, synonyms* and *grammatical completion*. The test also allows comparisons between listening, speaking, reading and writing to be examined.

Diagnostic Achievement Test for Adolescents-2 (DATA-2);
Diagnostic Achievement Test for Adolescents –3 (DATA-3)

The DATA-2/DATA-3 provides four subtests that examine language abilities. Normed for students 12.0 to 18.11, this test provides receptive and expressive vocabulary subtests as well as receptive

and expressive grammar subtests. Good as a tool to assess average to above average levels.

Differential Ability Scales (DAS) Two levels (preschool and school age; range from 3.6 to 17.11) with subtests that tap verbal comprehension and problem-solving.

Gray Diagnostic Reading Tests The GORTs are normed for youngsters 5.6 to 12.11. Subtest titles can be misleading in that there are tests for auditory closure, auditory sequencing and syntactic construction.

Illinois Test of Psycholinquistic Abilities III Designed to assess basic psycholinquistic abilities and pre-reading skills in children 5.0 to 12.11, this new tool explores phonological aspects of reading and spelling, morphological and syntactic aspects of reading/listening.

Wechsler Intelligence Scale for Children - III (WISC III) The WISC III is appropriate for youngsters aged 6.0 to 16.11. It's six verbal subtests tap a wide range of language processes including vocabulary, semantics, syntax and memory. Factor analysis, item analysis and error analysis can provide valuable information for instructional planning.

WJ III Tests; Achievement and Cognitive Appropriate for ages 2 through 90, this battery offers a number of subtest options. In the Achievement, four subtests measure receptive and expressive language processes, with two particularly relevant to classroom experiences: Story Recall and Understanding Directions. In the Cognitive, a number of subtests look at vocabulary, word retrieval and verbal reasoning.

WJ-R Cognitive Tests of Ability Appropriate for ages 2 through 90, this battery offers a number of subtest options. A number of verbal subtests provide indepth information; questions arise as to the true representativeness of the auditory processing subtests due to the nature/clarity of the audiotapes provided.

Test of Adolescent Language (TOAL - 2, TOAL-3) The TOAL-2 is normed for adolescents from 12.0 to 18.5, the TOAL-3 is normed from 12.0 to 24.11. The test items themselves are exactly the same. The TOAL is a composite of language tasks tapping into listening, speaking, reading and writing skills and allowing the examiner to separate vocabulary from syntactic abilities.

Test of Auditory-Perceptual Skills – Revised Used to measure the ability to perceive auditory stimuli for children from 4 through 12 years of age. Is not assessing at the phonemic level, but is assessing basic processing of verbal information. Includes a number of subtests which look at various forms of verbal memory.

Test of Language Development (TOLD-2 preferred) There are two levels of the TOLD-2; primary edition for ages 4.0 to 8.11, and intermediate edition for ages 8.6 to 12.11. There are subtests to tap listening and speaking via auditory perception/phonology, vocabulary, semantics and syntax.

Test of Written Language (TOWL-2/TOWL-3) This instrument is designed to assess students from 7.0 to 17.11. It is unique in that it's subtests tap both spontaneous and contrived writing performance, i.e. what the youngster does with and without structure. Vocabulary, syntactic maturity, spelling and style (capitalization, punctuation), thematic maturity, and logical sentences subtests provide a broad array of items for item analysis and error analysis of language disorders.

Wechsler Individual Achievement Test (WIAT) This particular test is designed to assess youngsters from ages 5 through 19 years in academic areas. It contains eight subtests, two of

which tap language processing: listening comprehension and oral expression. The screening version is not recommended.

<u>COGNITIVE PROCESSING</u>: as used to define PC Indicative Behavior; tapping attention, memory, speed of processing, problem-solving and executive functioning)

Cognitive Assessment System (CAS) Two different levels (ages 5-7, ages 8-17), this tool investigates attention and executive functioning, simultaneous and sequential processing. Subtests tend to be free of the influence of culture/educational experience.

Detroit Tests of Learning Aptitudes There are a number of versions of the DTLA tests. All versions have nonverbal tasks, including visual sequencing and visual-spatial problem-solving. The DTLA-3 is appropriate for ages 6.0 to 17.0; the DTLA-4 is appropriate for ages 6 through 17; the DTLA-P2 is appropriate for ages 3.0 to 9.11.

Differential Ability Scales (DAS) Two levels (preschool and school age; range from 3.6 to 17.11) with subtests that tap problem-solving and memory.

Hammill Multiability Intelligence Test A battery of eight subtests, this is a subset of the DTLA-4. Designed to tap information processing abilities of youngsters from 6 through 17, there are 4 verbal subtests and 4 nonverbal.

Test of Memory and Learning Designed for individuals from 5.0 to 19.0, this test includes 10 subtests which tap verbal and nonverbal memory as well as delayed recall. In many ways, these subtests are very similar to the older KTEA; memory for stories, facial memory, a word recall and visual recall subtest have a 30 minute delay recall task. It's fourteen subtests can also be used to derive five indexes; a learning index, an attention and concentration index, a sequential memory index, a free recall index and an associative recall index. Not appropriate for non-English speakers.

Wechsler Intelligence Scale for Children - III (WISC III) The WISC III is appropriate for youngsters aged 6.0 to 16.11. It's seven performance subtests tap a wide range of nonverbal processes including visual perception (discrimination, sequencing, memory), spatial organization, fine motor coordination, speed of processing and problem-solving.

Wechsler Memory Scale III For individuals from 16 years of age and up, the subtests explore a number of different memory storage capacities.

Woodcock Johnson – Revised Tests of Cognitive Ability (WJ-R) Appropriate for ages 2 through 90, this battery offers a number of subtest options not available elsewhere. Of particular importance are those subtests that tap short-term, working and long-term memory.

Woodcock Johnson III Tests of Cognitive Ability (WJ III COG) Appropriate for ages 2 through 90, the newer tool is much stronger in its ability to tap attention, speed of processing, memory and executive functioning.

Universal Nonverbal Intelligence Test Designed for ages 5 through 17, this is a test that is completely nonverbal. Three subtests are measures of memory and three subtests are measures of nonverbal reasoning.

Improving the IEP Process for Students Who Are Culturally and Linguistically Diverse

A Self Reflection Tool

Colorado Department of Education
Special Education Services
April 1998

Sources: The Spectrum Project and Project A.C.T., University of Colorado at Boulder
Guidelines for Using Interpreters, Santa Ana Unified School District, California

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Improving the IEP Process for Students who are Culturally and Linguistically Diverse: A Self Reflection Tool

	Non-Existent	Emerging	Proficient	Highly Proficient
TEAM DYNAMICS (Including Family Participation)				
1. Service providers have reciprocal relationships with one another and with families that are candid and respectful.				
2. The individual, ethnic, racial, and socioeconomic diversity of families is acknowledged and honored.				
3. The family and other team members identify and address relevant individual, cultural, and linguistic characteristics that may influence the assessment process.				
4. The family is asked to describe their individual and cultural characteristics that they would like the team to know (i.e., how family decisions are made, how children are disciplined, significant developmental milestones they value)				
5. The team uses ways to engage in dialogue that are consistent with the cultural and individual styles of the family.				
CRITICAL ELEMENTS OF THE IEP MEETING				
1. Introductions are completed.				
2. The purpose of the meeting is clearly stated and agreed upon.				
3. The process for the meeting is explained, including reaching consensus and closure on issues.				
4. The team identifies the student's present levels of functioning, achievement, and performance.				
5. The team develops or reviews the areas of educational needs, including consideration of the child's language needs.				
6. Reporting is not done by "discipline round robin."				
7. The team determines eligibility.				
8. The team identifies annual goals and short-term instructional objectives.				

	Non-Existent	Emerging	Proficient	Highly Proficient
9. The team identifies the special education and related services which will be provided, the amount of each service, extent to which the child will participate in general education, starting date and duration of services, eligibility for services beyond the regular school year, and if any modifications are necessary to participate in general education.				
10. The team recommends placement in least restrictive environment.				
11. Signatures of team participants are obtained indicating their involvement in the IEP development. IF it is an initial IEP meeting to determine eligibility, parent signatures are obtained for child placement in the program.				

CULTURAL AND LINGUISTIC DIVERSE FACTORS: Using Interpreters Effectively

	Non-Existent	Emerging	Proficient	Highly Proficient
1. The family is offered the services of an interpreter, community liaison, and/or bilingual parent advocate as needed to help support their participation in the process.				
2. Participants and their roles are introduced, including the interpreter.				
3. Team members speak directly to the parent, making eye contact, avoiding jargon, and speak in short enough "chunks" for the interpreter to translate verbatim.				
4. The interpreter speaks clearly and concisely, translating all comments made by the parent and other team members.				
5. There are no side conversations while the interpreter or parent are speaking in the language other than English.				
6. The interpreter maintains a neutral attitude.				
7. The interpreter asks for clarification, if needed, and does not ad lib.				

Determining Eligibility and Program Planning

	Non-Existent	Emerging	Proficient	Highly Proficient
1. The assessment tools used were non-discriminatory.				
2. Assessments were conducted in English and in the child's native language as appropriate.				
3. The team considers whether cultural factors and/or limited English acquisitions are the primary cause(s) of the student's learning problems.				
4. The team considers the language needs of the child.				

Improving Assessment Information Sharing and Planning Processes: Families and Teams Together

A Self-Reflection Tool

Developed by Project A.C.T.
University of Colorado at Boulder
William Eiserman, Ardith Ferguson, and Susan Moore

Supported by
The Colorado Department of Education

Developed in collaboration with the Project Design Team, Parents, and Service Providers

Setting the Stage

Quality Indicators	Frequency					Evaluation			Need			Action Plan/Comments
	N	S	O	U	A	S	A	NI	TA	T	R	
Reflecting on Individual Practices: *As a team member, I reflect on my personal beliefs and practices as they relate to the following guiding principles:*												
Families are the key decision makers for their children.												
Families' knowledge of and dreams for their children are believed and valued.												
Service providers have reciprocal relationships with one another and with families that are candid and respectful.												
Families and service providers have the opportunity to consider and discuss the same information and diverse perspectives from which they form opinions, determine priorities, and plan services.												
The individual, ethnic, racial, and socioeconomic diversity of families is acknowledged and honored.												
Reflecting on Team Practices: *The team discusses its beliefs and practices related to the following principles:*												
Families are the key decision makers for their children.												
Families' knowledge of and dreams for their children are believed and valued.												
Service providers have reciprocal relationships with one another and with families that are candid and respectful.												
Families and service providers have the opportunity to consider and discuss the same information and diverse perspectives from which they form opinions, determine priorities, and plan services.												
The individual, ethnic, racial, and socioeconomic diversity of families is acknowledged and honored.												

Frequency: N=Never, S=Seldom, O=Occasionally, U=Usually, A=Always
Evaluation: S=Strength, A=Adequate, NI=Needs Improvement
Need: TA = Technical Assistance, T = More Time, R - Resources

Quality Indicators	Frequency					Evaluation			Need			Action Plan/Comments
	N	S	O	U	A	S	A	NI	TA	T	R	
Team Members' Roles: *Specific roles are designated for each post-assessment process. A team member is designated to:*												
Guide the post-assessment process. Stay focused on issues and insure information is relevant.												
Make sure that each person shares information and that the guiding principles of the team are followed.												
During a meeting, watch the time and monitor time spent by any team member.												
Pay attention to the family members' emotions for adjusting the flow or direction of the process.												
Pay attention to language being used and seek clarification of technical terms.												
Preparation for the Post-Assessment												
Throughout the assessment process, the family is encouraged to share their priorities and concerns.												
The family and other team members identify and address relevant individual, cultural, and linguistic characteristics that may influence the assessment process.												
The family is asked to describe their individual and cultural characteristics they would like the team to know (i.e., how family decisions are made, how children are disciplined, significant developmental milestones they value).												
In preparation for the post-assessment process, families are encouraged to share information with the team (i.e., share pictures, think of meaningful stories).												
The family is encouraged to ask questions and to seek clarification about the process and procedures.												
The post-assessment process is explained as a problem solving discussion in which family input is actively sought and valued.												

Frequency: N=Never, S=Seldom, O=Occasionally, U=Usually, A=Always

Evaluation: S=Strength, A=Adequate, NI=Needs Improvement

Need: TA = Technical Assistance, T = More Time, R - Resources

Quality Indicators	Frequency					Evaluation			Need			Action Plan/Comments
	N	S	O	U	A	S	A	NI	TA	T	R	
The other team members assure the family that they will not be making decisions for the child or family, but will provide information about the child and community resources.												
The team acknowledges that it is not uncommon for various team members to see children's development from different perspectives and that discussing different points of view can be helpful.												
The team tells the family that they will be asked to provide feedback about the process (i.e., survey, interview, follow-up phone call).												

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Creating an Interactive Meeting

Quality Indicators	Frequency					Evaluation			Need			Action Plan/Comments
	N	S	O	U	A	S	A	NI	TA	T	R	
Starting with the Family												
The family is asked to begin the information sharing process by stating their observations, thoughts, and questions about the assessment experience. These comments are used to guide the discussion.												
Engaging in Dialogue Rather Than Individual Reporting												
Initiation of the dialogue is guided by the observations, thoughts, and questions of family members. The other team members offer their insights and observations in a dialogue about the child.												
The child's performance is not reported separately by each discipline, but is integrated, resulting in a holistic and functional profile of the child.												
The team uses ways to engage in dialogue that are consistent with the cultural and individual styles of the family.												
Maintaining Open Communication: Checking In												
When verbal or non-verbal cues are given that indicate the family member may be confused, upset, angered, etc., these feelings are addressed (i.e., "Do you need clarification? Would you like to take a break? Would you like to continue at another time?")												
In response to the family's desires, the team alters the process as necessary.												
Validating Perceptions												
Family and other team members compare and contrast each other's perceptions (i.e., "Does this sound like your child? What I've seen...")												

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Frequency: N=Never, S=Seldom, O=Occasionally, U=Usually, A=Always

Evaluation: S=Strength, A=Adequate, NI=Needs Improvement

Need: TA = Technical Assistance, T = More Time, R - Resources

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Quality Indicators	Frequency					Evaluation			Need			Action Plan/Comments
	N	S	O	U	A	S	A	NI	TA	T	R	
Clarifying Terms												
The team establishes the norm that explanation or clarification of information is sometimes needed.												
Other team members seek clarification of terms, as needed, for themselves and for families.												
Handling Differences of Opinion												
When conflict arises, a problem-solving process is used to facilitate resolution.												
The team members react to differences of opinion in a respectful and open manner so that families can make informed decisions.												
Reflection with the Family												
The family is asked to provide feedback on whether the information provided meets their priorities and concerns.												
At the end of the post-assessment process, the steps for implementing an action plan (IFSP, IEP, or informal next steps) are reviewed.												
Specific follow-up responsibilities of team members are defined.												
Families are asked to provide feedback on the helpfulness of the assessment and post-assessment process (i.e., interview, survey, phone call).												

Frequency: N=Never, S=Seldom, O=Occasionally, U=Usually, A=Always

Evaluation: S=Strength, A=Adequate, NI=Needs Improvement

Need: TA = Technical Assistance, T = More Time, R - Resources

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Cultivating Team Relationships

Quality Indicators	Frequency					Evaluation				Need			Action Plan/Comments
	N	S	O	U	A	S	A	NI	TA	T	R	
When questions arise regarding how to handle particular issues, the team refers to their guiding principles.												
The team discusses the quality indicators, practices expressing differences of opinion, and explores ways to provide support to one another.												
The names (first or last depending on the individual and cultural preferences) of family and team members are used rather than referring to these individuals by the names of the roles (i.e., mom, dad, nurse).												
The team spends time getting to know one another professionally and personally to develop trust, respect, and open communication.												
The team discusses how team structure and hierarchy, whether formal or informal, may influence the process of putting the principles into practice and how relationships among team members can be developed and maintained.												

Frequency: N=Never, S=Seldom, O=Occasionally, U=Usually, A=Always

Evaluation: S=Strength, A=Adequate, NI=Needs Improvement

Need: TA = Technical Assistance, T = More Time, R - Resources

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Family Perspectives: Improving Information Sharing with Teams

University of Colorado at Boulder

Susan Moore, William Eiserman, Ardith Ferguson, Clara Pérez-Méndez,
Janet Beatty, Jayne Dixon Weber

Supported by
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Think about your most recent assessment process with your child. The purpose of the meeting was (check all that apply):

- ☐ Initial evaluation
- ☐ Entering services for the first time
- ☐ Parent conference to review progress
- ☐ Update or revision of IFSP or IEP
- ☐ Transition from one program to another
- ☐ Other _____

After each statement on the following pages, indicate whether the activity described:

- Occurred
- Did not occur
- Is something I want to happen at my next information sharing meeting

You are encouraged to share and discuss this information with your team members to build relationships with your providers and improve the process for you and your child.

SETTING THE STAGE: Reflecting on the Process - As a family member, what happened during my child's assessment process reflects the following guiding principles:

	Did it occur?		Not appropriate at this time	Do you want this to happen at the next meeting?	
	Yes	No		Yes	No
As a family member, I was considered the key decision maker for my child.					
My knowledge of and dreams for my child were believed and valued.					
Service providers had open relationships with one another and with me that were candid and respectful.					
Our family and team considered a variety of options including community programs and activities that my child would participate in regardless of disability.					
Our family had the opportunity to consider and discuss the same information as the service providers. This information was then used to form opinions, determine priorities, and plan services.					
My family's individual ethnic, racial, and socioeconomic background was acknowledged and honored.					

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	Did it occur?		Not appropriate at this time	Do you want this to happen at the next meeting?	
	Yes	No		Yes	No

Preparation for the Process

Throughout the assessment process, our family was enc.uraged to share our priorities and concerns.					
Our family was encouraged to discuss future planning and transitions including changes in supports and services and/or moving from one progra.n to another.					
Our family and other team members identified and at.:;:ssed relevant individual, cultural, and linguistic characteristics that may influence the asses;ment process.					
Our family was asked to share information about how we make decisions, how children are disciplined, significant developmental milestones we value, etc.					
We were encouraged to share information about our child's life (i.e., to bring photo albums, think of meaningful stories).					
Our family was encouraged to ask questions and to seek clarification about the process and procedures.					
The assessment process was explained as a problem solving discussion in which our input would be important.					
The other team members assured our family that they would not be making decisions for my child or family, but would provide information about my child and community resources.					
The service providers acknowledged that it is not uncommon for various team members to see children's development from different perspectives and that discussing different points of view can be helpful.					
The team helped our family by providing directions in our preferred language and/or providing transportation to the meeting.					
The team informed us that we would be asked to provide feedback about the process (through personal interview, written survey, follow-up phone call, etc.).					
Key participants needed for future planning were in attendance.					

CREATING INTERACTIVE MEETINGS: Starting with Our Family

Our family was asked to begin the information sharing process by stating our observations, thoughts, and questions about the assessment experience. These comments were used to guide the discussion.					

	Did it occur?		Not appropriate at this time	Do you want this to happen at the next meeting?	
	Yes	No		Yes	No
We participated in the decisions about when and where the meeting would take place.					
Our family was offered the services of an interpreter, community liaison, and bilingual parent advocate as needed to help support our participation in the process.					
We participated in decisions about who would participate in the meeting.					
During the Meetings					
Someone led the discussion and ensured that the information that was shared was relevant.					
Each person had a chance to share information.					
During meetings, time was shared appropriately.					
Discussion was guided by the observations, thoughts, and questions of our family members. The other team members offered their insights and observations in a dialogue about our child with a focus on our child's strengths...					
Our family was informed of educational programs and other community resources with services available in our family's preferred language(s).					
Verbal and written information was shared in the language preferred by our family. If an interpreter was present, team members paused during translations, stayed on the subject, and used clear, straightforward language that we understood.					
The interpreter communicated clearly with our family in our preferred language.					
Team members offered information on selecting culturally appropriate toys, games, and materials appropriate for home activities.					
The team helped us feel comfortable to engage in the discussion.					
Maintaining Open Communication					
Team members checked to see how I was feeling during the discussion.					
The team was open to changing the process based on our feelings (stopping, slowing down, taking break, rescheduling).					
Team members compared their perceptions of our child with each other and with us (i.e., "Does this sound like your child?" "What I've seen . . .").					

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	Did it occur?		Not appropriate at this time	Do you want this to happen at the next meeting?	
	Yes	No		Yes	No
The team explained or clarified information as necessary.					
Information shared was understandable. Technical terms were explained or avoided.					
The team members reacted to differences of opinion in a respectful and open manner so that our family could make informed decisions.					
Reflection					
Our family was asked to provide feedback on whether the information provided met our priorities and concerns.					
At the end of the post-assessment process, the steps for implementing an action plan (IFSP, IEP, transition planning, or informal next steps) were reviewed.					
Service providers had information and other resources needed to design an individualized transition process with us.					
Specific follow-up responsibilities of team members were defined.					
Our family was offered follow-up support regarding any questions or concerns we identified after the meeting.					
Our family was asked to provide feedback on the helpfulness of the assessment (i.e., through personal interview, phone call, written survey, etc.).					
BUILDING ONGOING RELATIONSHIPS					
The names (first and last depending on individual and cultural preferences) of family and team members were used rather than referring to these individuals by the names of their roles (i.e., mom, dad, nurse, speech therapist).					
The team spent time introducing themselves and their roles with our family.					
Name tags, place cards, or lists of names and members' roles were provided so that our family was familiar with the team.					
The physical atmosphere made us feel comfortable (i.e., we were given central seats around a table; we had a quiet private setting for the meeting).					

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APPENDIX I

HISTORY

The information in this book traces its roots to the early 1980's when a forty percent discrepancy formula was used, which identified students by multiplying the student's IQ by his/her actual grade level and then dividing by 100 to determine expected achievement. The Colorado legislature ordered a study of how students in our state were identified as learning disabled. The 1981 Shepard and Smith study titled "Evaluation of the Identification of PC Disorders in Colorado" cited that more than half of the children then identified as PC eligible did not meet statistical or valid clinical criteria. As a result of that study many of the tests and techniques traditionally used to consider learning disabilities were discarded. That left a void, not only in tools for identification, but also in the conceptual and philosophical framework that supported the field. The result was that for many years after, perceptual-communicative disabilities were defined simply as a discrepancy between intellectual potential and academic achievement.

A 1993 survey of administrative units indicated that there were twenty-four different models for eligibility being utilized and fifty-seven different instruments used for assessment. At that time, the process for identifying students with perceptual/communicative disabilities and determining eligibility was reevaluated and changed. The 1995 recommended model included a regression-based discrepancy formula and "PC Indicative Behaviors", specific processing problems that affect a student's cognition or language.

In 2001, the guidelines for identification of students with perceptual/communicative disabilities were reviewed, updated and revised to provide a practical guide for special educators to use in determining eligibility for special education services.

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APPENDIX J

CONVERSION TABLES

Table 1: Converting Subtest Standard Scores to Scaled Scores

standard score derived from raw score using age-based norms (M = 100, SD = 15)			scaled score conversion (M = 10, SD = 3)	
	150			20
	145			19
	140			18
	135			17
	130			16
	125			15
	120			14
	115			13
	110			12
	105			11
	100			10
	95			9
	90			8
	85			7
	80			6
	75			5
	70			4
	65			3
	60			2
	55			1
	50 and below			1

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Table 2: Converting the Sum of the Scaled Score to Standard Quotients

Sum of 2 cluster scores	Sum of 3 subtests	Standard Score Quotient
		120
	39	119
26		118
	38	117
		116
25	37	115
		114
	36	113
24		112
	35	111
		110
23	34	109
		108
		107
22	33	106
		105
	32	104
21		103
	31	102
		101
20	30	100
		99
	29	98
19		97
	28	96
		95
18	27	94
		93
		92
17	26	91
		90
	25	89
16		88
	24	87

		86
15	23	85
		84
	22	83
14		82
	21	81
		80
13	20	79
		78
		77
12	19	76
		75
	18	74
11		73
	17	72
		71
10	16	70
		69
	15	68
9		67
	14	66
		65
8	13	64
		63
		62
7	12	61
		60
	11	59
6		58
	10	57
		56
5	9	55
		54
	8	53
4		52
	7	51
		50

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APPENDIX K

Bibliography of Sources and Suggested Readings
supporting the conceptual and research base of the PC Model

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