The BRIGANCE® Early Childhood Screens III: A Summary of Technical Information
Implementing the BRIGANCE® Screens III for Early Identification and Intervention

The BRIGANCE® Screens III provide valid and reliable data in all areas of a child’s development, making each screen truly multi-dimensional. As noted in the Screens III Technical Manual (full manual available upon request), the Screens III can typically be used for one of three reasons:

1. **Identify as early as possible** children who may have developmental delays or disabilities as well as children who may have advanced development or giftedness so that any necessary referrals for further testing or special services can take place as soon as possible.

2. **Determine school readiness** by assessing a child’s mastery of those age-appropriate skills that prepare the child for the classroom and promote the child’s future success.

3. **Guide instructional planning** and monitor progress over time.

### Early Identification

A fundamental reason for screening is early identification, and the Screens III were developed with this application in mind. Because the Screens III sample a range of developmental domains, school systems and agencies can use the Screens III to comply with Head Start mandates as well as early identification requirements under the Individuals with Disabilities Education Act (IDEA).

The Screens III cutoffs for potential developmental delays and potential giftedness make it easy to identify early those children in need of additional evaluation and potential intervention. A critical component of any screening test is the accuracy of the cutoff scores in determining if a child should be referred for additional evaluation. The research behind the Screens III assures teachers and administrators that accurate early identification is taking place. In fact, sensitivity and specificity (key measures of accuracy) are 89% and 93%, respectively, for the Kindergarten screen. (Note: The field suggests that screening measures should target at least 70%, according to Distefano and Kamphaus, 2007.)

Accuracy statistics for other age-specific screens in the Screens III are available in the Technical Manual as well as in the infographics on the following pages.

### School Readiness

Screening also plays a critical role in determining school readiness, particularly for children entering Kindergarten. Many states have their own definitions of school readiness, but in its most general form, school readiness means that a child possesses a set of prerequisite skills and abilities (e.g., knowledge, attitudes, behaviors) that will allow that child to benefit from instruction at the kindergarten level (and above) (Anastasi and Urbina, 1997). Accurate screening of behavioral, language, and academic skills (with valid and reliable measures) assists in ensuring children are ready to achieve.

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The Screens III, in particular the Kindergarten screen, were developed with the realization that school readiness assessment is growing increasingly important in the field of education. For this reason, numerous state standards (both early learning standards and content standards for Kindergarten) were consulted in the development of the screening items to ensure that critical indicators of school readiness are being measured by the Screens III. The validity research, including the accuracy statistics cited above, also supports the use of the Screens III as a trustworthy multi-dimensional assessment to inform school readiness. Furthermore, the fact that numerous districts and the entire state of Kentucky are using the Screens III for this purpose serves to build additional validity evidence for this application.

**Instructional Planning**

A third reason for screening is to guide instructional planning and monitor child development and growth over time. Providing teachers and programs with valid and reliable information about each child to ensure that instruction can be individualized to a specific child’s needs is a critical step in effective early intervention. In addition to generating a total score that can be compared to cutoffs, the Screens III offer domain-level scores, which can provide the guidance needed to effectively support targeted instructional planning and intervention. For the Four-Year-Old Child and Kindergarten screens, domain scores include:

- Physical Development
- Language Development
- Academic Skills/Cognitive Development (including both literacy and mathematics)
- Self-help Skills
- Social-Emotional Development

To assist in identifying significantly weak or strong skills on the Screens III (in relation to those of the child’s peers), normative scores can be computed for each domain at each age level. An easy-to-use score interpretation table is offered to help teachers determine if a domain score implies a significant strength or significant weakness (or somewhere in between) for each child in their class. Once a domain is identified as a possible area of concern, teachers can dig into the specific skills assessed within that domain to determine where additional evaluation and/or instructional support may be needed for that child. Guidance for this type of skill analysis is included with the Screens III technical documentation.
The BRIGANCE® Screens III Research Base

The Screens III were completely updated for 2013 and normed on a nationally representative sample of 1,929 children. The infographics on this and the following pages illustrate the research base for the Screens III, including significant evidence supporting the validity and reliability of the assessments.

Standardization

The sample of children is nationally representative in terms of geographic, demographic, and socioeconomic characteristics.

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Reliability

The scores of the children assessed were consistent when examined repeatedly. Differences in scores were attributable to real differences in abilities, as opposed to chance error.

Accuracy

With a high degree of accuracy, each age-specific screen correctly identifies children not likely to have developmental delays or academic disabilities as well as children likely to have delays or disabilities who may require further evaluation and potential intervention.
Validity

The decisions based on test scores and the inferences on which the decisions are based are justified by supporting evidence.

Construct Validity—Internal Structure
The domain score structure of the Screens III is supported by confirmatory factor analysis for all domains and age levels.

Construct Validity—Fairness
Children of similar ability have the same chance of receiving credit regardless of their demographic.

Content Validity
Developmental researchers and educators confirm the items test the important developmental and early academic skills.

Criterion-Related Validity
BRIGANCE screening results correlate with other early development, achievement, intelligence, and language tests.

Differential Item Functioning Analysis
684 items were examined for bias in the categories of gender & race. Using differential item functioning analysis (DIF) based on a chi-square difference test, 0 items were biased.

BRIGANCE Screens III
Confirmed sequencing of items
Identified items in need of revision
Confirmed items are key predictors of child development and school success
Identified need for new content

Infant & Toddler

Two-Year-Old through First Grade

BCI-2™ Battelle Developmental Inventory, Second Edition
WJ-III™ Woodcock-Johnson® III
Mullen Scales of Early Learning
Bayley-III® Bayley Scales of Infant and Toddler Development-3rd edition
Vineland™-II Vineland Adaptive Behavior Scales, Second Edition

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