IED III Standardized Research Base

- Standardization
- Reliability
- Validity
Items measuring the same concept were correlated with one another.

**Internal Consistency**

**Reliability Estimates for the Total Developmental Score**

<table>
<thead>
<tr>
<th>Score 1</th>
<th>Score 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>110</td>
<td>110</td>
</tr>
<tr>
<td>105</td>
<td>105</td>
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<tr>
<td>100</td>
<td>100</td>
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<tr>
<td>95</td>
<td>95</td>
</tr>
<tr>
<td>90</td>
<td>90</td>
</tr>
<tr>
<td>85</td>
<td>85</td>
</tr>
</tbody>
</table>

**Age in Months**

- Data represented in pie charts showing regional representation, gender, ethnicity/race, Hispanic/Latin/Spanish origin, free/reduced lunch, and special services.

**Test-Retest Reliability**

Observations/ratings of performance were consistent across multiple examiners.

**Inter-Rater Reliability**

The correlation is strong between individual assessments and their respective domains and weaker between those assessments and the other domains.

**Construct Validity—Internal Structure**

Children of similar ability have the same chance of receiving credit regardless of their demographic.

**Construct Validity—Fairness**

Correlates with other early development, achievement, intelligence, and language tests.

**Criterion-Related Validity**

**Validity**

Identified items in need of revision

Identified need for new content

Confirmed sequencing of items

Confirmed items are key predictors of child development and school success

**Standardization**

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

**Regional Representation**

- West
- Midwest
- Northeast
- South

**Gender**

- Male
- Female

**Ethnicity/Race**

- White
- Asian
- African Am./Black
- Hawaiian/Pacific Islander
- Other

**Hispanic/Latin/Spanish Origin**

- No
- Yes

**Free/Reduced Lunch and/or Medicaid**

- No
- Yes

**Special Services**

- No
- Yes

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For more information, see the Standardization & Validation Manual, Chapters 5–7.

**Mullen**

Mullen Scales of Early Learning

**Vineland**

Vineland Adaptive Behavior Scales

**WISC**

Wechsler Intelligence Scale for Children

**WJ III**

Woodcock - Johnson

**BDI-2**

Battelle Developmental Inventory

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

**Current Literature**

- Mullen
- Vineland
- WISC
- WJ III

**Domains**

- Physical Development
- Language Development
- Academic Skills/Cognitive Development
- Adaptive Behavior
- Social-Emotional Development

**Intraclass Correlation Coefficient**

(for subdomains where observations were required)

Only 6 items were biased had large enough DIF worth investigating.

A separate fairness & bias review was also conducted by a review panel.

Together, DIF & bias reviews concluded:

- Am. Indian/Alaska Native
- Asian
- African Am./Black
- Hawaiian/Pacific Islander
- Other

DIF

EXAMINED FOR BIAS BASED ON A CHI-square test DIFFERENCE TEST IN THE CATEGORIES OF GENDER & RACE USING A DIFFERENTIAL ITEM FUNCTIONING ANALYSIS

**look at item analysis**
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.

**Internal Consistency**
Items measuring the same concept were correlated with one another.

**Inter-Rater Reliability**
Observations/ratings of performance were consistent across multiple examiners.

**Test-Retest Reliability**
Domain and Total Developmental Scores were stable when tested at multiple points in time.
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 correlation is strong between individual assessments and their respective domains and weaker between those assessments and the other domains.

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

Content Validity
Items test the developmental and early academic skills that are considered to be important by developmental researchers and educators.

Criterion-Related Validity
Correlates with other early development, achievement, intelligence, and language tests.