RELEVANCE & RIGOR:
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Gifted Identification Gap: When Just as Good is Not Good Enough

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National Center for Education Research (NCER) and
National Center for Special Education Research (NCSER)

Introduction to the National Center for Research on Gifted Education's (NCRGE) Research

Funded by the Institute of Education Sciences (IES), U.S. Department of Education, PR/Award # R305C140018

Federal Definition of Gifted and Talented

Gifted and talented, when used with respect to students, children, or youth, means students, children, or youth who give evidence of high achievement capability in areas such as intellectual, creative, artistic, or leadership capacity, or in specific academic fields, and who need services or activities not ordinarily provided by the school in order to fully develop those capabilities. (Every Student Succeeds Act [ESSA, 2015] Section 8101(27))

Jacob K. Javits Gifted and Talented Students Education Act asserts that

"outstanding talents are present in children and youth from all cultural groups, across all economic strata, and in all areas of human endeavor"
(United States Department of Education, 1993, p. 3).

the PROBLEM:

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**.

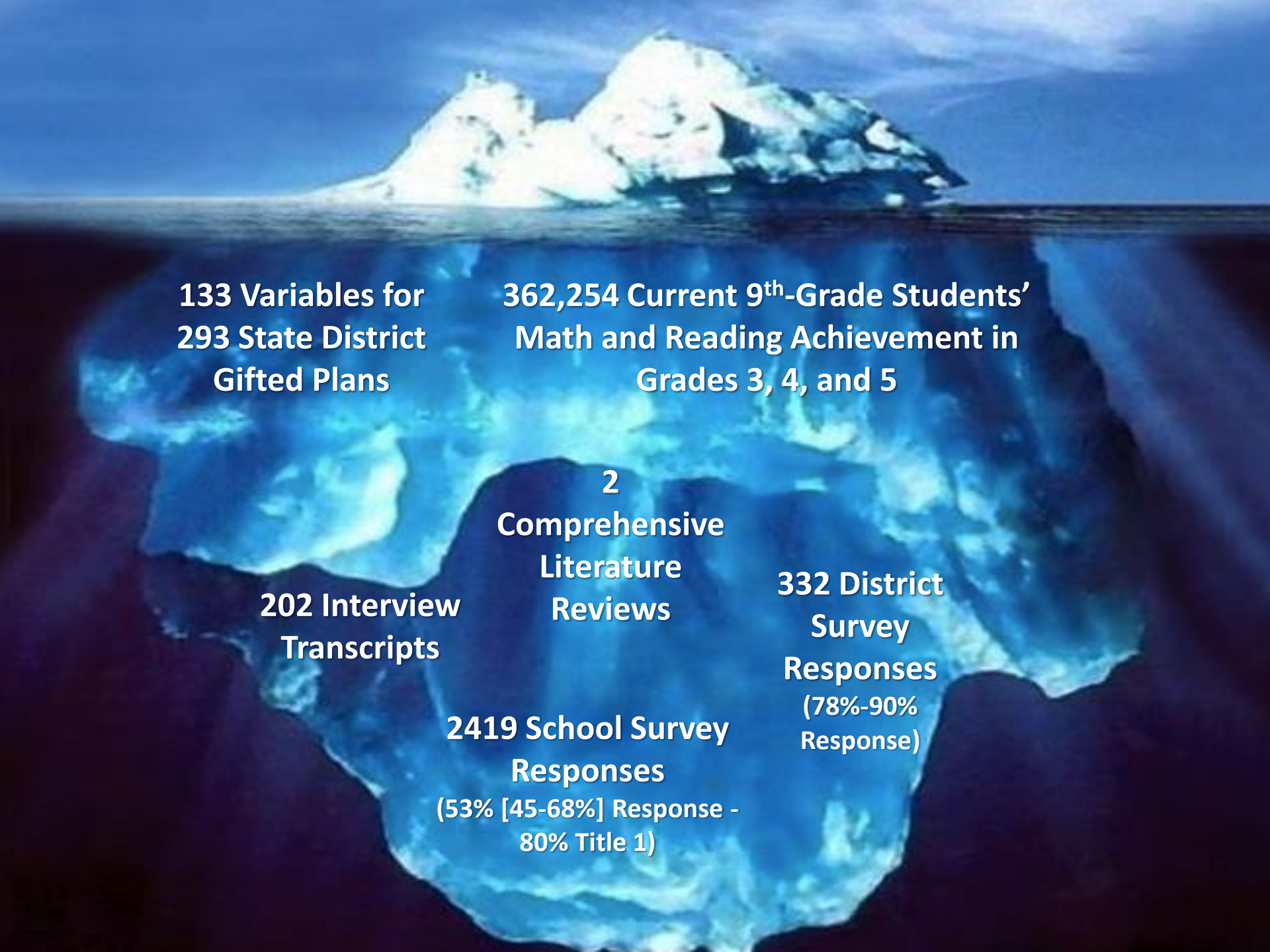
the GOAL:

To increase our understanding of:

1. Identification policies and procedures
2. Instructional approaches
3. Program curricula and content
4. Predictors of success

the PLAN

- Year 1- **Analyze State District Gifted Education Plans**
- **Year 1- Survey All Districts and Schools about Gifted Identification and Service Policies and Practices in Three States**
- **Year 1- Analyze 3rd, 4th, and 5th Grade Student Reading and Mathematics Achievement for Current 9th Grade Students**
- **Year 1- Identify Schools that Successfully Include and Serve Underrepresented Populations with Gifted Services**
- **Years 2 & 3- Conduct Case Studies of 24 Schools and 9 Districts to Determine Which Practices and Services are Most Effective**
- **Years 4 & 5- Develop a "What Works Clearinghouse" Quality Study Based on Findings from Year 1-3**


133 Variables for 293 State District Gifted Plans
362,254 Current 9th-Grade Students' Math and Reading Achievement in Grades 3, 4, and 5
2 Comprehensive Literature Reviews
202 Interview Transcripts
332 District Survey Responses (78%-90% Response)
2419 School Survey Responses (53% [45-68%] Response - 80% Title 1)

Identification

Grade First identify in…

- Kindergarten - .9%
- 1st – 2.8%
- 2nd – 27.8%
- 3rd – 53.6%
- 4th – 12.0%
- 5th – 1.6%
- None of the above – 1.3%

Identified in what…

- Global – 41%
- Reading/LA – 69.1%
- Mathematics – 66.6%
- Other – 44.2%

Identification (Continued

19.3% use Universal Screening. With Universal Screening, they most often use

- 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 with…

- 33.9% Native Language
- 50.3% Non-Verbal Test
- 62% More Flexible Score
- 23.9% Different Weighting of Criteria
- 49.4% Different Criteria or Cutoff

Services

Grouping/Service Options

- 73.2% of schools use pullout (2.81 hs/wk)
- 53.4% of schools use cluster grouping (50% Sometimes or less)
- 45.3% of schools use homogenous grouping
- 33.1% of schools use push-in (1.87 hs/wk)

Acceleration Practices

- 29.2% of schools do not accelerate
- 34.8% of schools subject accelerate
- 26.1% of schools whole grade accelerate

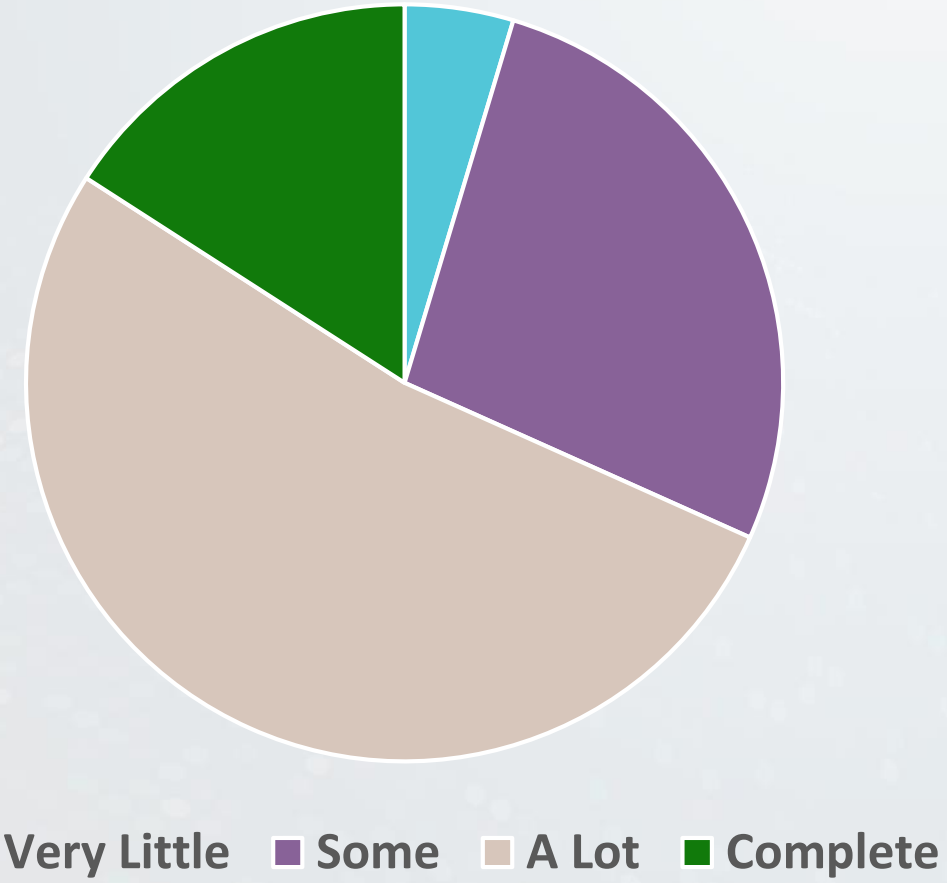
Services (continued)

- **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 designated math curriculum for gifted**
- **90.2% of districts do not have a designated reading/LA curriculum for gifted**

Schools Have Options

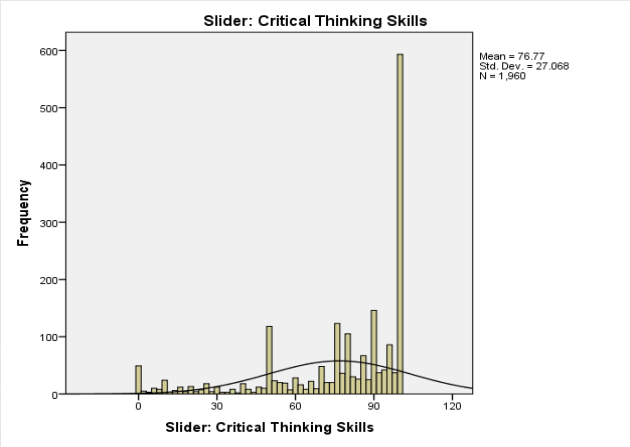
How much autonomy do your school's teachers of the gifted have in choosing the content to deliver?

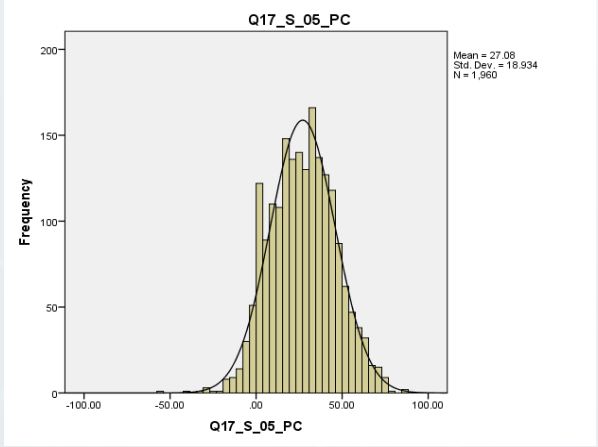
- **Very Little – 4.6%**
- **Some – 26.8%**
- **A Lot – 51.9%**
- **Complete 15.8%**

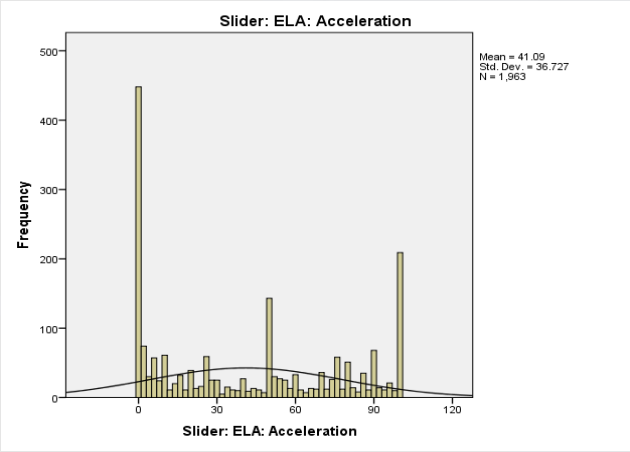


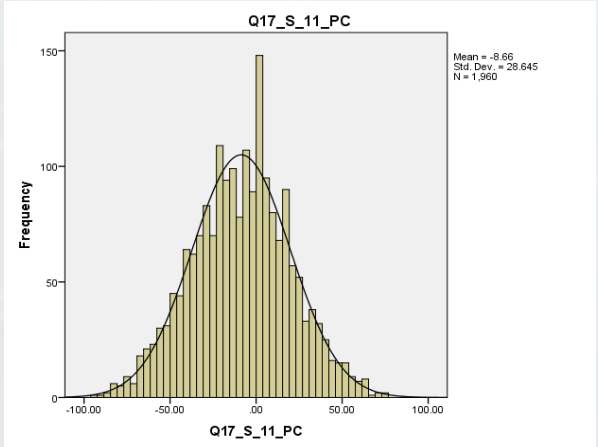
Focus of Program Services

Using the slider, indicate the degree to which the gifted programming at your school *focuses* on the following goals and/or activities (0=Not a focus, 100=Complete focus).









Focus of Program Services (continued)

	Min	Max	Mean	*SD*
Critical Thinking Skills	-55.31	85.65	27.08	18.93
Creativity/Creative Thinking	-63.73	88.27	19.44	20.42
Reading/ELA: Grade Level Extension Activities	-66.19	92.31	15.13	23.28
Math: Grade Level Extension Activities	-66.96	92.31	12.50	25.17
Communication Skills	-55.31	75.19	11.93	20.17
Technology Literacy	-78.27	75.62	10.97	21.94
Metacognitive Skills	-79.00	76.35	9.14	20.15
Research Skills	-68.27	75.00	7.96	21.16
Academic Motivation	-59.77	71.23	7.13	20.31
Academic Self-Confidence	-82.69	72.27	4.87	20.85
Student Autonomy	-85.00	71.23	1.38	21.95
Enrichment in non-core content areas	-79.04	96.15	1.09	25.71
Writing Skills	-77.31	95.92	0.80	23.32
Self-directed projects	-80.73	75.96	-0.30	22.91
Leadership Skills	-74.50	76.92	-0.32	21.26
Social-Emotional Needs	-82.69	76.35	-1.51	23.08
Interdisciplinary study of big ideas	-86.73	80.54	-4.01	23.52
Math: Acceleration	-89.58	83.58	-7.63	29.27
Reading/ELA: Acceleration	-95.19	75.73	-8.50	28.97
Opportunities for Underserved Students	-84.81	79.65	-8.60	24.11
College and Career Readiness	-88.46	72.27	-9.97	27.83
Culturally Responsive Curriculum	-82.69	73.85	-12.13	22.26
Academic Contests	-90.92	83.92	-13.35	26.08
Cultivation of Cultural Identity	-90.00	69.12	-19.51	21.71
Service Learning	-88.46	61.50	-20.50	22.67
Opportunities Outside of School Day	-88.46	72.35	-22.94	24.85

Greater than average focus

Less than average focus

15
15

Gifted Identification Policies and the Underrepresentation of Latino, Black, English Language Learners, and Low-Income Students in Gifted Programs in Three States

Funded by the Institute of Education Sciences (IES), U.S. Department of Education, PR/Award # R305C140018

Research Questions

- What is the level of underrepresentation in gifted programs among students who are in poverty, who are English learners, and racial/ethnic minorities?
- Is this level of underrepresentation persistent after controlling for student level academic achievement and the amount of gifted students in a school
- How do district level policies about identification differ by state?
- Are there district level policies that can reduce the level of underrepresentation?

Data

- Longitudinal Student Level Administrative Data for all of the 2011-12 3rd grade cohort from three states. Longitudinal data from these students from 3rd, 4th, and 5th grades. Includes variables on identification as gifted, FRPL status, EL status, race ethnicity, and academic achievement for three academic years from 2011/12, 12/13, and 13/14.
- District Survey of all districts in three states conducted in 2014/15

Table 1: *Sample Sizes after list wise deletion*

	State 1		State 2		State 3	
	Full Sample	District Survey Respondents	Full Sample	District Survey Respondents	Full Sample	District Survey Respondents
Students	95,587	74,922	58,154	53,641	168,184	131,435
Schools	1,293	1,026	1025	922	2,235	1,791
Districts	115	97	180	114	73	49

Variables

- **Dependent Variable:** Gifted identification any time from 3rd-5th
- **Independent Variables:**
  - Level 1 Variables (Student Level) - Free or Reduced Price Lunch (FRPL) status any time from 3rd-5th, English Language Learner (ELL) status any time from 3rd-5th, race/ethnicity (Latino, Black, Asian, Other, White(omitted)), math achievement (1), reading achievement (1), interaction of math and reading (1), school mobility any time from 3rd -5th.
  - Level 2 Variables (School Level) - Controls: percent gifted (1), percent Black or Latino (1), percent ELL(1), percent FRPL (1), and whether the school is a charter school
  - Level 3 Variables (District Level) - District Policies about Identification
    - Structure (e.g. universal identification, modification of identification process, are there programs to recruit/identify underrepresented gifted students)
    - Tools (e.g. parents and teacher nomination, cognitive tests, non-verbal tests, creativity tests.)
    - Decision (e.g. teacher committee decides, matrix is used, or fixed cut-offs are used)
    - Revisit (e.g. identification is revisited for non-identified students or identified students)
  - Controls: percent gifted (2), percent Black or Latino (2), percent EL (2), percent FRPL (2),

Data, Variables, and Models

- Method: three-level logistic multi-level model using HLM
- Models:

  Model 1= f(FRPL, ELL, race/ethnicity, mobility, charter)

  Model 2= f(Model 1 variables, academic ability)

  Model 3= f(Model 2 variables, % gifted at the school & district levels)

  Model 4=f(Model 3 variables, identification structure policy variables)

  Model 5=f(Model 3 variables, identification tools policy variables)

  Model 6=f(Model 3 variables, identification decision policy variables)

  Model 7=f(Model 3 variables, revisiting identification policy variables)

Descriptive Statistics:
Table 2: *Under Representation of FRL and ELL Students in Gifted Programs*

	State 3	State 1	State 2
% Gifted students	10.7%	18.7%	11.5%
% Free or reduced lunch students	67.1%	61.3%	51.1%
% Gifted who are free or reduced lunch	6.8%	8.9%	7.0%
% Free or reduced lunch who are gifted	42.5%	29.3%	31.0%
% English Language Learners	19.4%	11.4%	20.7%
% Gifted who are English Language Learners	6.4%	6.0%	8.1%
% English Language Learners who are gifted	11.6%	3.6%	14.6%

Descriptive Statistics:

Table 3: *Under Representation of Black and Latino Students in Gifted Programs*

	State 3	State 1	State 2
% Gifted students	10.7%	18.7%	11.5%
% Black	21.9%	24.3%	4.4%
% Gifted who are Black	4.4%	7.1%	6.3%
% Black who are gifted	8.9%	9.2%	2.4%
% Latino	30.5%	15.7%	34.7%
% Gifted who are Latino	9.4%	8.7%	7.2%

Table 4: *District Identification Policies in Three States*

	State 3	State 1	State 2
Structure of Identification			
Universal identification	22%	81%	94%
Modify identification for underrepresented groups	65%	26%	23%
Program to identify underrepresented groups	16%	39%	32%
Tools for Identification			
Parents can nominate	88%	77%	89%
Teachers can nominate	96%	91%	95%
Use cognitive tests	90%	95%	94%
Use non-verbal tests	41%	45%	68%
Use creativity tests	10%	4%	44%
Decision process for identification			
Committee of teachers and administrators decide	31%	64%	74%
Use a matrix to decide	35%	51%	23%
Use cut scores to decide	86%	57%	54%
Revisit the identification process			
Non-identified students are reassessed at regular intervals	16%	60%	54%
Non-identified students are reassessed upon request	84%	47%	54%
Identified students are reassessed at regular intervals	2%	10%	31%
Identified students are reassessed upon request	4%	10%	11%

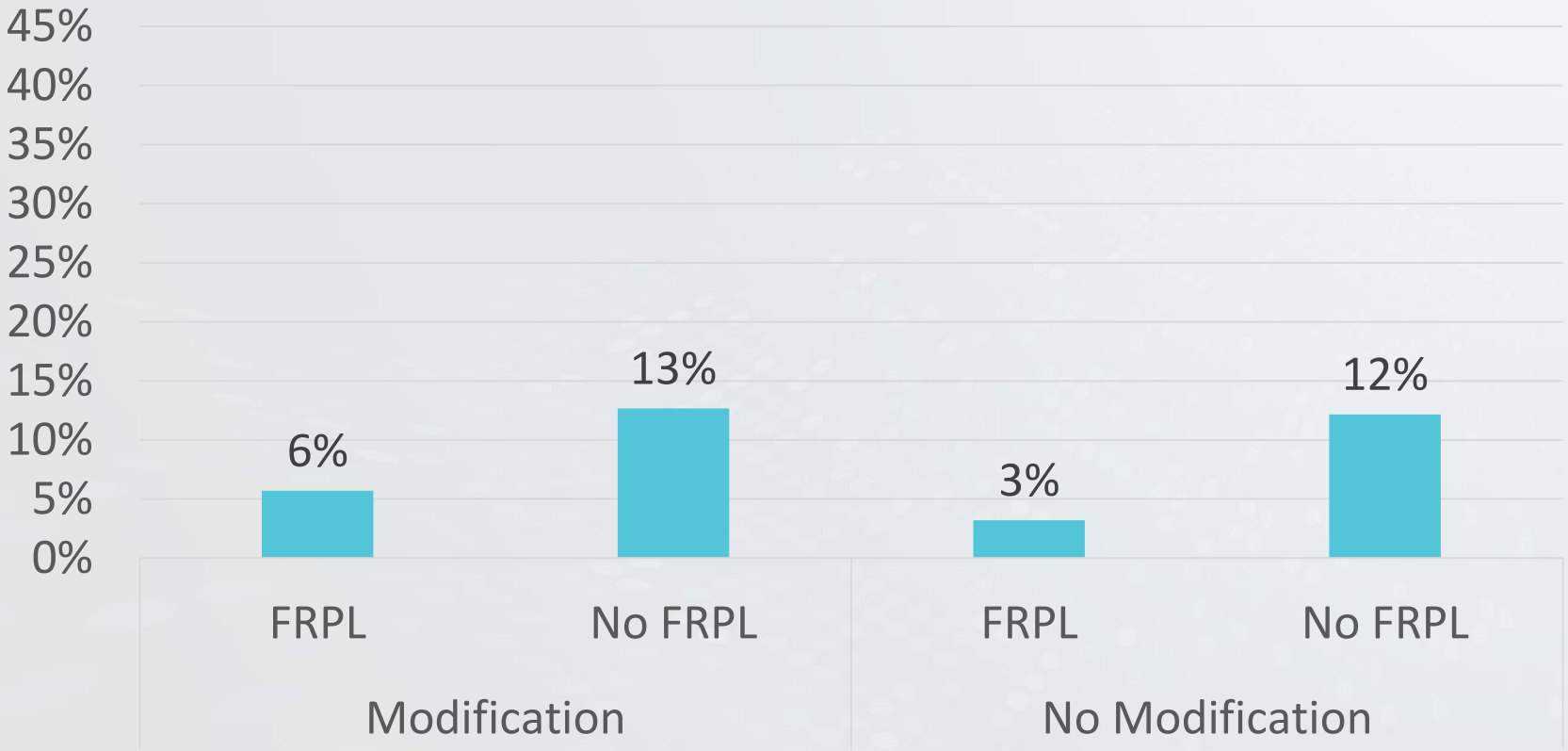
Multi-level models: Log Odds of Being in a Gifted Program - Table 5: Underrepresentation and academic ability

	State 2		State 1		State 3	
	Model 1	Model 2: (Model 1 +Achievement)	Model 1	Model 2: (Model 1 +Achievement)	Model 1	Model 2: Model 1 + Achievement
Free or Reduced Price Lunch Student	-.77 *	-.11	-1.08 *	-.42 *	-.58 *	-.01
	[.10]	[.12]	[.03]	[.03]		[.07]
English Language Learner	-.23	.16	-1.11 *	-.16 *	-.76 *	-.30 *
	[.14]	[.10]	[.06]	[.05]		[.04]
Black (White is the reference)	-.92 *	-.20	-1.15 *	-.26 *	-.93 *	-.29 *
	[.16]	[.11]	[.04]	[.04]		[.04]
Latino (White is the reference)	-.52 *	-.04	-.28 *	-.14 *	-.27 *	-.20
	[.07]	[.05]	[.05]	[.05]		[.05]
Academic Ability- Math (3rd Grade)		.02 *		.22 *		.06 *
Academic Ability- ELA (3rd Grade)		.02 *		.18 *		.06 *
Academic Ability- Math by ELA		-.000005 *		-.003 *		-.00008*

Note: *=*p*-value<.01; Standard Error in Brackets; sample sizes: State2=58,154 , State1=95,587 , State3 = 168,184

Model with No Additional Controls

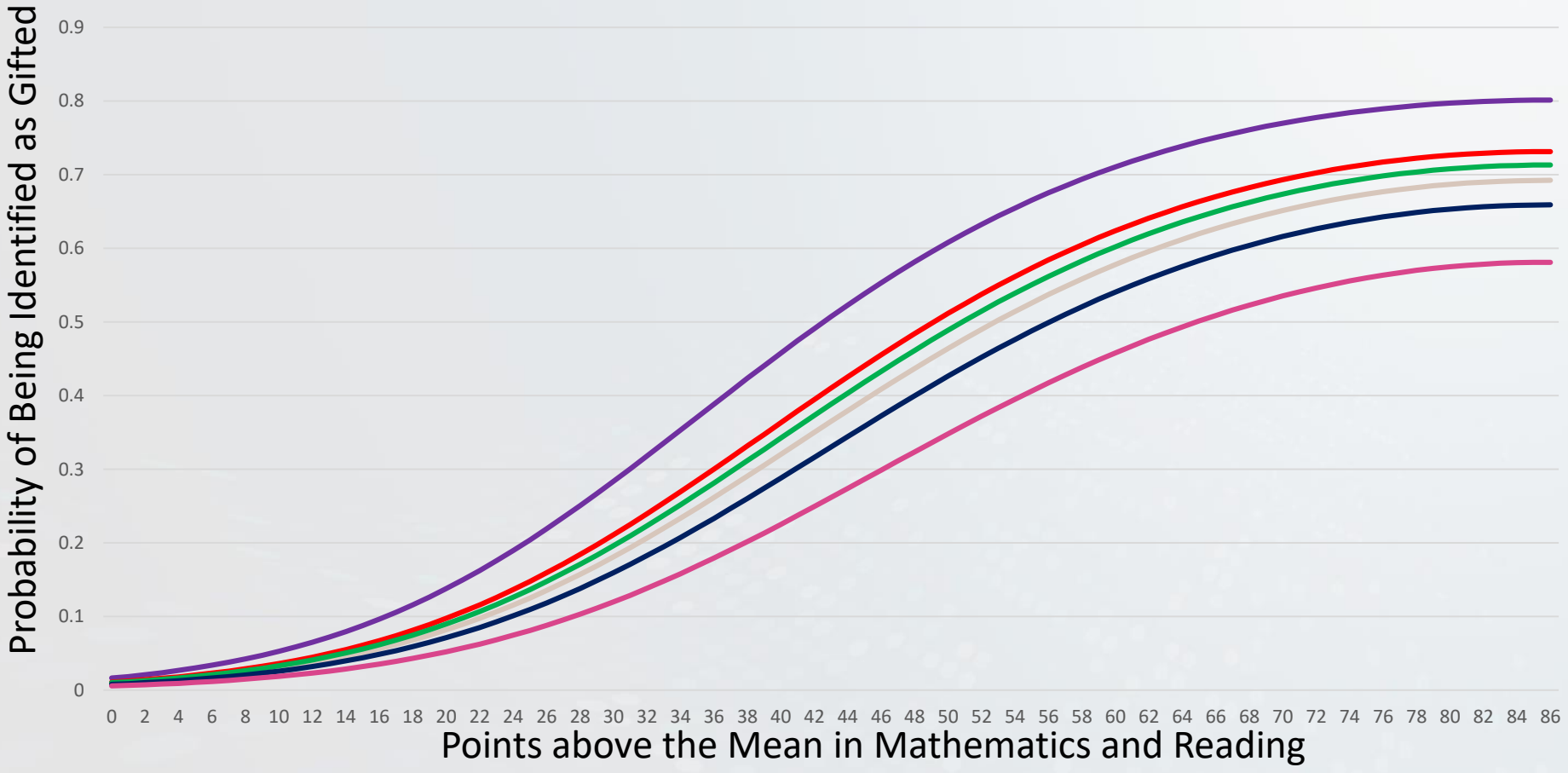
Predicted Probabilities of Identification for Districts that Modify Identification Policies vs. Districts that Do Not Modify Identification Policies in State 3



Multi-Level Models: Log Odds of Being in a Gifted Program Table 6: Structure (e.g. universal identification, modification of identification process, etc.)

	State 2		State 1		State 3	
	Model 3	Model 4: (Model 3 + Structure Policies)	Model 3	Model 4: (Model 3 + Structure Policies)	Model 3	Model 4: (Model 3 + Structure Policies)
Free or Reduced Price Lunch Student	-.15	-.21	-.45 *	-.44 *	.04	-.58 *
By universal identification		-.12		.01		.05
By modification of identification process		.31 *		-.22		.59 *
English Language Learner	.18	.01	-.19 *	-.26	-.38 *	-1.45 *
By universal identification		-.02		.13		.21
By modification of identification process		.24		.17		.98 *
Black (White is the reference category)	-.26	-.39	-.27 *	-.27	-.37 *	-.48 *
By universal identification		.57		.06		.05
By modification of identification process		-.48		.01		.14
Latino (White is the reference category)	-.03	.32	-.14	-.18	-.18*	-.03
By universal identification		-.26		.18		.07
By modification of identification process		-.08		-.06		-.19

Probability of Identification as Gifted for Free and Reduced Price Lunch (FRPL) and non-FRPL Students in Districts with Modification Q6=1) and Without Modification (Q6=0) in State 3



Multi-level Models: Log Odds of Being in a Gifted Program - Table 7: Tools (e.g. parents and teacher nomination, non-verbal tests)

	State 2		State 1		State 3	
	Model 3	Model 5: (Model 3 + ID Tools Policies)	Model 3	Model 5: (Model 3 + ID Tools Policies)	Model 3	Model 5: (Model 3 + ID Tools Policies)
Free or Reduced Price Lunch Student	-.15	.86	-.45 *	-.95 *	.04	-.91 *
By parent nomination		-.47		.07		.44 *
By teacher nomination		.25		.10		.61
By non-verbal test		.17		.04		-.34 *
By creativity test		.29 *		-.23		-.15
English Language Learner	.18	-.70	-.19 *	-.57	-.38 *	-.82
By parent nomination		-1.06		-.46		.26
By teacher nomination		.73		.70		-.73
By non-verbal test		.06		.19		-.10
By creativity test		.10		.54		-.24

Multi-level Models: Log Odds of Being in a Gifted Program Table 7 (continued): Tools (e.g. parents and teacher nomination, non-verbal tests, etc.)

	State 2		State 1		State 3	
	Model 3	Model 5: (Model 3 + ID Tools Policies)	Model 3	Model 5: (Model 3 + ID Tools Policies)	Model 3	Model 5: (Model 3 + ID Tools Policies)
Black (White is the reference category)	-.26	1.93	-.27 *	-.13	-.37 *	-.54
By parent nomination		-.27		.12		-.44
By teacher nomination		1.18		.03		.50
By non-verbal test		.41		.19		-.09
By creativity test		-.49		.15		-.21
Latino (White is the reference category)	-.03	.68	-.14	-.20	-.18*	-1.11
By parent nomination		-.59		.18		.34
By teacher nomination		-.18		.10		.61
By non-verbal test		.22		.10		-.22 *
By creativity test		-.24		.16		.11

Multilevel models: Log Odds of Being in a Gifted Program Table 8: Decision (e.g. selection committee decides, matrix is used, and fixed cut-offs for identification)

	State 2		State 1		State 3	
	Model 3	Model 6: (Model 3 + Decision Policies)	Model 3	Model 6: (Model 3 + Decision Policies)	Model 3	Model 6: (Model 3 + Decision Policies)
Free or Reduced Price Lunch Student	-.15	.19	-.45 *	-.32 *	.04	.31 *
By selection committee makes decisions		-.35		-.05		.17 *
By matrix used for decisions		-.52*		-.17 *		-.28 *
English Language Learner	.18	.36	-.19 *	-.15	-.38 *	-.29
By selection committee makes decisions		-.30		.42 *		-.04
By matrix used for decisions		-.07		-.13		.09
Black (White is the reference category)	-.26	.36	-.27 *	-.28	-.37 *	-.15
By selection committee makes decisions		-.32		.13		-.08
By matrix used for decisions		-.76		.15		-.02
Latino (White is the reference category)	-.03	-.07	-.14	-.06 *	-.18*	.16
By selection committee makes decisions		.13		.31 *		.01
By matrix used for decisions		-.05		.28		-.13

Multi-level Models: Log Odds of Being in a Gifted Program Table 9: Revisit (e.g. identification is revisited for non-identified students or identified students)

	State 2		State 1		State 3	
	Model 3	Model 7: (Model 3 + Revisit Policies)	Model 3	Model 7: (Model 3 + Revisit Policies)	Model 3	Model 7: (Model 3 + Revisit Policies)
Free or Reduced Price Lunch Student	-.15	.19	-.45 *	-.49 *	.04	-.11
by re-assessed at regular intervals for non-identified		-.18		.04		.50 *
by re-assessed at regular intervals for identified		-.01		.04		.46
English Language Learner	.18	.11	-.19 *	-.29	-.38 *	-.12
by re-assessed at regular intervals for non-identified		.21		.28		.01
by re-assessed at regular intervals for identified		-.49		-.16		-6.12
Black (White is the reference category)	-.26	-.06	-.27 *	-.41	-.37 *	-.27
by re-assessed at regular intervals for non-identified		-.30		.06		.05
by re-assessed at regular intervals for identified		.80 *		-.06		-8.21
Latino (White is the reference category)	-.03	.35	-.14	-.05	-.18*	-.17
by re-assessed at regular intervals for non-identified		-.37 *		-.10		.06
by re-assessed at regular intervals for identified		.07		.46 *		-.33

Key Findings

- Notable underrepresentation of students in poverty, EL students, Black and Latino students in gifted programs in all three states
- Notable differences in identification policies in all three states
- State 2 is notable in that underrepresentation appears to be largely accounted for after controlling for 3rd grade student ability. State 1 and State 3 have notable underrepresentation even after controlling for ability.
- Few identification policy variables reduce the level of underrepresentation
  - One notable exception is the positive effect of modification of identification criteria in State 3 on reducing underrepresentation among FRPL and EL students. There is no effect on underrepresentation of Latino or Black students in State 3. These findings provide evidence supporting the effectiveness of the current statewide policy in State 3 that mandates a lower threshold for the identification of FRPL and EL.
  - Two policies (universal identification and the use of non-cognitive tests) that are supported in the literature as effective tools to reduce underrepresentation have no effect on underrepresentation in our three state sample

Gifted Identification Outcomes

Funded by the Institute of Education Sciences (IES), U.S. Department of Education, PR/Award # R305C140018

Comparisons of Groups of Schools – State 1

Variable	Reference (*n*=1177)		No Gifted (*n*=39)		No Gifted FRL (*n*=86)	
	Mean	SD	Mean	SD	Mean	SD
School % FRL	61.33	21.85	85.87	13.16	47.37	25.24
School % Gifted	7.64	5.31	1.07	1.18	8.05	6.19
District % FRL	54.67	11.80	61.15	11.12	48.08	12.53
District % Gifted	15.50	5.54	10.68	3.84	15.97	7.55
Prop Gifted FRL in cohort	0.06	0.05	0.00	0.00	0.00	0.00
READ	445.79	3.66	441.89	3.95	447.54	3.94
MATH	449.78	3.92	445.69	4.02	450.90	4.32
Reading Gap (by FRL)	5.80	3.64	4.32	6.64	7.08	3.41
Math Gap (by FRL)	5.39	3.65	4.41	5.88	7.15	3.35

Comparisons of Groups of Schools – State 2

Variable	Reference (*N*= 573)		No Gifted (*N*=141)		No Gifted FRL (*N*=261)	
	Mean	*SD*	Mean	*SD*	Mean	*SD*
School % FRL	53.72	27.85	49.99	28.55	28.21	22.32
School % Gifted	5.33	7	0.96	1.06	3.97	3.91
District % FRL	47.94	19.56	44.67	19.45	31.94	16.07
District % Gifted	8.69	4.05	4.43	3.09	7.74	3.46
Prop Gifted FRL in cohort	0.05	0.06	0	0	0	0
READ	581.87	27.93	582.19	21.84	599.82	20.68
MATH	485.87	36.78	480.98	30.29	505.9	30.22
Reading Gap (by FRL)	31.04	27.03	25.73	24.96	31.31	23.96
Math Gap (by FRL)	40.05	32.57	32.18	29.03	43.74	31.35

Comparisons of Groups of Schools – State 3

Variable	Reference (*N*= 1495)		No Gifted (*N*=343)		No Gifted FRL (*N*=201)	
	Mean	*SD*	Mean	*SD*	Mean	*SD*
School % FRL	70.0	24.0	83.0	18.0	54.0	25.0
School % Gifted	12.0	11.0	0.0	0.0	7.0	8.0
District % FRL	63.37	13.79	77.14	14.33	86.11	19.64
Prop Gifted FRL in cohort	0.12	0.11	0	0	0.07	0.08
READ 3rd grade	212.83	7.92	206.42	8.18	215.35	7.77
MATH 3rd grade	216.14	8.19	210.29	989	218.29	8.04
Reading Gap (by FRL)	10.9	8.29	9.89	9.92	11.56	7.57
Math Gap (by FRL)	10.64	8.31	9.11	10.05	11.33	8.18

Breakdown of Schools by Percentage of Students by Free and Reduced-price Lunch Status Identified as Gifted in State 1

	n	%	% FRL
No GT students	39	3%	85.87
Less than 2% GT FRL	240	18%	48.24
2-5% GT/FRL	399	31%	58.45
5-7.5% GT FRL	244	19%	61.72
7.5-10% GT FRL	156	12%	63.18
10%-15% GT FRL	158	12%	71.92
15%+ GT FRL	66	5%	78.07

Breakdown of Schools by Percentage of Students by Free and Reduced-price Lunch Status Identified as Gifted in State 2

	N	%	% FRL
No Gifted students	141	14%	53.72
< 2% Gifted FRL	429	44%	37.64
2-5% Gifted FRL	216	22%	51.09
5-7.5% Gifted FRL	63	6%	55.29
7.5-10% Gifted FRL	34	3%	56.50
> 10% Gifted FRL	92	9%	70.17

Breakdown of Schools by Percentage of Students by Free and Reduced-price Lunch Status Identified as Gifted in State 3

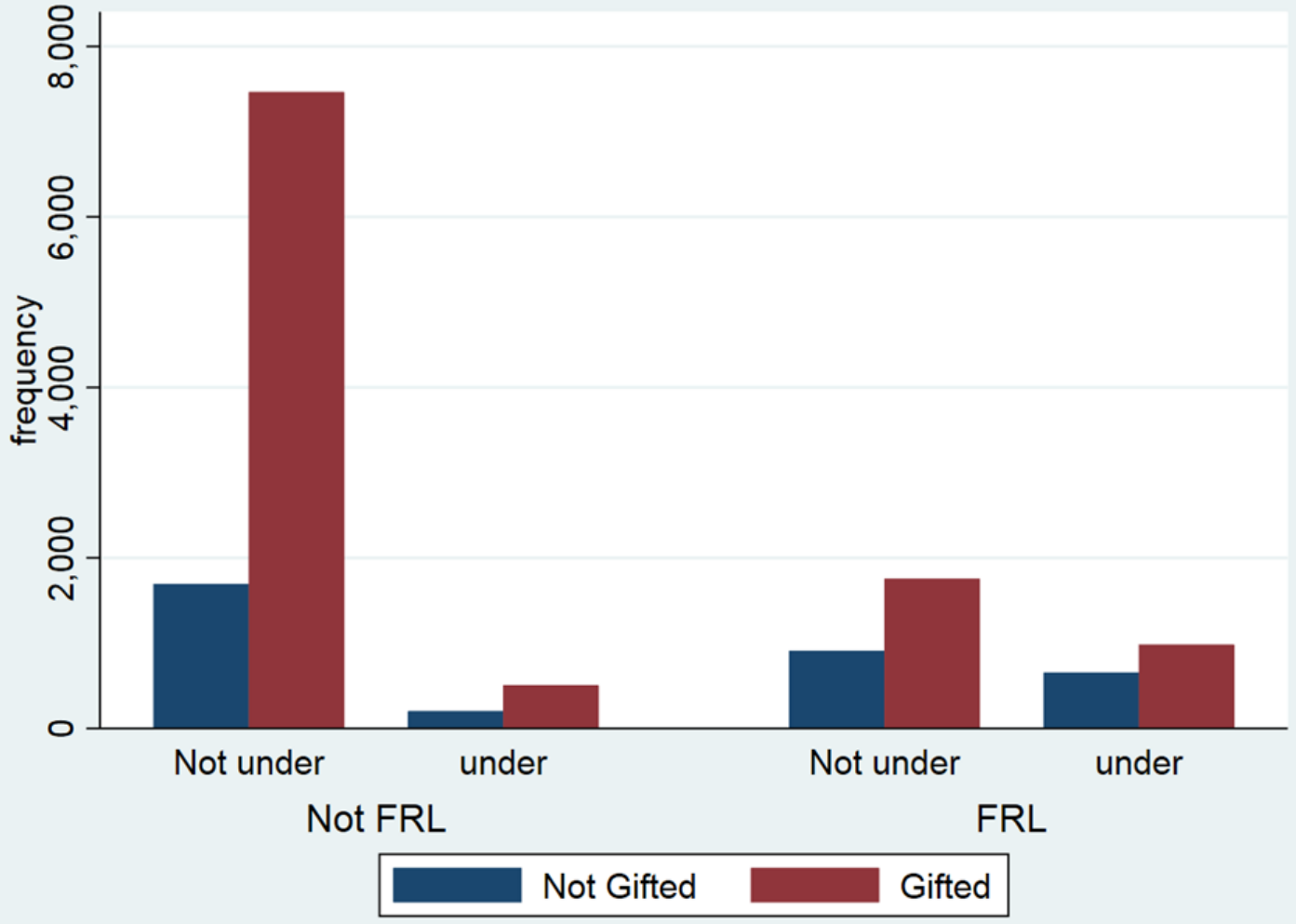
	N	%	% FRL
No Gifted students	343	16.76	82.87
< 2% Gifted FRL	357	17.45	66.03
2-5% Gifted FRL	413	20.19	72.83
5-7.5% Gifted FRL	285	13.93	71.51
7.5-10% Gifted FRL	207	10.12	67.21
> 10% Gifted FRL	441	21.55	62.98

Two-level Unconditional Means Models

- State 1
  - Between-district variance : .23
  - Within-district variance: .77
- State 2
  - Between-district variance: .18
  - Within-district variance: .82
- State 3
  - Between-district variance: .09
  - Within-district variance: .91

Frequencies

State 1: Frequency of students with combined math and reading scores at least 2 *SD* above the district mean who are identified as gifted, by underserved and free lunch status



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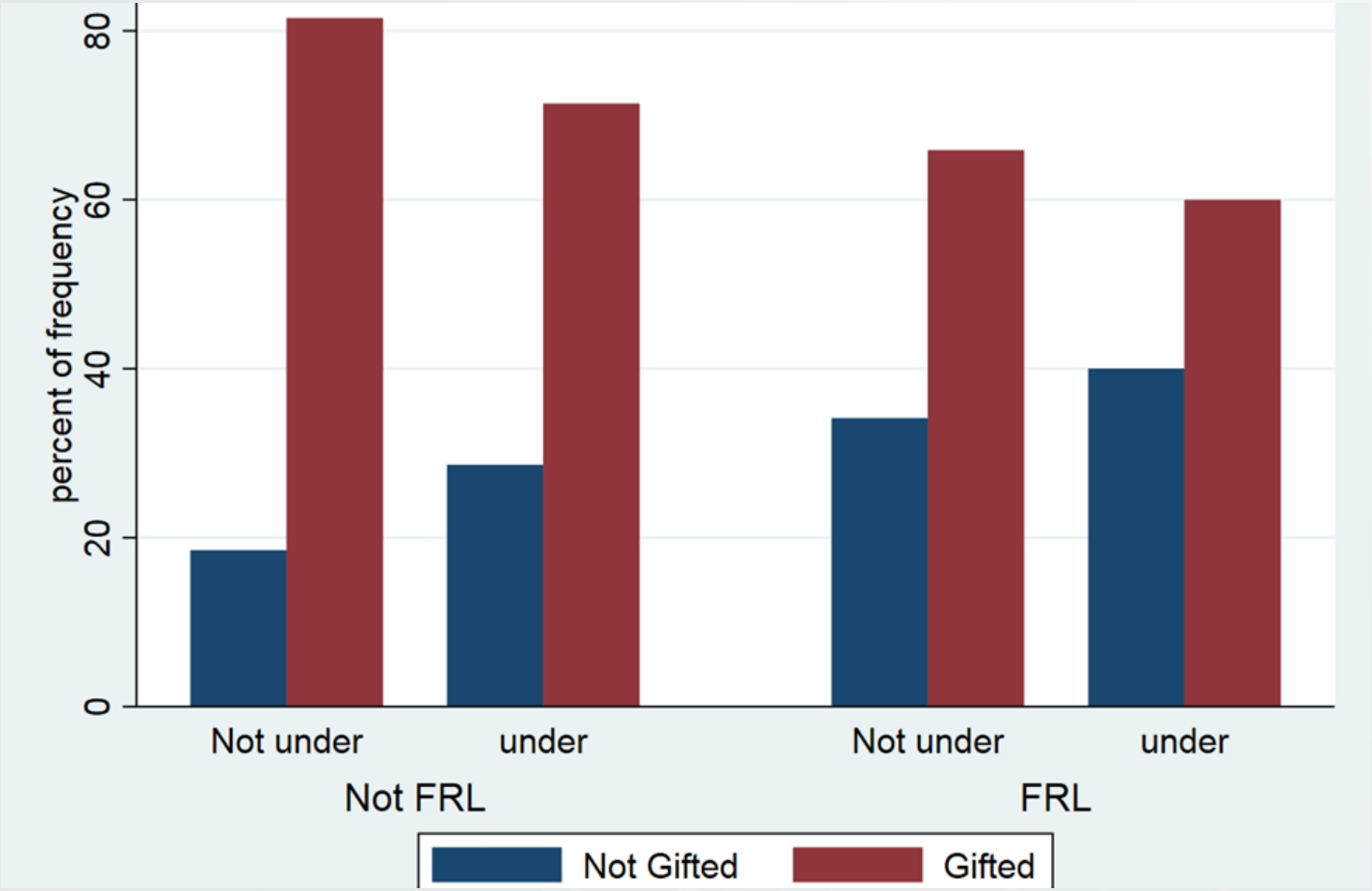
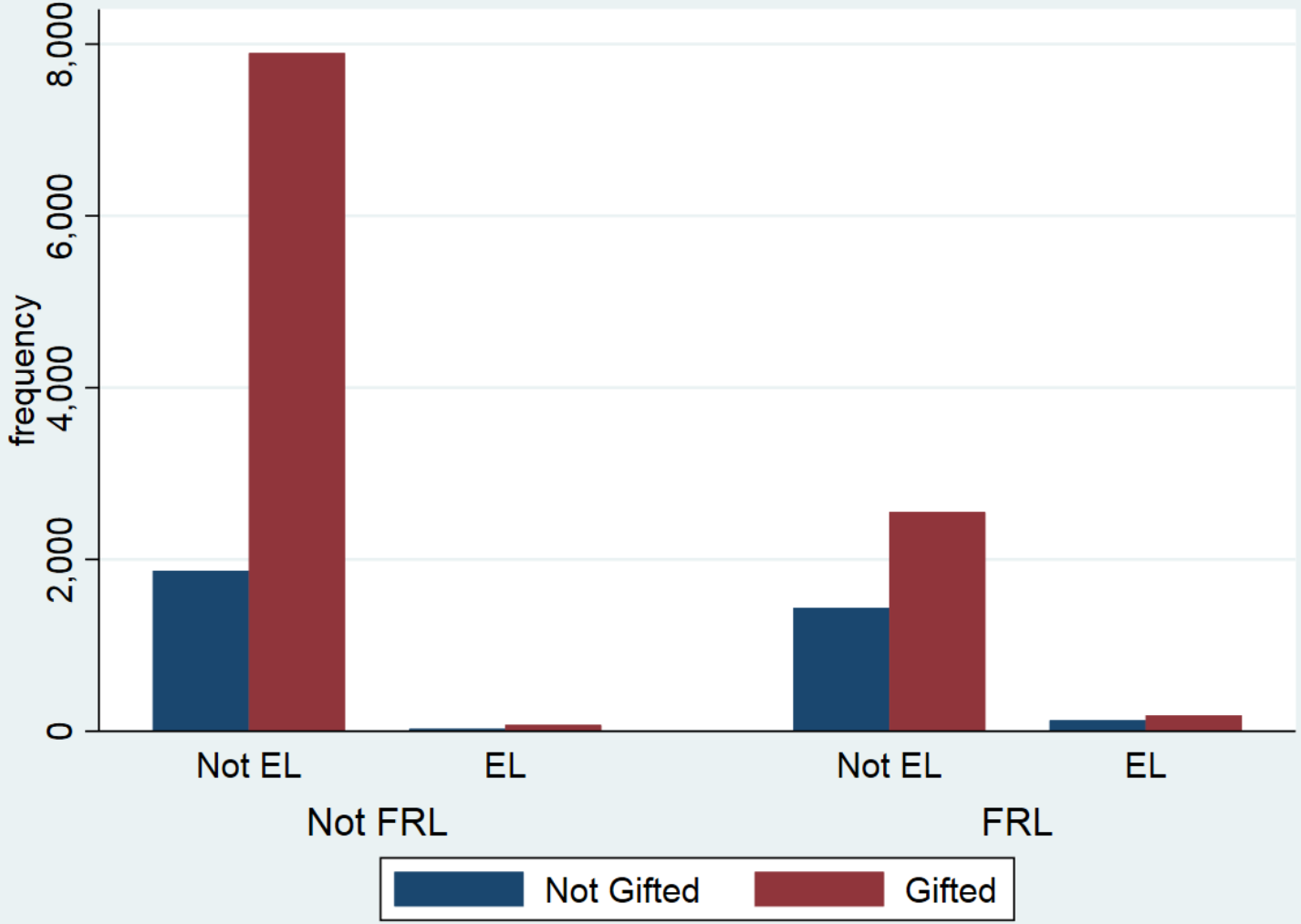


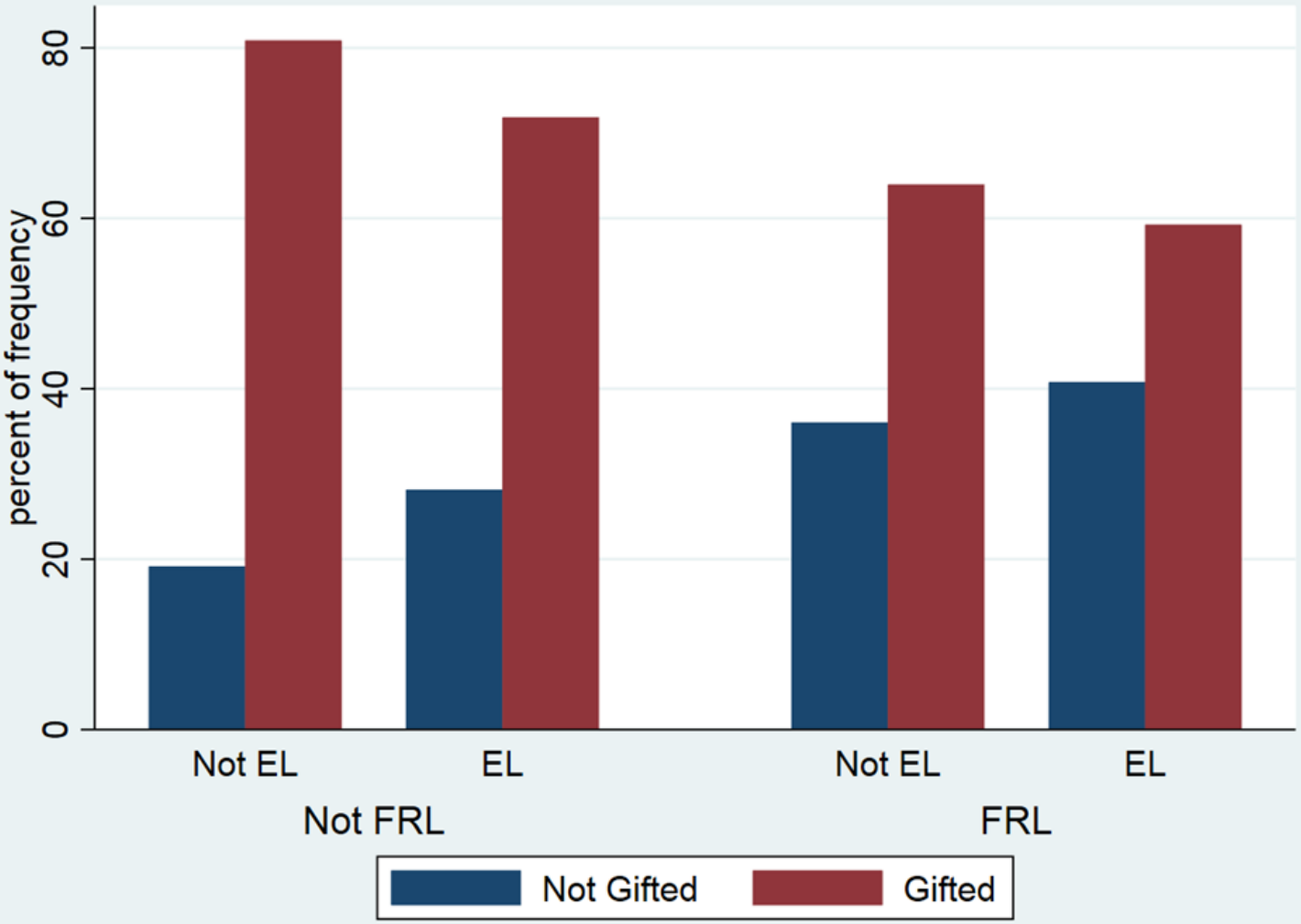
Gifted Frequencies by EL and Free Lunch

State 1: Frequency of students with combined math and reading scores at least 2 *SD* above the district mean who are identified as gifted, by EL and free lunch status

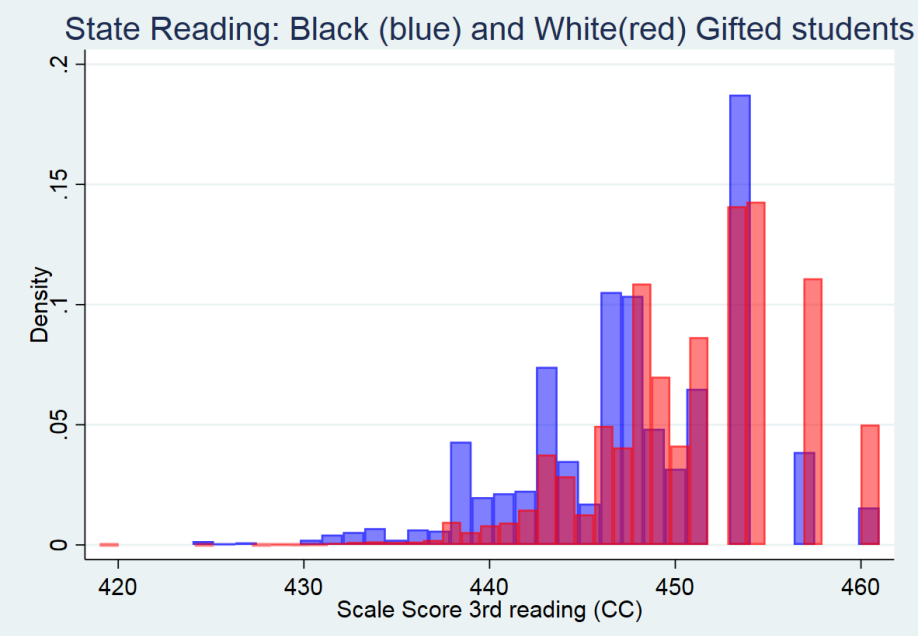


Gifted Frequencies by EL and Free Lunch

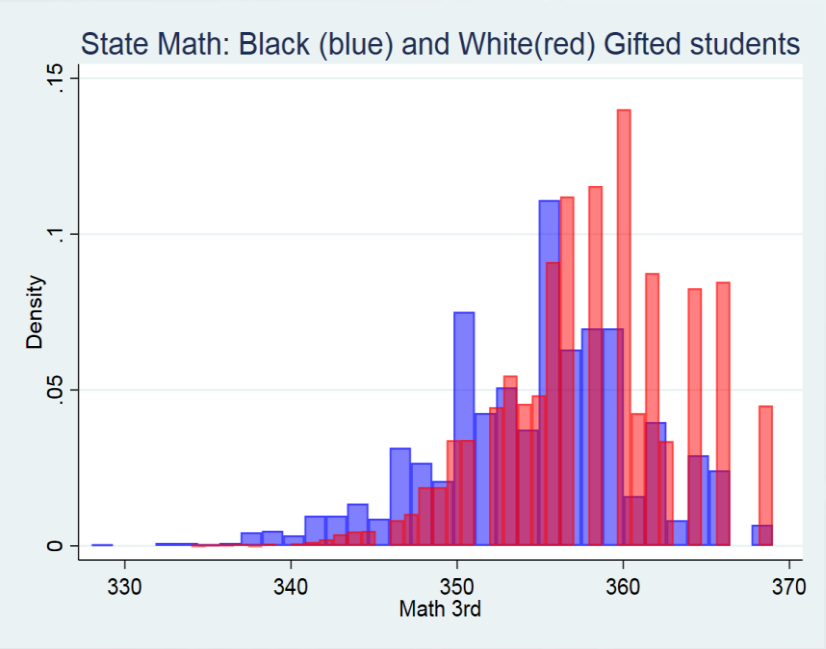
State 1: Frequency of students with combined math and reading scores at least 2 *SD* above the district mean who are identified as gifted, by EL and free lunch status



Distribution of Math and Reading Scores



State 1: Distributions of math and reading scores for Black (blue) and White (red) gifted students



So what does predict more equitable identification?

- Enormous variability in terms of the percentage of students identified as gifted between schools within the same school district!
- Also much greater between school within district variability in terms of demographic composition and math and reading achievement.
- These results suggest that there is a great deal of sorting (segregation… inequality…) within school districts.

Example- State 1 – What percentage of the variance is between schools within districts vs. between districts?

- Percentage of Gifted Students: 29% of the variance is between districts; 71% is between schools (within district)
- Percentage of Free and Reduced Price Lunch Students: 21% of the variance is between districts; 79% is between schools (within district)
- Percentage of Underserved Students: 48% of the variance is between districts; 72% is between schools (within district)
- Average Reading: 23% of the variance is between districts; 77% is between schools (within district)
- Average Math: 24% of the variance is between districts; 76% is between schools (within district)

So what does predict more equitable identification?

- The (school level) correlation between the percentage of gifted students and the percentage of free lunch students in State 1 is approximately -.65.
- This is almost as large as the (school level) correlation between the percentage of Black, Latino, and Native students and the percentage of free lunch students, which is approx. .70.

An interesting aside-- for the cohort that we examined-

- Of the 1306 public schools in the analytic sample for state 1:
- Approximately 25% of the students were Black.
- Approximately 17% of the students were gifted
- 41 schools had no gifted students (in the cohort)
- 135 schools (10%) had no Black students (in the cohort)
- 5 schools were in both lists (no gifted students/no Black students)
- In 652 of the 1306 schools (50%), there were no gifted Black students in the cohort that we examined at that school.

How does within district sorting relate to the identification of traditionally underserved students as gifted?

- Hypothesis: Districts with more segregation (inequitable distributions of students across schools within the district) are likely to be worse at identifying traditionally underrepresented students.
- These preliminary analyses use State 1.

Index of Dissimilarity as a measure of segregation

- Index of Dissimilarity: measures the evenness with which two mutually exclusive groups are distributed across the sub-units (i.e. schools) that compose a larger entity (i.e.- districts) (http://enceladus.isr.umich.edu/race/calculate.html)
- D= the proportion of a group that would need to move to create a uniform distribution.
- D is maximized if each school contains only one group.
- D is 0 if the proportion in each subgroup is the same as the proportion in the population

(Forest, 2005)

Multilevel Analysis Using District Dissimilarity to predict Identification as Gifted (State 1)

- Methods: 3 level multilevel logistic regression model
  - Clustered by 4th grade school
- Eliminated from the analysis 3 school districts that had NO gifted students in the cohort (so there is no sensible dissimilarity index for those districts)
- Also eliminated districts with only 1 elementary school (again- no sensible dissimilarity index for those districts)
- The analytic sample contained 92,107 students nested in 1282 schools nested within 98 districts

Variables included in the model:

- Student covariates: UNDER (Black/Hispanic/Native American=1), centered 3rd grade Reading and Math scores, FRL status, EL status
- School Covariates: School Average Math and Reading, school percentage of gifted students, school percentage of FRL students, school percentage of under students (all centered)
- District Covariates: District Average Math and Reading, District percentage of gifted students, District percentage of FRL students, District percentage of under students; Index of dissimilarity students (all centered)

Results:

- After controlling for everything else in the model (ACEE), the higher the district's index of dissimilarity, the less likely a student is to be identified as gifted (overall, regardless of group)- lower overall identification rate.
- Dissimilarity moderates the under slope--- ACEE, the differential in the identification rate of traditionally underrepresented students is even larger in districts with larger dissimilarity indices
- ACEE, the logit for a district at the mean on dissimilarity is -.20. For a district that is one standard deviation above the mean on dissimilarity, that logit is -.367, and for a district that is one standard deviation below the mean, the logit is -.03.

What is the practical magnitude of this effect?

- ACEE, in districts with average dissimilarity indices, The odds of non-under students being identified are 25% higher than the odds of under students (the odds of under students being identified as gifted are 80% as high as those of non-under students)
- ACEE, In districts where dissimilarity is 1 SD above the mean, the odds of non-under students being identified as gifted are 45% higher than those of under students (the odds of under students being identified as gifted are 69% as high as those of non-under students)
- ACEE, In districts where dissimilarity is 1 SD below the mean, the odds of under students being identified as gifted are 97% as high as those of non-under students- both groups have very similar odds of being identified.

Follow up District Level Regressions: Underserved GT students

- After controlling for District Math, Reading, %FRL, %under, %GT (and the interaction between %GT and %under), districts with higher dissimilarity indices had lower percentages of underrepresented GT students.
- 2.8% GT underserved students (at the overall mean)
- ACEE, as dissimilarity increases by 1 SD, the district's predicted percentage of GT underserved students falls by .62%.

Follow up District Level Regressions: Gifted Black students

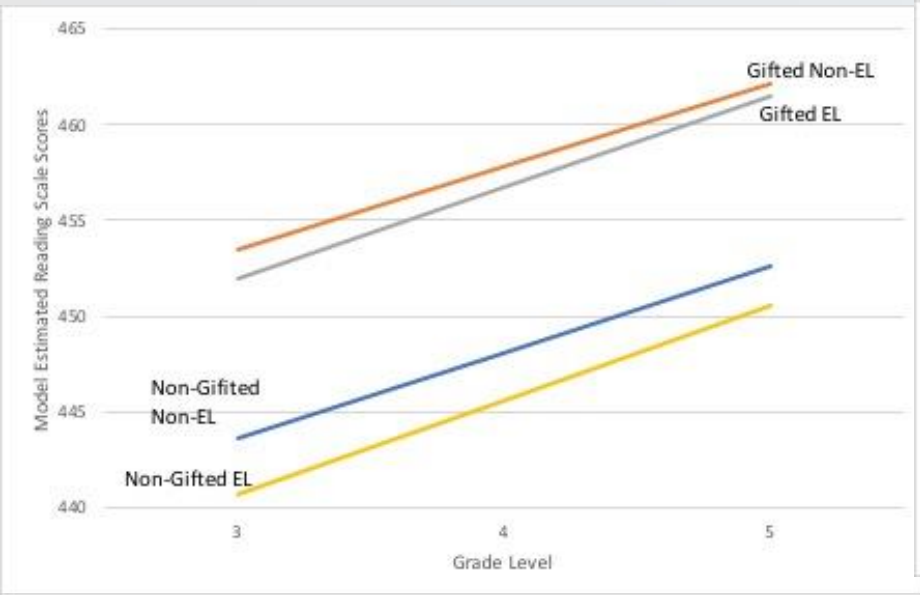
- After controlling for District Math, Reading, %FRL, %Black, %GT (and the interaction between %GT and %Black), districts with higher dissimilarity indices had lower percentages of underrepresented GT students.
- 1.43% GT Black students (at the overall mean)
- ACEE, as dissimilarity increases by 1 SD, the district's predicted percentage of GT Black students falls by .41%.

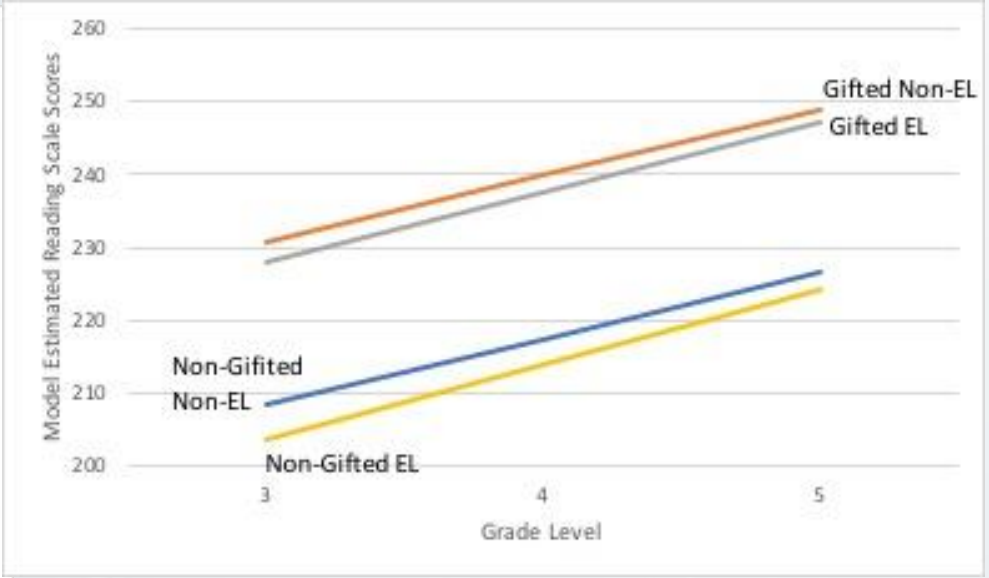
Next steps- Continuing to unpack, understand, and replicate these results…

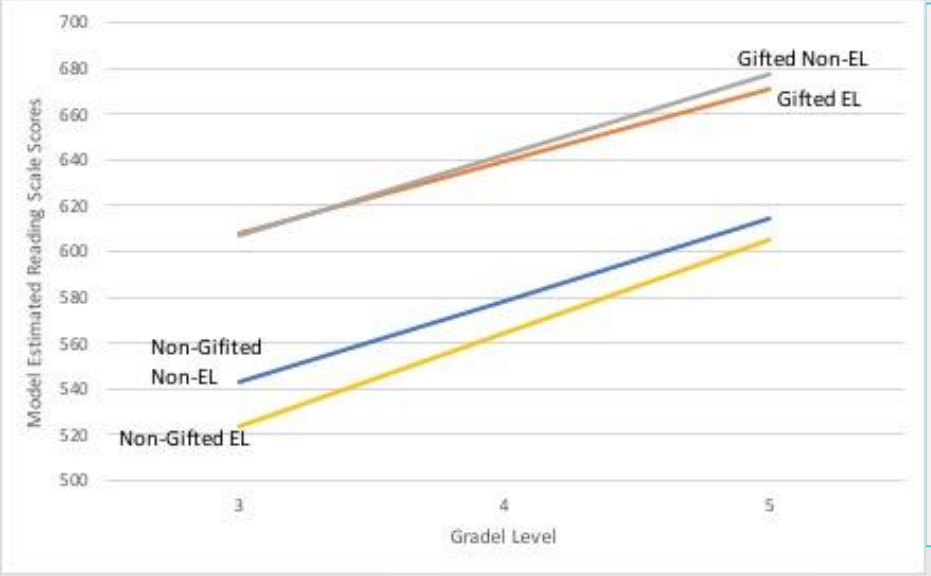
- Why is the district dissimilarity index negatively related to the overall identification rate ?
- Why is the district dissimilarity index negatively related the parity/equity in identification of traditionally underrepresented groups ?
- Chicken and Egg- which comes first? Segregation or inequity?
- Caveat: This study is descriptive, not causal.

Three-level Growth Models - Reading

Panel of plots depicting model-estimated reading scale score growth for prototypical (controlling for FRL and Under status and school/district variables) gifted, non-gifted, EL, and non-EL students in States 1-3





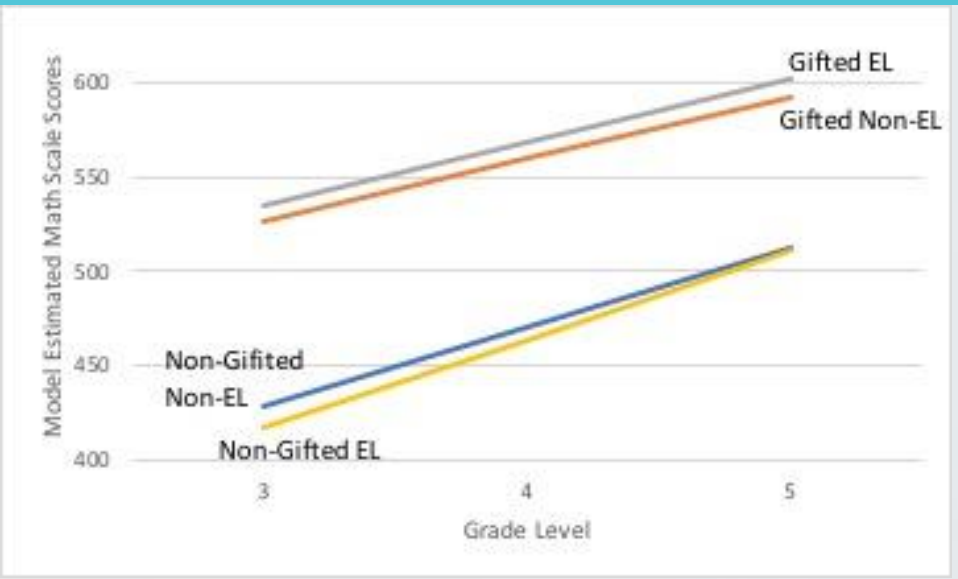


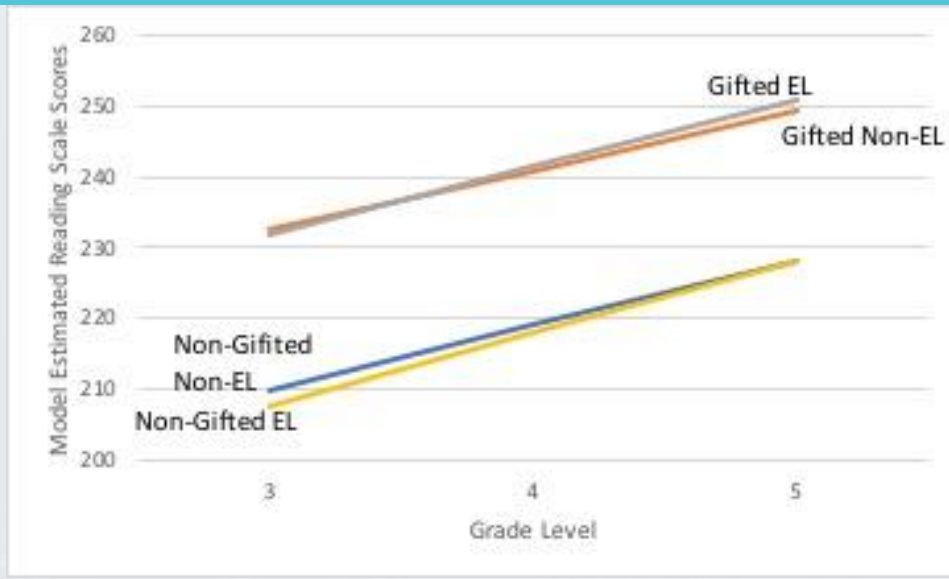
Highlights:

- Gifted students' reading scores in the 3rd grade were about 1 s.d. (~ 2 years) higher than their non-gifted peers
- Gifted students' rates of growth were slightly less than their non-gifted peers across all three states
- The impact of language status on identification depended on context

Three-level Growth Models - Math

Panel of plots depicting model-estimated reading scale score growth for prototypical (controlling for FRL and Under status and school/district variables) gifted, non-gifted, EL, and non-EL students in States 2 and 3 (L-R).





Highlights:

- Gifted students' math scores in the 3rd grade were about 1 s.d. (~ 2 years) higher than their non-gifted peers
- Gifted students' rates of growth were slightly less than their non-gifted peers across all three states
- EL students (those who were and were not identified as gifted) demonstrated slightly higher rates of growth

Exploratory Study on the Identification of English Learners in Gifted and Talented Programs

Funded by Office of English Language Acquisition, Language Enhancement, and Academic Achievement for Limited English Proficient Students (OELA) and the Institute of Education Sciences (IES), U.S. Department of Education, PR/Award # R305C140018

English Learners Growth & Inclusion

English Learners (ELs) are the fastest growing population of learners in the United States (National Center for Education Statistics, 2013). According to the United States Department of Education, Office of Civil Rights (2014)

- **2% of English learners (ELs)** are enrolled in gifted programs, as compared to **7% of non-ELs.**
- **Historically, there is an underrepresentation** of economically disadvantaged students, students of color, students from ethnic minorities, and ELs in programs for gifted and talented students
- **Identification procedures and policies** have been cited as the **crux of the problem.**

Data Collection

Quantitative Methods

- 3 years of school-reported state data
- 3 states with mandates for identification and programming for gifted students

Qualitative Methods

- 16 schools from 9 districts
- interviews and focus groups (225 informants)
- 84 transcripts
- 2,207 excerpts
- 6,278 total code applications
- 208 total axial codes
- four selective codes (i.e., core categories)

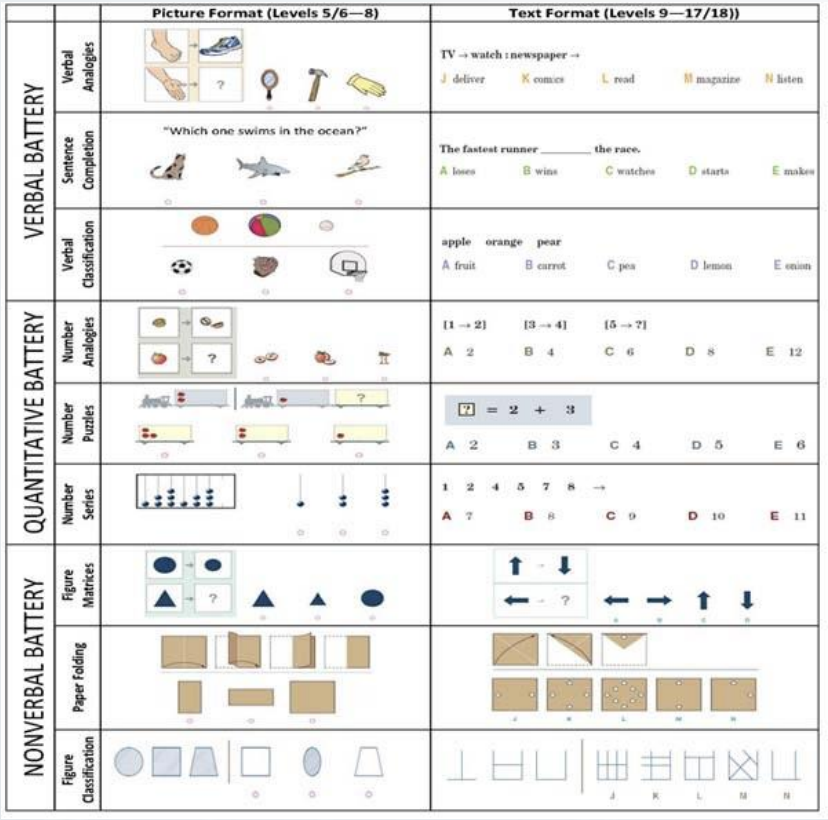
Research Questions

1. What procedures, practices, and instruments are used to assess and identify ELs in gifted and talented programs?
2. What are the roles, backgrounds, and qualification of school and district personnel involved in the assessment and identification of ELs for gifted and talented programs?
3. What challenges do districts and schools encounter in the assessment and identification of ELs for gifted and talented programs?

Research Question 1:
Identification Procedures, Practices, and Instruments of Gifted ELs by Grade Level

Most frequently used instruments

- **Ability tests**
  - Cognitive Abilities Test (*n*=9)
  - Naglieri Nonverbal Ability Test (*n*=8)
  - Bateria III Woodcock Muñoz
    - (individually administered, *n*=3)
- **Achievement tests**
  - Iowa Tests of Basic Skills (*n*=7)
  - Measures of Advanced Progress (*n*=4)
  - Aprenda (*n*=2)
  - Logramos (*n*=1)
- **Rating scales**
  - Teacher rating scale (*n*=8)
  - Parent rating scale (*n*=6)
  - Student rating scale (*n*=5)



Research Question 2:
Personnel Involved in the Identification Process

- Classroom teachers: referral/nomination
- Gifted specialists and/or coordinators of gifted programs
- District personnel
- EL teachers (some schools)
- Identification committees
  - Gifted education staff
  - Psychologists and/or counselors
  - Administrators
  - Classroom teachers

Research Question 3:
Challenges in Gifted EL Identification

- **Screening -** Language as a barrier
  - *"Sometimes teachers are quick to dismiss those kids because of the language barrier . . . they don't recognize it because they're so focused on . . . learning . . . the language that maybe they don't recognize the other areas."* (Gifted coordinator)
- **Nomination -** Locally-developed teacher, parent, and student scales used more often than published instruments
  - Raises questions about reliability, validity, and research-based evidence about characteristics of gifted students
- **Identification -** 6 of 9 districts used native language tests
  - *"I'd love to have legitimate ability tests or screening, whatever, in native languages and I need them in more than just English and Spanish."* (Gifted coordinator)
- **Placement -** Mismatch between testing in native language and services in English
  - *"Services are only offered in English . . . and so when kids are advanced or they have different needs when they're in Kindergarten and First Grade, there is nobody who can provide those services for them in the language that they're learning in."* (Parent)
  - *"I really just waved my pirate flag too sometimes and said, 'This kid is gifted and whether that score says it or not.' I know based on all these things that this child is."* (Gifted specialist)

Recommendations

from Qualitative Analysis of Case Studies

- Adopt Universal Screening Procedures
- Create Alternative Pathways to Identification
- Establish a Web of Communication
- View Professional Development as a Lever for Change

Conclusions

- New and growing awareness, knowledge, and skills for addressing historical and persistent patterns of underrepresentation of ELs in gifted education
- No uniform solutions, but rather developing capacities for supporting equitable representation in gifted education
- Committed to recognizing and serving the needs of students, across differences that include language-acquisition, immigration, and socioeconomic status
- Importance of culturally and sustaining gifted education in the U.S.

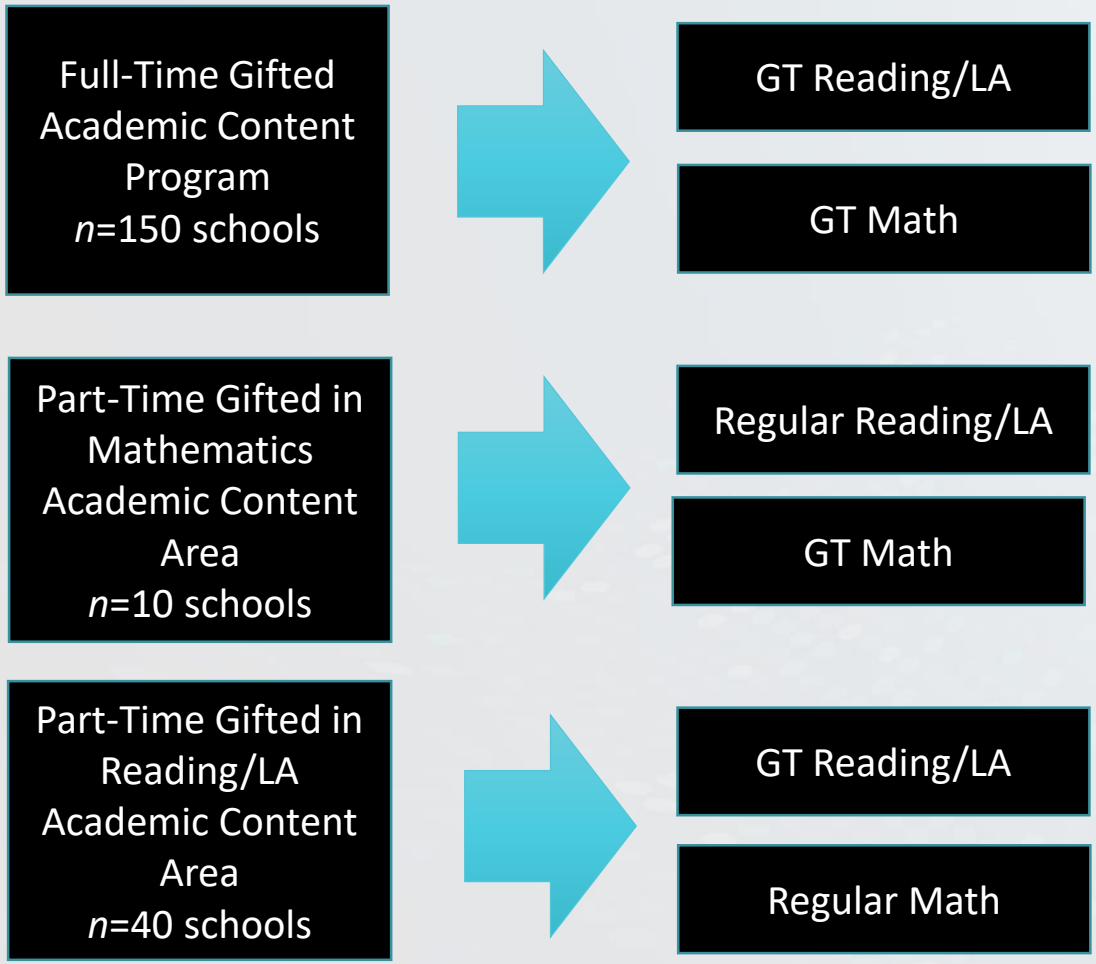
Underserved Gifted Students' Response to Gifted Programming in Core Content Areas

Funded by the Institute of Education Sciences (IES), U.S. Department of Education, PR/Award # R305C140018

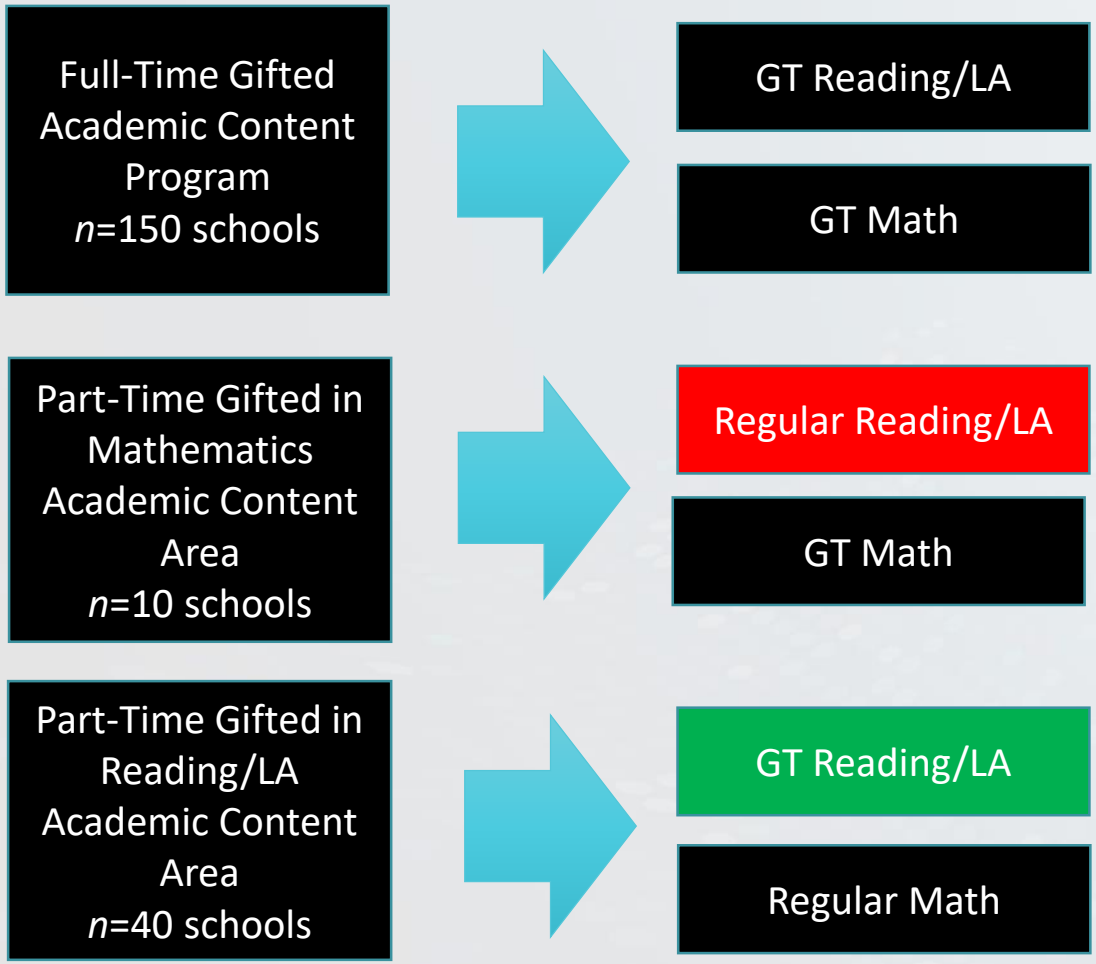
Take home message from Phase 1…

- Great variability exists across states known for their commitment to gifted education.
- Gifted services are not equally distributed across schools within districts.
- Underserved populations are not being identified at the same rates as non-underserved students even after controlling for student achievement
- Practices such as universal screening and nonverbal tests do not appear to be panaceas.
- Talent scouts are effective in finding gifted English learners; don't wait for them to surface.
- Gifted students start ahead in reading and mathematics achievement but don't grow any faster than other groups.
- Gifted programs seldom focus on core curriculum such as math and reading.

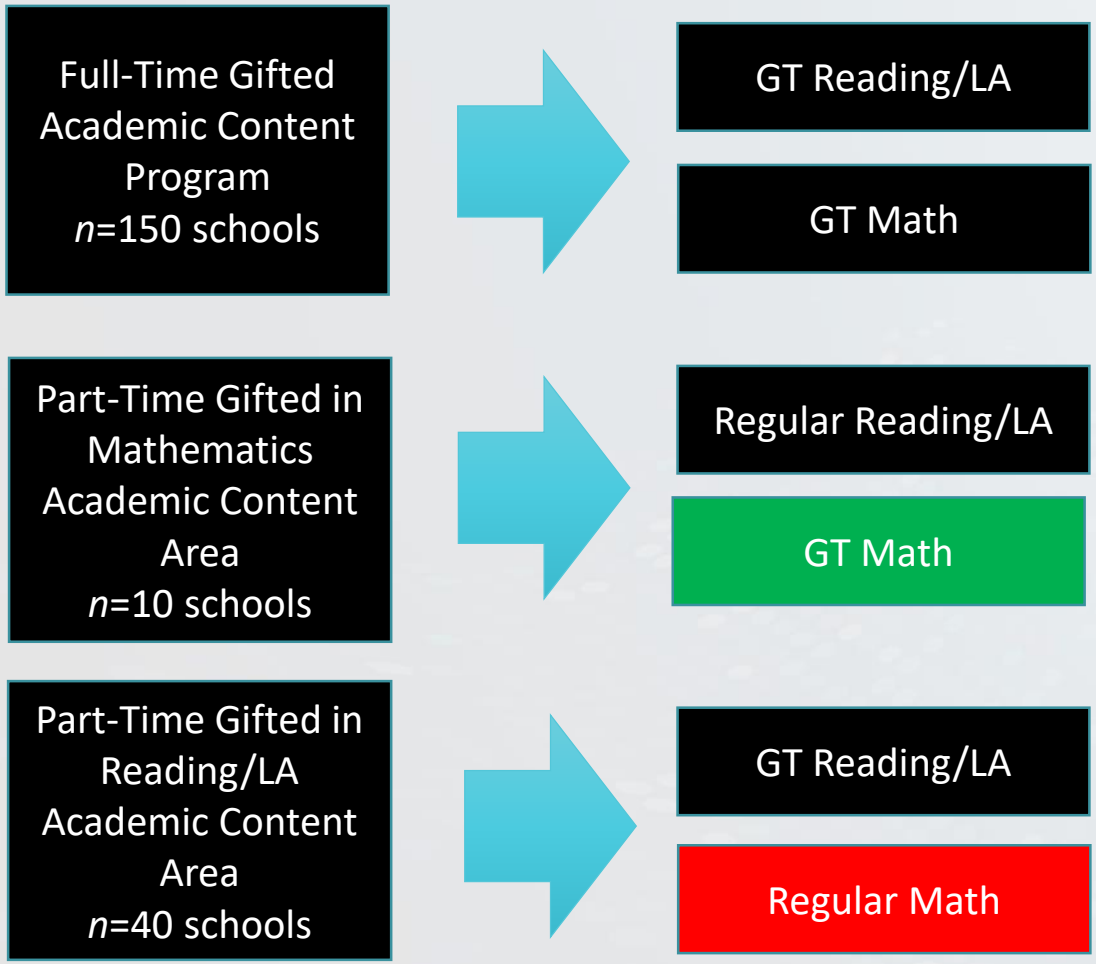
Three School Conditions Being Studied



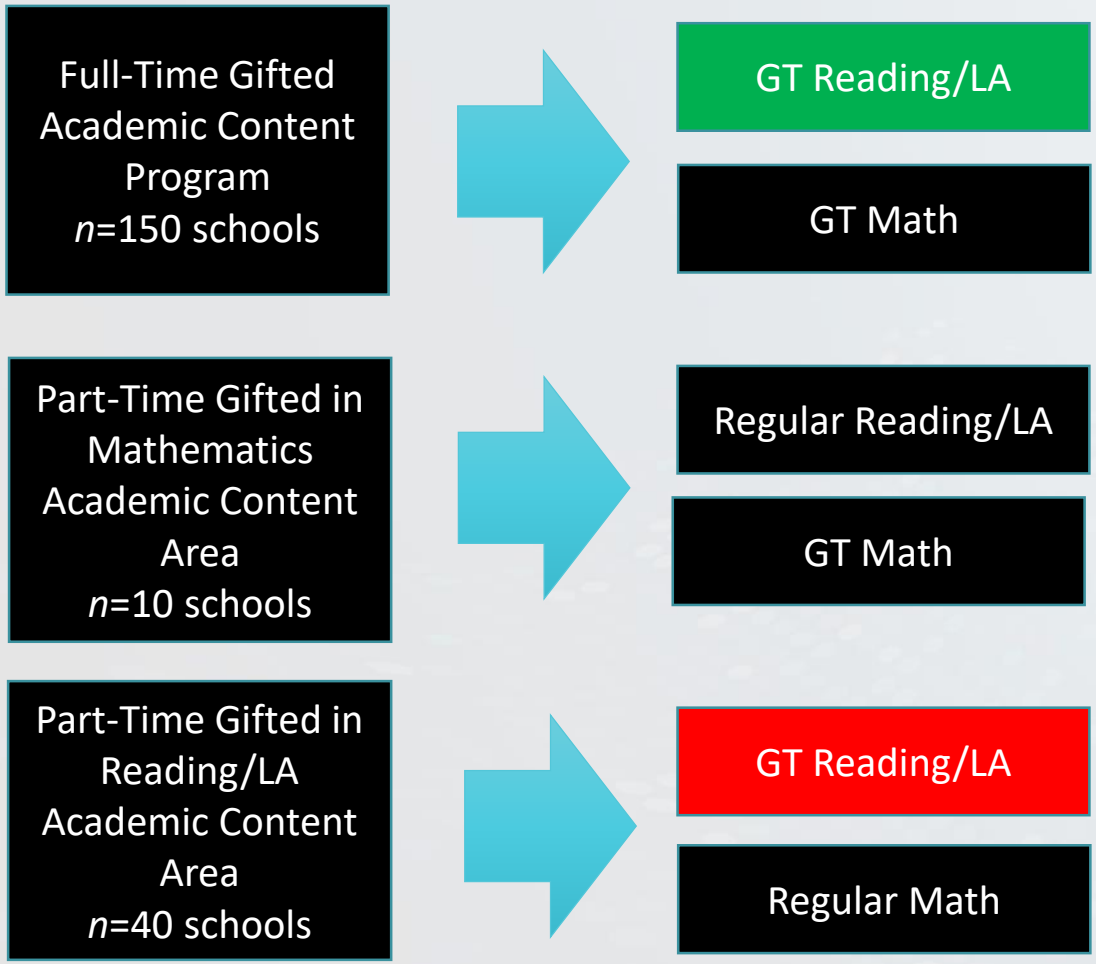
1a. What is the impact on reading/language arts achievement of gifted students receiving reading/language arts instruction in a part-time gifted class when compared with gifted students in part-time gifted settings who receive reading/language arts instruction in a regular education setting?



1b. What is the impact on mathematics achievement of gifted students receiving mathematics instruction in a part-time gifted class when compared with gifted students in part-time gifted settings who receive mathematics instruction in a regular education setting?



2a. What is the impact on reading/language arts achievement of gifted students receiving reading/language arts instruction in a full-time gifted setting when compared with gifted students who receive reading/language arts instruction in a part-time gifted setting?



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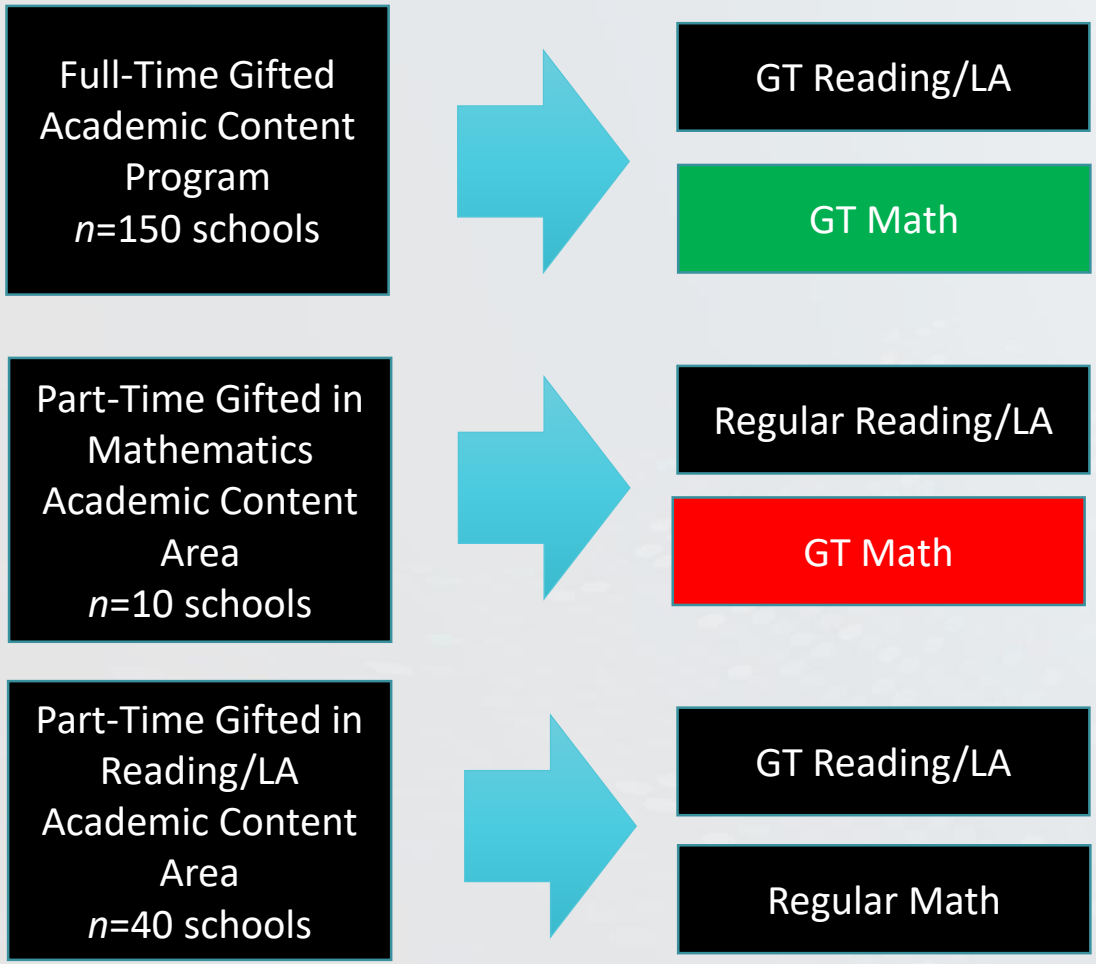
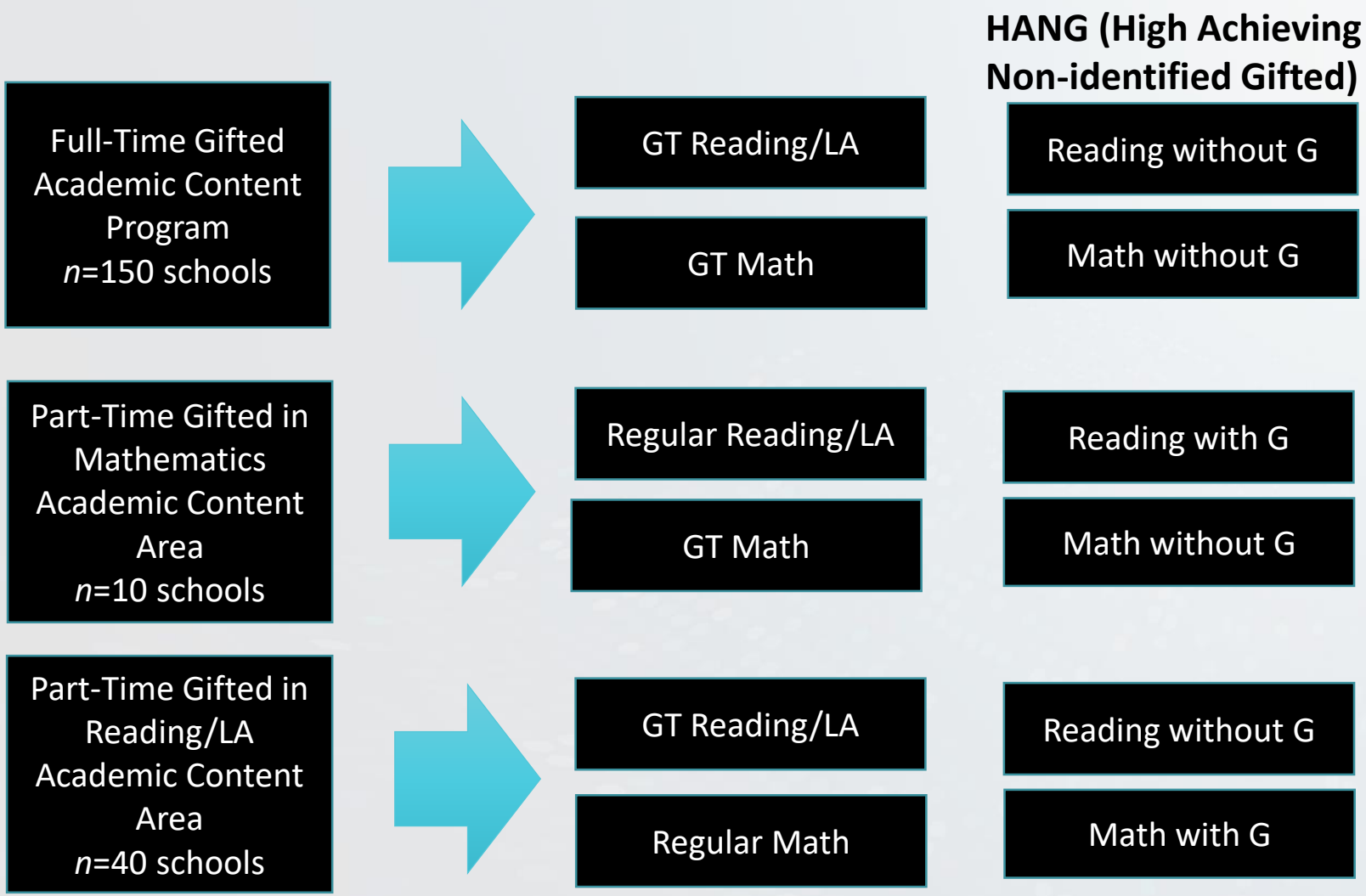
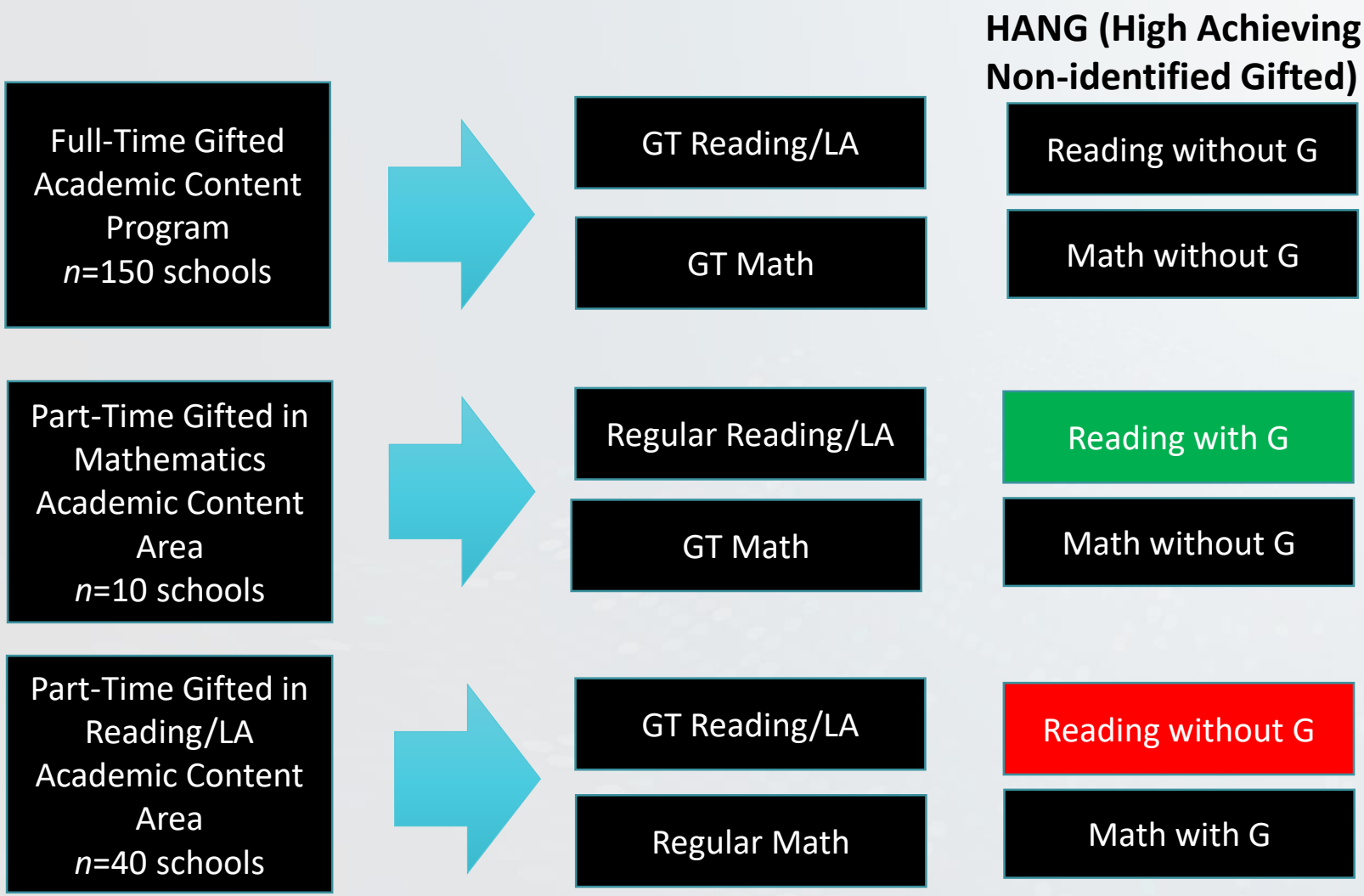


Secondary Research Questions



3a. What is the impact on reading/language arts achievement of high achieving non-gifted students receiving reading/language arts instruction in a regular education setting where gifted students are present only for mathematics instruction, compared with students in regular education settings where gifted students are present only for reading/language arts instruction?



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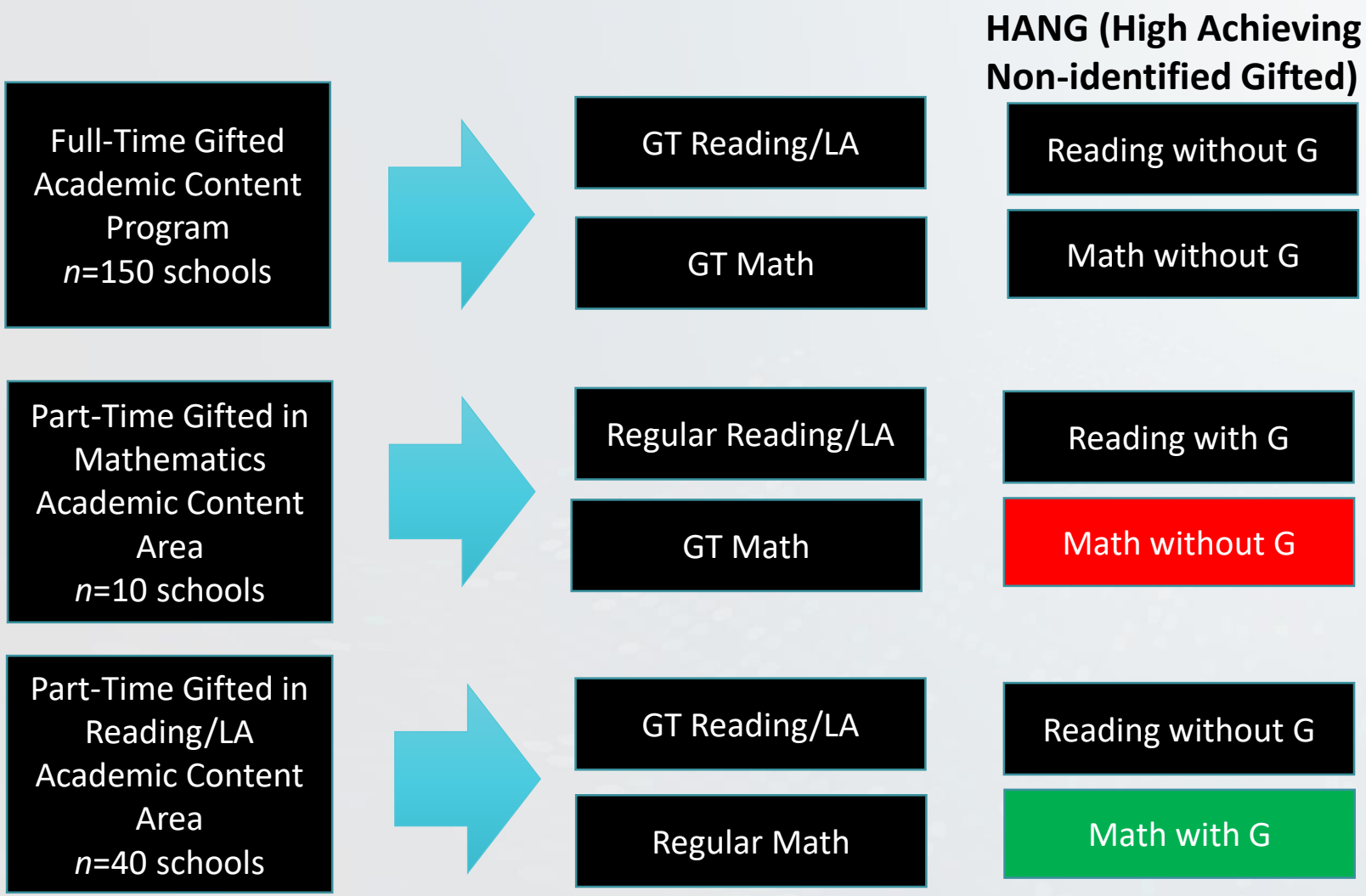
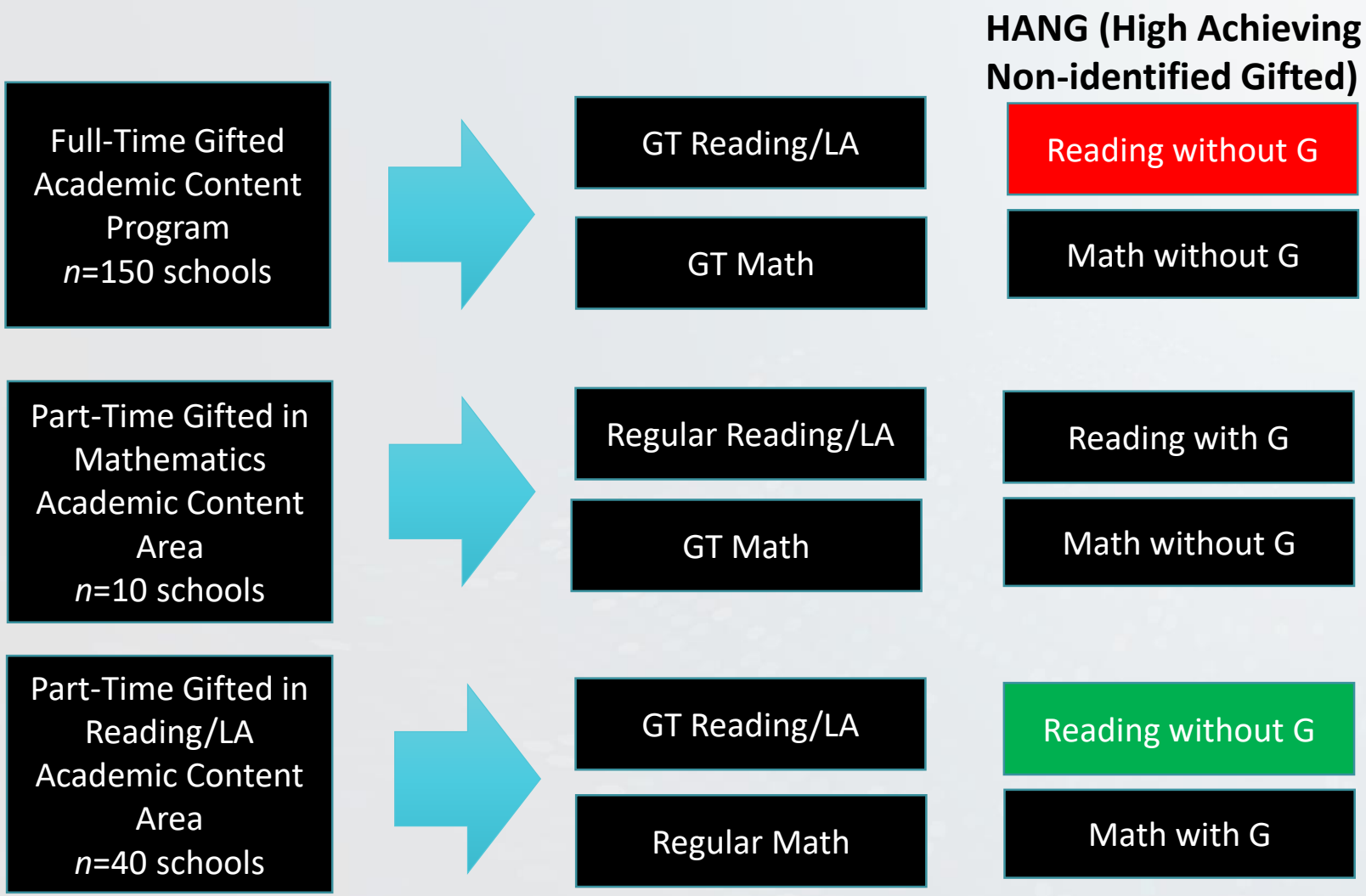


4a. What is the impact on reading/language arts achievement of high achieving non-gifted students receiving reading/language arts instruction in a regular education setting where gifted students are present only for mathematics instruction, compared with students in regular education settings where gifted students are never present?



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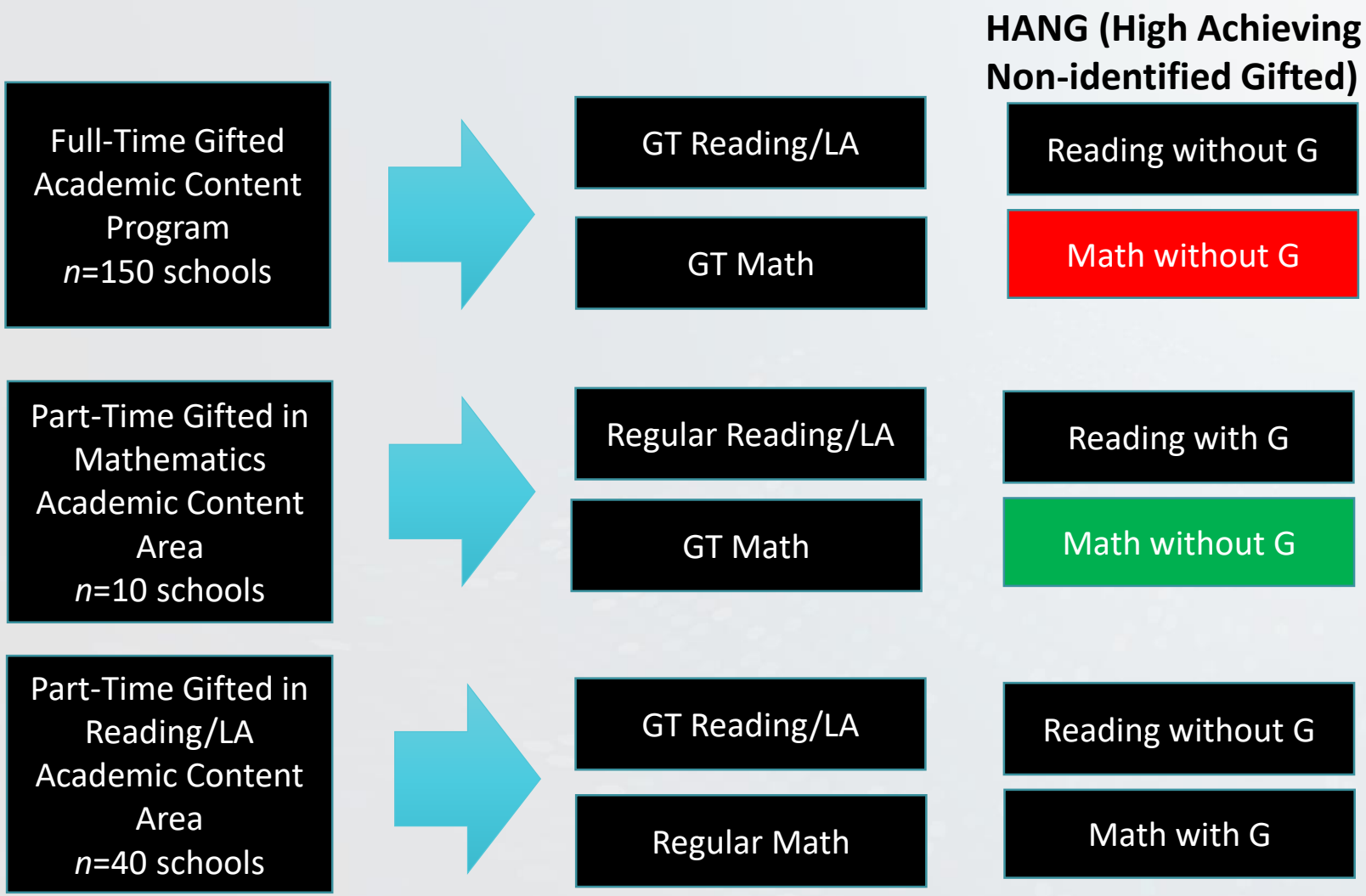
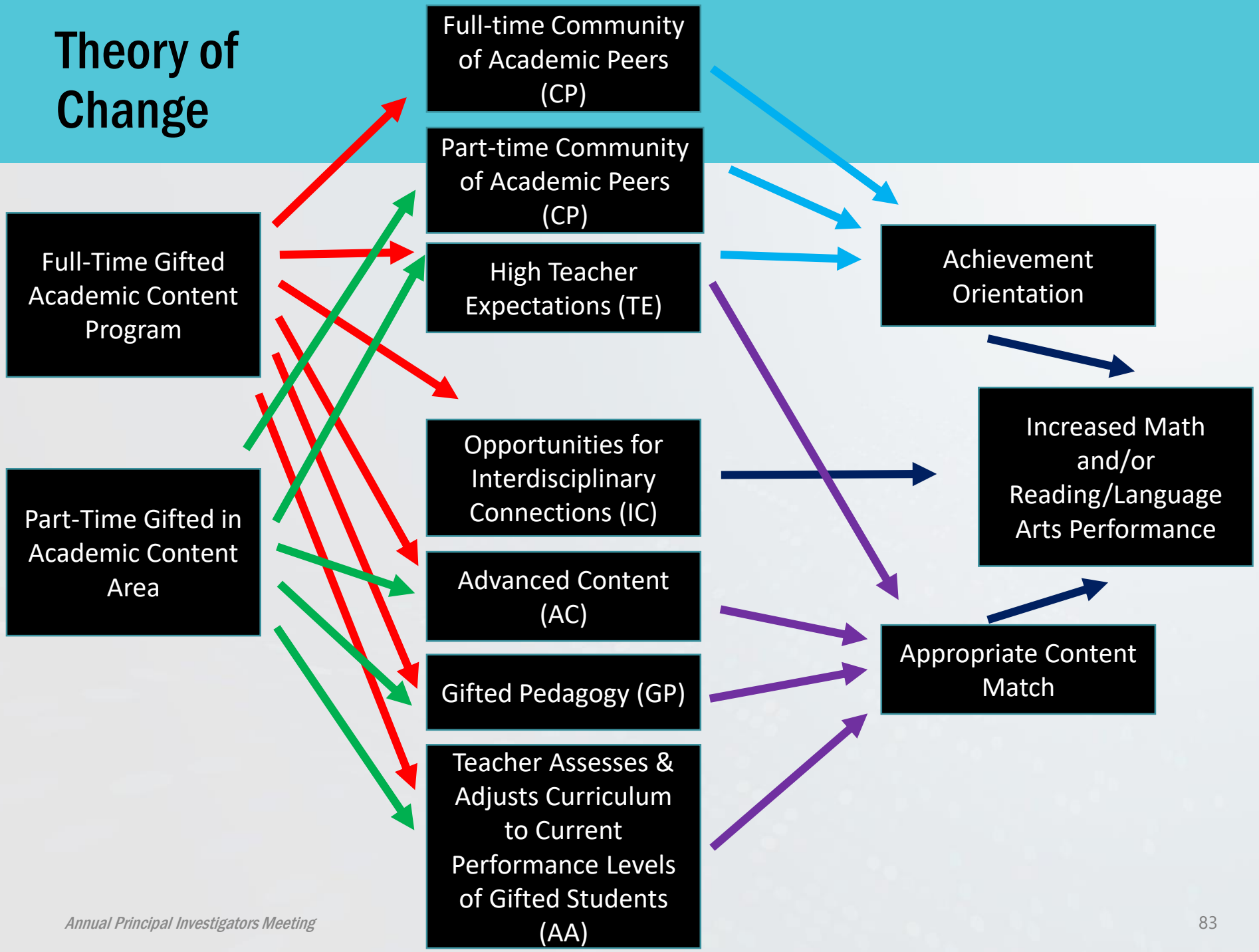


Qualitative Research Questions

1. *What do the three different types of classrooms (Fulltime (F), Part-time reading/language arts (PRLA), and Part-time math (PM)* ***look like in practice*** *(organization, classroom climate and expectations, etc.)?*
2. *How are the* ***curriculum and instruction characterized*** *in each of the conditions studied?*
3. *What are the* ***similarities and differences in content coverage and instructional delivery*** *of* ***reading/language arts*** *for gifted students in full-time gifted classes, part-time gifted classes, and regular classes for these content areas?*
4. *What are the similarities and differences in content coverage and instructional delivery of* ***math*** *for gifted students in in full-time gifted classes, part-time gifted classes, and regular classes for these content areas?*
5. *How are gifted education programs implemented at the school level? What* ***factors influence gifted education programming*** *at the school level?*
6. *How are* ***decisions*** *made at the school level* ***about gifted education*** *programming? What factors influence this decision?*

Theory of Change



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