## What’s changed from the BBCS–3:R?

<table>
<thead>
<tr>
<th></th>
<th>BBCS–3:R</th>
<th>Bracken 4</th>
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</thead>
<tbody>
<tr>
<td><strong>Age Range</strong></td>
<td>3:0 through 6:11</td>
<td>3:0 through 7:11</td>
</tr>
<tr>
<td><strong>Publication Date</strong></td>
<td>2006</td>
<td>2023</td>
</tr>
<tr>
<td><strong>Administration Time</strong></td>
<td>Receptive School Readiness Composite (SRC) subtests 1–5: 10–15 minutes Receptive Total Composite (Receptive TC): 30–40 minutes</td>
<td>School Readiness Subtests (SRS) and SRC subtests 1–6: 10–20 minutes Receptive Total Composite (Receptive TC): 25–40 minutes</td>
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<tr>
<td><strong>Test Administration Options</strong></td>
<td>Paper and Pencil only</td>
<td>Paper and Pencil</td>
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<td></td>
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<td><strong>New! Digital Options:</strong></td>
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<tr>
<td></td>
<td></td>
<td>Q-global®</td>
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<tr>
<td></td>
<td></td>
<td>• Digital Manual</td>
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<td>• Digital Stimulus Book</td>
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<td></td>
<td></td>
<td>• Print Record Form</td>
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<td></td>
<td></td>
<td>• Digital Scoring (purchased separately)</td>
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<td></td>
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<td><strong>Q-interactive®</strong></td>
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<tr>
<td></td>
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<td>• Integrated administration, scoring, and reporting using two iPad® devices connected by Bluetooth®.</td>
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<tr>
<td><strong>Number of Concepts Tested</strong></td>
<td>282 concepts tested</td>
<td>320 concepts tested</td>
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<tr>
<td></td>
<td>Grouped by category and ordered by level of difficulty.</td>
<td>159 of these are identified as STEAM* concepts in the Record Form and in the Concept Development Guide.</td>
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<tr>
<td></td>
<td></td>
<td>*Science, Technology, Engineering, Art, and Math concepts</td>
</tr>
<tr>
<td><strong>Start Points and Discontinue Points</strong></td>
<td>Ability-based start point for subtests 6–10. Use the SRC raw score to identify the letter indicating the Start Point for Subtests 6–10.</td>
<td><strong>Age-based start points for Subtests 1–10.</strong> The Start Point for each subtest is shown on the Record Form.</td>
</tr>
<tr>
<td></td>
<td>Discontinue Rule:</td>
<td>Discontinue Points:</td>
</tr>
<tr>
<td></td>
<td>3 consecutive scores of 0.</td>
<td>Subtests 1–6 (SRS): 3 consecutive scores of 0</td>
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<tr>
<td></td>
<td></td>
<td>Subtests 7–10: 4 consecutive scores of 0.</td>
</tr>
</tbody>
</table>

Text in purple indicates changes from previous version.
### Subtests Comprising the SRS (School Readiness Subtests) and SRC (School Readiness Composite)
- Colors
- Letters
- Numbers/Counting
- Sizes Comparisons
- Shapes

### Subtests Not Included in the SRC
- Direction/Position
- Self-/Social Awareness
- Texture/Material
- Quantity
- Time/Sequence

### Results by Subtest Scores:
- **BBCS–3:R Subtest Scaled Scores**
  - Available for:
    - Ages 3:0 through 6:11
    - Receptive SRC, Subtests 1–5
    - Subtests 6–10 including:
      - Direction/Position
      - Self-/Social Awareness
      - Texture/Material
      - Quantity
      - Time/Sequence
- **BBCS–4:R Subtest Scaled Scores**
  - Available for:
    - Ages 3:0 through 7:11
    - Receptive SRC, Subtests 1–6
    - Self-/Social Awareness (available as a separate subtest score and as part of the SRS)
    - Subtests 7–10, including:
      - Direction/Position
      - Texture/Material
      - Quantity
      - Time/Sequence
      - Growth Scale Values (GSVs)

### BBCS–4:R Results: Composite Scores
- **Scores**
  - Standard scores (mean of 100; standard deviation of 15) for the SRC and Total Composite (TC), reported in 3-month intervals
    - Percentile ranks
    - Age equivalents
- **Other test information**
  - Percent mastery (Spanish Record Form only)
  - Descriptive classifications

### BBCS–3:R Composite Scores
- **Available for:**
  - Ages 3:0 through 6:11
    - Receptive SRC
    - Receptive TC

### Digital Scoring
- Previously available on CD (now out of print)

### New!
- **Q-global scoring:**
  - Individual report usages
  - Unlimited use 1- and 3-year subscriptions
- **Q-interactive:**
  - Included in test administration fee
<table>
<thead>
<tr>
<th><strong>Test Stimuli</strong></th>
<th>Developed in 2003 based on customer feedback and expert content and bias reviews.</th>
<th>Developed in 2017 and 2018 based on customer and examiner feedback, in addition to expert content and bias reviews.</th>
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</thead>
<tbody>
<tr>
<td><strong>Standardization</strong></td>
<td>Standardization data was collected using print materials from September 2005 to April 2006.</td>
<td>Standardization data was collected using Q-interactive. Data were collected from January 2020 to May 2022. An equivalency study examining personal protective equipment (PPE) vs. no PPE was collected October through November 2020.</td>
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<tr>
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<td>N = 640</td>
<td>N = 720</td>
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<td>Sample matched to US Census figures in 2003.</td>
<td>Sample matched within +/-5% to US Census figures reported in 2019.</td>
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<td>Included 4.8% of children with a diagnosed receptive and/or expressive language disorder/delay.</td>
<td>Included 2% of children identified as Gifted/Talented (GT). Seven percent of children were placed in a special education program (including 0.5% identified with autism spectrum disorder, 1% with a Developmental Delay (DD), 1% with Specific Learning Disability (SLD), 1% Other Health Impairment (OHI), 2.5% with a Language Impairment (LI), and 1% with ADHD).</td>
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<tr>
<td><strong>Reliability Studies</strong></td>
<td>Descriptions in the Manual for evidence of reliability based on:</td>
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<tr>
<td></td>
<td>• Test-retest stability for all ages from 3:0 through 6:11: For the subtests (1–5 (SRC) and subtests 6–10), the standard difference between the first and second testing ranged from .11 to .39. For composite scores, the standard difference ranged from .19 to .27.</td>
<td>• Test-retest stability for all ages from 3:0 through 7:11: For the subtests (SRS subtests 1–6 and Subtests 6–10) the standard difference between the first testing and second testing ranged from .07 to .31. For composite scores, the standard difference ranged from .13 to .27.</td>
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<tr>
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<td>• Average internal consistency reliability coefficients (split half) for subtest and composite scores across all ages ranged from .91 to .98 (normative sample).</td>
<td>• Average internal consistency reliability coefficients (split half) for subtest scores ranged from .92 to .98. Reliability coefficients for composite scores across all ages ranged from .98 to .99 (normative sample).</td>
</tr>
</tbody>
</table>
### Reliability Studies (continued)

- Average standard errors of measurement are based on internal reliability coefficients (split half) for subtest and composite scores across all ages: 0.55 to 0.93 for subtest scores; 1.98 to 3.75 for composite scores.

- Internal consistency reliability coefficients (split half) for subtest and composite scores across all ages ranges by clinical groups range from .96 to .99 (language impairment group) and .97 to .99 (intellectual disability group).

### Validity Studies

Descriptions in the Manual for evidence of validity based on:

- Test content
  - National and international expert review and comparison to state early childhood standards.

- Response processes, including examination of frequently occurring error responses, with items modified or deleted if needed.

- Internal structure (Intercorrelation analysis): Score intercorrelations of subtests with other subtests across all ages ranged from .54 to .68. Intercorrelations of subtests to the Total Composite ranged from .79 to .86.

### Average standard errors of measurement are based on internal reliability coefficients (split half) for subtest and composite scores across all ages: 0.48 to 0.84 for subtest scores; 1.80 to 2.40 for composite scores.

- Internal consistency is reported for three groups: Language Impairment (LI), Developmental Delay (DD), and Gifted and Talented (GT). Subtest reliability coefficients for the LI group ranged from .97 to 1.0; composite reliability coefficients for the Receptive SRC and Receptive TC were rounded to 1.0. For the DD group, subtest reliability coefficients ranged from .80 to .99; composites ranged from .97 to .99. For the GT group, subtest reliability coefficients ranged from .62 to .97; composites ranged from .86 to .95. The average subtest reliability coefficients of the three special groups ranged from .91 to .97; the average Receptive SRC and Receptive TC composites were both .96.

Descriptions in the Manual for evidence of validity based on:

- Test content
  - Literature review, user feedback, national and international expert review, and comparison to state early childhood standards.

- Response processes, including examination of frequently occurring error responses, with items modified or deleted if needed.

- Studies of responses collected in a digital format and responses obtained with and without the use of PPE are discussed in the Manual.

- Internal structure (Intercorrelation analysis): Score intercorrelations across all ages range from .67 to .78 on subtests. For intercorrelations between subtests and composites, the range is .73 to .99. For composite scores: the correlation is .85 for the Receptive TC and Receptive SRC the intercorrelations is .88.
### Validity Studies (continued)

- Relationships with other variables:
  - Correlation coefficients between BBCS–3:R and BBCS-R:
    Corrected $r$: .69 to .84 (subtests)
    Corrected $r$: .85 for both the Receptive TC and Receptive SRC
  - Correlation coefficients between the BBCS–3:R and PLS™-4: Corrected $r$: .73 with the Receptive TC and .65 with the Receptive SRC
  - Special group studies included children diagnosed with Language Impairment:
    - The mean standard difference of subtest scores range from 0.88 to 1.24. Mean standard difference of composite scores is 0.80 for Receptive SRC and 1.31 for Receptive Total Composite).

### Spanish Version

- The BBCS–3:R test items were adapted or modified from the English items rather than translated (e.g., a comparable Spanish word or phrase is chosen that best expresses the concept in English).
- Vocabulary options reflecting regional dialectal variations are not provided on the BBCS–3:R Spanish Record Form.
- Research was conducted with 61 Spanish speaking children ages 3:0 through 6:11.

- Some items on the BBCS–4:R Spanish Record Form were modified from items on the English Record Form rather than translated. Modified test items consist of a comparable Spanish word or phrase that best expresses the concept in English.
- Vocabulary options reflecting regional dialectal variations are provided on the BBCS–4:R Spanish Record Form.
- Research data were not collected from a sample of children who speak Spanish as their dominant language. It is not appropriate to use the responses recorded on the BBCS–4:R Spanish Record Form to derive a standard score based on the English normative data. Results may be used as a criterion referenced measure to:
### Spanish Version (continued)

| Evidence of reliability and validity: Evidence of internal consistency: The internal consistency reliability coefficients (split-half) for the Receptive Total for both the Spanish and English editions was .99.  
Evidence of validity based on internal structure: The correlation of the Receptive Total with BBCS–3 subtests (matched sample of English and Spanish speakers) ranged from .82 to .95.  
Evidence of reliability and validity Information reported in the BBCS–3:R Manual presents initial evidence of reliability and validity of the BBCS–3:R Spanish. The information obtained using the Spanish Record Form for the BBCS-4:R helps you assess constructs similar to the constructs tested using the English Record Form.  
Information from the BBCS–3:R Spanish demonstrates that the Spanish version of the test items provide a reliable and valid instrument for criterion-referenced or curriculum-based assessment when used as a part of a comprehensive evaluation. No updated reliability and validity data was collected for the Spanish translation of the BBCS–4:R. |

- Determine a child's baseline level of performance (pretesting), then determine the child's level of mastery after instruction/remediation has occurred (post-testing)  
- Validate previous test results and observations about a child's receptive concept knowledge  
- Deep-test concept categories not fully assessed on another measure  
- Identify specific concepts that the child has not mastered that require instruction/remediation so they can be included in the classroom teacher's lesson plans and/or the child's Individualized Education Program (IEP)