Research Update from the NCRGE

Del Siegle, NCRGE Director

The National Center for Research on Gifted Education (NCRGE – http://ncrge.uconn.edu) is funded by the Institute of Education Sciences, U.S. Department of Education PR/Award # R305C140018
For more than a quarter century, the field of gifted education has wrestled with two separate, but related issues:

1) a widespread failure to identify and serve underrepresented populations and
2) limited data documenting “what works” in gifted education.
The GOAL
...to increase our understanding of
1. Identification policies and procedures
2. Instructional approaches
3. Program curricula and content
4. Predictors of success
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**The PLAN**

- Analyze State District Gifted Education Plans
- Survey All Districts and Schools about Gifted Identification and Service Policies and Practices in CO, FL, and NC
- Analyze 3rd, 4th, and 5th Grade Student Reading and Mathematics Achievement for Current 7th Grade Students
- Identify Schools that Successfully Include and Serve Under-Represented Populations with Gifted Services

**Year 1**

- Conduct Case Studies of 24 Schools (8 in each of three states) to Determine Which Practices and Services are Most Effective

**Year 2**

- Develop a Randomized Controlled Trial to Test Findings from Case Studies
133 Variables for 293 State District Gifted Plans

193,810 7th-Grade Students’ Math and Reading Achievement in Grades 3, 4, and 5

2 Comprehensive Literature Reviews

331 District Survey Responses

1580 School Survey Responses
How BAD is the under representation of Underserved Populations in Gifted Education?

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### Predicted probability of being identified as gifted in grade 4 for students from different demographic groups

<table>
<thead>
<tr>
<th></th>
<th>Logit</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reference</td>
<td>-1.88</td>
<td>13.23</td>
</tr>
<tr>
<td>Non-under/FRL</td>
<td>-3.13</td>
<td>4.18</td>
</tr>
<tr>
<td>Non-under/EL</td>
<td>-2.58</td>
<td>7.06</td>
</tr>
<tr>
<td>Non-under/FRL/EL</td>
<td>-3.83</td>
<td>2.13</td>
</tr>
<tr>
<td>UNDER</td>
<td>-2.93</td>
<td>5.05</td>
</tr>
<tr>
<td>UNDER/FRL</td>
<td>-4.10</td>
<td>1.63</td>
</tr>
<tr>
<td>UNDER/EL</td>
<td>-3.63</td>
<td>2.58</td>
</tr>
<tr>
<td>UNDER/FRL/EL</td>
<td>-4.79</td>
<td>0.82</td>
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</tbody>
</table>

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Probability of identification as gifted in grade 4 for reference students and students who are EL, FRL, and UNDER after controlling for Reading and Math scores and school SES and school percentage of gifted students.

Points above the Mean in both reading and mathematics; SD is approximately 9.5 points.

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Identified by 5th Grade

Combined Math and Reading Score Above the Mean

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What is the relationship between the % of free and reduced lunch students in a school and the % of students identified as gifted?
The percentage of students in the school with free and reduced lunch predicts 20% of the residual within district variance (after controlling for reading and math scores) in the percentage of students identified as gifted and talented.

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District Plans: Coding Scheme Sections

Section A: Preparation
Section B: Pre-Identification
Section C: Identification
Section D: District Coordinator & Other Staff
Section E: Evaluation
Section F: Intervention
Section G: Service Delivery

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District Plans – Inter-rater Agreement

293 Plans: 133 Variables Each

- **State 1:** 57 districts with 16 BOCES (with 2-21 sub-districts); 178 district plans
  - 14% selected for group ratings
  - 91.9% average inter-rater agreement

- **State 2:** 115 district plans
  - 13% selected for group ratings
  - 87.8% average inter-rater agreement
## Screening & Identification Mentioned in the Plan

<table>
<thead>
<tr>
<th>State 1</th>
<th>Assessments</th>
<th>State 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>70.8%</td>
<td>Intelligence</td>
<td>92.2%</td>
</tr>
<tr>
<td>47.2%</td>
<td>Non-verbal Intelligence</td>
<td>69.6%</td>
</tr>
<tr>
<td>68.0%</td>
<td>Achievement</td>
<td>97.4%</td>
</tr>
<tr>
<td>47.2%</td>
<td>Teacher rating scales</td>
<td>69.3%</td>
</tr>
<tr>
<td>59.6%</td>
<td>Teacher nominations</td>
<td>80.9%</td>
</tr>
<tr>
<td>56.7%</td>
<td>Parent nominations</td>
<td>73.0%</td>
</tr>
<tr>
<td>38.2%</td>
<td>Self-nominations</td>
<td>36.5%</td>
</tr>
<tr>
<td>District Survey Results</td>
<td>Support District Plan Analysis</td>
<td></td>
</tr>
<tr>
<td>-------------------------</td>
<td>-------------------------------</td>
<td></td>
</tr>
<tr>
<td>Cognitive Ability Tests</td>
<td>94.3%</td>
<td></td>
</tr>
<tr>
<td>Teacher Nomination/Referral</td>
<td>93.4%</td>
<td></td>
</tr>
<tr>
<td>Achievement Tests</td>
<td>91.8%</td>
<td></td>
</tr>
<tr>
<td>Parent Nomination/Referral</td>
<td>84.9%</td>
<td></td>
</tr>
<tr>
<td>Teacher Ratings</td>
<td>77.0%</td>
<td></td>
</tr>
<tr>
<td>Student Work Samples</td>
<td>65.9%</td>
<td></td>
</tr>
<tr>
<td>Observation Tools</td>
<td>61.2%</td>
<td></td>
</tr>
<tr>
<td>Non-Verbal Assessment</td>
<td>57.7%</td>
<td></td>
</tr>
<tr>
<td>Performance-Based Assessment</td>
<td>47.0%</td>
<td></td>
</tr>
<tr>
<td>Self-Nomination</td>
<td>36.5%</td>
<td></td>
</tr>
<tr>
<td>Creativity Test Score</td>
<td>27.4%</td>
<td></td>
</tr>
<tr>
<td>Dynamic Assessment</td>
<td>4.4%</td>
<td></td>
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</tbody>
</table>

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First identify in...
Kind. - .9%
1st - 2.8%
2nd - 27.8%
3rd - 53.6%
4th - 12.0%
5th - 1.6%
None of the above - 1.3%

Identified at what...
Global - 41%
Reading/LA - 69.1%
Mathematics - 66.6%
Other - 44.2%

19.3% Use Universal Screening
Group Cognitive - 77.7%
Non-verbal - 37.5%
Achievement - 22.3%
Teacher Rating Scale - 11.7%

33% Use Matrix
59.8% Have Specific Cut Score
46% Modify the Identification for Underserved Populations
33.9% Native Lang.
50.3% Non-Verbal Test
62% More Flexible Score
23.9% Different Weighting of Criteria
49.4% Different Criteria or Cutoff
Screening & Identification

• Tests matter
  – Provide main data sources
  – IQ and achievement tests used most frequently

• Identification occurs in 3rd grade
Reading & Math Curricular and Instructional Approaches Mentioned in District Plans

<table>
<thead>
<tr>
<th>State 1</th>
<th>State 2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>36.5% Math</strong></td>
<td><strong>74.8% Math</strong></td>
</tr>
<tr>
<td><strong>31.5% Reading</strong></td>
<td><strong>75.7% Reading</strong></td>
</tr>
<tr>
<td>More in-depth or breadth of grade level content</td>
<td></td>
</tr>
<tr>
<td><strong>48.3% Math</strong></td>
<td><strong>88.7% Math</strong></td>
</tr>
<tr>
<td><strong>47.8% Reading</strong></td>
<td><strong>89.6% Reading</strong></td>
</tr>
<tr>
<td>Faster pace (acceleration, above grade level)</td>
<td></td>
</tr>
<tr>
<td><strong>39.3% Math</strong></td>
<td><strong>61.7% Math</strong></td>
</tr>
<tr>
<td><strong>39.3% Reading</strong></td>
<td><strong>61.7% Reading</strong></td>
</tr>
<tr>
<td>Pre-assessment (informal or formal)</td>
<td></td>
</tr>
</tbody>
</table>
• 30.4% of schools do not accelerate
• 36.0% of schools subject accelerate
• 25.9% of schools whole grade accelerate

• 71.6% of schools use pullout
• 52.1% of schools use cluster grouping
• 43.8% of schools use homogenous grouping
• 32% of schools use push-in

• 28.9% schools offer gifted reading/LA but 28.7% of them don’t have specific reading/LA curriculum
• 28.4% schools offer gifted mathematics but 24.2% of them don’t have specific gifted math curriculum
• 93.7% of districts do not have a designed math curriculum for gifted
• 90.2% of districts do not have a designated reading/LA curriculum for gifted

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17. Using the slider, indicate the degree to which the gifted programming at your school focuses...- Creativity/creative thinking skills

17. Using the slider, indicate the degree to which the gifted programming at your school focuses...- Critical thinking skills (e.g., problem solving, decision making)

$M=68.5$

$SD=30.38$

Creativity/Creative Thinking Skills

$M=76.27$

$SD=27.90$

Critical Thinking Skills
Pullout for Creativity and Critical Thinking Rule the Day
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**Change is Possible**

How much autonomy do your school's teachers of the gifted have in choosing the content to deliver?

- **Very Little** – 5.1%
- **Some** – 27.2%
- **A Lot** – 50.2%
- **Complete** – 16.4%
Now we begin visiting schools where underserved students are being identified as gifted and excelling in mathematics and reading...stay tuned.