BRIGANCE® DIAGNOSTIC

COMPREHENSIVE INVENTORY OF BASIC SKILLS—Revised

CIBS–R Standardisation and Validation Manual

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Chapter 1. Rationale for the Development, Standardisation, and Validation of the *BRIGANCE® Diagnostic Comprehensive Inventory of Basic Skills—Revised (CIBS–R)*

Until its recent revision, the *Comprehensive Inventory of Basic Skills* was exclusively a criterion-referenced measure, widely used in curricular planning, assessment of readiness skills, and in the development of Individual Educational Programs (IEP). With the publication of the *CIBS–R,* the test is also standardised and validated on children five to thirteen years of age. Educational personnel can now obtain not only detailed information about students' skill levels, but also validated grade-equivalent and age-equivalent scores, percentile ranks, and quotients (with a mean of 100 and a standard deviation of 15). This enables the measure to be used for diagnostic, as well as classroom, assessment. Changes from the previous to the current edition are described in its introductory section. This manual focuses exclusively on the standardisation and validation of the *CIBS–R* and includes the norm tables.

Purpose of the *CIBS–R*

As with its criterion-referenced application, the *CIBS–R* is designed to be administered in classroom settings, by teachers. Accordingly, the standardisation and validation of the *CIBS–R* was conducted largely by teachers who administered the test to their own students in classroom settings. This means that the *CIBS–R* produces a complete range of data on students' skill levels as demonstrated under real-life, everyday conditions.

The standardised portions of the *CIBS–R* are designed to meet state and federal assessment requirements. This means that the *CIBS–R* can be used as the educational portion of the battery that identifies children with learning disabilities, giftedness or other exceptionalities. Specifically, the *CIBS–R* produces grade equivalents, age equivalents, percentiles and quotients in six of the seven areas of achievement designated under the Individuals with Disabilities Education Act, for the detection of learning disabilities (basic reading skills, reading comprehension, maths calculation, maths reasoning, written language and listening comprehension). The *CIBS–R* also provides data on students' information-processing skills in order to detect students with learning disabilities caused by processing deficits.

Ultimately, the *CIBS–R* shows how students are progressing and identifies their strengths and weaknesses across skill areas. Consequently, the measure continues to be indispensable in IEP development and program planning.

Components of the Standardised Portions of the *CIBS–R*

READINESS ASSESSMENTS. The twenty-seven Readiness assessments of the *CIBS–R* are designed for kindergarten students. Twenty-six of these were standardised and validated in the 1998 study, and the remaining assessment was validated in 1995 with the *BRIGANCE Screens* standardisation study. The twenty-seven assessments cluster into five composites: general knowledge and language, gross-motor skills, graphomotor and writing skills, reading skills, and maths skills.

The Readiness assessments can be used to determine whether a child is adequately prepared for either kindergarten (prep) or grade one, to show progress during the kindergarten year, and to provide evidence of learning strengths and weaknesses. The Readiness assessments produce grade-equivalent scores, quotients (at both age and grade), and percentiles. Although useful for almost every student, caution should be observed with students who are being tested for academic giftedness. The *CIBS–R* focuses on basic skills likely to have been mastered by such students. More information on when the *CIBS–R* is and is not appropriate to use with a child suspected of academic giftedness is included in Chapter 2.

GRADE ONE TO GRADE SIX ASSESSMENTS. Among the many assessments in the *CIBS–R* designed for grade one to grade six students, ten were included in the national standardisation and validation study. These assessments cluster into the following composites: basic reading skills, reading comprehension, mathematics, written expression, and listening comprehension. In addition, three assessments, if timed, can generate separate scores on a critical and central aspect of information processing and its efficiency; i.e., processing speed in the areas of reading rate, computational rate, and rate of written expression. Slow processing speed can be an indicator of problematic control processes in regulating the flow of information through various stages of learning and thinking; i.e., in such areas as selective attention, coding, organisation, short-term and long-term memory, rehearsal or retrieval (Sattler 1990).

Many of the grade one to grade six assessments are presented in two forms, Form A and Form B. These equivalent versions produce identical scores. The availability of two separate but equivalent forms enables the *CIBS–R* to be used for pre-testing and post-testing without the potential for score inflation due to practice effects.

CIBS–R SCREENER. Three assessments from the ten grade one to grade six assessments can be used as a quick screening tool to decide whether further testing is needed. These assessments are Comprehends Passages, Sentence Writing, and Computational Skills. Each is a strong predictor of overall success in school, and all tap critical school skills. Each of the three assessments in the CIBS–R Screener, if timed, can also yield scores for Reading Information Processing, Writing Information Processing, and Maths Information Processing. The symbol ➞ denotes the CIBS–R Screener assessments.

OPTIONAL SOFTWARE. A simple reporting program for PC and Macintosh computers is sold separately that automates the conversion of birth dates to chronological ages and raw scores to standard scores, percentiles, grade equivalents, ages equivalents and composite scores. Call 1800 334 603 or (03) 9555 1344 for CD-ROM #6010.

Tables 1-1 and 1-2 show the relationship of assessments to composites for the Readiness assessments and for the grade one to grade six portions of the *CIBS–R*. Following the tables is a description of the skill being sampled in each assessment.

Table 1-1. Relationships Between Readiness Assessments and Composites

ASSESSMENTS	General Knowledge and Language	Gross-Motor Skills	Graphomotor and Writing Skills	Reading	Maths
A-2 Recognises Colours *(supplemental)**	2				
A-3 Self-help Skills *(supplemental)**	2				
A-1 Personal Data Response	2				
A-7 Identifies Body Parts	2				
A-26 Understands Directional and Positional Concepts	2				
A-25 Running and Skipping Gross-Motor Skills *(supplemental)**		2			
A-23 Standing Gross-Motor Skills		2			
A-24 Walking Gross-Motor Skills		2			
A-4 Draws a Person *(supplemental)**			2		
A-5 Visual Motor Skills—Forms *(supplemental)**			2		
A-12 Prints Lowercase Letters in Sequence *(supplemental)**			2		
A-13 Prints Uppercase Letters Dictated *(supplemental)**			2		
A-14 Prints Lowercase Letters Dictated *(supplemental)**			2		
A-11 Prints Uppercase Letters in Sequence			2		
A-15 Prints Personal Data			2		
A-22 Writes Numerals in Sequence			2		
A-6 Visual Discrimination—Forms, Letters and Words *(supplemental)**				2	
A-8 Recites Alphabet *(supplemental)**				2	
A-9 Reads Uppercase Letters *(supplemental)**				2	
A-10 Reads Lowercase Letters				2	
A-27 Readiness for Reading				2	
A-20 Joins Sets *(supplemental)**					2
A-21 Numeral Comprehension *(supplemental)**					2
A-16 Rote Counting					2
A-17 Understands Quantitative Concepts					2
A-18 Counts Objects					2
A-19 Reads Numerals					2

** Supplemental assessment scores are not included in the composite scores.*

Table 1-2. Relationships Between Grade One to Grade Six Assessments and Composites

ASSESSMENTS	Basic Reading Composite	Reading Comprehension Composite	Math Composite	Written Expression Composite	Listening Comprehension Indicator	Information Processing
H-4 Warning and Safety Signs *(supplemental)**	2					
D-1 Word Recognition level-placement Test	2					
G-1 Word Analysis Survey	2					
F-1 Reading Vocabulary Comprehension level-placement Test		2				
F-2 ➞ Comprehends Passages		2				
M-1 ➞ Computational Skills level-placement Test			2			
M-2 Problem-Solving level-placement Test			2			
I-1 Spelling level-placement Test				2		
J-3 ➞ Sentence-Writing level-placement Test				2		
C-4 Listening Vocabulary Comprehension level-placement Test					2	
***Maths Information Processing*						2
***Writing Information Processing*						2
***Reading Information Processing*						2

* *This assessment is not included in Basic Reading Composite score.*
** *These assessments are not administered separately. Scores are derived by applying separate scoring criteria to previously administered assessments.*
➞ *These assessments comprise the CIBS–R Screener.*

Description of *CIBS–R* Assessments Included in the Standardisation and Validation Study

READINESS ASSESSMENTS

General Knowledge

A-1 PERSONAL DATA RESPONSE—samples students' ability to state their full name, age, telephone number, parents' names, and address.

A-2 RECOGNISES COLOURS (supplemental test)—samples students' ability to name 11 common colours.

A-3 SELF-HELP SKILLS (supplemental test)—samples students' ability to dress, button, tie shoes and so forth, according to teachers' report.

A-7 IDENTIFIES BODY PARTS—samples students' ability to point to thirty body parts, from 'mouth' to 'wrists' and 'waist'.

A-26 UNDERSTANDS DIRECTIONAL AND POSITIONAL CONCEPTS—samples students' ability to use, in response to pictures and verbal prompts, such terms as 'front/back', 'left/right,' 'inside/outside' and so forth.

Gross-Motor Skills

A-23 STANDING GROSS-MOTOR SKILLS—samples students' ability to stand on each foot, heel-to-toe, with eyes closed and so forth.

A-24 WALKING GROSS-MOTOR SKILLS—samples students' ability to walk a straight line, heel-to-toe, backwards and so forth.

A-25 RUNNING AND SKIPPING GROSS-MOTOR SKILLS (supplemental test)—samples students' ability to run and skip.

Graphomotor and Writing Skills

A-4 DRAWS A PERSON (supplemental test)—samples students' ability to draw a human figure with a range of body parts, such as head, arms, ears, neck and so forth.

A-5 VISUAL MOTOR SKILLS—FORMS (supplemental test)—samples students' skills in copying basic shapes.

A-11 PRINTS UPPERCASE LETTERS IN SEQUENCE—samples students' ability to write uppercase letters in alphabetical order.

A-12 PRINTS LOWERCASE LETTERS IN SEQUENCE (supplemental test)—samples students' ability to write lowercase letters in alphabetical order.

A-13 PRINTS UPPERCASE LETTERS DICTATED (supplemental test)—samples students' ability to write uppercase letters out of order in response to dictation.

A-14 PRINTS LOWERCASE LETTERS DICTATED (supplemental test)—samples students' ability to write lowercase letters out of order in response to dictation.

A-15 PRINTS PERSONAL DATA—samples students' ability to write their full name, age, telephone number and address.

A-22 WRITES NUMERALS IN SEQUENCE—samples students' ability to print numerals between 1 and 100 in correct order.

Reading

A-6 VISUAL DISCRIMINATION—FORMS, LETTERS AND WORDS (supplemental test)—samples students' ability to point to shapes, letters and words that are different from among competing choices

A-8 RECITES ALPHABET (supplemental test)—samples students' ability to recite letter names in order.

A-9 READS UPPERCASE LETTERS—samples students' ability to name uppercase letters when presented out of order.

A-10 READS LOWERCASE LETTERS (supplemental test)—samples students' ability to name lowercase letters when presented out of order.

A-27 READINESS FOR READING—samples, by teacher report, students' interest in reading, ability to read some common words, use letter sounds to decode unfamiliar words, and so forth.

Maths

A-16 ROTE COUNTING—samples students' ability to count to 100.

A-17 UNDERSTANDS QUANTITATIVE CONCEPTS—samples students' ability to correctly use, in response to pictures and verbal prompts, such terms as 'big/little', 'thick/thin', 'few/many', 'beginning/end' and so forth.

A-18 COUNTS OBJECTS—samples students' ability to count 3 to 24 pictures of objects.

A-19 READS NUMERALS—samples students' ability to name numerals between 2 and 100 when presented out of order.

A-20 JOINS SETS (supplemental test)—samples students' ability to combine and count two groups of objects.

A-21 NUMERAL COMPREHENSION (supplemental test)—samples students' ability to demonstrate via pencil marks or by holding up fingers, the meaning of numbers from 1 to 10.

GRADE ONE TO GRADE SIX ASSESSMENTS

Basic Reading Composite

D-1 WORD RECOGNITION LEVEL-PLACEMENT TEST—samples students' ability to read single words from preprimer level through to year eight.

G-1 WORD ANALYSIS SURVEY—samples phonemic awareness and knowledge, including students' ability to discriminate like and different sounds in spoken words, identify initial sounds, substitute sounds in rhyming words, decode word parts and divide words into syllables.

H-4 WARNING AND SAFETY SIGNS (supplemental test)—although this test is not used to produce a basic reading composite score, it samples students' ability to read correctly such words as 'flammable', 'don't walk', 'exit' and so forth.

Reading Comprehension Composite

F-1 READING VOCABULARY COMPREHENSION LEVEL-PLACEMENT TEST—samples students' understanding of the meaning of printed words by the identification of the one with a different meaning, given competing choices.

F-2 COMPREHENDS PASSAGES—samples students' ability to read and comprehend a short passage between the primer and year nine levels and answer oral questions.

Math Composite

M-1 COMPUTATIONAL SKILLS LEVEL-PLACEMENT TEST—samples students' ability to solve calculations involving addition, subtraction, multiplication, division, fractions and percentages.

M-2 PROBLEM-SOLVING LEVEL-PLACEMENT TEST—samples students' ability to apply computational skills to practical problems. Word problems are read to (or by) students, who then solve them using basic arithmetic processes, the ability to operate with fractions, and so forth.

Written Expression Composite

I-1 SPELLING LEVEL-PLACEMENT TEST—samples students' ability to write with correct spelling, words from grade one to year eight word lists.

J-3 SENTENCE-WRITING LEVEL-PLACEMENT TEST—samples students' ability to create and write sentences, given three to five stimulus words.

Listening Comprehension Indicator

C-4 LISTENING VOCABULARY COMPREHENSION LEVEL-PLACEMENT TEST—samples students' ability to comprehend the meaning of words by the naming of the one in a list of four that has a different meaning.

INFORMATION PROCESSING. Because learning disorders may occur in only one academic area, the following assessments are not combined into a composite score but are viewed individually for evidence of unique types of information-processing deficits. Their value in reflecting significant problems should also be based on observations of classroom difficulties. Students with processing problems are those who take an excessively long time to finish their work (i.e. read, write or compute far more slowly than most children). Often, children with processing problems have difficulty initiating tasks, since they are usually aware of their difficulties and are readily overwhelmed when presented with tasks.

Maths Information Processing. By counting the number of computational problems completed in 60 seconds, this scoring procedure samples computational rate.

Writing Information Processing. By counting the number of correctly written sentences completed in 120 seconds, this scoring procedure samples writing rate.

Reading Information Processing. By using a stopwatch while students read passages on the reading comprehension assessment, this scoring procedure samples reading rate.

