

A Strategy to Optimally Identify Students for Gifted Services

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This session:

Part One:

- What criteria do we follow? What are the goals?
- What's the problem we want to solve?
- What is Optimal ID?
- How does Optimal ID make gifted identification better?

Part Two:

- The Optimal Identification App
- Applying Optimal ID to a real district



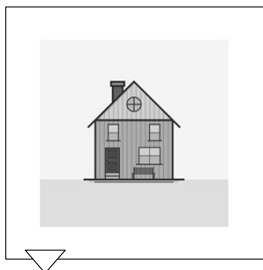
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Terms we will use...

- Universal consideration (aka single-phase system)
- Two-phase system
- Universal screening
- Sensitivity
- Nomination validity
- Combination Rules (AND/OR/MEAN)



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Cost
Alignment
Sensitivity
Access

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Cost

any finite resource that is allocated to identifying students for placement in each advanced learning opportunity. Common costs include money spent on assessments, teacher time, and student time spent on identification-related practices.

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Alignment

focuses on the agreement between the skills, dispositions, and abilities measured by the identification system and those that will be fostered in the service being provided. There are two relevant components to alignment: domain and level.

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Sensitivity

represents the proportion of students who would benefit from an educational service that are correctly identified for that specific service.

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Access

The removal of unintentional (or intentional) systematic barriers to gifted identification and providing equal opportunity to be identified. Similarly qualified students have the same probability of identification regardless of race, ethnicity, culture, language, disability status, and geographic or economic background.

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Criteria	Short Definition
Cost	Time, money, and “opportunity cost”
Alignment	ID domain match services ID level matches service level
Sensitivity	Getting kids who would benefit into services
Access	The identification portion of equity

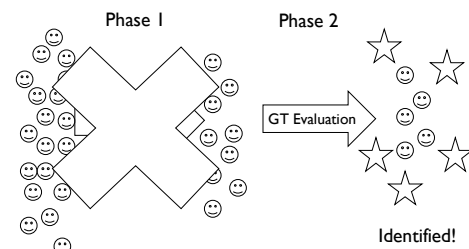
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What's the problem?

1. Commonly-used gifted identification systems miss the majority of students they are designed to identify
 - This is especially pronounced for disadvantaged groups
2. Universal consideration systems are far more effective, but inefficient (time and money)
 - Most students who are considered won't be served
 - Universal consideration means testing everyone (\$\$\$)

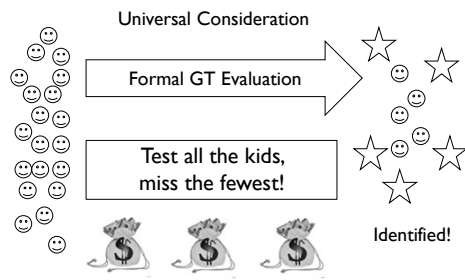
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Two-Phase Identification System



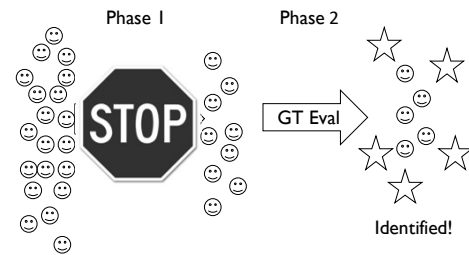
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Single-Phase Identification System



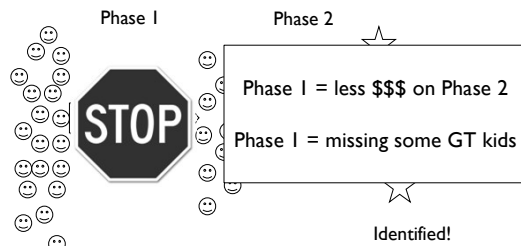
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Two-Phase Identification System

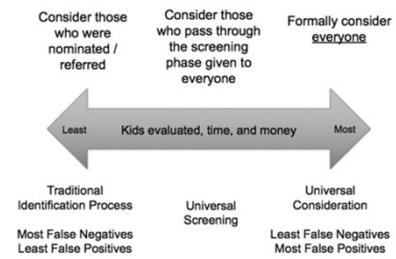


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Two-Phase Identification System



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Optimal Identification



Can we have the effectiveness benefits of universal consideration AND the efficiency benefits of two-phase identification systems?

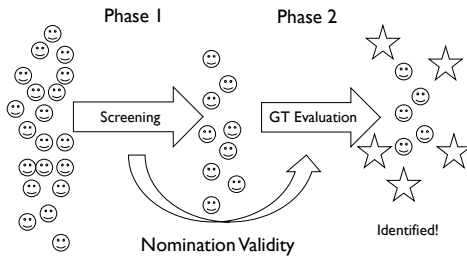
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Required Components of Optimal ID

1. High reliability of individual assessments
2. Strong Nomination Validity
 - One of the phase two data points at phase one
3. Lower cutoff at phase one
 - 70th-90th percentile
4. Mean combination rule at phase two

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Can we make this better?



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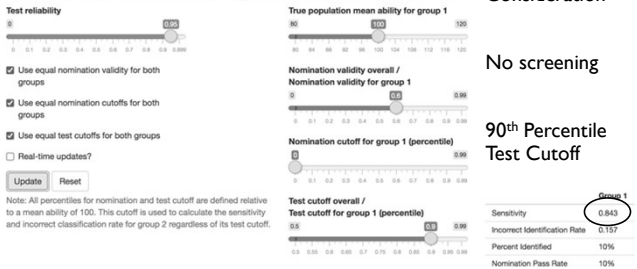
Identification Simulator

<https://goo.gl/IVKtuc>



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Gifted Identification Psychometrics Explorer



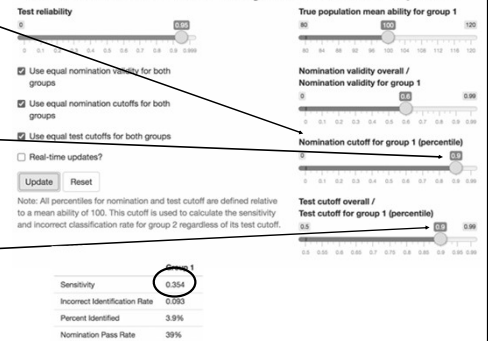
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Gifted Identification Psychometrics Explorer

Two-Phase ID System

90th Percentile Screening

90th Percentile ID Cutoff



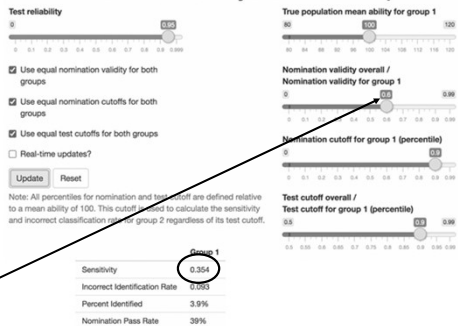
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Gifted Identification Psychometrics Explorer



Why is this happening?

This guy...

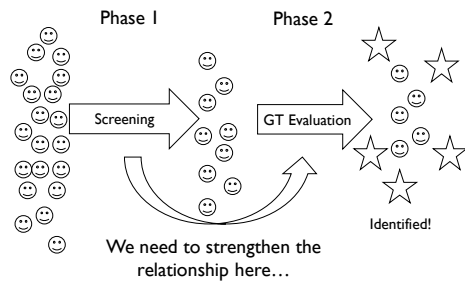


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Essential Practice: Strong Nomination Validity

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Can we make this better?



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What makes for an Optimal Phase One?

- ☐ Strong nomination validity
- ☒ High reliability
- ☒ Fast for students
- ☒ Easy for staff
- ☐ Cheap

Phase One:
Teacher Rating Scale

Phase Two:
IQ Test

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What makes for an Optimal Phase One?

- ☐ Strong nomination validity
- ☒ High reliability
- ☒ Fast for students
- ☒ Easy for staff
- ☒ Cheap

Phase One:
State Achievement Test

Phase Two:
CogAT + GT
characteristics
Checklist

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What makes for an Optimal Screener?

- ☒ Strong nomination validity
- ☐ High reliability
- ☒ Fast for students
- ☐ Easy for staff
- ☒ Cheap

Phase One:
Homemade Creativity
Checklist

Phase Two:
TTCT + Creative
Evidence

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Essential practice: Mean combination rule at phase two

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What makes for an Optimal Screener?

- ☒ Strong nomination validity
- ☒ High reliability
- ☒ Fast for students
- ☒ Easy for staff
- ☒ Cheap

Let's talk about this...

Phase One:
Math and Reading
Achievement test

Phase Two:
Average of CogAT,
Math, Reading, teacher
recommendation

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Mean Combination Rule at Phase Two

- Presuming we're identifying based on multiple measures...

- Taking the mean of the data points **INCREASES** reliability
- Higher reliability = higher sensitivity
- Higher reliability = greater equity

Table 4. Reliability of Mean by Reliabilities of Original Assessments and Number of Assessments Being Combined.

Original reliability of assessments	Number of assessments being combined	Reliability of resulting mean
.95	2	.97
.95	3	.98
.95	4	.99
.90	2	.95
.90	3	.96
.90	4	.97
.85	2	.92
.85	3	.94
.85	4	.96
.80	2	.89
.80	3	.92
.80	4	.94
.75	2	.86
.75	3	.90
.75	4	.92

Note. Assumes that original scores have equal reliability and are standardized to z scores prior to combination. Calculations based on Equation (14).

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An Aside....

- Goodness of what phase one measures is 100% determined by what you measure at phase two
- Your definition of giftedness **DOES NOT MATTER** in choosing a screener
- Goodness of what phase two measures is 100% determined by your definition of giftedness and what service will be provided
 - So don't just average random things together unless they a) fit your definition of gifted and b) measure skills necessary for success in the service

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How to "do"
the mean
combination
rule



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Rubrics and Matrices at Phase Two

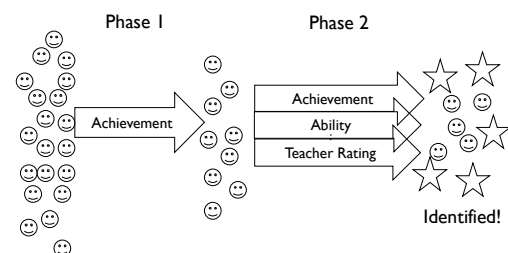
CRITERIA	POINTS
Achievement Test (done in the last year). Assign the point-value for EACH qualifying battery or composite score. 3 pts. for $\geq 96^{th}$ percentile 2 pts. for $\geq 95^{th}$ percentile 1 pt. for $\geq 92^{nd}$ percentile Example: Verbal: 94, Quantitative: 98, VQ: $97 = 1 + 3 + 3 = 7$ pts. For MAP scores , assign the point-value for each battery for each testing window for the last year (i.e. up to 6 MAP scores – Reading and Math, Fall, Winter, Spring)	
Ability Test (done in the last 3 years). Assign the point-value for EACH qualifying battery or composite score. 3 pts. for $\geq 96^{th}$ percentile 2 pts. for $\geq 95^{th}$ percentile 1 pt. for $\geq 92^{nd}$ percentile Example: Verbal: 94, Quantitative: 98, VQ: $97 = 1 + 3 + 3 = 7$ pts.	
Teacher Recommendation and Classroom Performance 2 pts. Teacher recommendation form completed in PowerSchool 1 pt. Student academic performance (add 1 pt. if 75% of child's grades $\geq 5+$ or 8 in core subjects: Math, Language Arts, Science, Social Studies)	
TOTAL POINTS	

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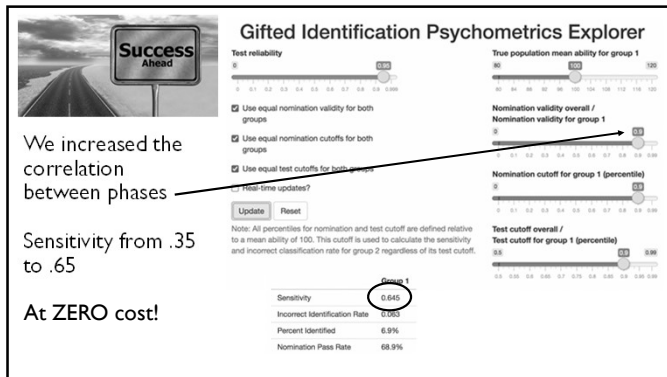
Essential practice:
Use one of the phase two data points as the universal screener

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Optimized Two-Phase System



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But wait....there's more....

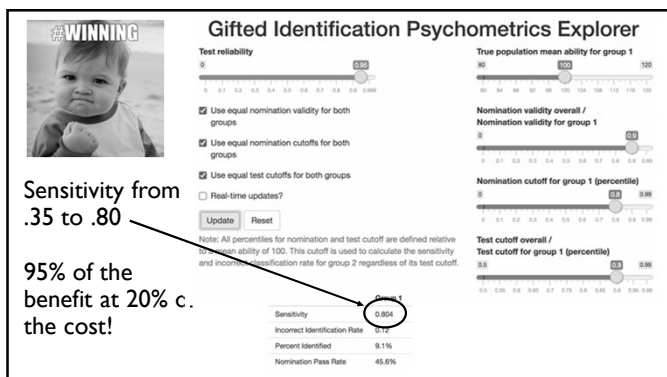
What if you were willing to spend a little bit more – testing 20% of kids for GT eligibility instead of just 10%

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Essential practice:

Phase One Cutoff < Phase Two Cutoff

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So, What's the Trick?

- Using existing, universally administered assessments as screeners lowers cost and decreases needed staff time
- Many of these also have high reliability (e.g., state achievement tests)
- By including this data point in both phases, we can drastically increase the correlation between the two phases
- By taking the mean of multiple measures in phase two, we can increase the reliability of our ID decisions

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Required Components of Optimal ID

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2. Strong Nomination Validity
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3. Lower cutoff at phase one
 - 70th-90th percentile
4. Mean combination rule at phase two

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Why Does Optimal Identification Matter?

If using a two-phase system, this approach can provide:

- ✓ • Greater sensitivity and identification rates
 - Increased equitable access for disadvantaged groups
- ✓ • Better alignment planning
 - between phases and specifically assessments
 - from program goals to identification and services

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See an example!



<https://youtu.be/olsMhx01hmw>

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Optimal Gifted Identification Application

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Optimal Identification

1. High reliability of individual assessments
2. Strong Nomination Validity
 - One of the phase two data points at phase one
3. Phase one: Lower cutoff
 - ~70th-90th percentile
4. Phase two: Mean combination rule



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Questions? Contact Us!



Part One



Part Two



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