Comparison of Illinois Basic Skills test results and ACT scores

The Illinois Education Research Council
IACTE, October 28, 2011
Most recent BST results (September 2011)

Passed all four subtests

<table>
<thead>
<tr>
<th></th>
<th>AFRICAN AMERICAN</th>
<th>HISPANIC</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>6/89</td>
<td>17/117</td>
</tr>
<tr>
<td>Percentage</td>
<td>7%</td>
<td>15%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>ASIAN</th>
<th>WHITE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>9/31</td>
<td>281/765</td>
</tr>
<tr>
<td>Percentage</td>
<td>29%</td>
<td>37%</td>
</tr>
</tbody>
</table>

313/1002
31%
First, a couple of notes about our analysis:

1. This is a limited sample:
   a. Just those who took the BST Sept-Dec, 2010 (N= 5,310), and
   b. For whom we could obtain ACT data (N=3,203 or 60%)
   c. Will follow up with analysis of full year’s worth of data soon

2. I’m just the messenger.
   a. Analysis is intended to be descriptive, not prescriptive
Summary of initial BST results:
Number of subtests passed

- Passed None: 6.7%
- Passed Just One Subtest: 30.5%
- Passed Two Subtests: 19.5%
- Passed All Subtests except one: 15.9%
- Passed All: 27.3%
Passed Just One Subtest 30.5%

- Just Writing 29.4%
- Just Math 0.5%
- Just Reading 0.3%
- Just Language Arts 0.2%
- Passed Two Subtests 19.5%
- Passed All Subtests except one 15.9%
- Passed All 27.3%
- Passed None 6.7%
Passed Two Subtests 19.5%
Passed All Subtests except one 15.9%

- All but Language Arts 6.7%
- All but Reading 5.0%
- All but Math 4.0%
- All but Writing 0.3%
- Passed Two Subtests 19.5%
- Passed Just One Subtest 30.5%
- Passed None 6.7%
- Passed All 27.3%
Do BST scores improve on subsequent attempts?

**Reading**
- Average Change = +14.9
- % improving = 63.0%
- % passing on 2\textsuperscript{nd} attempt = 27.4%

**Writing**
- Average Change = +28.3
- % improving = 68.6%
- % passing on 2\textsuperscript{nd} attempt = 82.9%
Do BST scores improve on subsequent attempts?

**Language Arts**

- **Average Change** = +9.7
- % improving = 53.3%
- % passing on 2\(^{nd}\) attempt = 24.7%

**Math**

- **Average Change** = +21.5
- % improving = 70.1%
- % passing on 2\(^{nd}\) attempt = 36.2%
The relationship between BST results & ACT scores
Distribution of ACT composite scores for our sample

Mean = 21.38
Std. Dev. = 4.651
N = 3,203
Distribution of BST results by ACT composite score

![BST Distribution Chart]

- **X-axis**: ACT Composite
- **Y-axis**: Count
- **BST Results**: Fail and Pass

The chart shows the distribution of BST results by ACT composite score, indicating the number of failures and passes across different composite score ranges.
Proportion passing BST by ACT composite score
### Average ACT composite and subscale scores by BST status

<table>
<thead>
<tr>
<th></th>
<th>All BST Takers</th>
<th>Did not pass BST</th>
<th>Passed BST*</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACT Composite</td>
<td>21.38</td>
<td>19.52</td>
<td>25.73</td>
</tr>
<tr>
<td>ACT English</td>
<td>21.45</td>
<td>19.34</td>
<td>26.41</td>
</tr>
<tr>
<td>ACT Math</td>
<td>20.95</td>
<td>19.18</td>
<td>25.11</td>
</tr>
<tr>
<td>ACT Reading</td>
<td>21.65</td>
<td>19.56</td>
<td>26.54</td>
</tr>
<tr>
<td>ACT Writing</td>
<td>22.64</td>
<td>21.06</td>
<td>26.75</td>
</tr>
<tr>
<td><strong>N (%)</strong></td>
<td>3203 (100%)</td>
<td>2244 (70%)</td>
<td>959 (30%)</td>
</tr>
</tbody>
</table>

* Including those who passed after multiple attempts
Comparison of ACT composite scores for selected groups

- Bottom Third Teachers (2006): 19.00
- Did Not Pass BST (our sample): 19.50
- Bottom Third College-Goers (2002 cohort): 21.00
- Our Sample: 21.30
- All Illinois Teachers (2006): 21.60
- ACT College-Ready: 22.00
- Top Third Teachers (2006): 23.00
- Pass BST (our sample): 25.70
- Top Third College-Goers (2002 cohort): 26.00
Proportion passing each BST subtest by ACT college readiness status
Average number of BST subtests passed by ACT college readiness status

- **No**: Mean number of BST subtests passed = 1.43
- **Yes**: Mean number of BST subtests passed = 3.23
**ACT score x BST score correlation matrix**

<table>
<thead>
<tr>
<th></th>
<th>BST reading</th>
<th>BST language arts</th>
<th>BST math</th>
<th>BST writing</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ACT Composite</strong></td>
<td>.675**</td>
<td>.705**</td>
<td>.738**</td>
<td>.481**</td>
</tr>
<tr>
<td><strong>ACT English</strong></td>
<td>.648**</td>
<td>.702**</td>
<td>.645**</td>
<td>.487**</td>
</tr>
<tr>
<td><strong>ACT Math</strong></td>
<td>.538**</td>
<td>.574**</td>
<td>.770**</td>
<td>.389**</td>
</tr>
<tr>
<td><strong>ACT Reading</strong></td>
<td>.649**</td>
<td>.646**</td>
<td>.573**</td>
<td>.442**</td>
</tr>
<tr>
<td><strong>ACT Writing</strong></td>
<td>.655**</td>
<td>.692**</td>
<td>.589**</td>
<td>.469**</td>
</tr>
</tbody>
</table>

**Correlation is significant at the 0.01 level (1-tailed).**
ACT Reading by BST Reading

- College Ready Failed BST 18%
- College Ready Passed BST 37%
- Not College Ready Failed BST 37%
- Not College Ready Passed BST 7%
ACT English by BST Language Arts

College Ready
- Failed BST: 37%
- Passed BST: 38%

Not College Ready
- Failed BST: 24%
- Passed BST: 1%
ACT Math by BST Math

- College Ready Failed BST: 6%
- College Ready Passed BST: 37%
- Not College Ready Failed BST: 44%
- Not College Ready Passed BST: 13%
ACT composite by number of BST subtests passed

- College Ready Passed BST 26%
- College Ready Failed BST 20%
- Not College Ready Passed BST 4%
- Not College Ready Failed BST 50%

Number of BST Subtests Passed vs. ACT Composite Scale (4.0 for College Ready, 22.0 for Not College Ready)
Questions or comments?

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