Opportunities Provided, Opportunities Taken: Providing Early Talent Development Opportunities is Critical for Diversifying Gifted Education

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University of California, Berkeley

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Heidelberg University

Invited Presentation
The Wallace Research Symposium on Talent Development
Storrs, Connecticut
May 20, 2024
Overview

- What is giftedness?
  - From gifted education to talent development
- Educational Disparities Exist
  - K–12, Higher Education
- Society needs to provide opportunities for talent development
- Individuals need to be helped to take advantage of opportunities that they are offered.
IQ scores are definitive.

Giftedness as Intelligence
At every step in the child’s progress the school should take account of his vocational possibilities. Preliminary investigation indicate that an IQ below 70 rarely permits anything better than unskilled labor; that the range from 70 to 80 is preeminently that of semi-skilled labor, from 80 to 100 that of the skilled or ordinary clerical labor, from 100 to 110 or 115 that of semi-professional pursuits, and that above all these are the grades of intelligence which permits one to enter the professions or the larger fields of business. (Terman, 1922c, p. 27)
Biologically driven
Global
Fixed: once gifted, always gifted

Giftedness as Intelligence
General Ability

- Intelligence or \( g \)

- “the ability to reason, plan, solve problems, think abstractly, comprehend complex ideas, learn quickly, and learn from experience.”
  - Gottfredson (1997)

- The ability to learn quickly.

- The ability to learn from experience.

- The ability to make good decisions in the moment.

- The ability to adapt to unexpected circumstances.
Correlates of IQ

- General intelligence has a .50 correlation with school achievement.
- General intelligence has a .55 correlation with years of education.
- General intelligence has an average correlation of .54 with job performance.
This view is prevalent in many domains.

**Giftedness as Innate Ability is not limited to beyond Intelligence**
Other Ability Models

- Sternberg’s (1986) triarchic theory
  - Analytical
  - Creative
  - Practical

- Talent Search (Stanley, 1976)
  - Verbal ability
  - Mathematical ability
Gardner’s Eight Intelligences

- Linguistic
- Logical-Mathematical
- Spatial
- Bodily-Kinesthetic
- Interpersonal
- Intrapersonal
- Musical
- Naturalist
## Gardner’s 8 Intelligence Domains

<table>
<thead>
<tr>
<th>Domain</th>
<th>Use of</th>
</tr>
</thead>
<tbody>
<tr>
<td>Linguistic</td>
<td>Use of words</td>
</tr>
<tr>
<td>Logical-mathematical</td>
<td>Use of numbers</td>
</tr>
<tr>
<td>Spatial</td>
<td>Use of spatial relationships</td>
</tr>
<tr>
<td>Bodily-Kinesthetic</td>
<td>Use of body</td>
</tr>
<tr>
<td>Interpersonal</td>
<td>Use of knowledge of others</td>
</tr>
<tr>
<td>Intrapersonal</td>
<td>Use of knowledge of self</td>
</tr>
<tr>
<td>Musical</td>
<td>Use of pitch and rhythms</td>
</tr>
<tr>
<td>Naturalist</td>
<td>Use of patterns in nature</td>
</tr>
</tbody>
</table>
Giftedness as Potential
MOVING BEYOND INTELLIGENCE
Giftedness as Potential Frameworks

- Giftedness is the potential for becoming an acclaimed performer or an exemplary producer of ideas.

- Giftedness as Practice
  - 10,000 hours
  - Practice is both necessary and sufficient
  - Ericsson (1993)
Giftedness as Potential Frameworks

- **Tannenbaum (1983, 1986)**
  - Giftedness is the potential for becoming an acclaimed performer or an exemplary producer of ideas

- **Ericsson (1993)**
  - Practice is sufficient
  - 10,000 hours

- **Gagné (2005)**
  - Gifts are natural abilities; talents are acquired skills and knowledge. The goal is to transform gifts into talents.
GIFTEDNESS AS INTERACTION
3-Ring Definition of Giftedness
Renzulli (1986)
Haensly et al.’s (1986) Definition

**Coalesced abilities**

- Setting that allows for and encourages the expression of abilities

**Obstacles that hone/refine abilities**

- Commitment that results in the development of abilities

**Giftedness**
RETHINKING THE OTHER MODELS
The Capacity to Make “Gifted” Contributions in Adulthood is the Outcome of a Talent Development Journey
Path to Gifted Performance

✓ Endowment/Biology/Ability
  ✓ Person
✓ Appropriate Development
  ✓ Match between Person and Environment
✓ Training/Teaching/Coaching
  ✓ Environment
✓ Context/Opportunity
  ✓ Environment and Person
✓ Psychosocial: Task Commitment/Mot/Effort
  ✓ Person (in environment)
Subotnik et al. (2011, 2023)
Olsewski-Kubilius et al. (2015, 2023)
Worrell et al. (2019, 2021)
TALENT DEVELOPMENT IS A SOCIETAL RESPONSIBILITY.
EDUCATION IN AN UNEQUAL SOCIETY
A simple definition of giftedness

PERFORMANCE AT THE UPPER END OF A DISTRIBUTION
Giftedness $\geq 95^{th}$ percentile
LEGACY OF AN UNEQUAL SOCIETY
Grade 4 Reading Performance by Demographic Characteristics

**2017**

**Scale score**

<table>
<thead>
<tr>
<th>Race/ethnicity</th>
<th>Scale score</th>
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<tbody>
<tr>
<td>Total</td>
<td>222</td>
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<tr>
<td>White</td>
<td>232</td>
</tr>
<tr>
<td>Black</td>
<td>206</td>
</tr>
<tr>
<td>Hispanic</td>
<td>209</td>
</tr>
<tr>
<td>Asian/Pacific Islander combined</td>
<td>239</td>
</tr>
<tr>
<td>Asian</td>
<td>241</td>
</tr>
<tr>
<td>Pacific Islander</td>
<td>212</td>
</tr>
<tr>
<td>American Indian/Alaska Native</td>
<td>202</td>
</tr>
<tr>
<td>Two or more races</td>
<td>227</td>
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</table>

**Sex**

<table>
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<tr>
<th>Scale score</th>
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<tbody>
<tr>
<td>Male</td>
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<tr>
<td>Female</td>
</tr>
<tr>
<td>Low poverty</td>
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<tr>
<td>Mid-low poverty</td>
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<tr>
<td>Mid-high poverty</td>
</tr>
<tr>
<td>High poverty</td>
</tr>
<tr>
<td>ELL</td>
</tr>
<tr>
<td>Non-ELL</td>
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Grade 8 Reading Performance by Demographic Characteristics
Grade 4
NAEP Mathematics Scores

2017

Scale score

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<th>Group</th>
<th>Scale Score</th>
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<td>Total</td>
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<td>White</td>
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<tr>
<td>Black</td>
<td>223</td>
</tr>
<tr>
<td>Hispanic</td>
<td>229</td>
</tr>
<tr>
<td>Asian/Pacific Islander</td>
<td>258</td>
</tr>
<tr>
<td>Asian</td>
<td>260</td>
</tr>
<tr>
<td>Pacific Islander</td>
<td>229</td>
</tr>
<tr>
<td>American Indian/Alaska Native</td>
<td>227</td>
</tr>
<tr>
<td>Two or more races</td>
<td>245</td>
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Race/ethnicity

Scale score

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<td>245</td>
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<tr>
<td>Mid-high poverty</td>
<td>236</td>
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<tr>
<td>High poverty</td>
<td>225</td>
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<tr>
<td>ELL</td>
<td>217</td>
</tr>
<tr>
<td>Non-ELL</td>
<td>243</td>
</tr>
</tbody>
</table>

Sex

School poverty level

English language learner (ELL) status
Plucker and Peters (2016)

THESE DISPARITIES ARE PRESENT AT THE HIGHEST LEVELS IN K–12 EDUCATION: EXCELLENCE GAPS
Proficiency Levels

- Far Below Basic
- Below Basic
- Basic
- Proficient
- Advanced
% Proficient or Above in Reading

- African American: 8, 18, 20
- Am Ind/Alaska Nat: 0, 21, 20
- Asian American: 0, 57, 59
- European American: 35, 46, 47
- Hispanic American: 12, 21, 23
- Nat Hawaiian/Pac Isl: 0, 28, 27
- 2 or More Races: 40, 42

Years: 1992, 2015, 2017
% Proficient or Above in Mathematics

- African American: 19% in 1992, 19% in 2015, 19% in 2017
- Am Ind/Alaska Nat: 23% in 1992, 24% in 2015, 23% in 2017
- Asian American: 65% in 1992, 67% in 2015, 65% in 2017
- European American: 16% in 1992, 51% in 2015, 51% in 2017
- Hispanic American: 5% in 1992, 26% in 2015, 26% in 2017
- Nat Hawaiian/Pac Isl: 30% in 1992, 29% in 2015, 29% in 2017
- 2 or More Races: 45% in 1992, 45% in 2015, 45% in 2017
Ashkenas et al. (2017): New York Times

IMPLICATIONS FOR DEVELOPING EXPERTISE AS AN ADULT
IMPACT OF THE PANDEMIC
Learning Loss 1

**Reading**

- Score change between 2020 and 2022
- Largest score drop in reading since 1990

**Mathematics**

- Score change between 2020 and 2022
- First ever score drop in mathematics

* Significantly different (p < .05) from 2022.
Learning Loss 2

**SCALE SCORE**

<table>
<thead>
<tr>
<th>Year</th>
<th>Score</th>
<th>Percentile</th>
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<tbody>
<tr>
<td>2020</td>
<td>267*</td>
<td>90th</td>
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<td></td>
<td>247*</td>
<td>75th</td>
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<td></td>
<td>224*</td>
<td>50th</td>
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<td>196*</td>
<td>25th</td>
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<tr>
<td></td>
<td>164*</td>
<td>10th</td>
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<tr>
<td>2022</td>
<td>265</td>
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<tr>
<td></td>
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<td>188</td>
<td></td>
</tr>
<tr>
<td></td>
<td>155</td>
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</tr>
</tbody>
</table>

**LEVEL**

- **Level 250**
- **Level 200**
- **Level 150**
Learning Loss 3

MATHEMATICS

<table>
<thead>
<tr>
<th>SCALE SCORE</th>
<th>2020</th>
<th>2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>286*</td>
<td>286</td>
<td>283</td>
</tr>
<tr>
<td>267*</td>
<td>267</td>
<td>262</td>
</tr>
<tr>
<td>245*</td>
<td>245</td>
<td>238</td>
</tr>
<tr>
<td>219*</td>
<td>219</td>
<td>208</td>
</tr>
<tr>
<td>191*</td>
<td>191</td>
<td>178</td>
</tr>
</tbody>
</table>

- 90th percentile: 283
- 75th percentile: 262
- 50th percentile: 238
- 25th percentile: 208
- 10th percentile: 178
If talent development is a societal responsibility, it is incumbent on society to provide....

OPPORTUNITIES FOR ALL WITH POTENTIAL
Opportunities Provided

- Academic Talent Development Program
- Center for Gifted Studies
- Center for Talent Development
- Center for Talented Youth
- Davidson Institute
- Gifted Education Research and Resource Institute
- Mahoney Center
- Talent Identification Program
- Vanderbilt Programs for Talented Youth
- School-based Gifted Education Programs
1. Does not apply to gifted students.

A FREE APPROPRIATE PUBLIC EDUCATION
1. Does not apply to gifted students.
2. Does not stop at the 95th %tile.

A FREE APPROPRIATE PUBLIC EDUCATION
<table>
<thead>
<tr>
<th>High Motivation</th>
<th>Low Motivation</th>
</tr>
</thead>
<tbody>
<tr>
<td>High opportunity</td>
<td>Current Students in our Gifted Programs</td>
</tr>
<tr>
<td>Low Opportunity</td>
<td>Students who should be in our Gifted Programs</td>
</tr>
</tbody>
</table>
• We do not have good measures of what potential individuals have in some domains.
• We have limited information on students who fall just below our cut scores.

DEVELOPMENT IS NOT LINEAR
Trajectories 2
Should Millions of Students Take a Gap Year? Large Numbers of Students Start the School Year Above Grade Level

Scott J. Peters¹, Karen Rambo-Hernandez², Matthew C. Makel³, Micheal S. Matthews⁴, and Jonathan A. Plucker⁵

Abstract
Few topics have garnered more attention in preservice teacher training and educational reform than student diversity and its influence on learning. However, the actual degree of cognitive diversity has yet to be considered regarding instructional implications for advanced learners. We used four data sets (three state-level and one national) from diverse contexts to evaluate how many students perform above grade level in English Language Arts and mathematics. Results revealed that among American elementary and middle school students, 20% to 49% in English Language Arts and 14% to 37% in mathematics scored 1 year or more above grade level. We address what these findings imply for K-12 schools, grouping decisions, and educational policies that strive to foster advanced abilities.
In 2004, 60 Minutes ran a piece on low-income adolescents of color from Harlem, four of whom were representing the United States at the Olympics in fencing that year. How did students from low-income backgrounds living in an inner-city neighborhood get involved in such an esoteric sport? As chance would have it, a former Black fencing champion had retired to Harlem and began giving lessons 15 years earlier. His work provided the opportunity for many youngsters who may never have held a sword in their hands to discover that they had a talent for the sport. Along with their newly discovered talent, these youngsters also exhibited the interest, passion, and commitment to pursue the gift; and of course, they had a teacher to help them hone the gift appropriately.
How two high school students solved a 2,000-year-old math puzzle
OPPORTUNITIES ALSO MATTER FOR THOSE WHO HAVE NOT HAD THE CHANCE TO DEVELOP POTENTIAL EARLY
Tailwinds and Headwinds
Stevens (2020)

Some Students:

Tailwinds

Other Students:

Headwinds
OPPORTUNITIES MATTER MORE FOR STUDENTS WITH LESS SOCIAL, ECONOMIC, AND SOCIAL CAPITAL.
1. Domains matter
2. Talent development produces outcomes.

SMPY
Providing Opportunities

- Provide enrichment **opportunities** for all students in the early grades unrelated to gifted classification
  - Schoolwide enrichment
- Use universal screening, local norms, ongoing screening
- Recruit students in pairs or groups.
- Provide appropriate academic and psychosocial supports
  - Culturally relevant pedagogy
- Partner with programs outside of school (e.g., universities, museums, neighborhood entities)
OPPORTUNITIES WHEN OFFERED, MUST BE TAKEN UP
Psychosocial Skills Matter

- Awareness of one’s strengths & weaknesses
- Adaptability
- Conscientiousness
- Curiosity
- Hope
- Motivation
- Openness to experience
- Passion

- Persistence
- Risk-taking
- Self-efficacy
- Self-reflection
- Self-regulation
- Social skills
- Teachability
- Tolerance for ambiguity
- Willingness to learn from mistakes
Psychosocial skills can be taught

- *Psychosocial Skills and School Systems in the 20th Century*
  - Lipnevich, Preckel, & Roberts (Eds.)
Figure 11.1. The role of motivation in talent development.
Some individuals are motivated and others are not.

MYTH
Truth: Everyone is motivated.
The Peril and the Promise

Racism, sexism, heterosexism, xenophobia

A country with many problems to address

This is America

Great universities

A country with more opportunities than many others in the world
America never was America to me

—Langston Hughes
Thanks for your attention.

QUESTIONS?