



BRIGANCE[®]



Early Childhood Screens

Standardisation & Validation

Research Highlights

The Power of Early Identification

The *BRIGANCE® Screens* provide easy-to-administer screening tools to ensure children receive the support they need to succeed. Completed in just 10–15 minutes per child, the ***BRIGANCE Screens* enable educators to quickly and accurately identify potential developmental delays and academic giftedness** in children from birth to age 7.

Developmental Screening Is Essential

Research has proven that **early identification and intervention** for both developmental delays and academic giftedness **can significantly impact a child's developmental progress**, success in school, and future adult functioning.

Early intervention with children who have special learning needs or are at risk helps ensure the realization of their potential and their success with critical life tasks. It decreases the need for intense and expensive services, maximizes potential, and improves future adult functioning (Reynolds et al, 2001). For children who may be academically gifted or talented, early intervention promotes motivation, task persistence, self-worth, and standards of excellence during a critically formative period (Karnes and Johnson, 1986).

The tremendous positive impact of early intervention on children's current and future development provides compelling justification for identifying emerging difficulties and strengths as early as possible.

Children Should Be Screened Regularly

Children should be screened regularly to detect developmental delays and academic giftedness. The ***BRIGANCE Screens* enable repeated developmental screening at different ages** with a screen for each age from birth to age 7. Children should be screened at each stage of development because certain skills become more apparent as a child matures. Furthermore, children who may appear to be developing normally at one age may appear delayed at a later age due to poor skill development (Bell, 1986).

Proven Effectiveness

Data is only as good as its source. The *BRIGANCE® Screens*, built on more than **twenty-five years of research and experience**, ensure effective screening results.

The *BRIGANCE Screens* cover a **broad sampling of a child's skills and behaviors**, including Language Development, Literacy, Mathematics and Science, and Physical Health and Development. In particular, the *BRIGANCE Screens* effectively **assess critically predictive domains of development**, language and achievement, by sampling expressive and receptive language as well as early literacy and math skills.

The assessments in the *BRIGANCE Screens* have been proven to be **highly accurate, reliable, and valid**. They have been nationally standardized and validated on children ages birth to 7, across a representative sample that encompasses geographic, demographic, and socio-economic breadth. Teachers can use the *BRIGANCE Screens* to **confidently compare any child to the national sample** to identify and set appropriate goals for those who are struggling, as well as those who are performing above average.

BRIGANCE Screens Are Nationally Normed

The assessments in the *BRIGANCE Screens* are standardized, or normed, on a geographically and demographically diverse sample of 1,366 children from across the United States. The parents of the children who participated in the *BRIGANCE Screens* standardization study **represent the population of the United States** in terms of ethnicity, gender, income, level of education, and factors that contribute to psychosocial risk status.

Furthermore, the directions for administration and scoring of the *BRIGANCE Screens* have been field-tested and proven to ensure consistent administration by different examiners. Users of the *BRIGANCE Screens* will find the directions clear, consistent from screen to screen, and easy to implement.

The data from the standardization of the *BRIGANCE Screens* has stood the test of time and will stand up under careful scrutiny by test and measurement professionals.

BRIGANCE® Screens Are Highly Accurate

The *BRIGANCE Screens* demonstrate a **high degree of accuracy**, the most important technical aspect of a screening instrument.

The *BRIGANCE Screens* are **highly sensitive**, identifying the vast majority of children with likely developmental delays and academic giftedness. This high degree of sensitivity ensures the *BRIGANCE Screens* will identify, on average across ages:

- 82% of children with true delays or difficulties
- 86% of children over the age of two with potential academic giftedness

The *BRIGANCE Screens* are also **highly specific**, correctly identifying the majority of children within the normal range of development, with minimal “overreferral.” Specificity related to developmental delays is 84%.

The *BRIGANCE Screens* cutoff scores, developed through Receiver Operating Characteristic (ROC) analyses, enable educators to identify students who fall into three categories:

- Children who should be evaluated for special education services due to a high probability of developmental delays or difficulties
- Children who should be evaluated to determine whether they are gifted or academically talented
- Children who are performing adequately for their age or grade placement

In addition, the *BRIGANCE Screens* **enable educators to evaluate children at risk**, in order to identify the most appropriate course of action. The *BRIGANCE Screens* include specific guidelines to help determine whether children are scoring below the cutoff due to psychosocial risk factors or true developmental delays. Children with multiple psychosocial risk factors may be most appropriately served by prevention programs or additional exposure.

BRIGANCE® Screens Are Highly Reliable

The *BRIGANCE Screens* are **highly reliable**. Teachers can be confident that if a child is rescreened several days or weeks later, even by a different examiner, the child should get approximately the same score.

The *BRIGANCE Screens* have a high degree of **internal consistency**, indicating that the items in the *BRIGANCE Screens* correlate well with each other and the total test score. The *BRIGANCE Screens* have an internal consistency of 0.84 to 0.99. In addition, scalability coefficients confirm that the assessments and their items are hierarchical, unidimensional, homogeneous measures of academic and readiness skills.

The *BRIGANCE Screens* also demonstrate excellent **test-retest reliability**, ensuring that assessment results are independent of when the assessment is administered. The *BRIGANCE Screens* demonstrate a high degree of stability in scores over short intervals of time, with correlations ranging from 0.84 to 0.99.

The *BRIGANCE Screens* demonstrate outstanding **inter-rater reliability**, indicating that assessment results are stable across multiple examiners. This is a testament to the clarity of the directions for administering and scoring the *BRIGANCE Screens*, as well as their ease of use. Correlations between assessment results by different examiners range from 0.90 to 0.99.

BRIGANCE Screens Demonstrate Substantial Validity

The *BRIGANCE Screens* demonstrate a **high degree of validity**, for which they have received numerous accolades from researchers over the past twenty-five years. The high degree of validity establishes that the *BRIGANCE Screens* focus on developmentally appropriate content areas, that those areas are appropriately assessed, and that the assessment results correctly identify those students in need of intervention.

The *BRIGANCE Screens* have substantial **content validity**. Assessments in the *BRIGANCE Screens* measure those developmental areas and readiness skills widely recognized by professionals as the most important in early childhood development. Assessment items were selected by educators and psychologists and are based on a

solid foundation of early childhood developmental literature. The *BRIGANCE Screens* also demonstrate desirable age-related trends; younger children average lower scores than do older children administered the same assessments.

The *BRIGANCE Screens* have substantial **construct validity**. This confirms that the *BRIGANCE Screens* measure clear and distinct developmental skills that are consistent with their overarching skill areas, or factors. Factor analysis reveals that the *BRIGANCE Screens* contain a clear factor/skill area structure with minimal overlap.

The *BRIGANCE Screens* demonstrate excellent **concurrent validity**. The *BRIGANCE Screens* skill areas are strongly correlated with widely recognized diagnostic or criterion assessment tools that measure similar skill areas. In particular, the *BRIGANCE Screens* are highly correlated to other measures of motor, language, and academic skills, with correlations ranging from 0.66 to 0.97, across skill areas and ages for children over the age of two.

The *BRIGANCE Screens* have historically had substantial **predictive validity**, identifying the majority of children who had school difficulty five months to six years later.

The *BRIGANCE Screens* have a high degree of **discriminant validity**, demonstrating that the *BRIGANCE Screens* effectively differentiate between students with typical versus atypical development, gifted versus non-gifted development, and those with and without risk factors. For example, children with developmental delays scored substantially lower on the *BRIGANCE Screens*, generally one standard deviation lower than children with average scores.

For more detail on the standardization and validation of the BRIGANCE Screens, see Chapter 7-10 of the Technical Report for the BRIGANCE Screens by Frances Page Glascoe, Ph.D.

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- Comprehensive set of assessments for children from birth to age 7
- Built on more than 25 years of research
- Standardized and validated

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