

CogAT and Culturally Responsive Identification Practices

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Organization

- The possibility of a culture-fair identification test
- Evidence-based suggestions of how to set up a universal screening process
- Options for Language-Reduced and Nonverbal administration with *CogAT*
- G/T identification for English learners

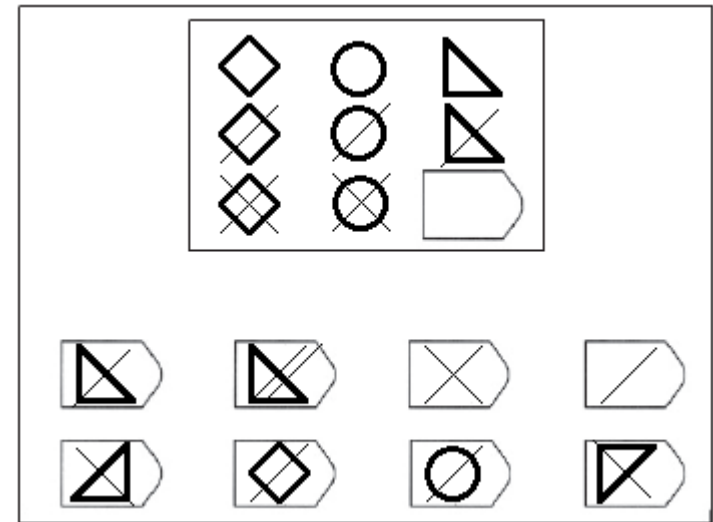


The Myth of Culture-Fair Tests

Can we just use a different, culture-fair test?

Figural Matrices (one of many formats labeled “nonverbal”)

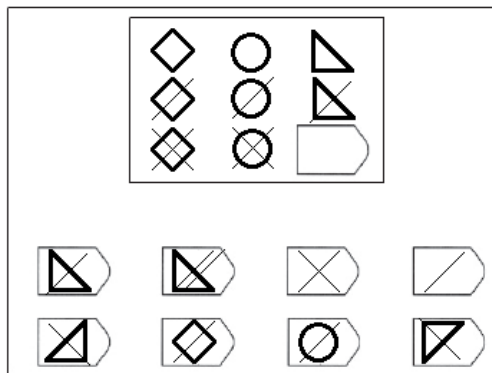
- Purported benefits:
 - Culture “fair”
 - Measure more innate ability not affected by education
 - Increase diversity



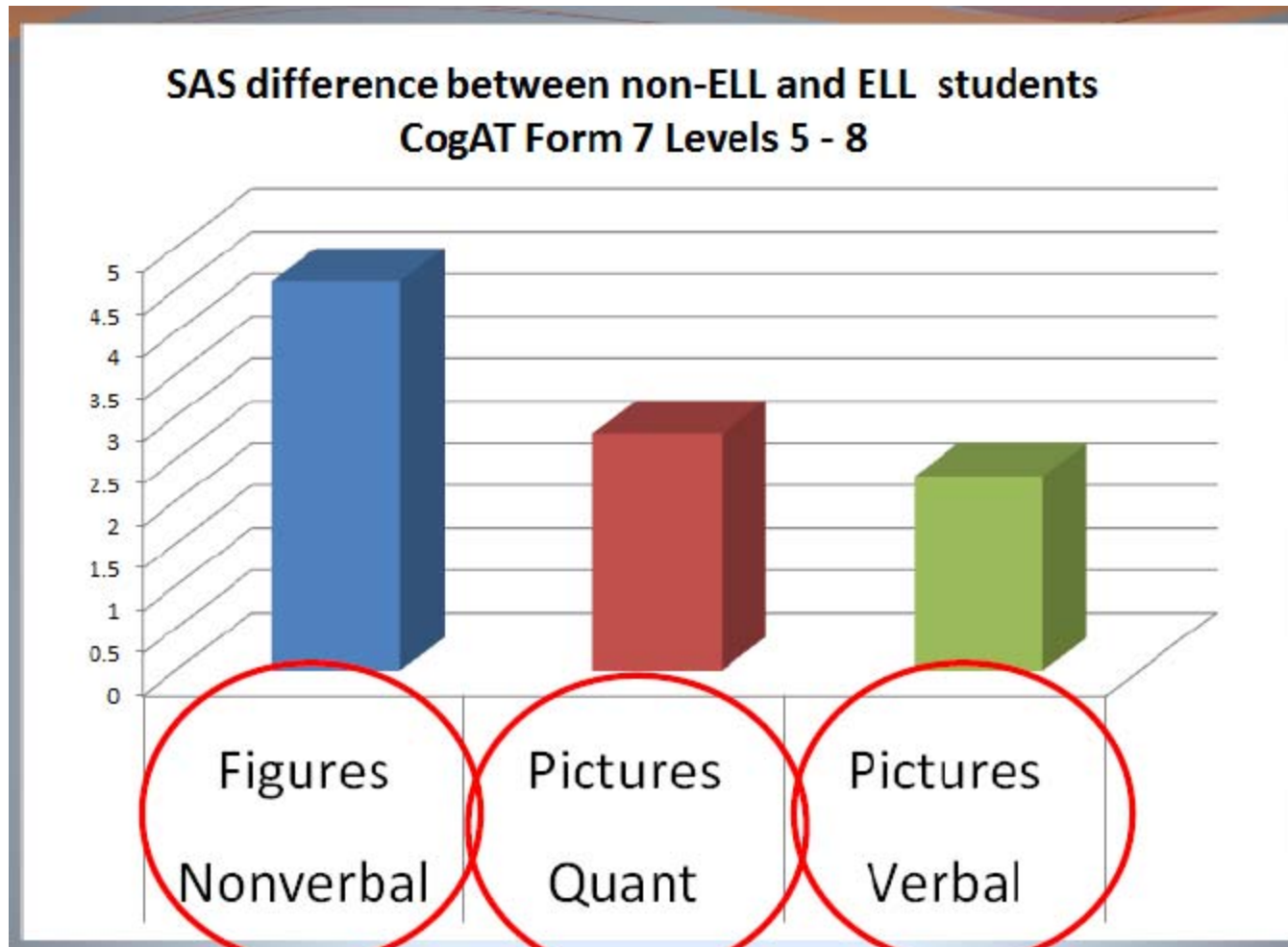
Example of Raven's Matrix-Type Item

Can we just use a different, culture-fair test?

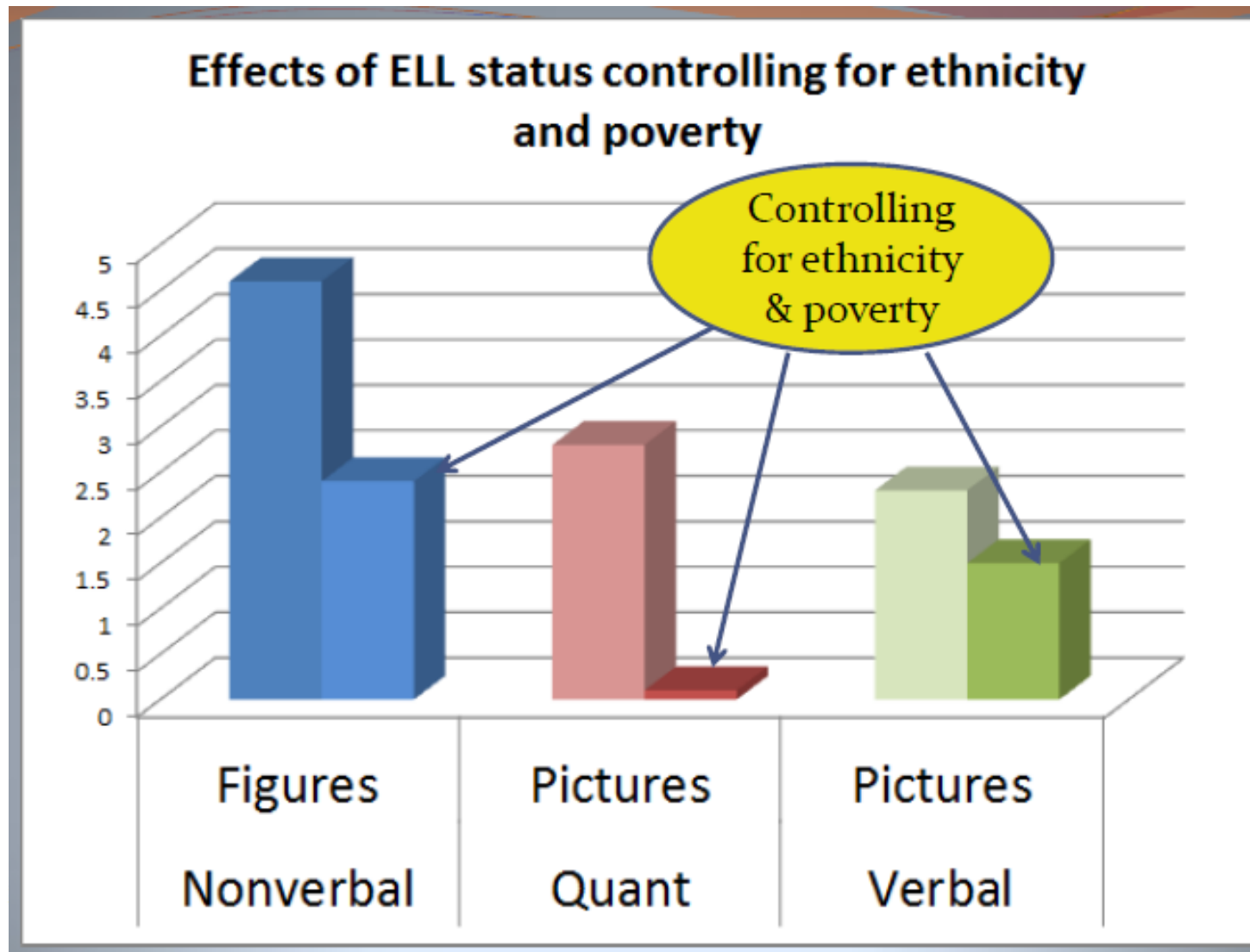
- Problems:
 - There are culture-reduced tests, but no culture-free tests
 - Language loading is not the same as cultural loading
 - All abilities and skills are developed.
 - Figural measures are less related to most school content than Verbal and Quantitative ability (less informative for instruction)
 - Often don't actually increase diversity in selection!



Figural-Nonverbal task can actually show larger differences



Especially when controlling for other factors...



Same “best” predictors of achievement for all students

ELL status	Ethnicity	Predicting achievement	Verbal	Quant	Figural
non-ELL	White (n= 114)	Math	0.74	0.82	0.73
		Reading	0.76	0.71	0.66
	Hispanic (n= 221)	Math	0.63	0.77	0.64
		Reading	0.69	0.57	0.48
ELL	Hispanic (n= 178)	Math	0.52	0.66	0.57
		Reading	0.54	0.50	0.44

From Lakin, J.M., & Lohman, D.F. (2011). The predictive accuracy of verbal, quantitative, and nonverbal reasoning tests: Consequences for talent identification and program diversity. *Journal for the Education of the Gifted*, 34, 595-623.

- ✖ **Correlations lower for ELL students but show SAME PATTERN of best predictors**
- ✖ **Will identify the most talented students WITHIN groups**

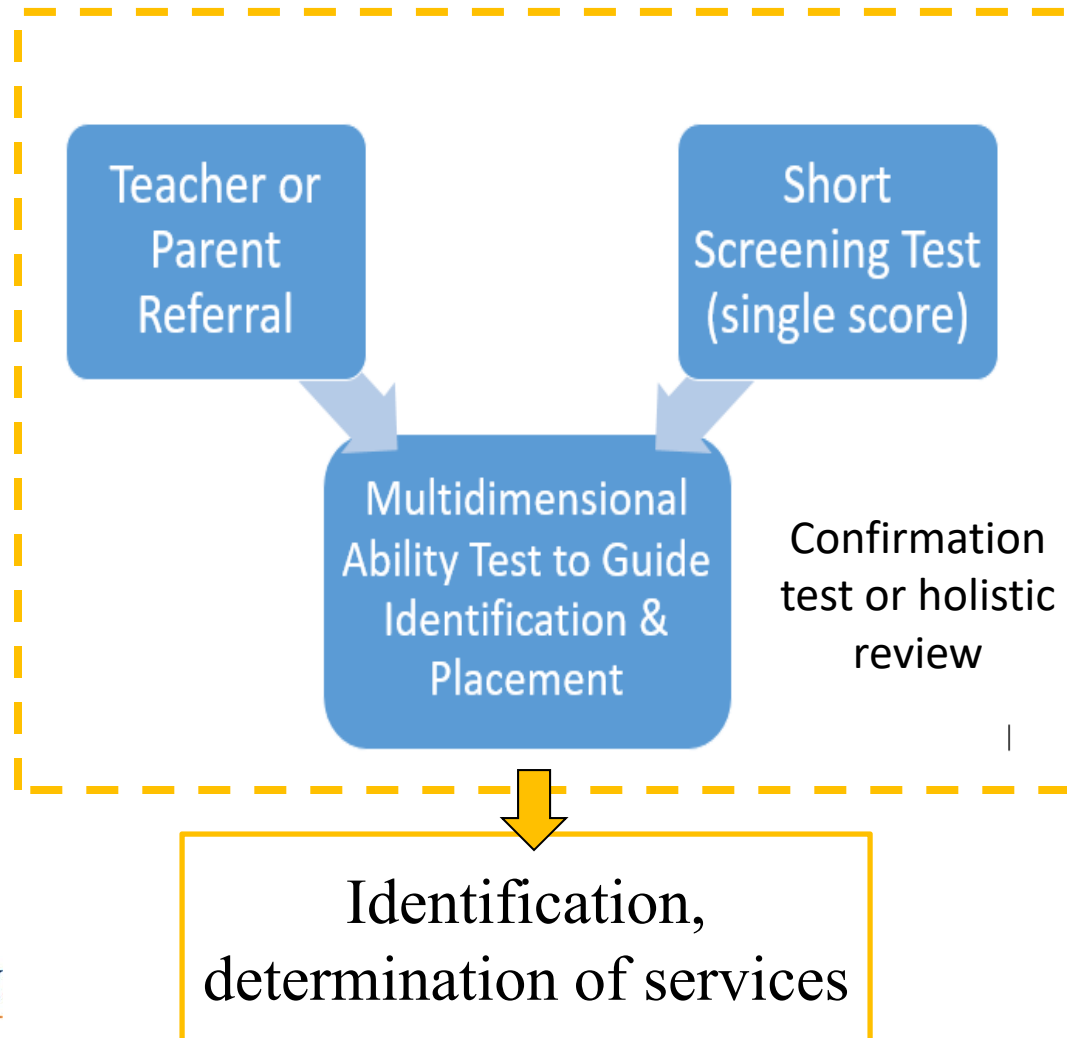
Conclusions about “Culture-fair” Tests

- Nonverbal tests are not a silver bullet solution
- Decrease in correlations means you’d select a lot of students who wouldn’t benefit from the program as much as others would
- Promised rewards of diversity often don’t materialize
- No clear connection between nonverbal skills and most enrichment options or school content
 - More information **Lakin**, J.M., & Lohman, D.F. (2011). The predictive accuracy of verbal, quantitative, and nonverbal reasoning tests: Consequences for talent identification and program diversity. *Journal for the Education of the Gifted*, 34(4), 595-623.

Evidence-based suggestions of how to set up a universal screening process

Basic Terminology

Nomination-First Universal Screening



Examples

- What counts as referral?
 - Teacher nomination for further testing
 - Teacher rating forms (especially general ratings not behavioral anchored)
 - Ratings of student products
- What counts as a universal screener?
 - Any formal, objective assessment of student skills that is relevant to the services offered

Referral-Led Identification

Pros

- Teacher and parent referrals are quick and cost-effective
- Fewer resources put towards testing
- 86% of districts use teacher nominations in some form

Cons

- Teacher ratings found to be biased towards traditionally over-represented groups (white, high SES, boys).
- Parent referrals affected by parent initiative and involvement in schools



Screening-Led Identification

Pros

- Gives all students *similar* opportunities to place into program
- Need equal practice
- Reduces potential for implicit bias and stereotypes of giftedness to influence process

Cons

- Requires time and testing materials for all students in a target grade level
- May require intensive district resources if confirmation test is expensive or time-intensive



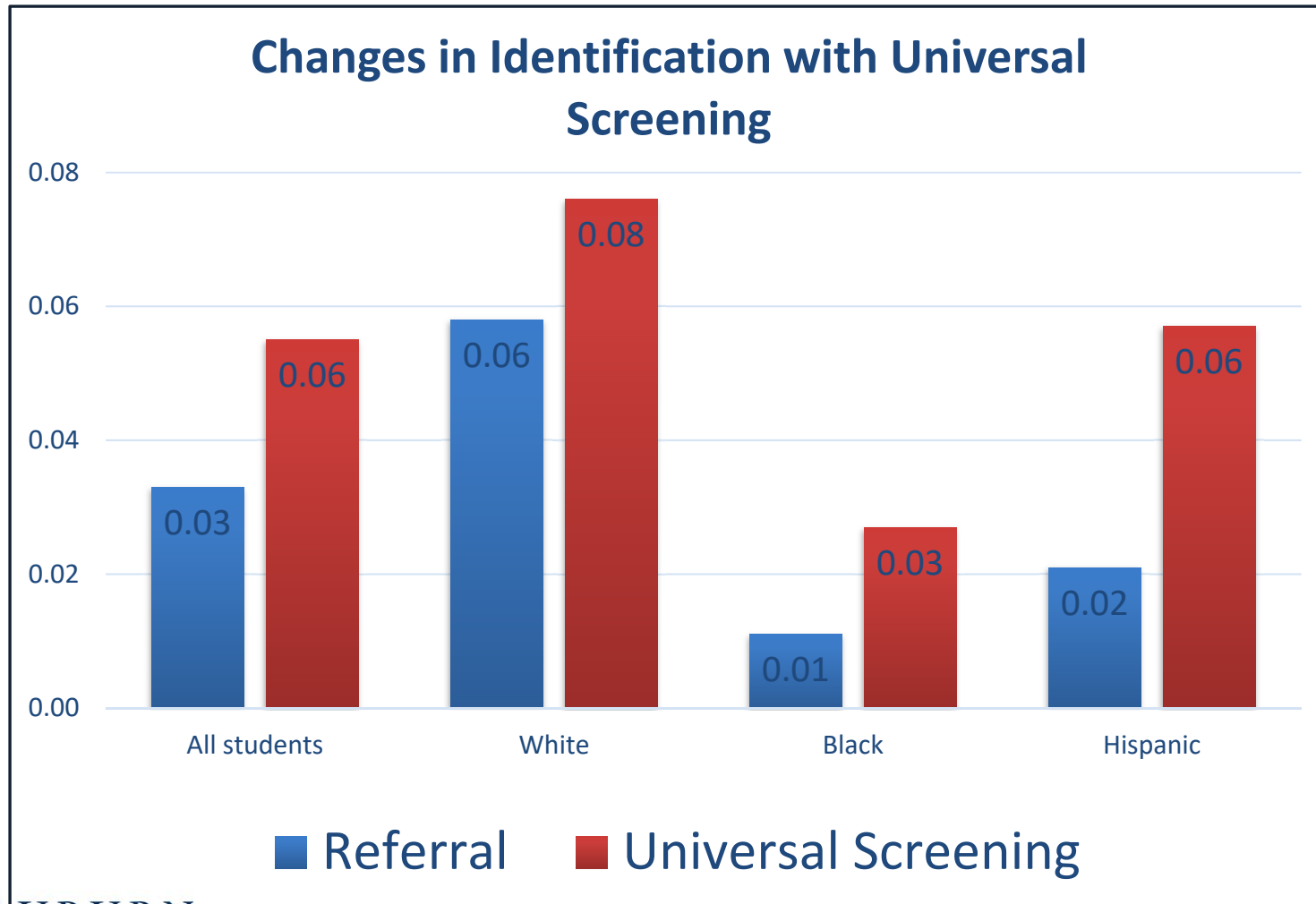
Impact on diversity:

Card & Giuliano (2015)

- Compared **diversity of identified students** in a large Florida school district that **moved from a referral-led process to a universal screening program.**

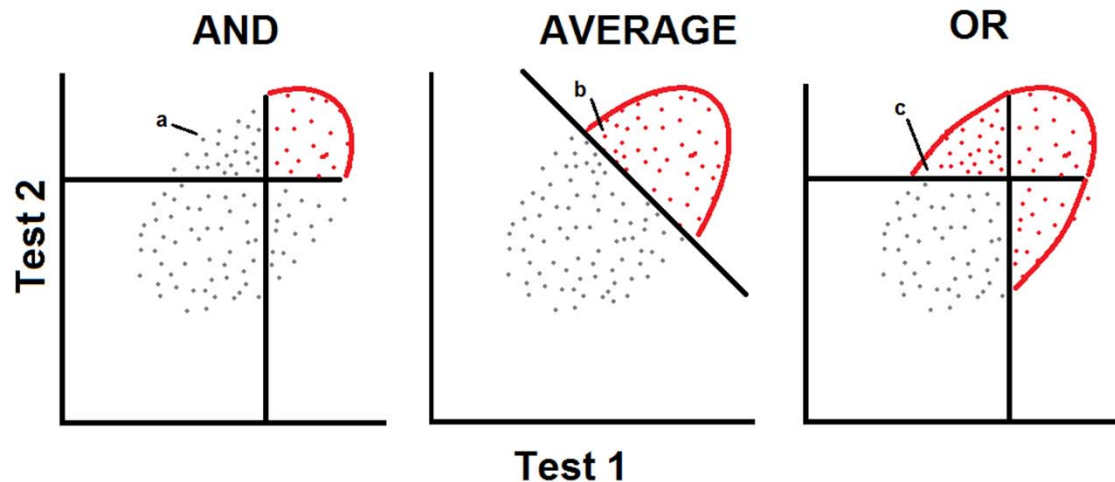
Impact on diversity:

Card & Giuliano (2015)



Combining multiple scores matters for diversity, too

Combination methods:

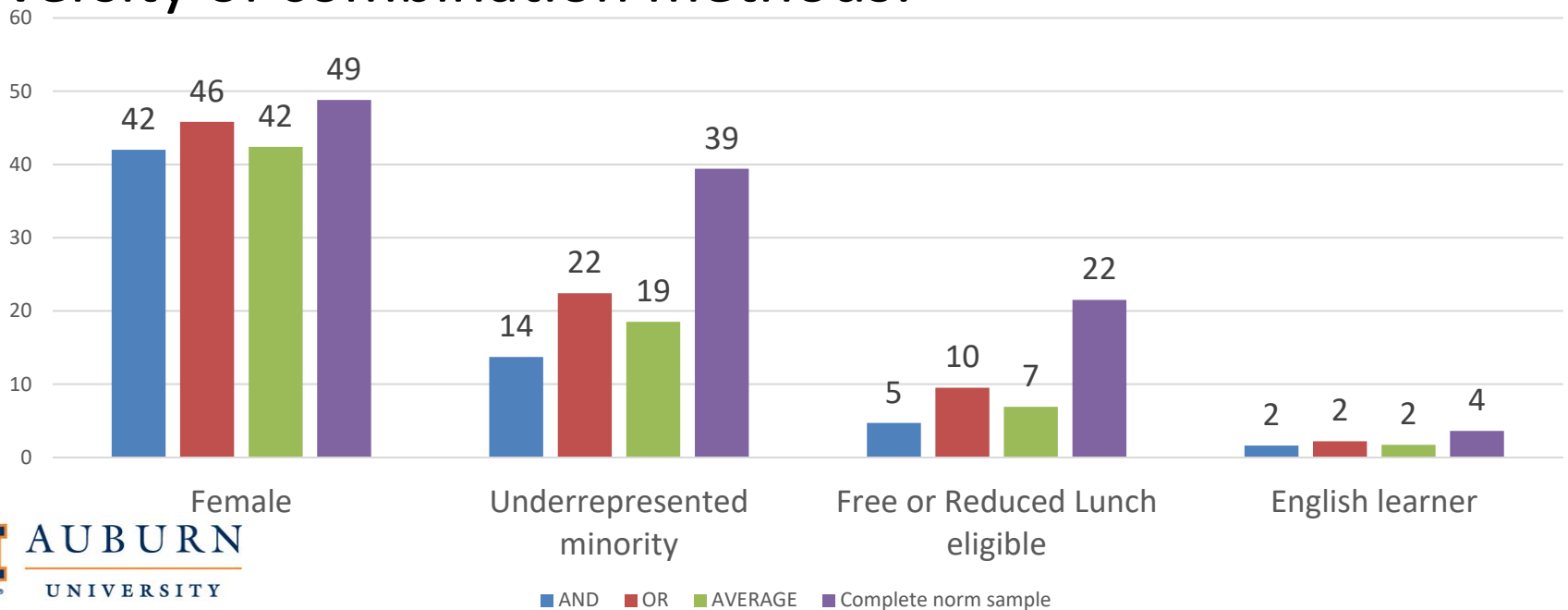


Combining multiple scores

Total identified by combination method (out of 36K)

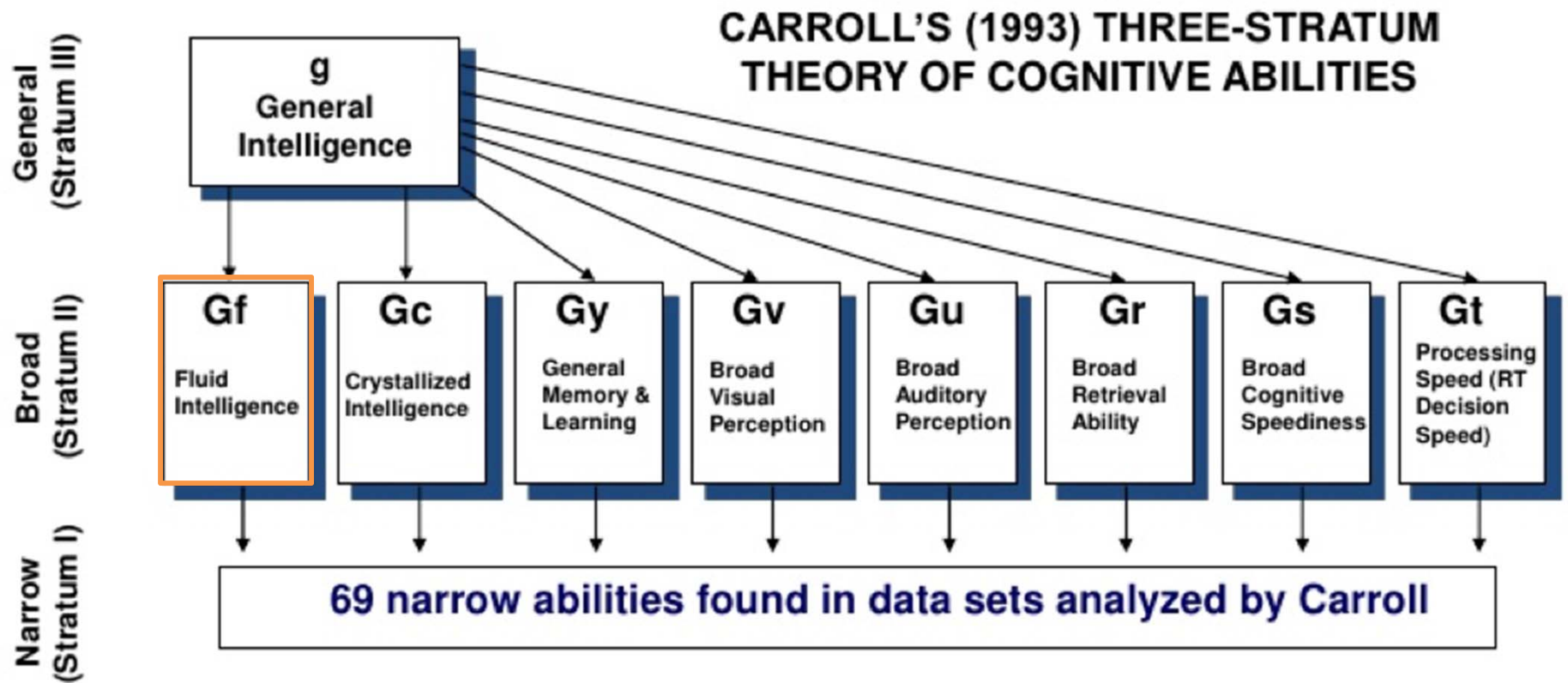
AND	OR	AVERAGE
619	5,602	2,646

Diversity of combination methods:



Options for Language-Reduced and Nonverbal administration with *CogAT* Form 7 and 8

Unidimensional vs. Multidimensional



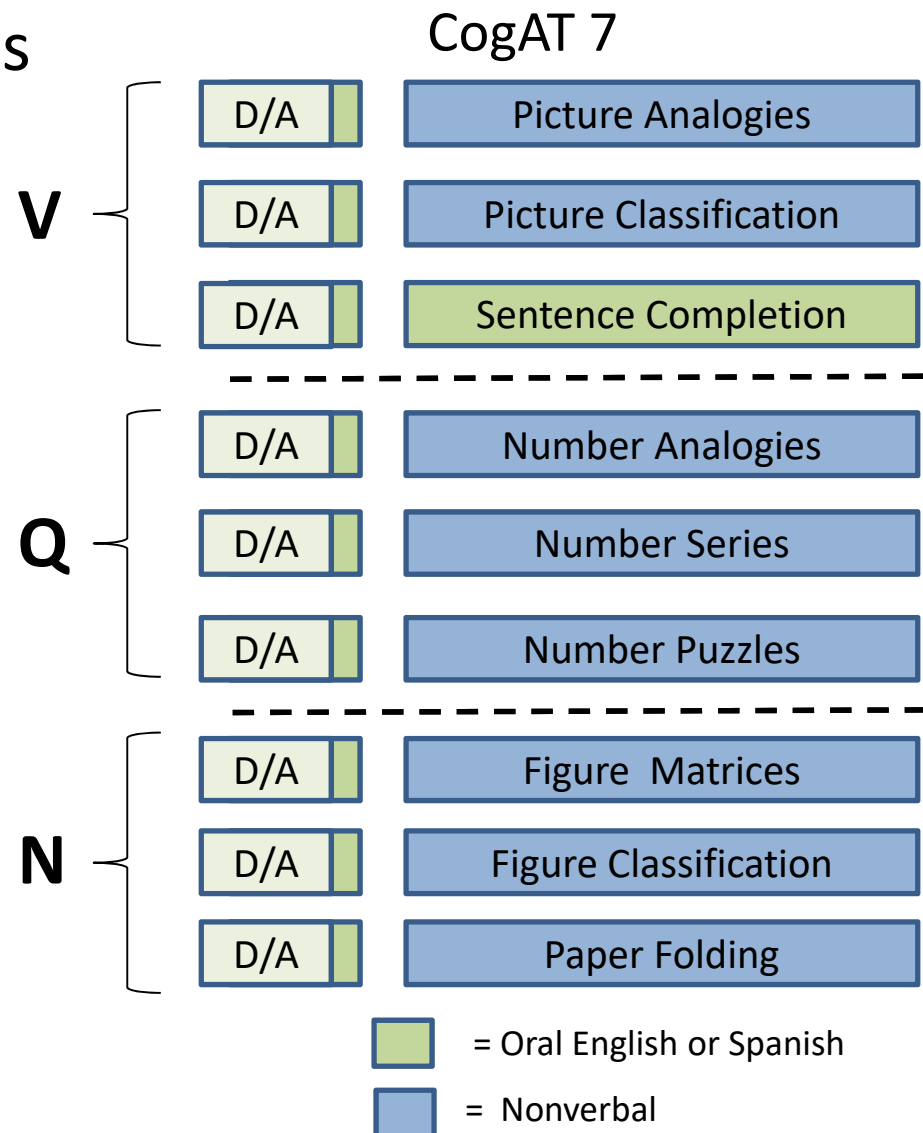
<https://sapa-project.org/blogs/CHCmodel.html>

Any single item format

- Underrepresents construct of general reasoning abilities
- Only gives students one chance to understand and master the task
- Privileges those with more preparation for the task (coaching, prior exposure)

Nonverbal is an administration type, not an item format


Primary: Grades K - 2 Subtests



Levels 5/6–8—Verbal Battery—Picture Analogies

1




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	→	

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Levels 5/6–8—Verbal Battery—Sentence Completion







Which animal swims in the ocean?




2

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Levels 5/6–8—Verbal Battery—Picture Classification




3


		
		


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Levels 5/6–8—Quantitative Battery—Number Analogies

4

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	→	?

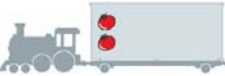

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Levels 5/6 and 7—Quantitative Battery—Number Puzzles


5







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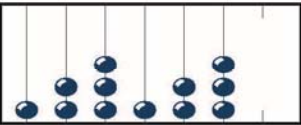

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Levels 5/6 and 7—Quantitative Battery—Number Series

6




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Levels 5/6-8—Nonverbal Battery—Figure Matrices

7

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Level 5/6—Nonverbal Battery—Paper Folding

8

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Level 8—Nonverbal Battery—Figure Classification

9

				<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

CoqAT 7: Alternative Verbal Scale

Figure 7: Composition of the Verbal and Alternative Verbal scores at Level 7

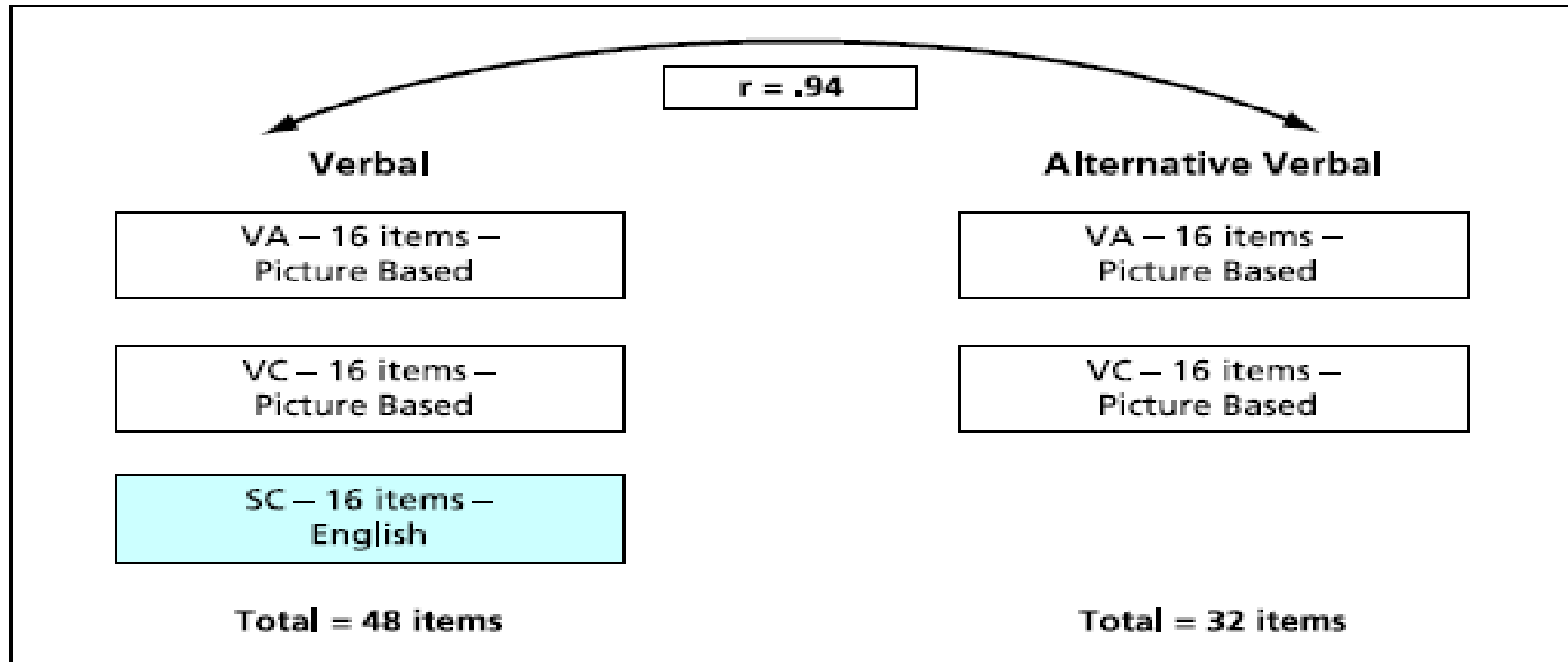


Table 51: Percentage of ELL and Non-ELL Verbal and Alternative Verbal Scores in the Top 10 Percent of the Distribution on Levels 5/6–8

	Population	Verbal	Alternative Verbal
Non-ELL	94.5%	96.9%	94.6%
ELL	5.5%	3.1%	5.4%

CogAT Screening Form

- Available for Form 7 and 8
- **K-2 Fully Nonverbal**
- Shorter administration time with consistent formats
- Can administer the six remaining tests to provide complete battery scores for a subset of students

Picture/Verbal Analogies

Picture/Verbal Classification

Sentence Completion

Number Analogies

Number Series

Number Puzzles

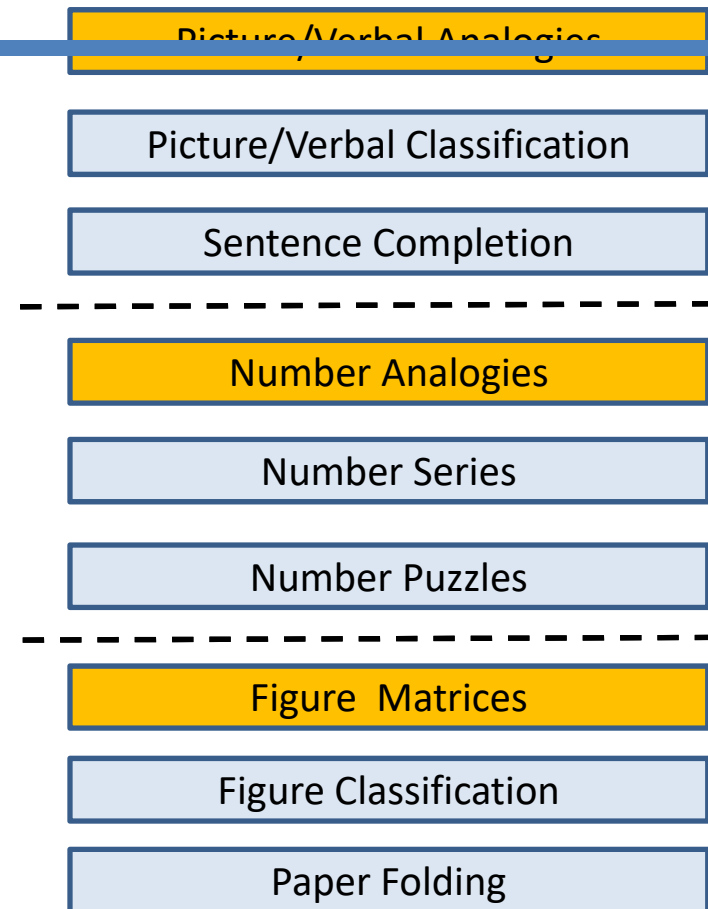
Figure Matrices

Figure Classification

Paper Folding

CogAT Screening Form: *Alt-V*

- For grades 3 and above, can be nonverbal as well with **Alt-V**
- Comprised of the Analogies subtest of each battery
 - Number Analogies
 - Figure Matrices
- Benefit from at least two formats to demonstrate skill on



Identifying English Learner Students for Gifted and Talented programming

Rethinking identification to promote diversity

- Consider “readiness for additional challenge” and “aptitude” through continuous **evaluations** rather than “gifted” and “high achieving” **labels**



Aptitude: “*The degree of readiness to learn and perform well in a particular situation”*”

Opportunities

- Increasing size of program and variety of programs more effective for increasing diversity of program
 - Renzulli and Reis's Schoolwide Enrichment Model
- Nonverbal tests can be used as **part** of a comprehensive talent identification system
 - See Lohman & Lakin, 2007; Lohman & Renzulli, 2007
- What other options do we have for identifying ELL students??

Option 1: Reducing the verbal demands of ability tests

- Some districts use single-format Nonverbal Tests (like NNAT), with the problems outlined in the previous section
- More instructionally relevant to use tests with verbal and quantitative domains (consistent with CHC) with modifications to make appropriate interpretations
- “Double the work” (Short & Fitzsimmons) for EL students

CogAT 7: Alternative Verbal Scale

Figure 7: Composition of the Verbal and Alternative Verbal scores at Level 7

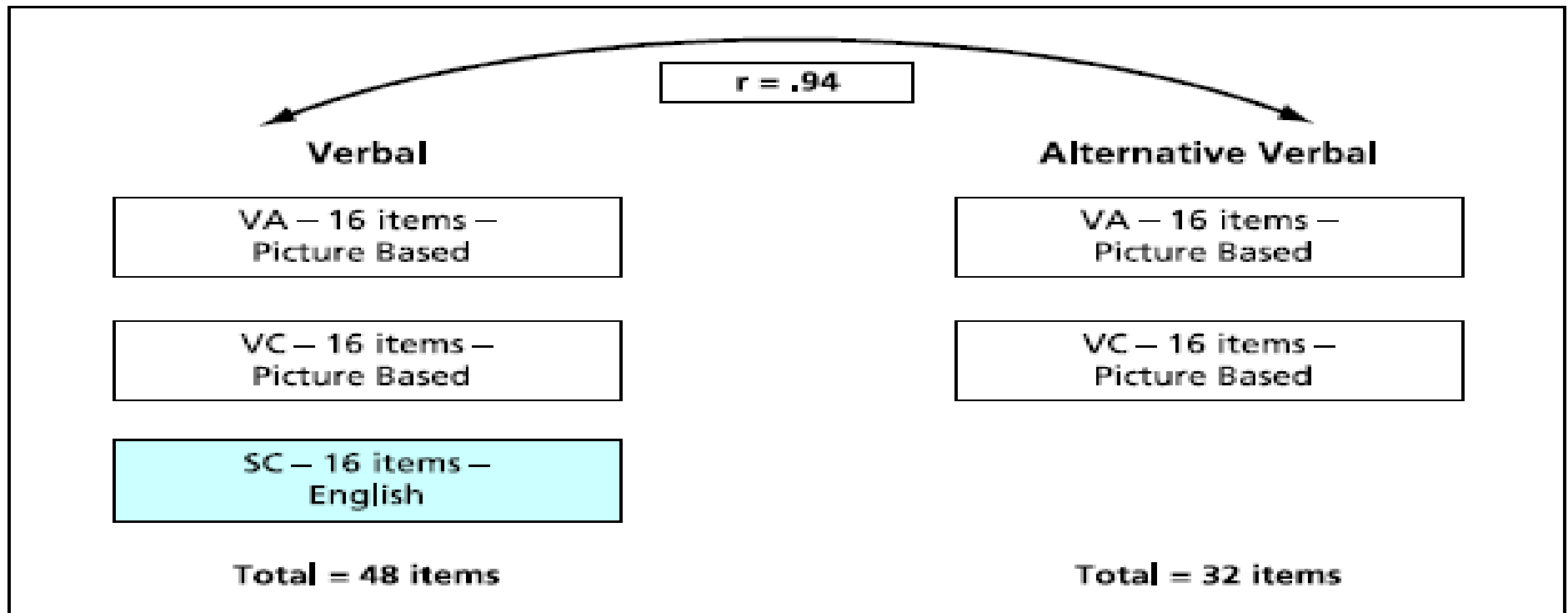


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Option 2: Using *Opportunity to Learn* Norms

- If the goal is to identify students ready for challenge, need to see which students know the most given their opportunity to learn the content
- Using national age norms presumes that all students have had equal opportunity to develop the practiced skills
 - Uses age to control for opportunity to learn (OTL)
- Can use local and subgroup norms to control for clear differences in OTL within age groups

Identifying ELs ready for challenge: Opportunity to Learn Norms

**These are students
who can reason best
given the same
opportunity to learn**

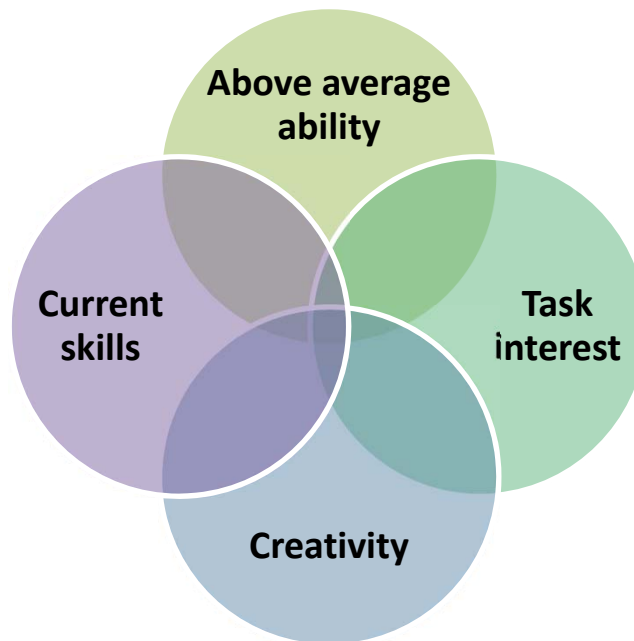
*Use multiple years of
data to increase
comparison group*

Student ID	Raw score out of 48	Verbal Scale Score	Rank within ELs
1189	48	105	100
1107	42	90	97
1111	41	90	97
1130	40	88	97
1145	37	80	95
1183	37	76	95
1105	36	75	93
1124	35	73	93
1108	34	71	91
1132	29	69	85
1118	29	69	85
1163	27	68	80

Using this information



- Subgroup norms show some students are high scoring compared to student with similar OTL
- Does not mean they are ready for the same types of enrichment or gifted programming as other students
- Does mean they are ready to be challenged



Programming options for EL students

- Current level of achievement is primary guide
- Programming goal: to encourage interests and improve achievement at a rate faster than would otherwise occur with typical classroom instruction
- For on- and below-grade-level achievement options include: tutors, after-school or weekend classes/clubs, etc. Motivational component critical.
- For achievement well in advance of peers, consider single-subject acceleration



Questions?

Webinars available soon:

Differentiating the Classroom: Use CogAT Ability Profile Scores Schoolwide

CogAT and Culturally Responsive Identification Practices

Come see us! NAGC November 15-18, Booth #803

Additional resources:

<https://www.hmhco.com/programs/cogat/>

Short introduction videos:

Getting to Know CogAT: Overview

<https://aub.ie/CogAT1>

Getting to Know CogAT: Ability Profile Scores

<https://aub.ie/CogAT3>

Getting to Know CogAT: Using Data for Differentiation

<https://aub.ie/CogAT2>