Basic Skills and Content Knowledge Testing

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Educator Assessment: Basic Skills and Content Knowledge Testing

- Licensure testing:
  - A requirement for certification
  - Assesses knowledge deemed important for practice as indicated by national and state teaching and content-area standards
  - Designed to ensure that candidates meet:
    - Basic skills (Reading, Math, and Writing)
    - Content they will teach
  - Teachers and teacher educators collaborate with test-development professionals in test development
Educator Assessment: Praxis Core (formerly Praxis I)

- Three separate tests
  - Reading
  - Writing
  - Mathematics

- Measures college and career readiness standards relevant to entry into teacher preparation

- Teachers and teacher preparation faculty involved throughout the test development process
Educator Assessment: Praxis Core

• Test development
  – Teacher educators identified college and career-readiness standards most relevant to teacher preparation
  – Surveyed 600+ teacher educators nationwide to verify importance of identified standards

• Standard setting
  – Deciding how much knowledge and/or skills must be demonstrated on a test to be considered ready to enter teacher preparation or the profession
  – Based on expert judgement
  – Multi-state standard setting (MSSS) process culminates in recommended passing standard (cut score) though states can set their own cut scores
Educator Assessment:
Basic Skills Testing and Content Knowledge Testing

- Connecticut standard-setting
  - Representative committee of educators, educator preparation program faculty, community college faculty, administrators, and other content-area experts

- Test review

- Review national pass rate data and state pass rate data

- Committee recommends cut score for Connecticut

- Connecticut standard-setting committee for Praxis Core recommended multi-state cut score, which the State Board of Education ultimately adopted
Educator Assessment: Basic Skills and Content Knowledge Testing

- Considerations when recommending cut scores:
  - National data
  - State pass rate data
  - Multi-state standard setting recommended cut score
  - Test structure (e.g., item type, item difficulty)
  - Connecticut candidate performance
    - Overall, CT candidates consistently out-perform peers nationwide
  - State goals regarding educator preparation
2014-15 PRAXIS Core Test-Taker Demographics

N = 167,778

<table>
<thead>
<tr>
<th>Group</th>
<th>All Test-Takers</th>
<th>CT Prepared Candidates</th>
</tr>
</thead>
<tbody>
<tr>
<td>African American</td>
<td>12.9</td>
<td>5.2</td>
</tr>
<tr>
<td>Hispanic</td>
<td>4.5</td>
<td>10.2</td>
</tr>
<tr>
<td>White</td>
<td>70.0</td>
<td>75.6</td>
</tr>
</tbody>
</table>
Pass Rate Differences by Ethnicity

• Typically defined as mean score differences between groups and often shown between White and examinees of other races/ethnicities

• Gaps tend to emerge in early years of schooling and persist over time
  – NAEP – Nationally, 25-35 percentage point differences in students at or above proficiency in Reading and Math across Grades 8 and 12
  – SAT – Nationally, 30-40 percentage point differences in college-bound seniors scoring above 500 in Critical Reading, Math, and Writing
Patterns Across Large-Scale Tests

- A range of gaps exist in large-scale tests across different testing populations

- **Examples:**

<table>
<thead>
<tr>
<th>Exam</th>
<th>Standardized difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAT Verbal</td>
<td>-0.83</td>
</tr>
<tr>
<td>SAT Math</td>
<td>-0.92</td>
</tr>
<tr>
<td>ACT English</td>
<td>-0.89</td>
</tr>
<tr>
<td>ACT Mathematics</td>
<td>-0.88</td>
</tr>
<tr>
<td>ACT Reading</td>
<td>-0.82</td>
</tr>
<tr>
<td>GRE Verbal</td>
<td>-0.96</td>
</tr>
<tr>
<td>GRE Quantitative</td>
<td>-0.98</td>
</tr>
<tr>
<td>GRE Analytical</td>
<td>-1.11</td>
</tr>
<tr>
<td>GMAT Total</td>
<td>-1.03</td>
</tr>
<tr>
<td>LSAT</td>
<td>-1.14</td>
</tr>
<tr>
<td>MCAT Verbal Reasoning</td>
<td>-0.96</td>
</tr>
</tbody>
</table>

- **Benchmarks:**
  - Not significant (< 0.20 in absolute value)
  - Small (0.20-0.50 in absolute value)
  - Moderate (0.50-0.80 in absolute value)
  - Large (> 0.80 in absolute value)

(Nettles, Scatton, Steinberg & Tyler, 2011)
Pass Rate Differences on Praxis Core: Nationally and in Connecticut

<table>
<thead>
<tr>
<th>Test</th>
<th>Comparison to White Candidates to</th>
<th>National</th>
<th>CT Only</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reading</td>
<td>African American</td>
<td>-0.82</td>
<td>-0.28</td>
</tr>
<tr>
<td></td>
<td>Hispanic</td>
<td>-0.44</td>
<td>-0.43</td>
</tr>
<tr>
<td>Writing</td>
<td>African American</td>
<td>-0.89</td>
<td>-0.61</td>
</tr>
<tr>
<td></td>
<td>Hispanic</td>
<td>-0.52</td>
<td>-0.76</td>
</tr>
<tr>
<td>Mathematics</td>
<td>African American</td>
<td>-0.94</td>
<td>-0.75</td>
</tr>
<tr>
<td></td>
<td>Hispanic</td>
<td>-0.47</td>
<td>-0.43</td>
</tr>
</tbody>
</table>

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  - Large (> 0.80 in absolute value)
2014-15 PRAXIS Core Pass Rate Data: Reading

Percent Passing

- Total: 83.7, 85.7
- African American: 63.9, 77.1
- Hispanic: 76.0, 69.8
- White: 88.7, 88.1

Legend:
- All Test Takers
- CT Prepared Candidates
2014-15 PRAXIS Core Pass Rate Data: Writing

- Total: 66.2% (All Test Takers) vs. 74.2% (CT Prepared Candidates)
- African American: 38.3% (All Test Takers) vs. 62.0% (CT Prepared Candidates)
- Hispanic: 53.9% (All Test Takers) vs. 50.5% (CT Prepared Candidates)
- White: 72.5% (All Test Takers) vs. 78.7% (CT Prepared Candidates)
2014-15 PRAXIS Core Pass Rate Data: Mathematics

<table>
<thead>
<tr>
<th>Group</th>
<th>All Test Takers</th>
<th>CT Prepared Candidates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>59.1</td>
<td>58.1</td>
</tr>
<tr>
<td>African American</td>
<td>28.5</td>
<td>32.8</td>
</tr>
<tr>
<td>Hispanic</td>
<td>46.8</td>
<td>47.5</td>
</tr>
<tr>
<td>White</td>
<td>65.8</td>
<td>61.4</td>
</tr>
</tbody>
</table>
Supporting Teacher Candidates: Factors to Consider

• Access to supportive academic and career advising services

• **Factors Related to Initial Licensure Performance** (Steinberg, Brenneman, Castellano, Lin & Miller, 2014)
  - Undergraduate GPA, Undergraduate Major, Institutional Selectivity

• **Relation of Initial Licensure Performance to Future Licensure Performance** (Gitomer, Brown & Bonett, 2008)
  - Performance on basic skills test predicts likelihood of passing selected Praxis II exams; differs by ethnicity