Center for Assessment

ISBE TAC
Accountability Monitoring Analyses

André A. Rupp

In-person TAC Meeting, January 22-23, 2025
ISBE Offices Chicago, IL

Deck version created January 15, 2025; Minor edits on March 10, 2025

Overview

- Analyses were with data from spring 2024 administration; output is based on data sets shared before 12/31/24

- Analytic foci include:
  - Index score distribution patterns (by indicator missingness pattern, subgroup, and designation)
  - Indicator score distribution patterns (by subgroup and designation [raw vs. scored])
  - Indicator weights analyses (policy vs. estimated weights by indicator missingness pattern)
  - Correlations among indicators (by indicator missingness pattern)

- Purpose/ Uses:
  - Understand performance differences amongst schools with different designations
  - Understand performance differences amongst subgroups
  - Understand the impact of scoring on indicator and index distributions
  - Understand the informational value of different indicators

TAC Questions

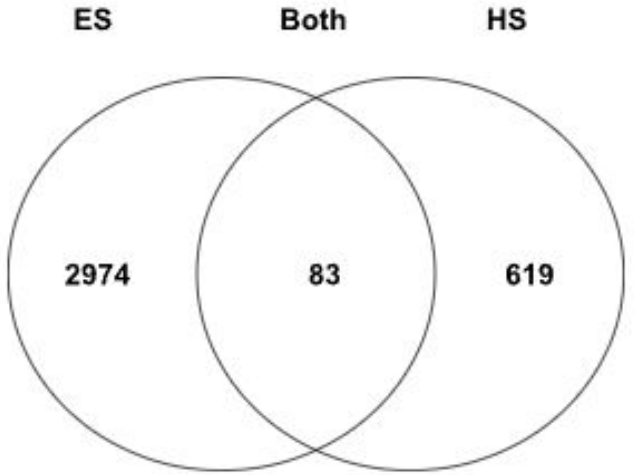
- What insights or questions do the analyses raise regarding the technical properties of the school accountability system and/or school support initiatives?
- What are the implications of these analyses on future design decisions?
- What additional steps should ISBE prioritize to further monitor, document, and evaluate the accountability system?

Data Structure

Data Structure

Schools that are only ES:	2974	
Schools that are only HS:	619	
Schools with both ES and HS:	83	
Total number of School Buildings:	3676	[2974 + 619 + 83]
Total number of ES:	3057	[2974 + 83]
Total number of HS:	702	[619 + 83]
Total number of all "Schools"	3759	[3057 + 702 = 2974 + 619 + 83 +83]

Two of these schools (one with dual designation really) will not get counted in the following analyses as they do not have any indicator scores.



From three merged data files:

- **indicator score file**
- **public designations file**
- **public master file, general tab**

Designations

Center for Assessment

Annual Summative Designations

Schools receive an annual summative designation on the Illinois Report Card. The designation is based on the school's overall data, and the data for each student group, for all of the accountability indicators.

Exemplary	• Overall performance in the top 10 percent of all schools • Must have no underperforming student groups at or below the "all students" group of the lowest-performing 5 percent of schools • High schools must have a graduation rate higher than 67 percent
Commendable	• Overall performance not in the top 10 percent of all schools • Must have no underperforming student groups at or below the "all students" group of the lowest-performing 5 percent of schools • High schools must have a graduation rate higher than 67 percent

https://www.isbe.net/Documents/IRC-2024-Improvement-Accountability.pdf

Targeted Support	• One or more student groups performing at or below the "all students" group of the lowest-performing 5 percent of schools; groups must have at least 20 students in at least five of eight indicators, one of which must be non-academic **A Targeted Support designation initiates targeted school improvement status and the school begins a four-year cycle of school improvement.**
Comprehensive Support	• Overall performance in the bottom 5 percent of Title I-eligible schools statewide • All high schools with a graduation rate of 67 percent or below • Schools that have completed a full Targeted Support school improvement cycle, where the performance of one or more of the originally Targeted student groups remains at or below the level of the "all students" group in the lowest-performing 5 percent of Title I-eligible schools at the end of the four-year improvement cycle **A Comprehensive Support designation initiates comprehensive school improvement status and the school begins a four-year cycle of school improvement.**
Intensive Support	• A school that has completed a full Comprehensive Support school improvement cycle, but whose performance remains in the lowest-performing 5 percent of Title I-eligible schools statewide or is a high school with a graduation rate of 67 percent or below at the end of the four-year improvement cycle **An Intensive Support designation initiates intensive school improvement status and the school begins a four-year cycle of school improvement.**

https://www.isbe.net/Documents/IRC-2024-Improvement-Accountability.pdf

Designations

Count

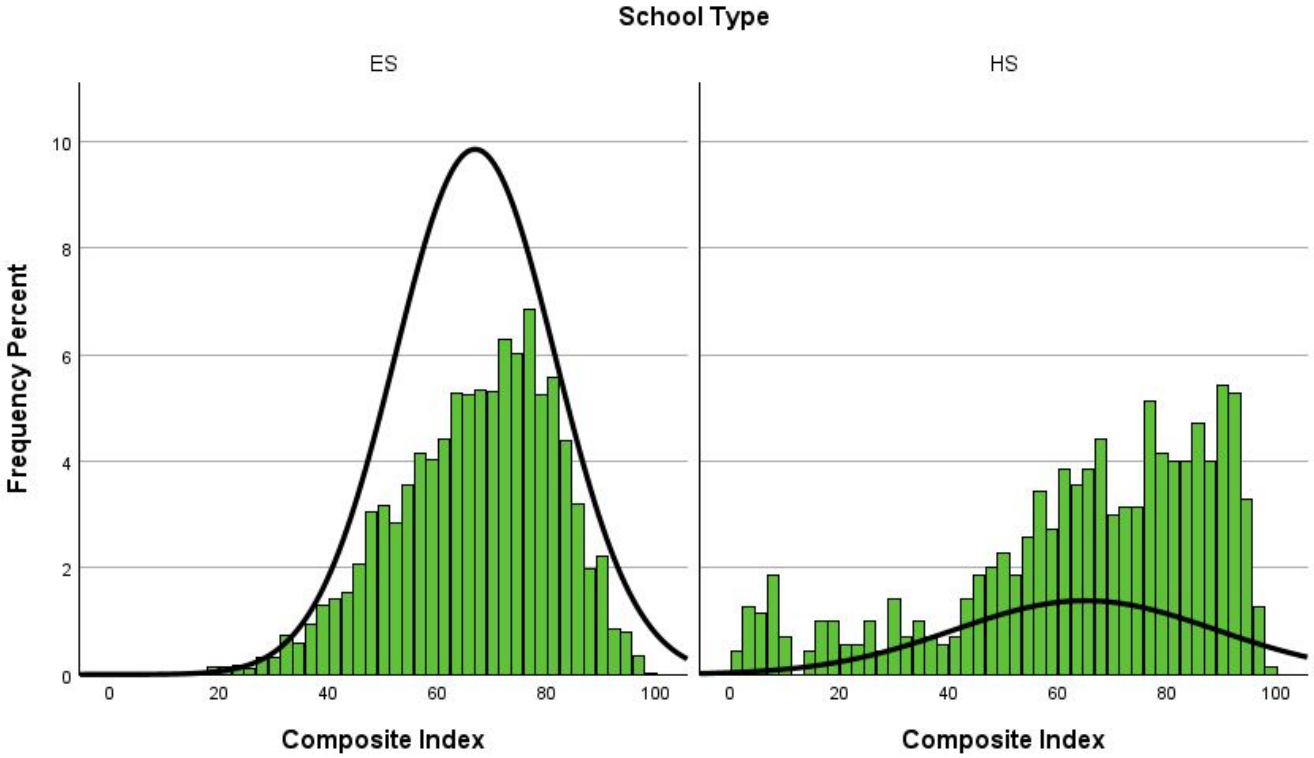
		Designation					
		Exemplary	Commendable	Target	Comprehensive	Intensive	Total
School Type	ES	306	2214	362	134	40	3056
	HS	70	577	15	9	30	701
Total		376	2791	377	143	70	3757

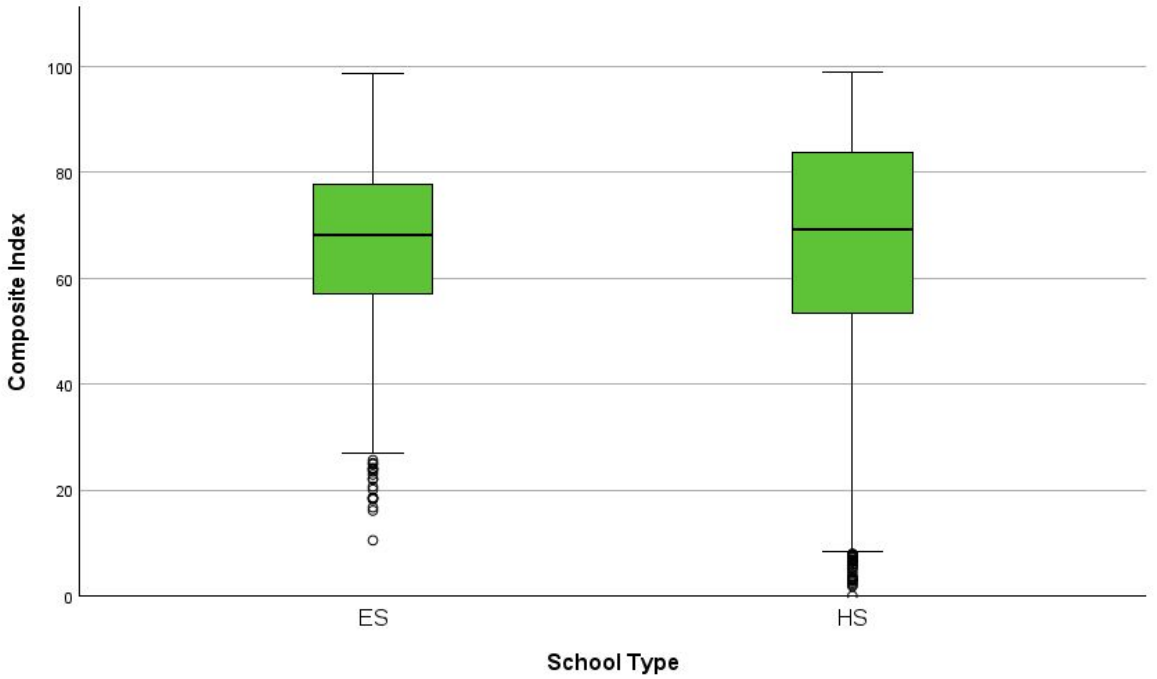
			Designation					
			Exemplary	Commendable	Target	Comprehensive	Intensive	Total
School Type	ES	Count	306	2214	362	134	40	3056
		% within School Type	10.0%	72.4%	11.8%	4.4%	1.3%	100.0%
	HS	Count	70	577	15	9	30	701
		% within School Type	10.0%	82.3%	2.1%	1.3%	4.3%	100.0%
Total		Count	376	2791	377	143	70	3757
		% within School Type	10.0%	74.3%	10.0%	3.8%	1.9%	100.0%

All following analyses are based on these 3,757 schools.

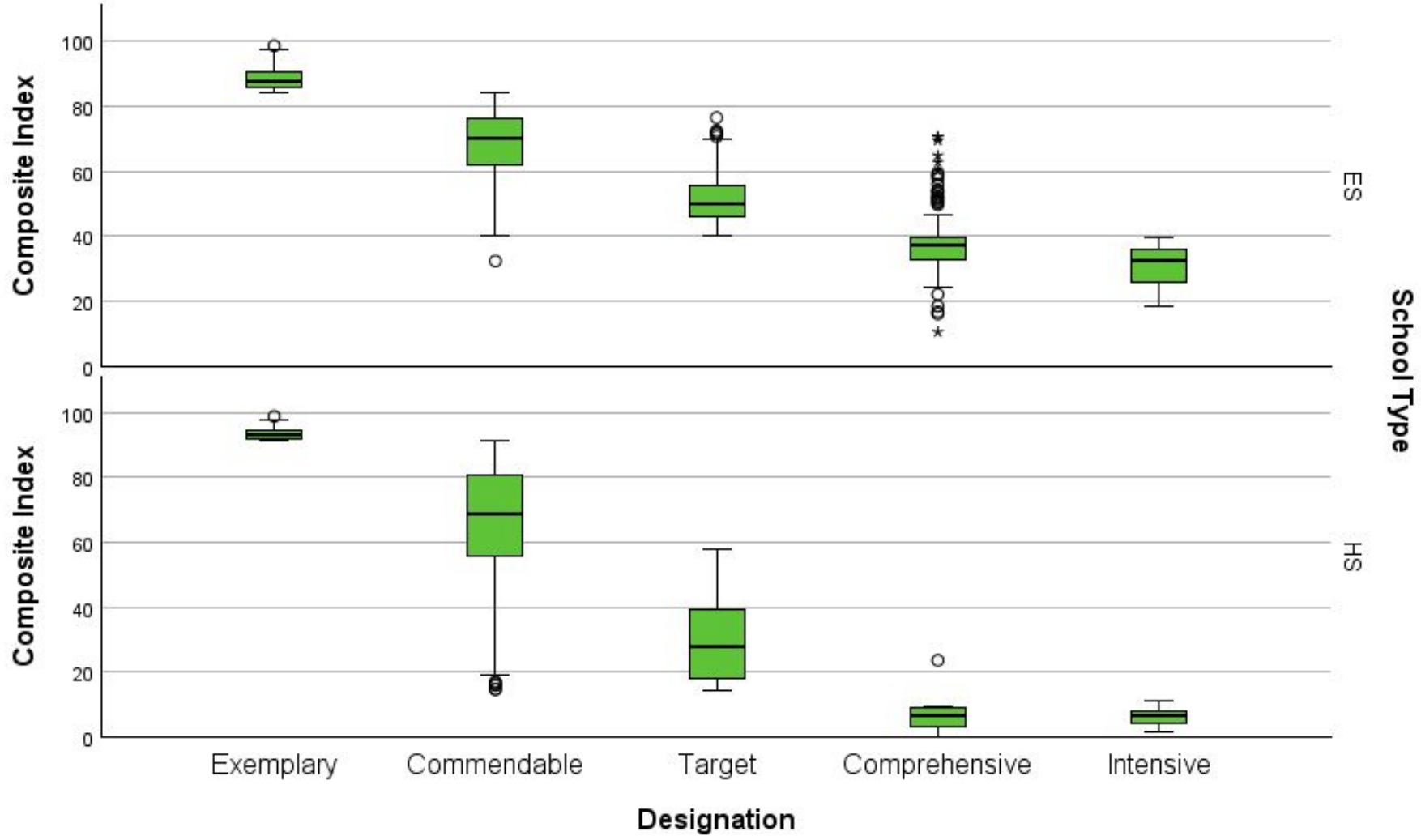
Composite Index Distributions

Global, by Designation, by Subgroup



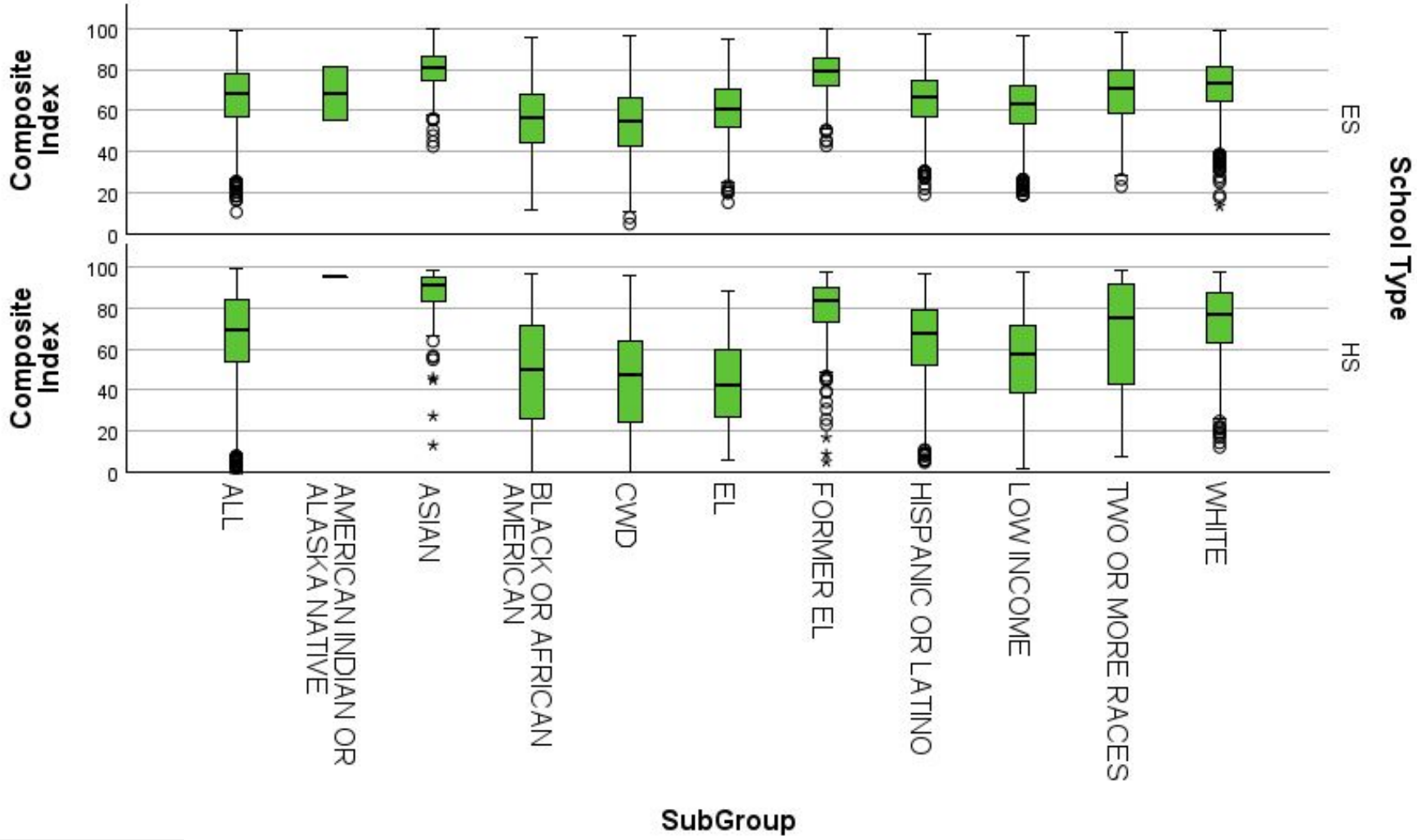


Frequency percent computed within school type



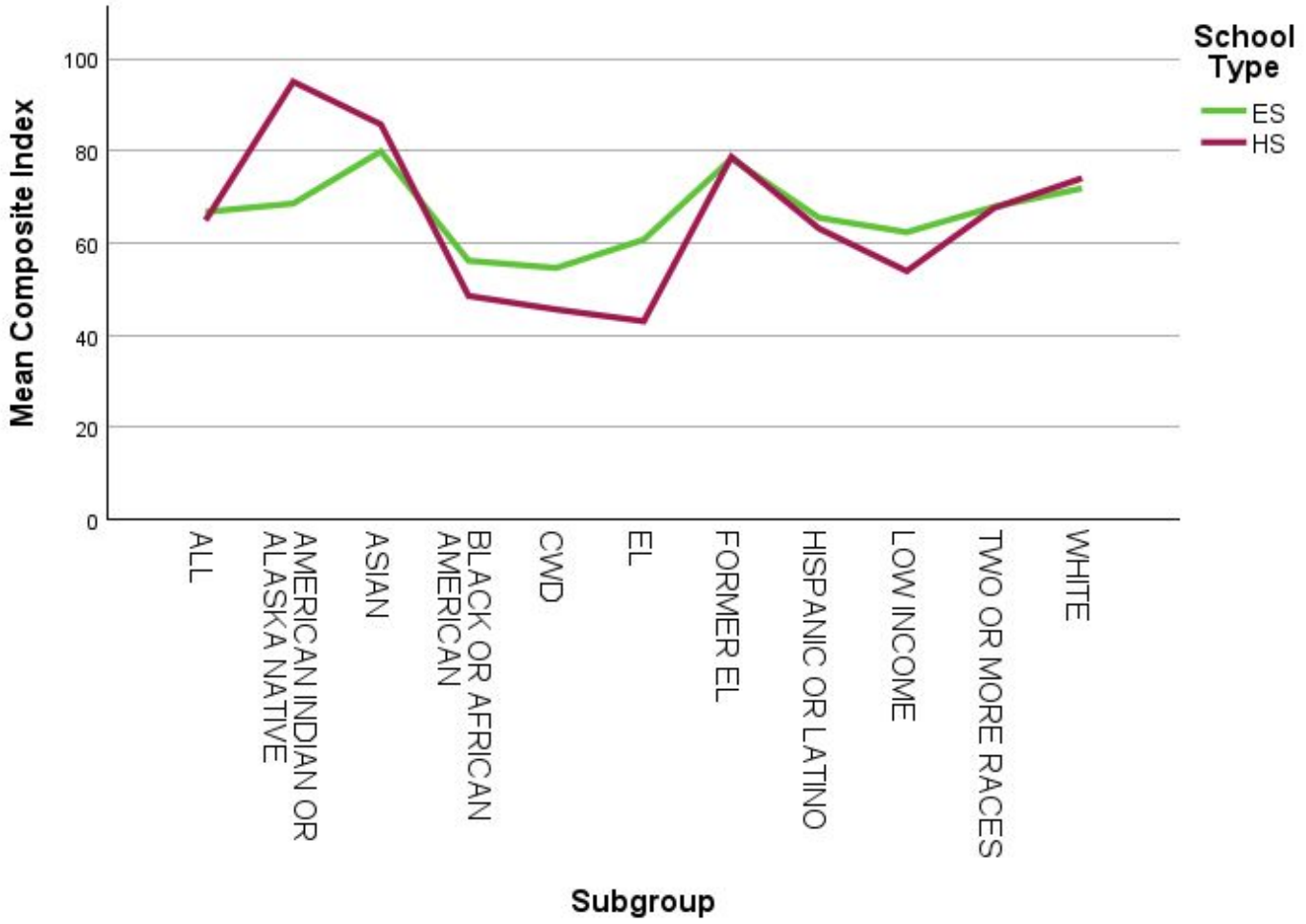
Count

		Designation					
		Exemplary	Commendable	Target	Comprehensive	Intensive	Total
School Type	ES	306	2214	362	134	40	3056
	HS	70	577	15	9	30	701
Total		376	2791	377	143	70	3757



 # schools for which a subgroup index is computed

		Subgroup										
		ALL	AMERICAN INDIAN OR ALASKA NATIVE	ASIAN	BLACK OR AFRICAN AMERICAN	CWD	EL	FORMER EL	HISPANIC OR LATINO	LOW INCOME	TWO OR MORE RACES	WHITE
School Type	ES	3056	2	425	1024	2102	1216	751	1529	2671	356	2276
	HS	701	1	94	252	370	207	224	290	561	102	532
Total		3757	3	519	1276	2472	1423	975	1819	3232	458	2808



 # schools for which a subgroup index is computed

		Subgroup										
		ALL	AMERICAN INDIAN OR ALASKA NATIVE	ASIAN	BLACK OR AFRICAN AMERICAN	CWD	EL	FORMER EL	HISPANIC OR LATINO	LOW INCOME	TWO OR MORE RACES	WHITE
School Type	ES	3056	2	425	1024	2102	1216	751	1529	2671	356	2276
	HS	701	1	94	252	370	207	224	290	561	102	532
Total		3757	3	519	1276	2472	1423	975	1819	3232	458	2808

Findings

Designations

- For HS, there are more Commendable but also more Intensive schools than for ES
- For ES, there are more Target and Comprehensive schools than for HS

Distributions

- Index scores are more spread out and more negatively skewed in HS than in ES
- Index scores are least variable overall within the Intensive, Comprehensive, and Exemplary groups in HS
- Index score distributions are overall very similar for the Comprehensive and Intensive groups
- Index score distributions follow the expected trends in terms of separation but also show some overlap
- The lowest 25% of Commendable schools have index values of the same magnitude as Target schools in HS and even more in ES

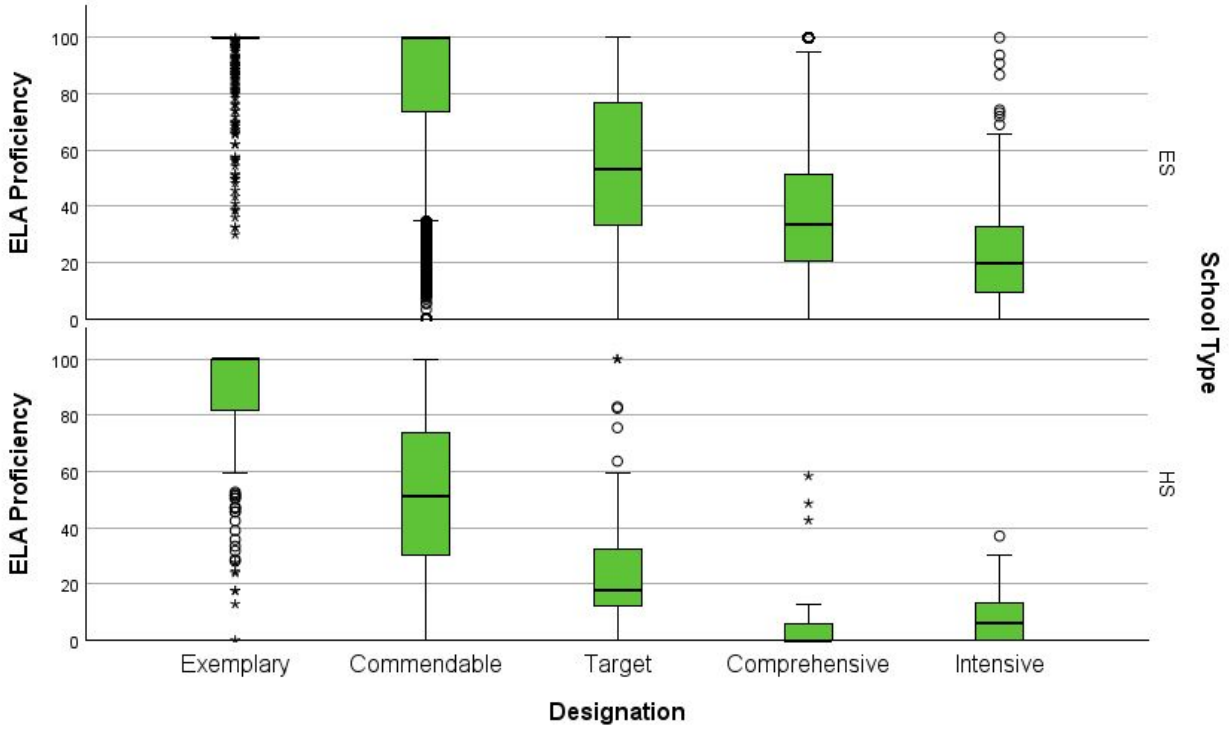
Subgroups

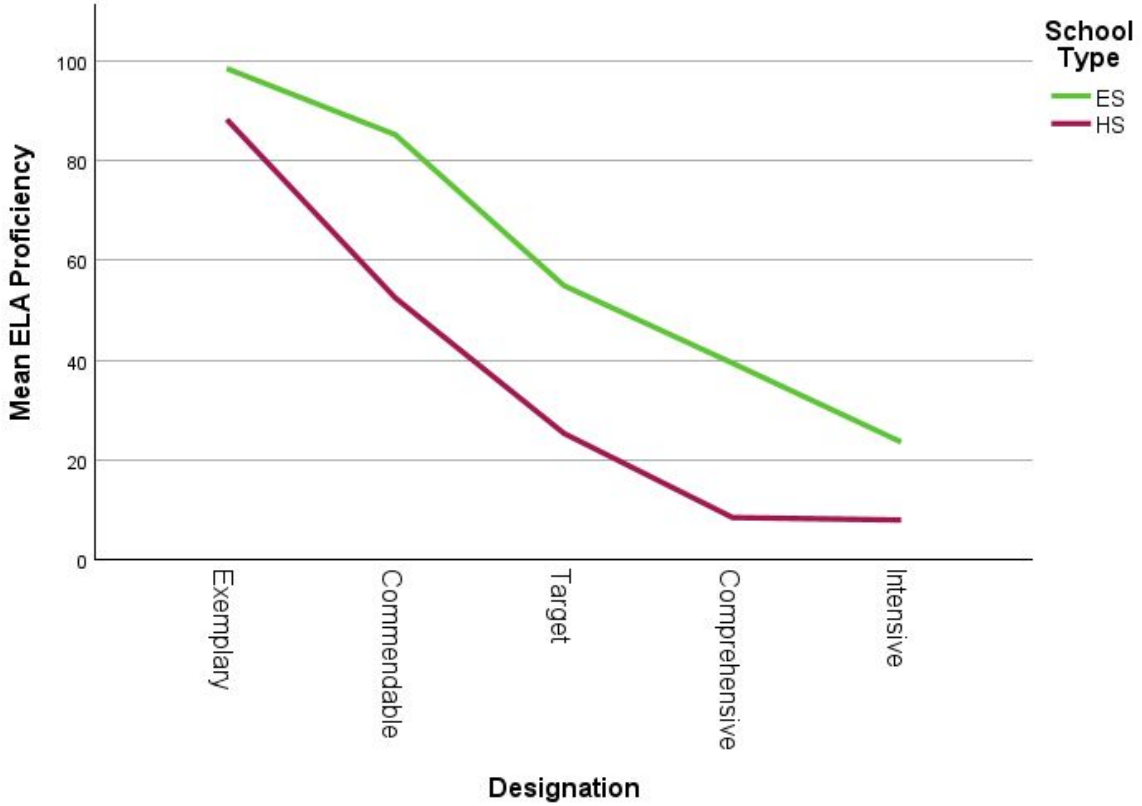
- For ES, Former ELs and Asians have higher mean index scores and score distributions than other subgroups
- For HS in particular, Black/AfrAm, CWDs, and ELs have lower mean index scores and score distributions overall than other groups

Indicators Distributions

by Designation [Scored Values]

ELA Proficiency



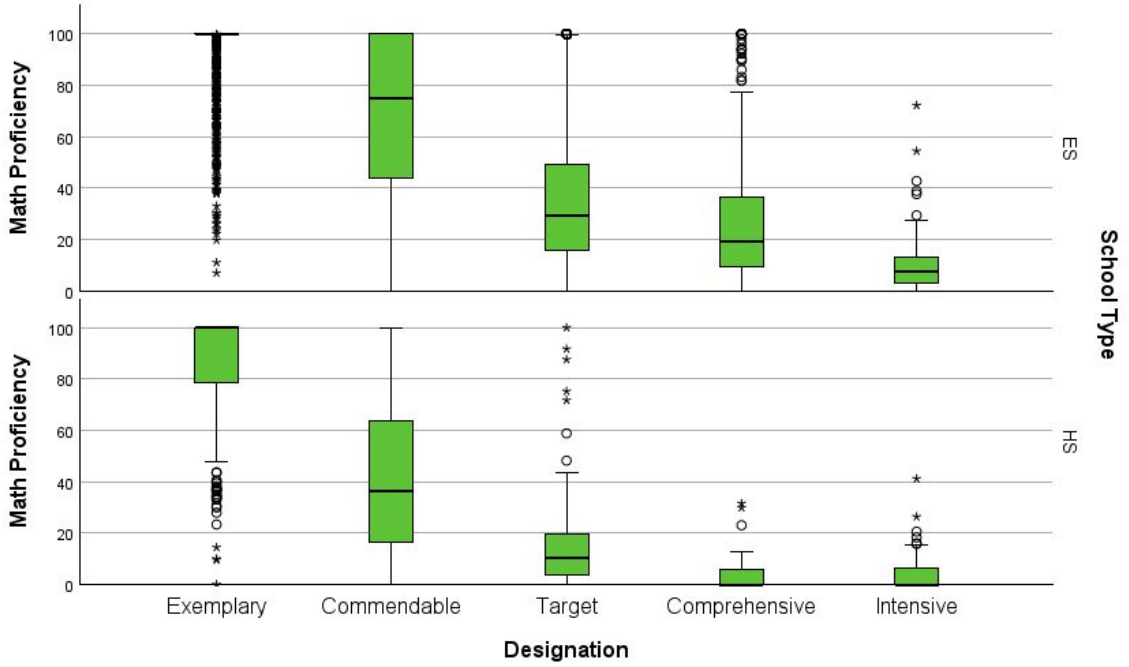


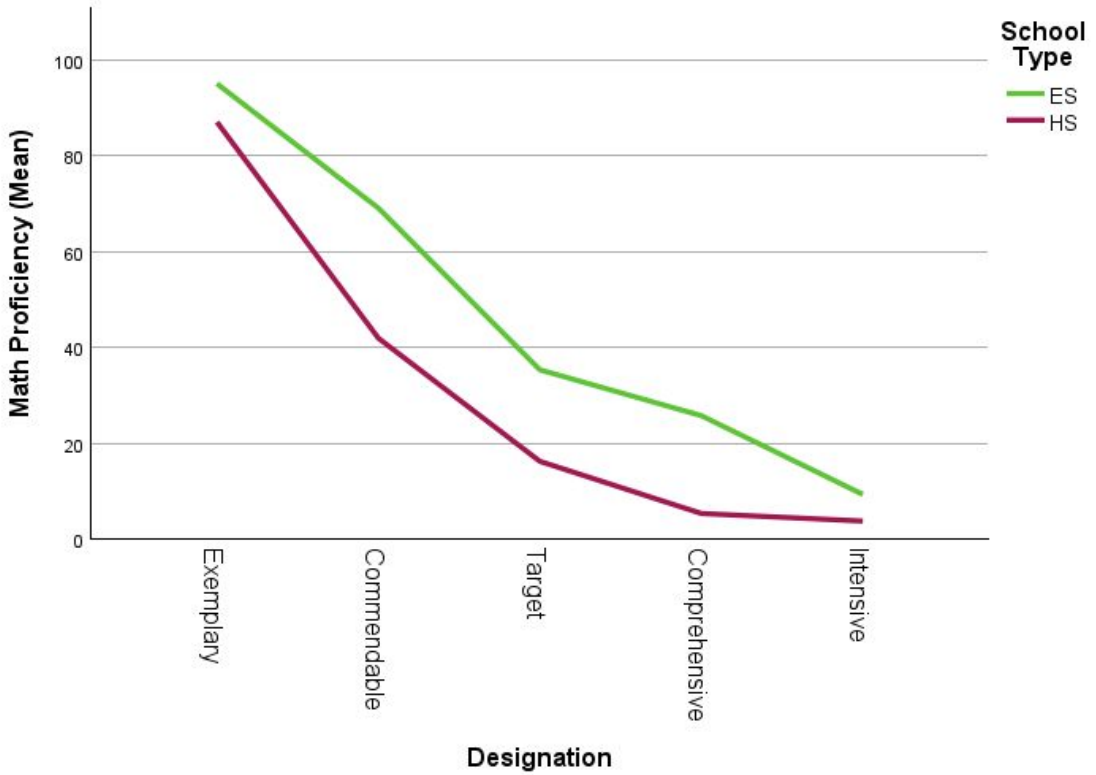
Count

		Designation					
		Exemplary	Commendable	Target	Comprehensive	Intensive	Total
School Type	ES	306	2214	362	134	40	3056
	HS	70	577	15	9	30	701
Total		376	2791	377	143	70	3757

Even though ELA Proficiency values exist in ES, they were not included in the data set and are thus omitted

Math Proficiency



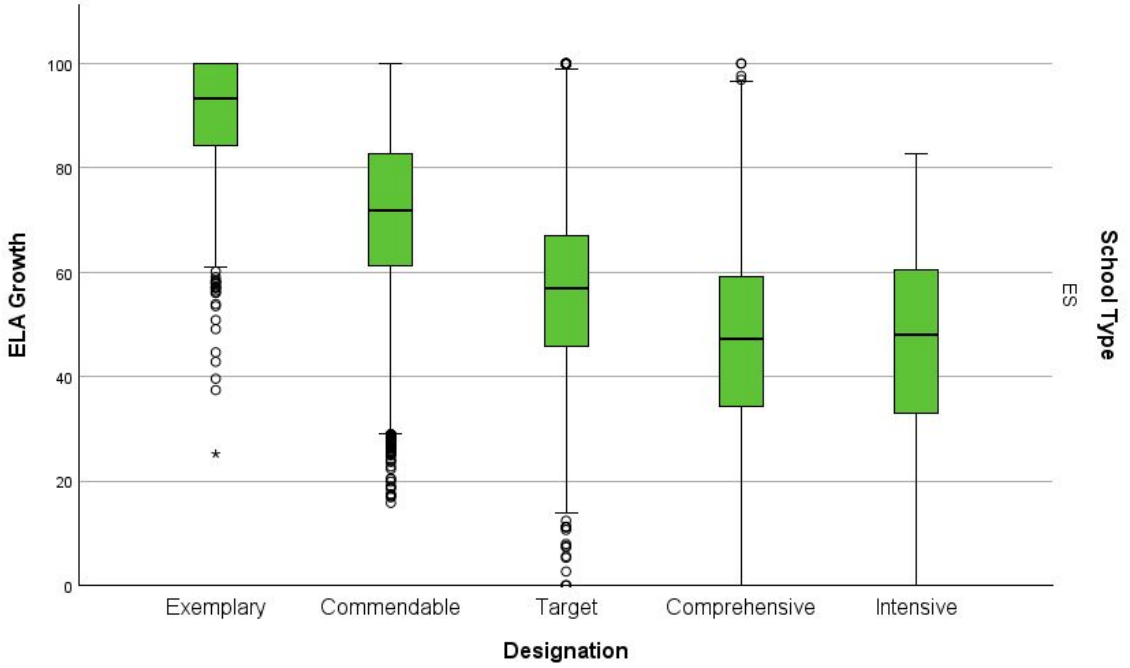


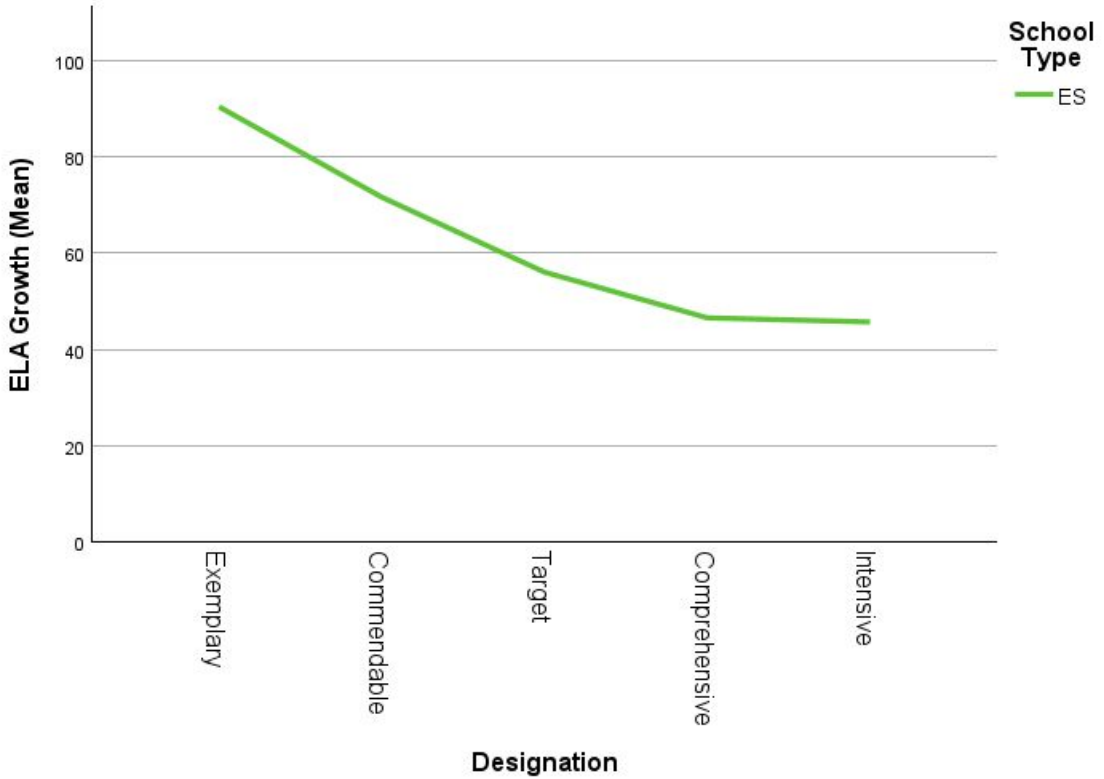
Count

		Designation					
		Exemplary	Commendable	Target	Comprehensive	Intensive	Total
School Type	ES	306	2214	362	134	40	3056
	HS	70	577	15	9	30	701
Total		376	2791	377	143	70	3757

Even though Math Proficiency values exist in ES, they were not included in the data set and are thus omitted

ELA Growth

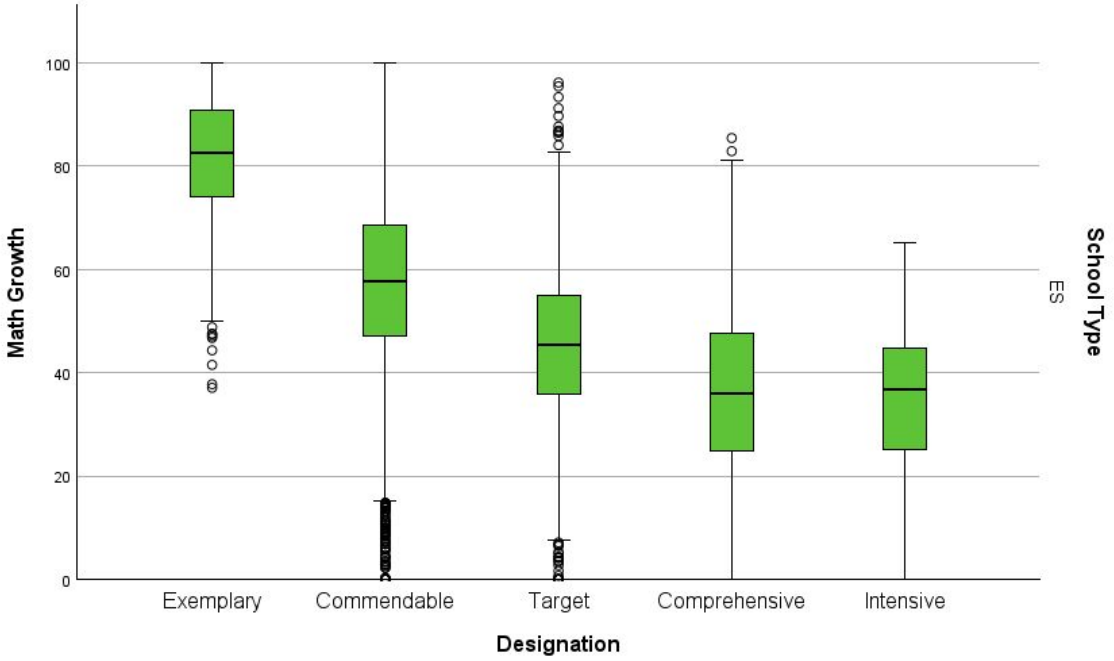


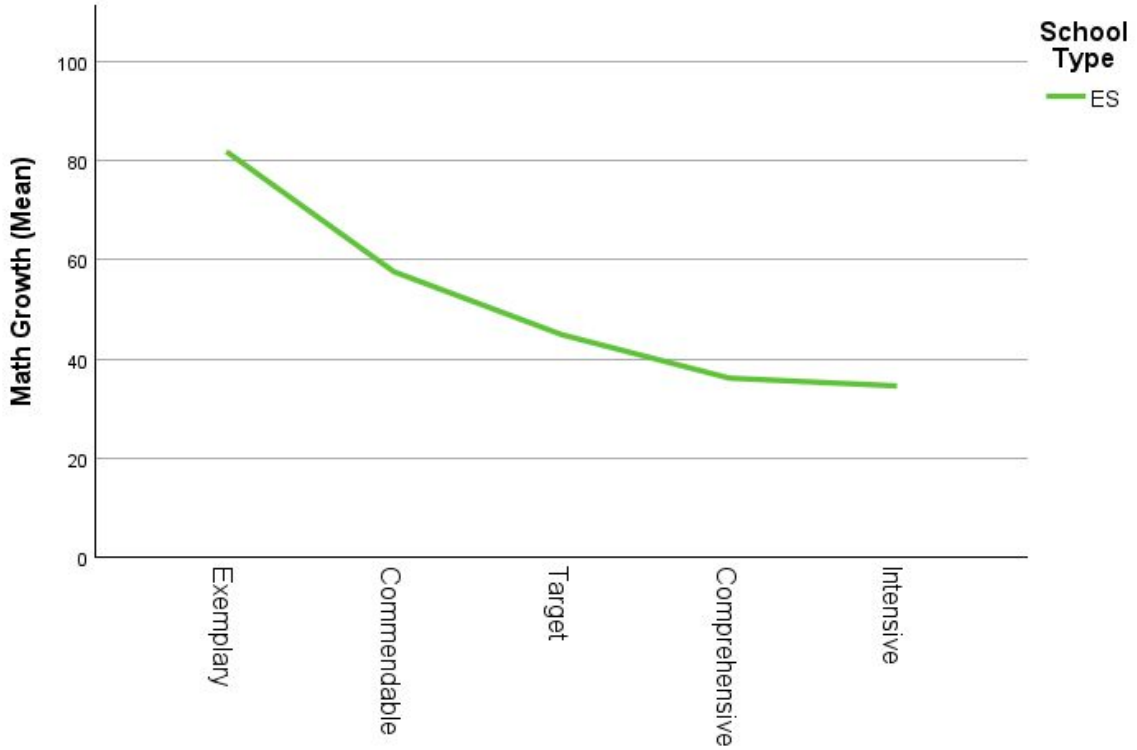


Count

		Designation					
		Exemplary	Commendable	Target	Comprehensive	Intensive	Total
School Type	ES	306	2214	362	134	40	3056
	HS	70	577	15	9	30	701
Total		376	2791	377	143	70	3757

Math Growth

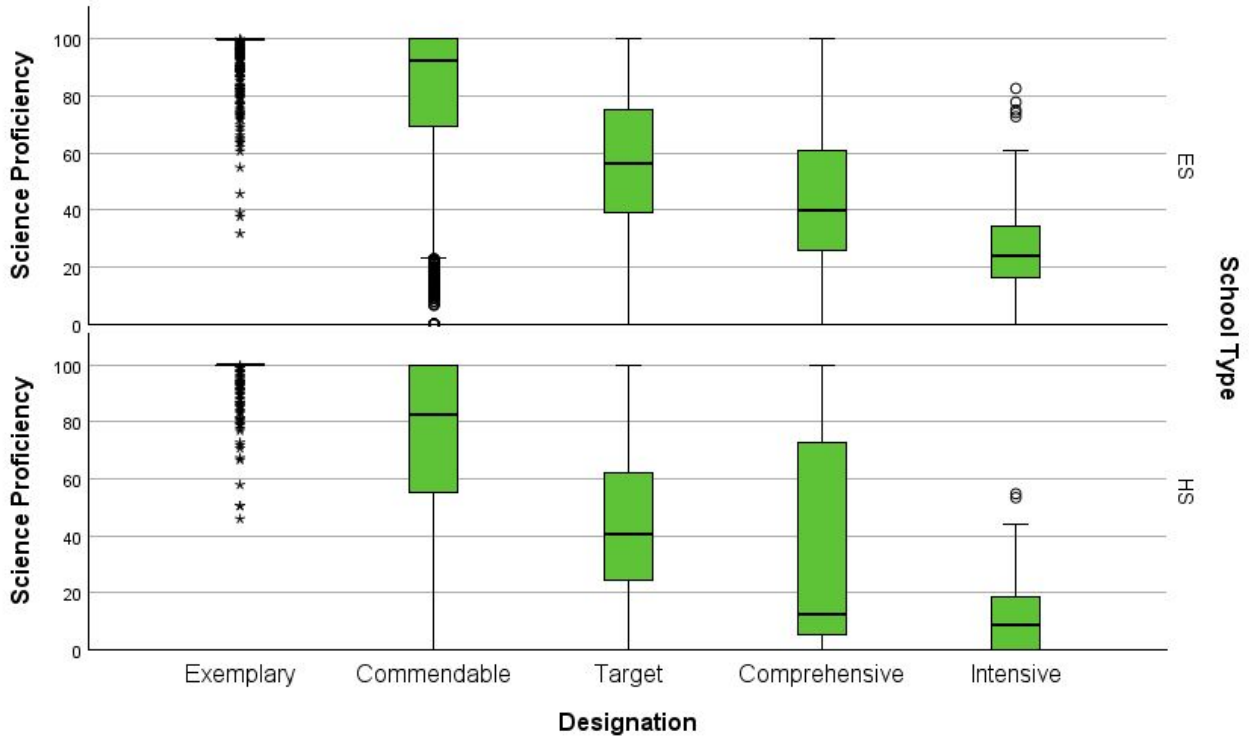


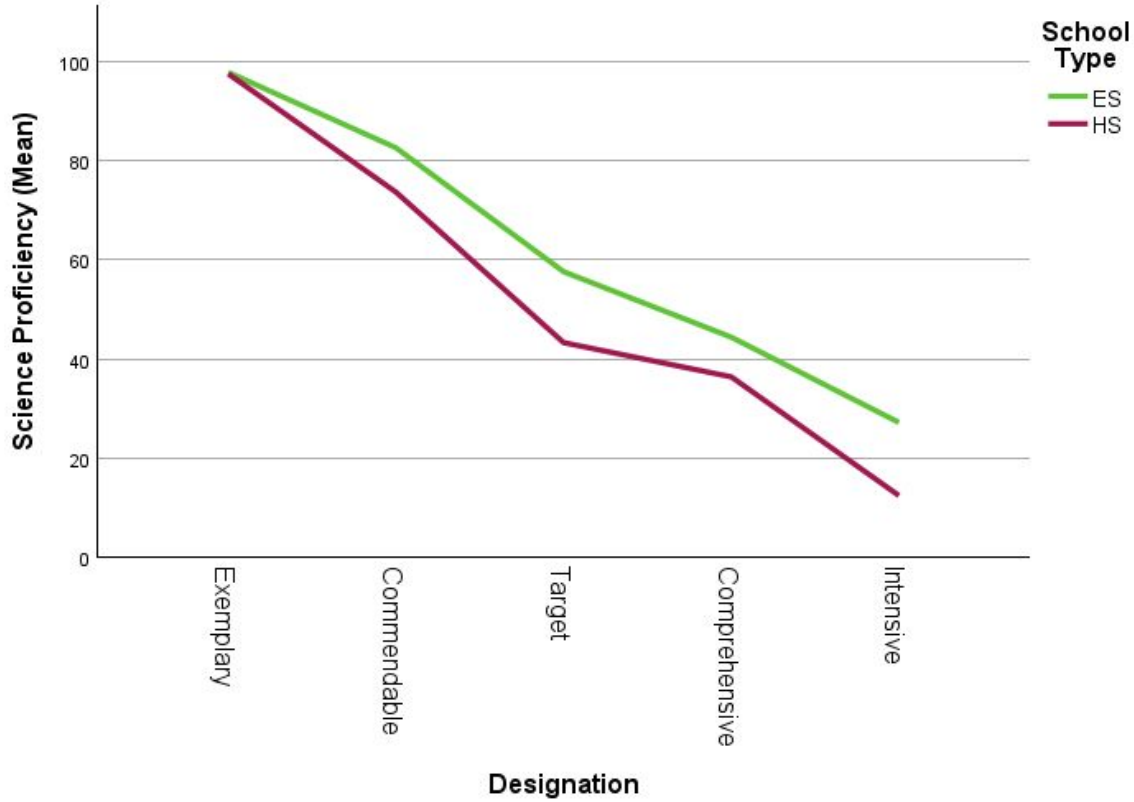


Count

		Designation					
		Exemplary	Commendable	Target	Comprehensive	Intensive	Total
School Type	ES	306	2214	362	134	40	3056
	HS	70	577	15	9	30	701
Total		376	2791	377	143	70	3757

Science Proficiency



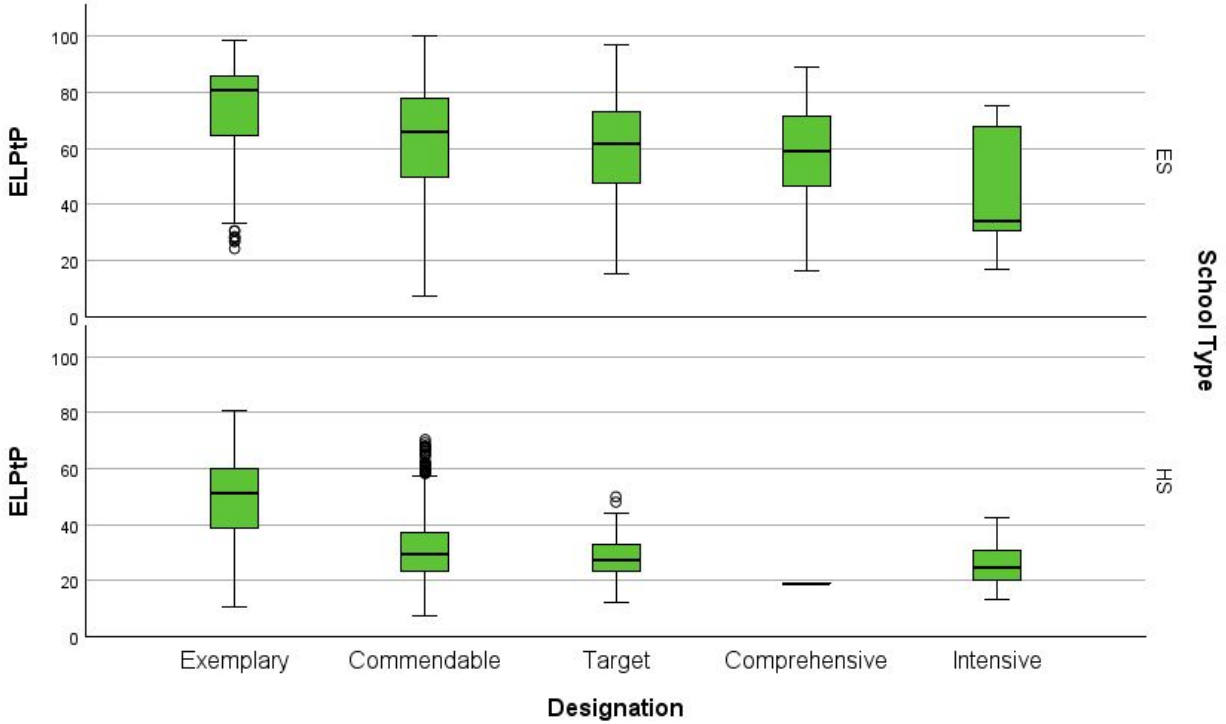


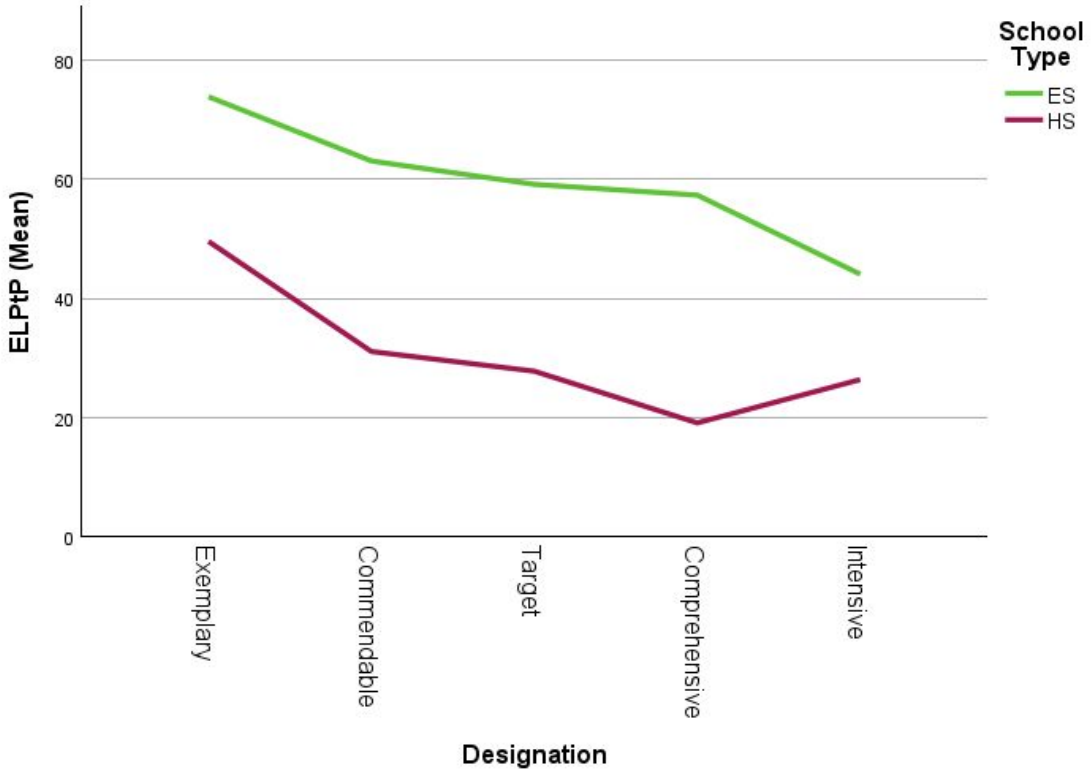
Count

		Designation					
		Exemplary	Commendable	Target	Comprehensive	Intensive	Total
School Type	ES	306	2214	362	134	40	3056
	HS	70	577	15	9	30	701
Total		376	2791	377	143	70	3757

Even though Science Proficiency values exist in ES, they were not included in the data set and are thus omitted

ELPtP

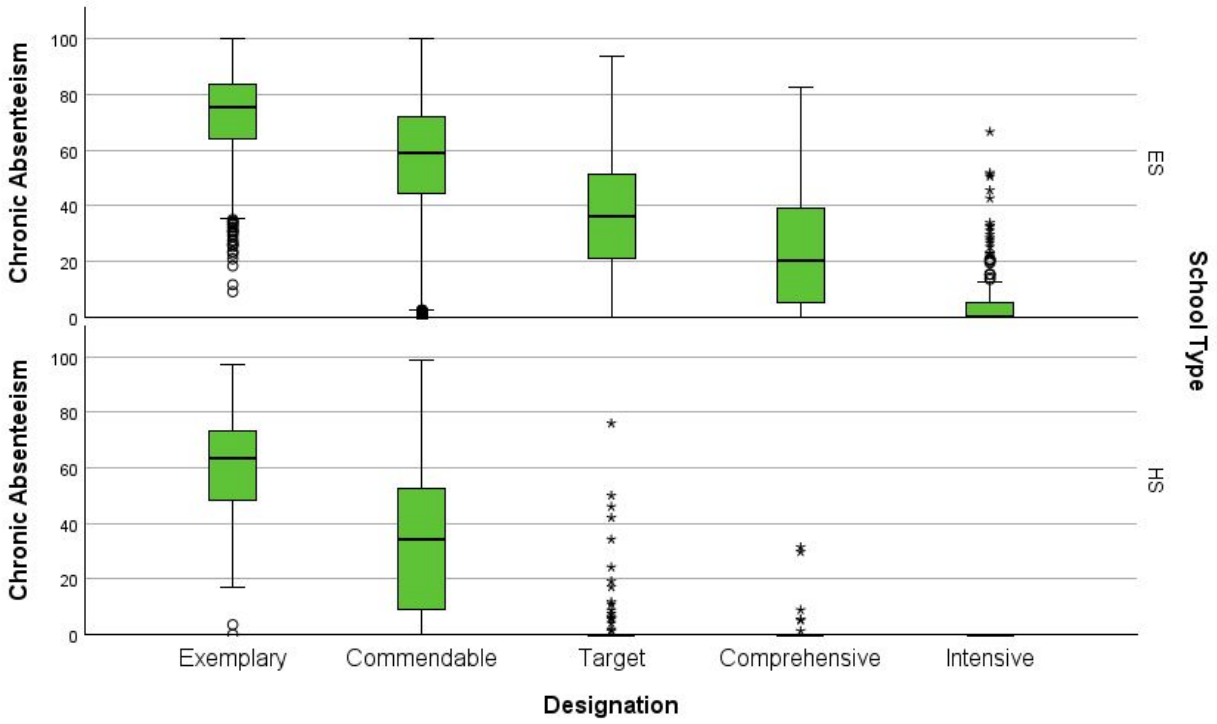


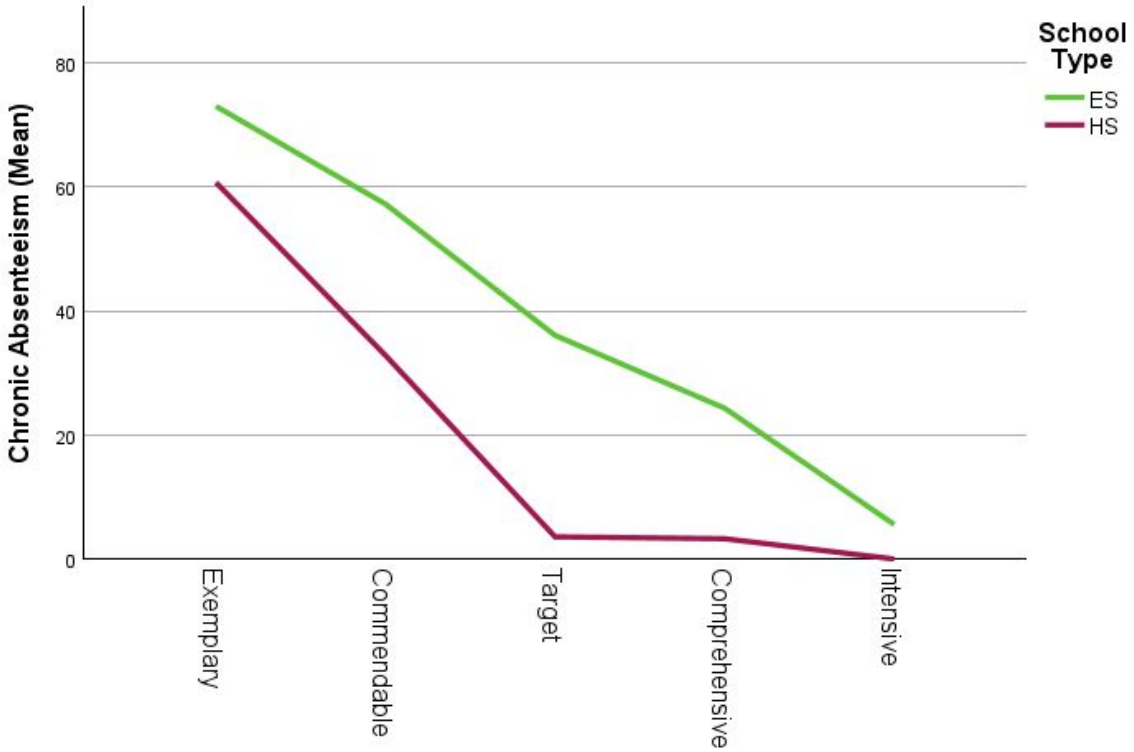


Count

		Designation					
		Exemplary	Commendable	Target	Comprehensive	Intensive	Total
School Type	ES	306	2214	362	134	40	3056
	HS	70	577	15	9	30	701
Total		376	2791	377	143	70	3757

Chronic Absenteeism

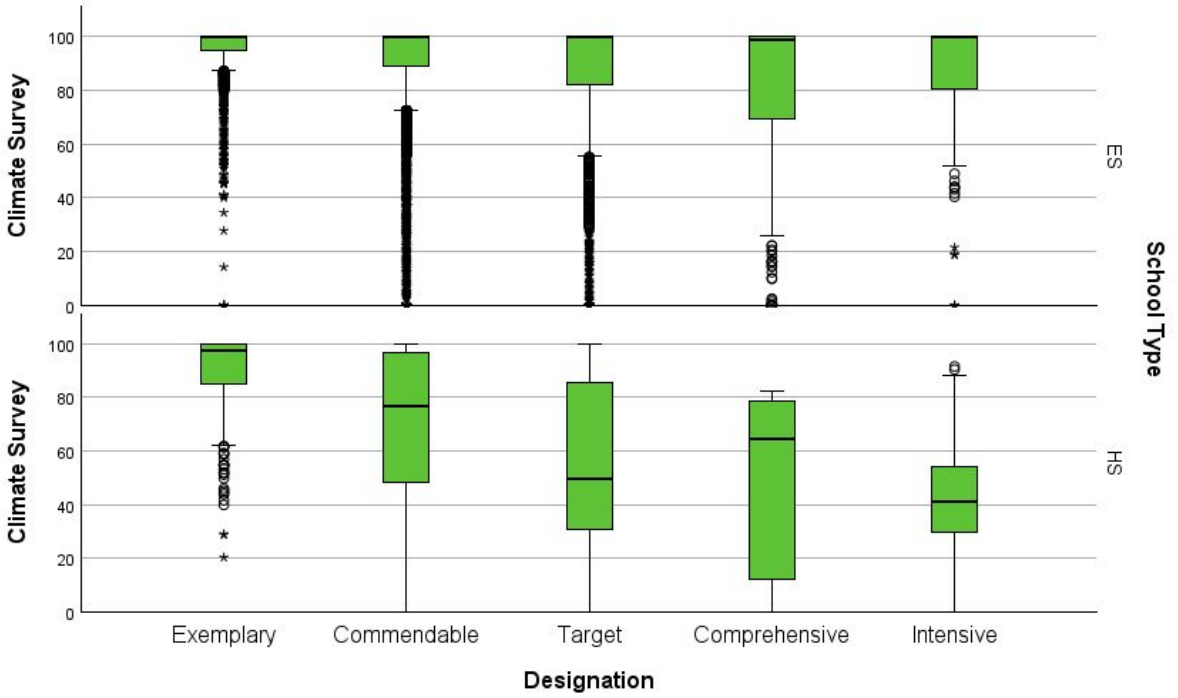


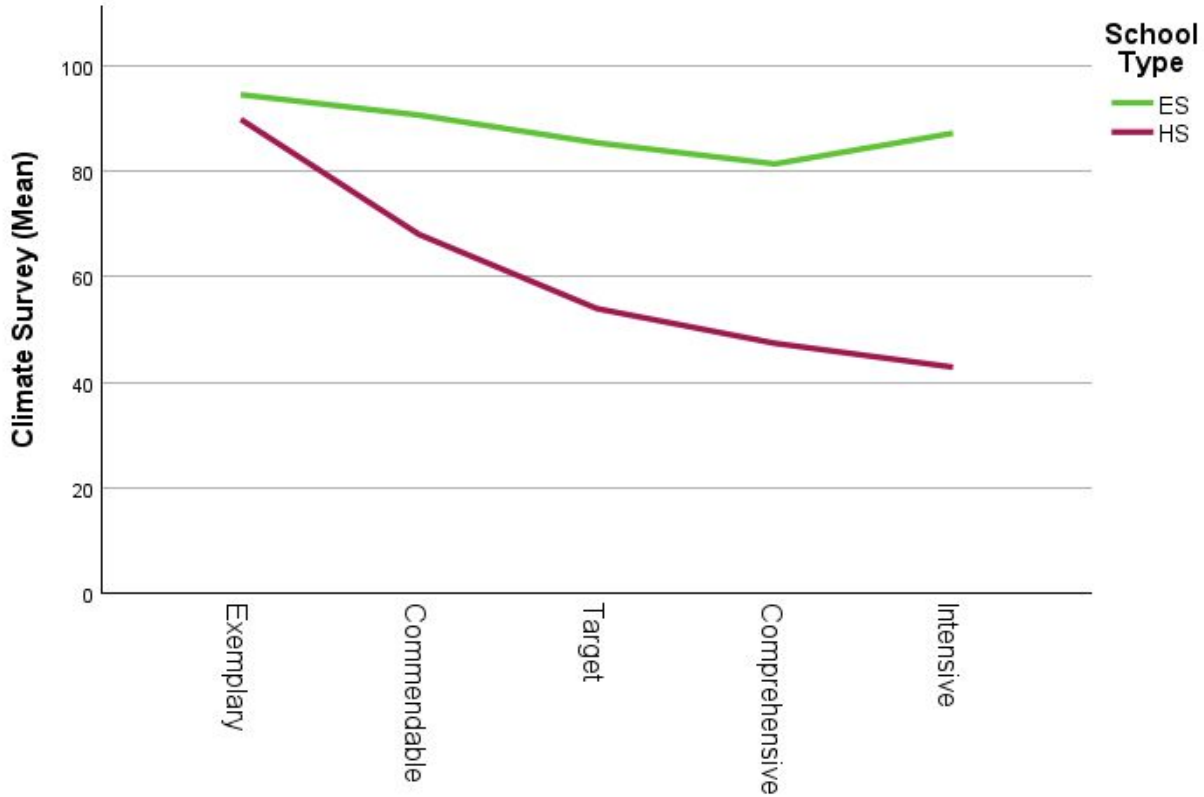


Count

		Designation					
		Exemplary	Commendable	Target	Comprehensive	Intensive	Total
School Type	ES	306	2214	362	134	40	3056
	HS	70	577	15	9	30	701
Total		376	2791	377	143	70	3757

Climate Survey

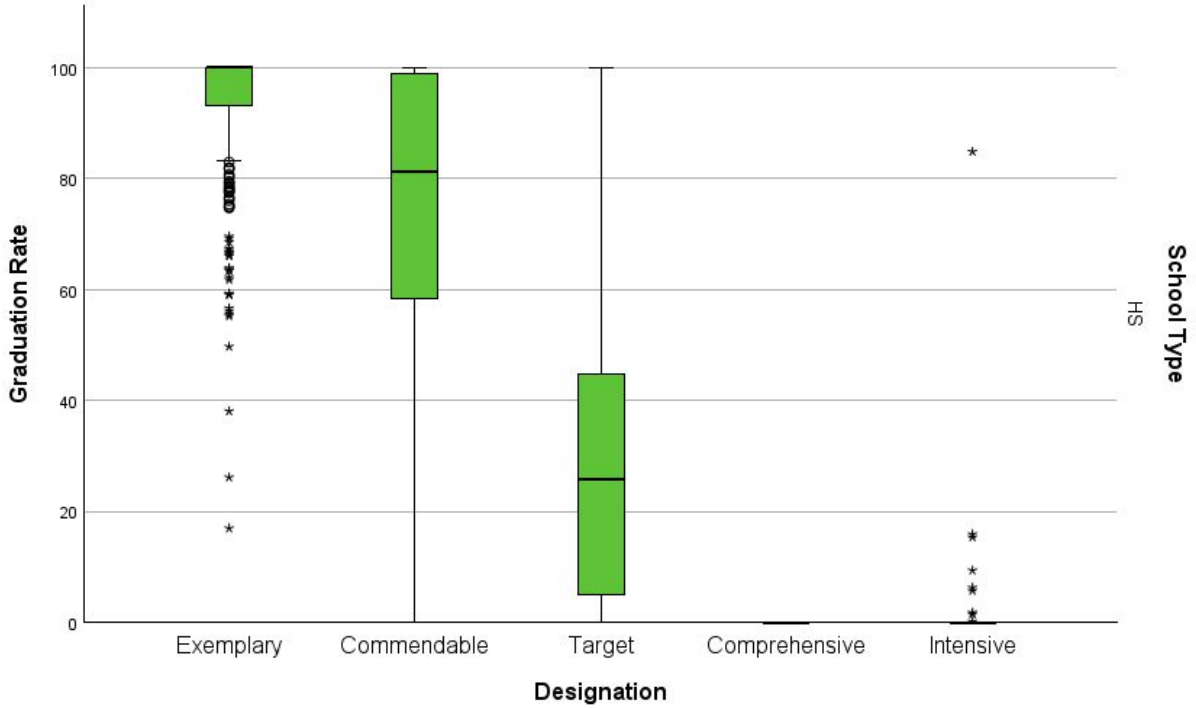


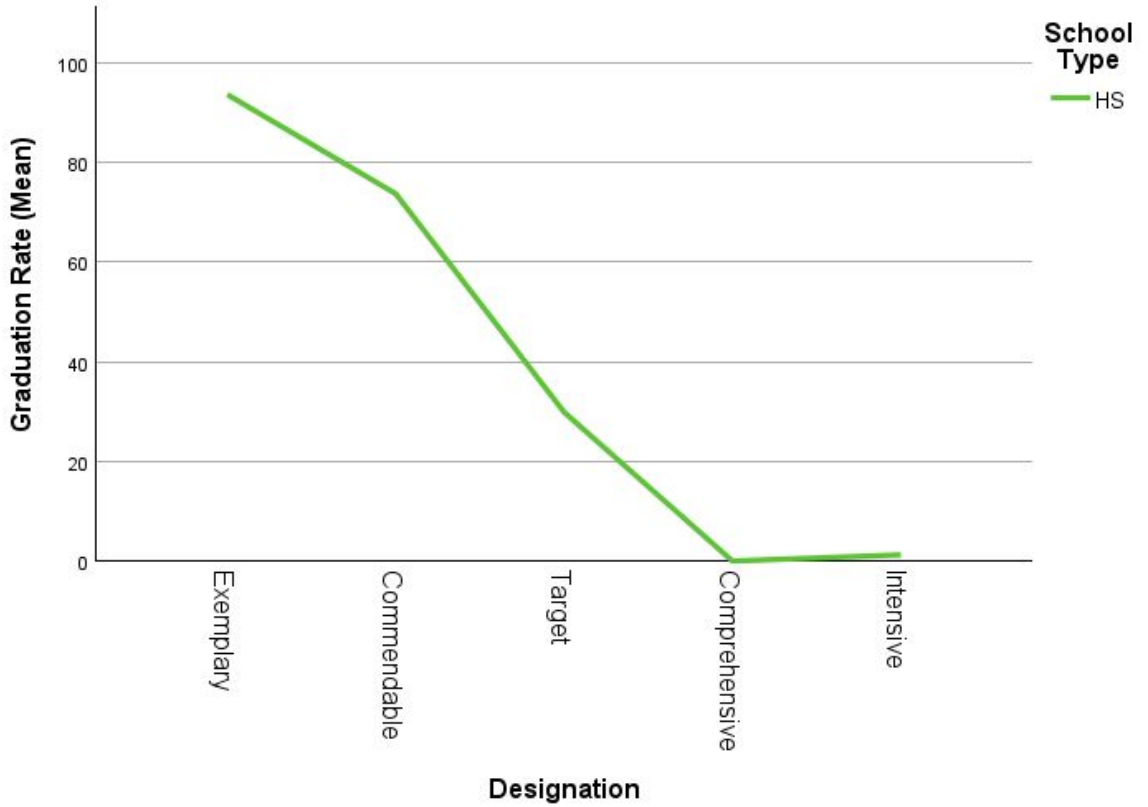


Count

		Designation					
		Exemplary	Commendable	Target	Comprehensive	Intensive	Total
School Type	ES	306	2214	362	134	40	3056
	HS	70	577	15	9	30	701
Total		376	2791	377	143	70	3757

Graduation Rate

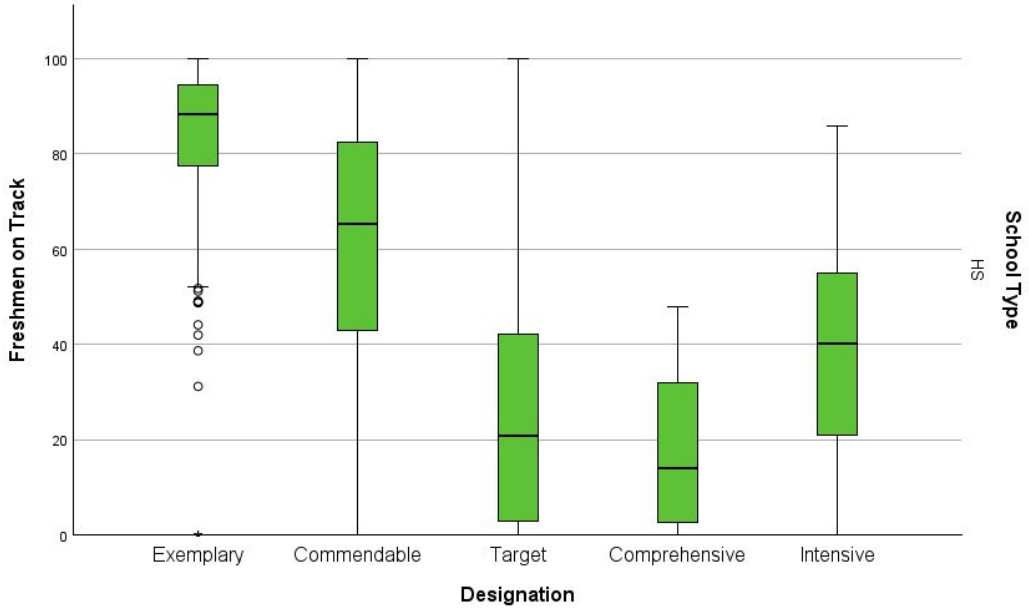


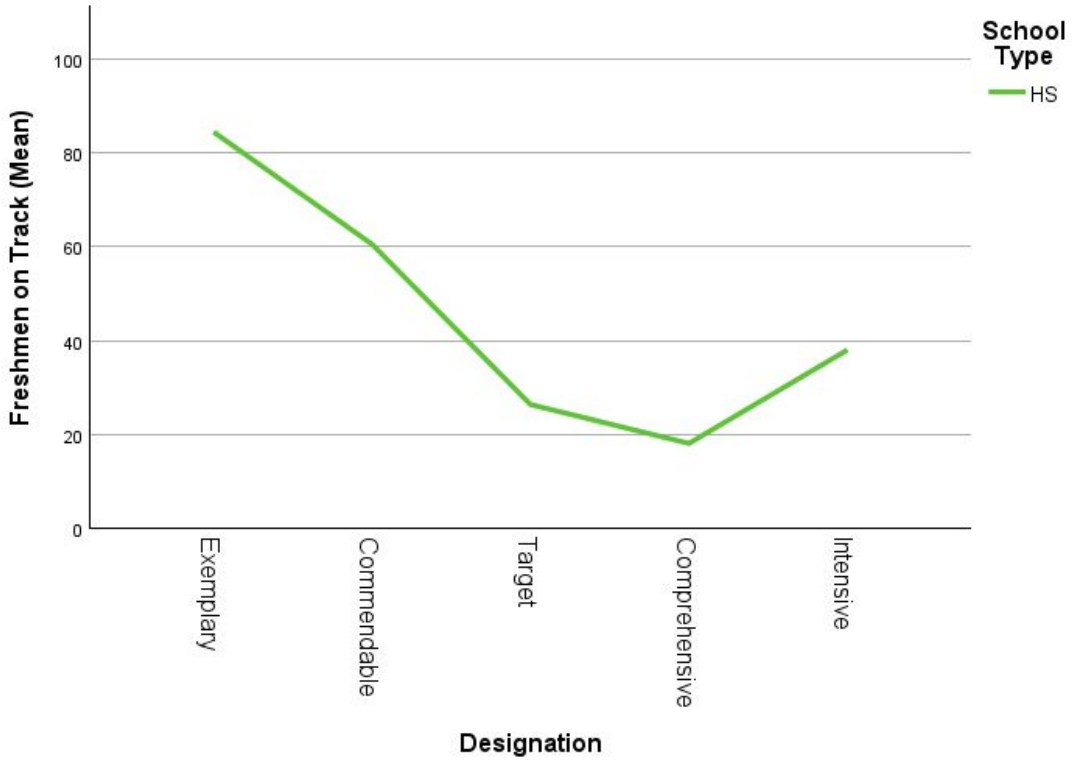


Count

		Designation					
		Exemplary	Commendable	Target	Comprehensive	Intensive	Total
School Type	ES	306	2214	362	134	40	3056
	HS	70	577	15	9	30	701
Total		376	2791	377	143	70	3757

Freshmen on Track





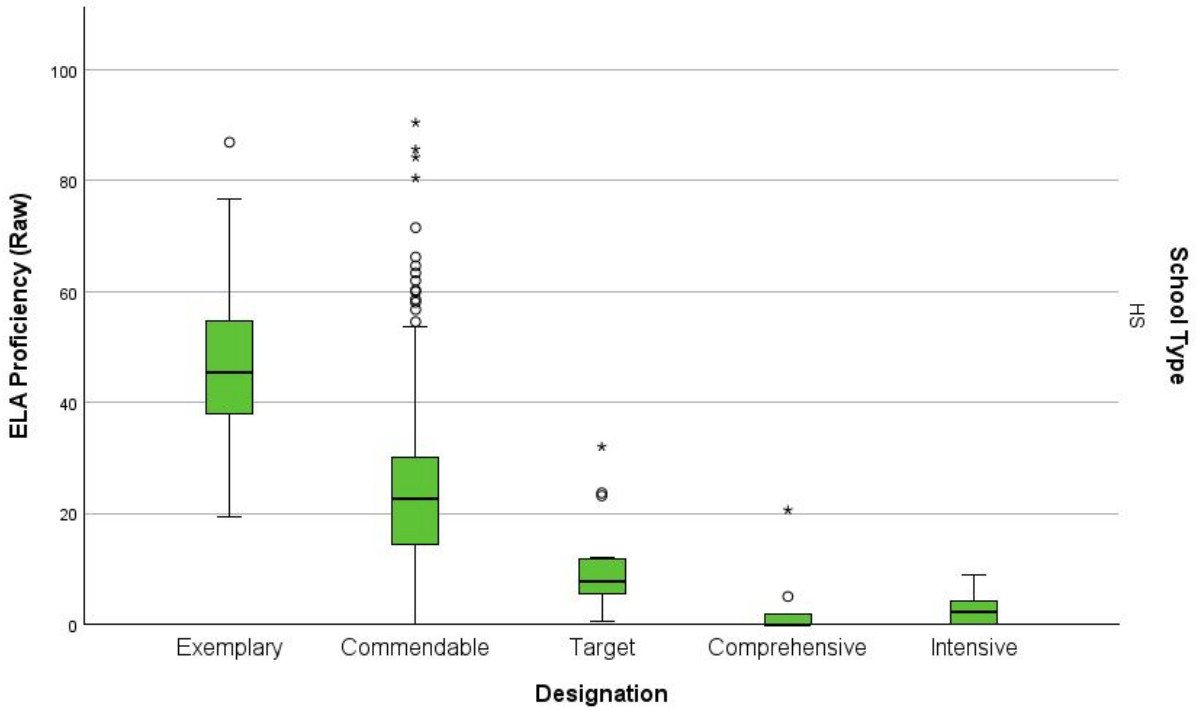
Count

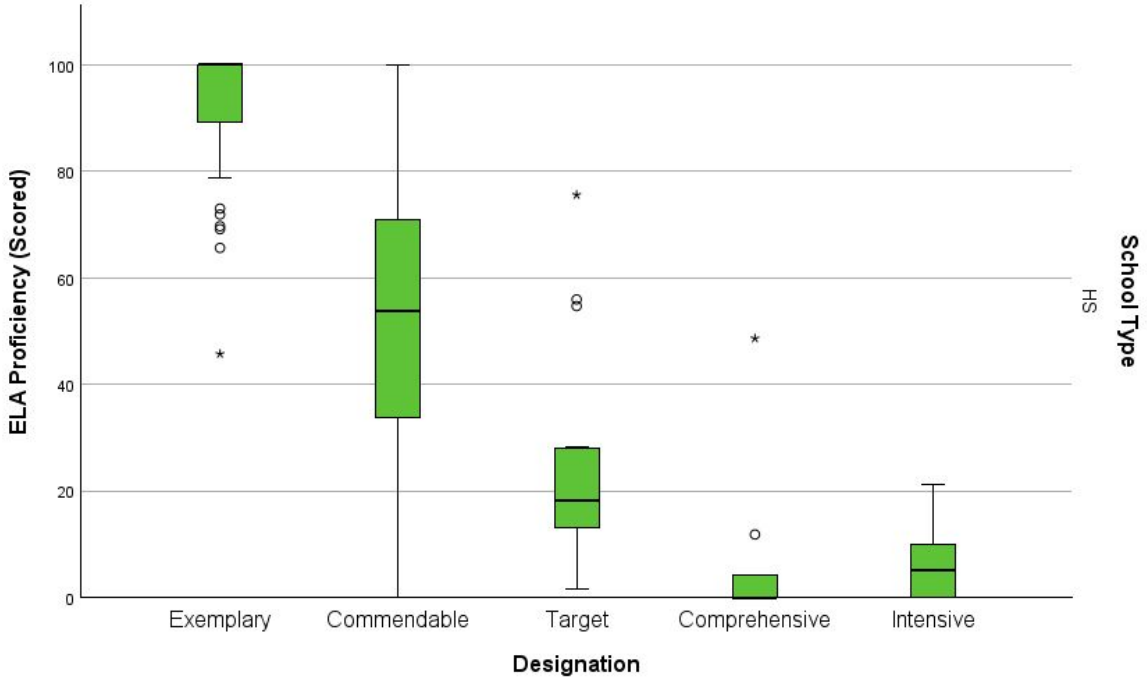
		Designation					
		Exemplary	Commendable	Target	Comprehensive	Intensive	Total
School Type	ES	306	2214	362	134	40	3056
	HS	70	577	15	9	30	701
Total		376	2791	377	143	70	3757

Indicator Distributions

by Designation [Raw vs. Scored]

ELA Proficiency
(Raw vs. Scored, HS Only)



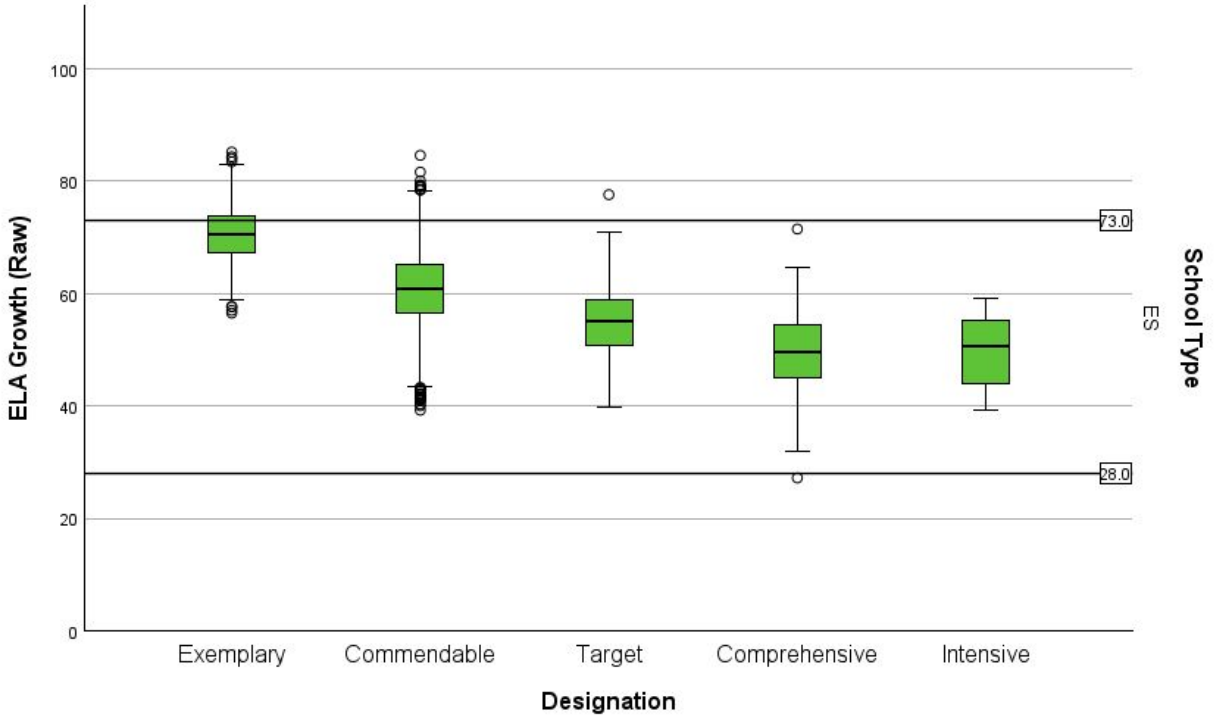


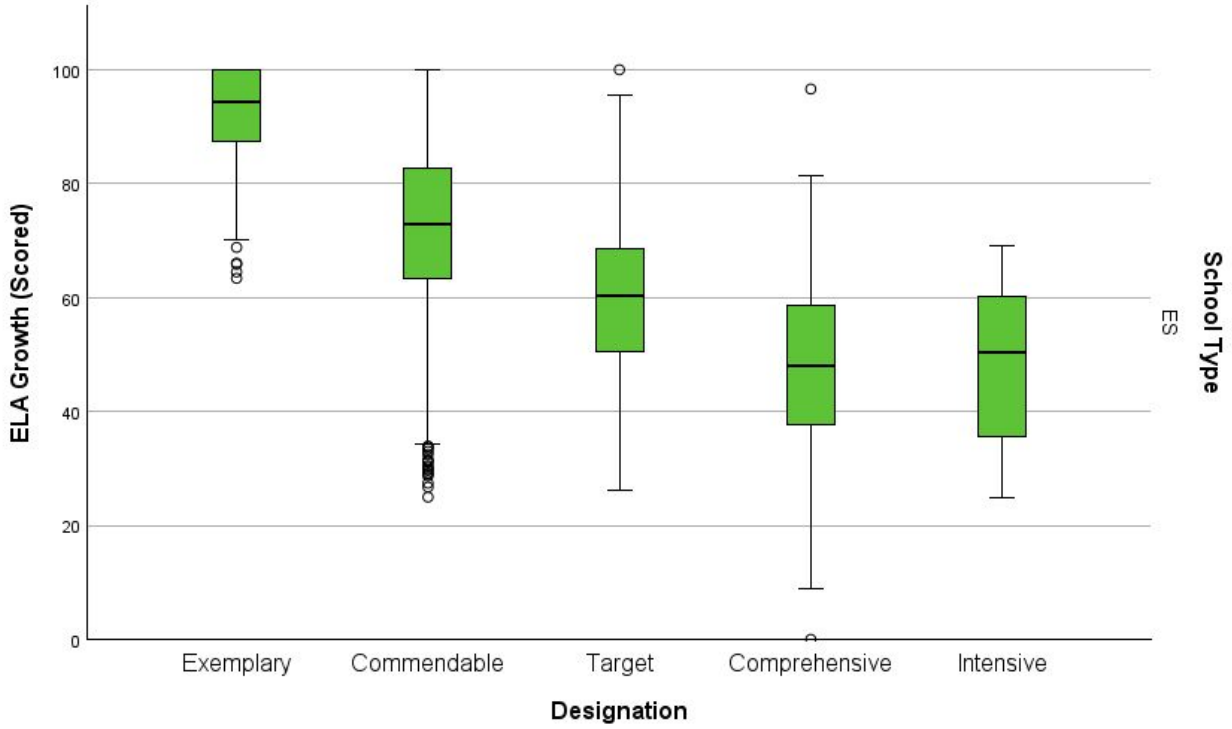
Computation

0 ≤ (%ELAProf / %ELATargetProf) < 1	➡	((%ELAProf / %ELATargetProf)*100) Points
(%ELAProf / %ELATargetProf) ≥ 1		100 Points

Even though ELA Proficiency values exist in ES, they were not included in the data set and are thus omitted

ELA Growth
(Raw vs. Scored, ES Only)

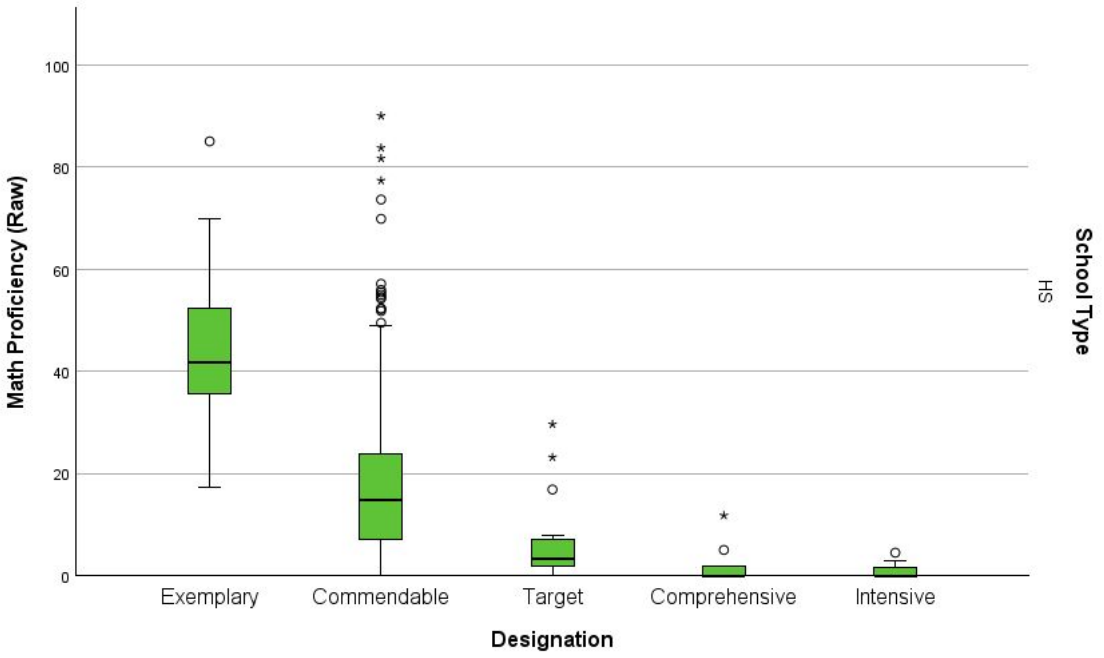


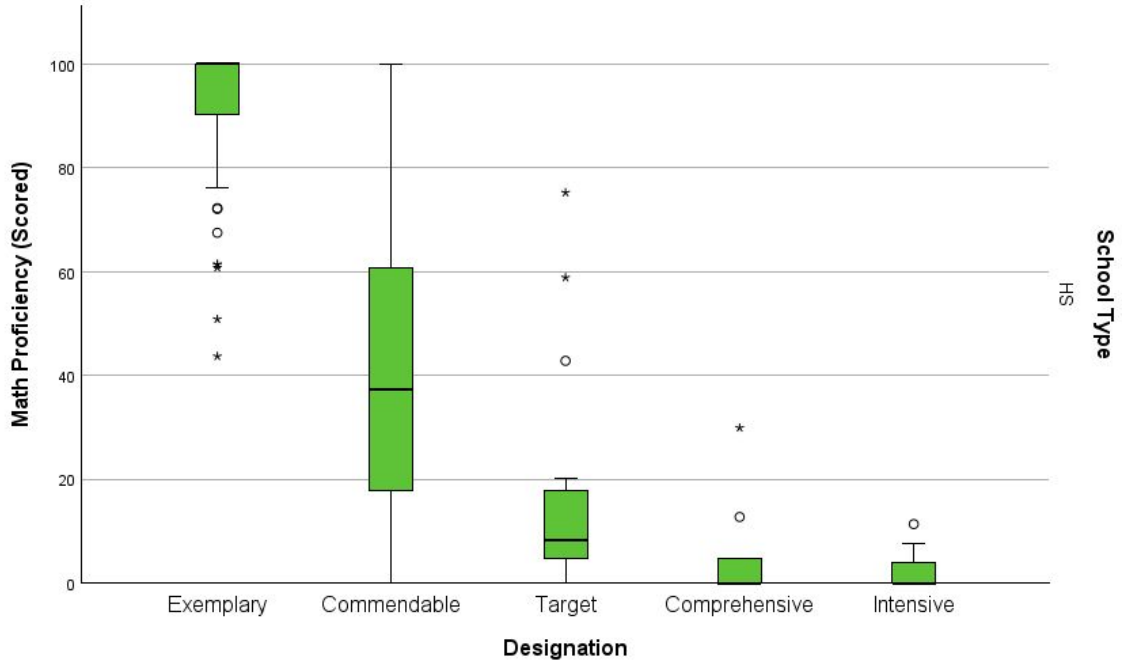


Computation

MeanSGP ≤ 28	→	0 Points
28 < MeanSGP < 73	→	(MeanSGP*2.22 – 62.22) Points
MeanSGP ≥ 73	→	100 Points

Math Proficiency
(Raw vs. Scored, HS Only)





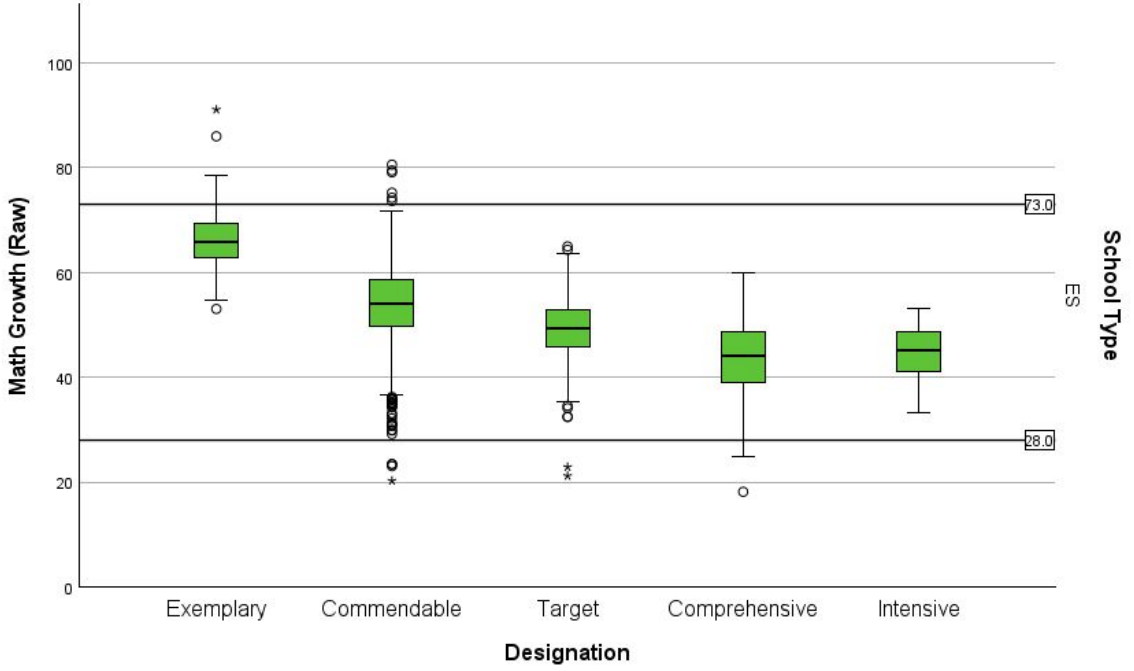
Computation

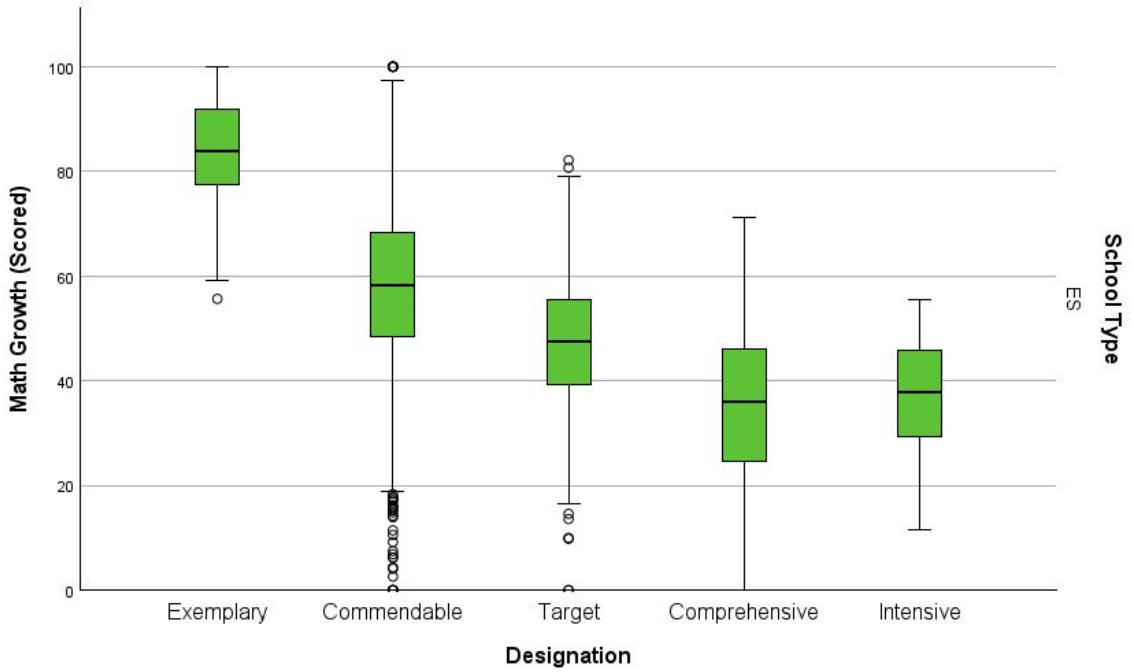
0 ≤ (%MathProf / %MathTargetProf) < 1 Points	➡	((%MathProf / %MathTargetProf)*100)
(%MathProf / %MathTargetProf) ≥ 1		100 Points

Even though Math Proficiency values exist in ES, they were not included in the data set and are thus omitted

Math Growth

(Raw vs. Scored, ES Only)

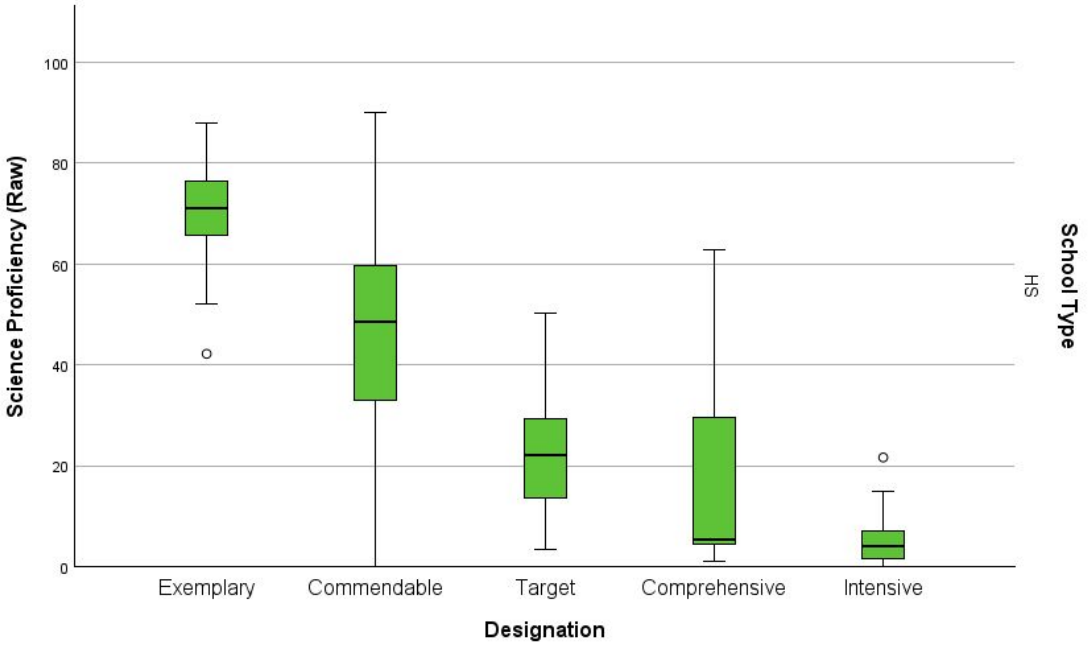


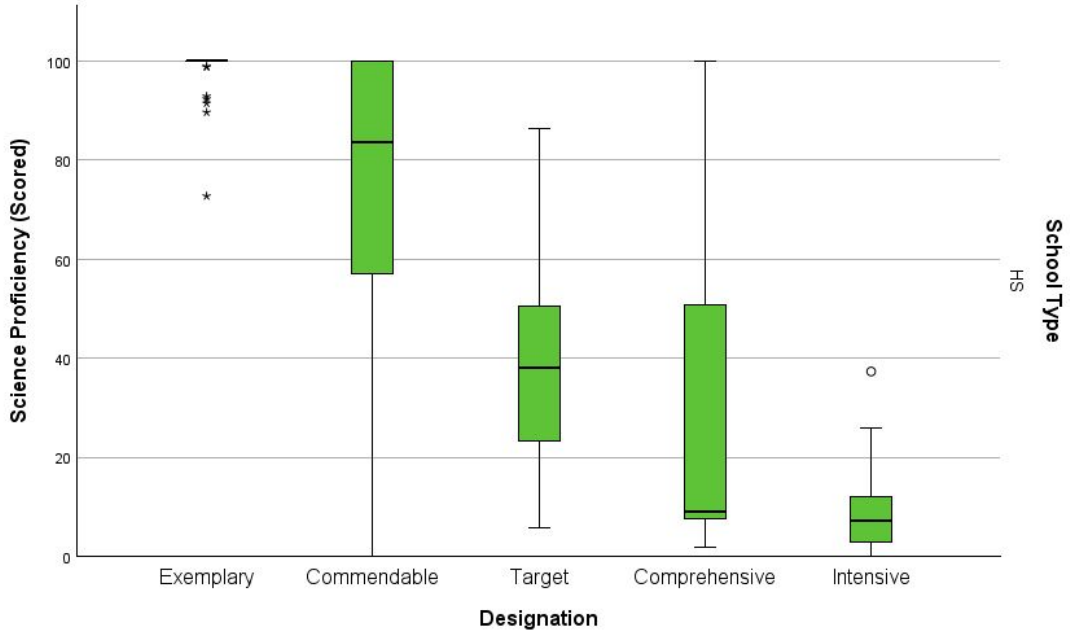


Computation

MeanSGP ≤ 28	➡	0 Points
28 < MeanSGP < 73		(MeanSGP*2.22 – 62.22) Points
MeanSGP ≥ 73		100 Points

Science Proficiency
(Raw vs. Scored, HS Only)





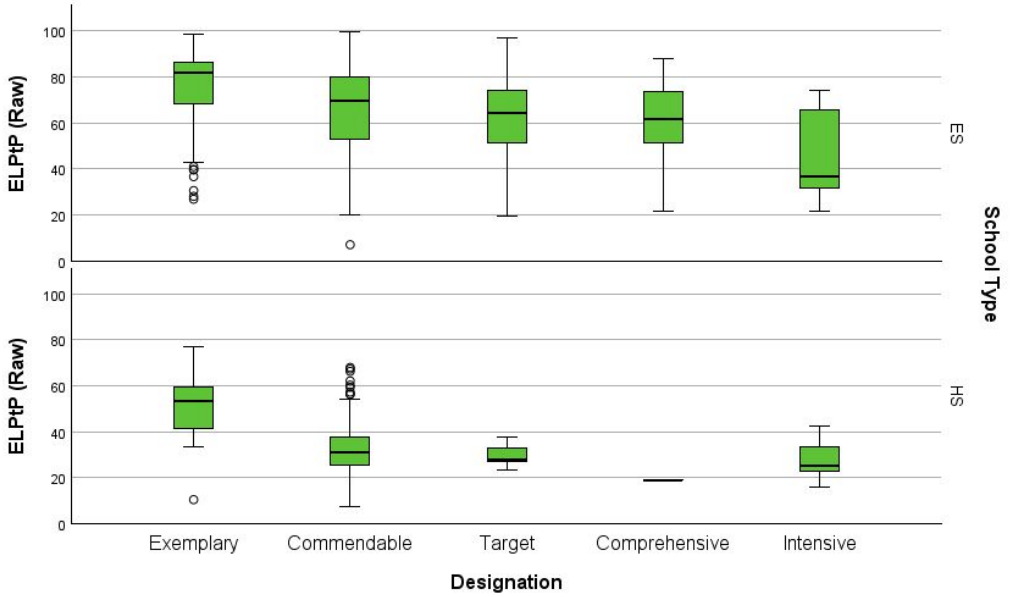
Computation

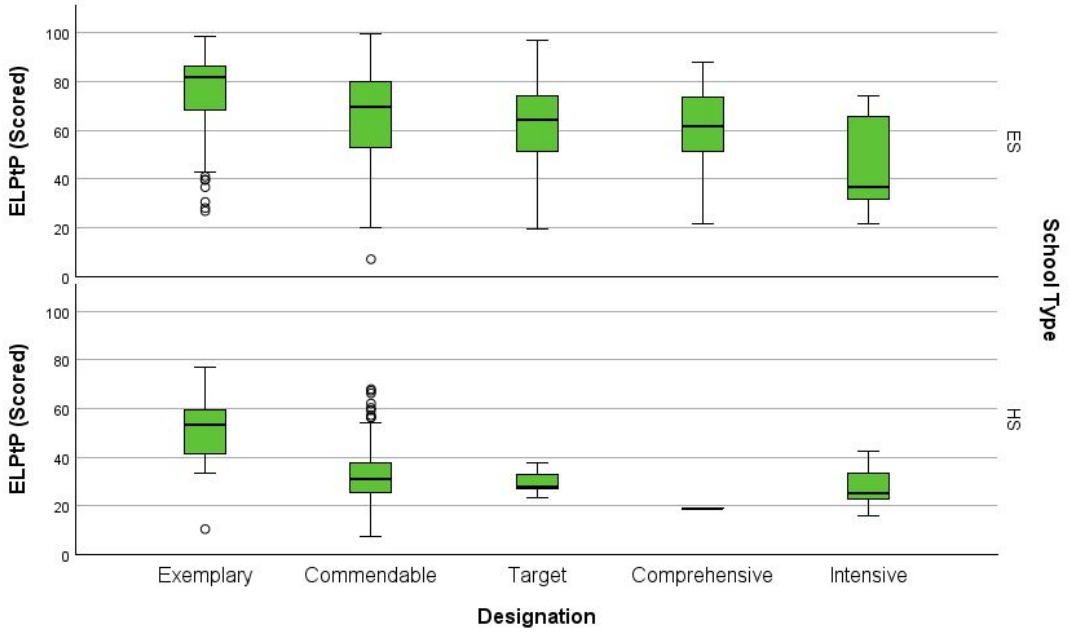
$0 \leq (\%SciProf / \%SciTargetProf) < 1$ → $((\%SciProf / \%SciTargetProf)*100)$ Points

$(\%SciProf / \%SciTargetProf) \geq 1$ → 100 Points

Even though Science Proficiency values exist in ES, they were not included in the data set and are thus omitted

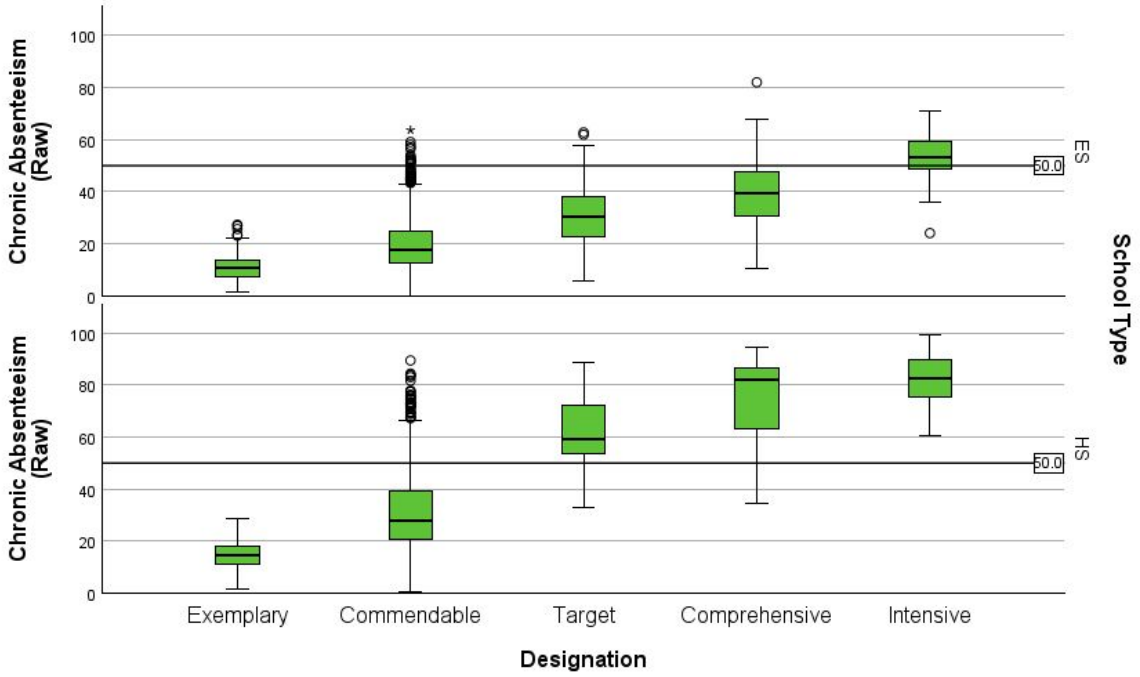
ELPtP
(Raw vs. Scored)

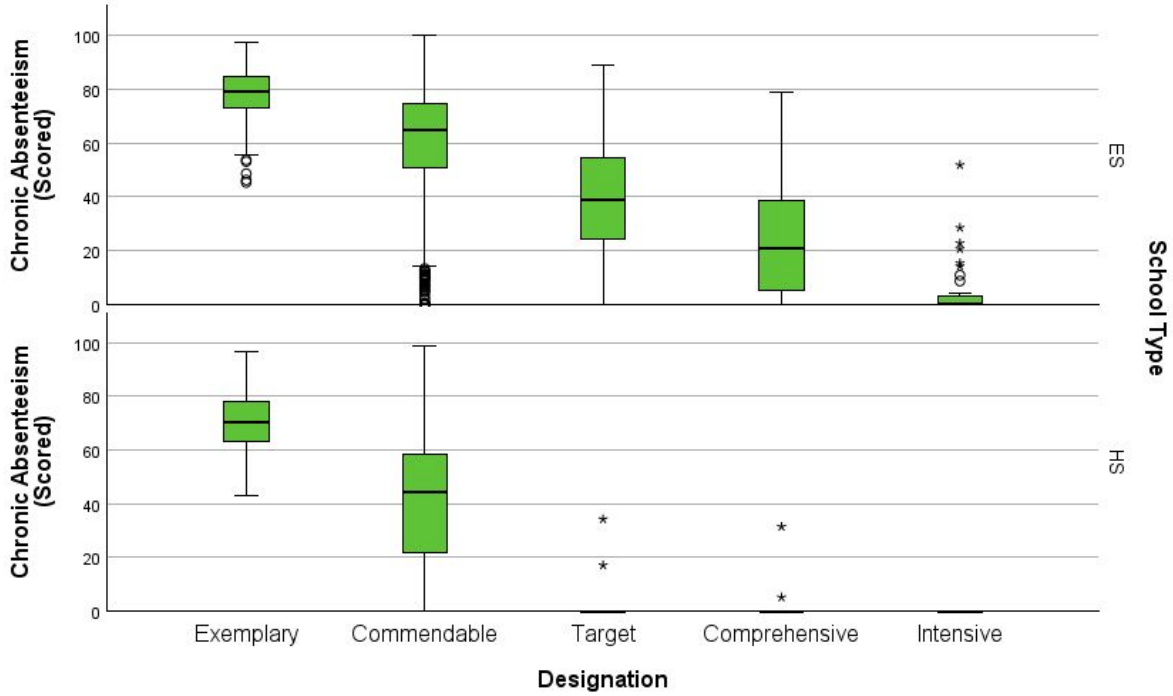




Raw and scored values are identical

Chronic Absenteeism
(Raw vs. Scored)

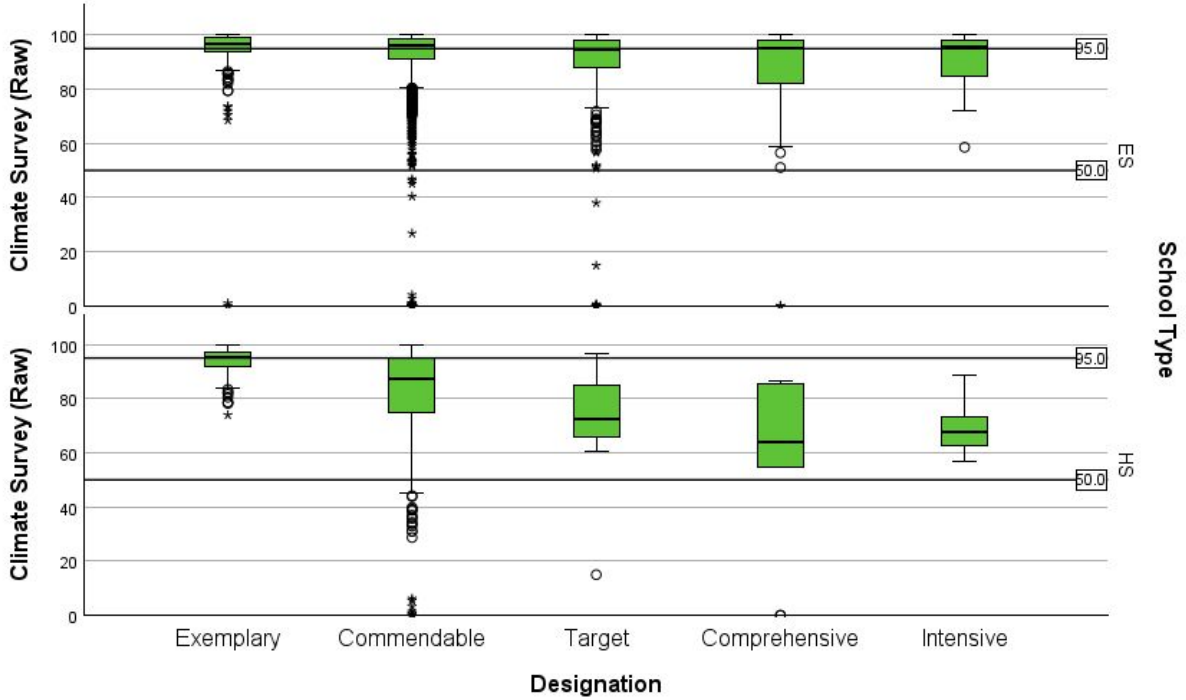


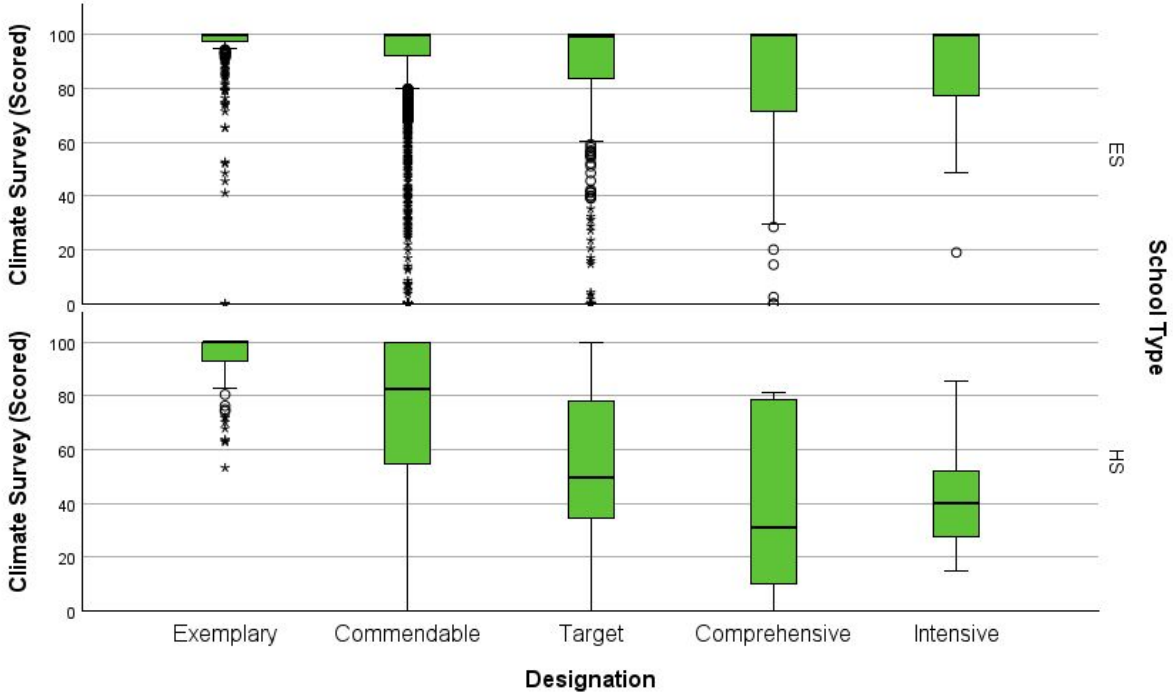


Computation

0% ≤ ChronicAbsent < 50%	➡	(100 – ChronicAbsent*2) Points
ChronicAbsent ≥ 50%		0 Points

Climate Survey [Participation]
(Raw vs. Scored)

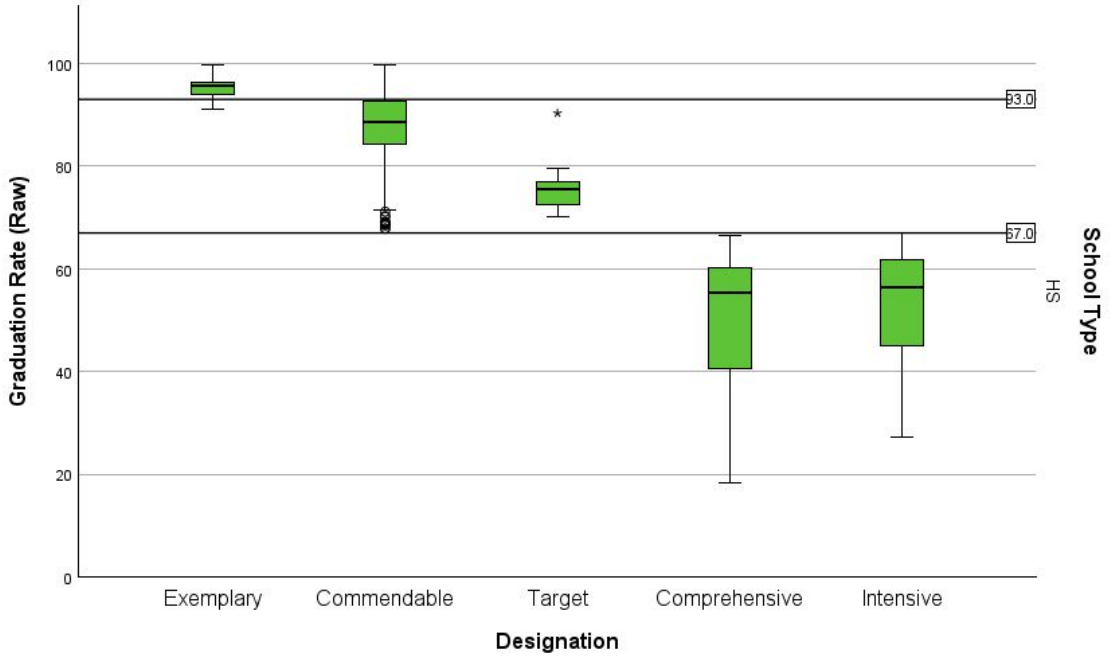


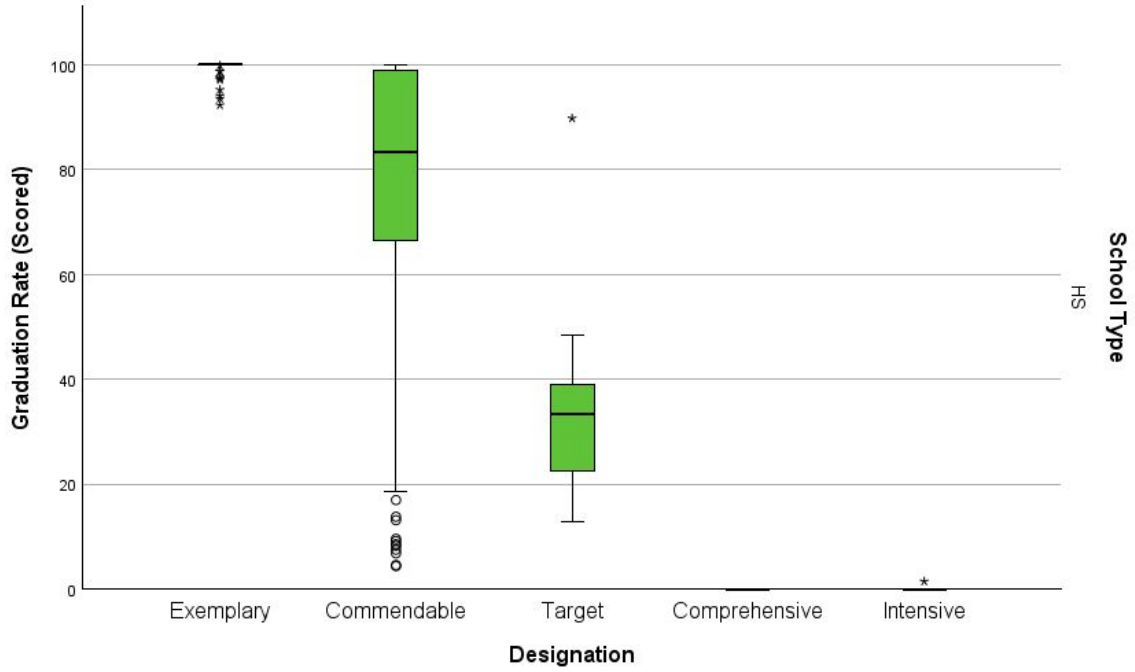


Computation

0% ≤ ClimateSurvey ≤ 50%	➡	0 Points
50% < ClimateSurvey < 95%		(ClimateSurvey*2.22 – 111.11) Points
ClimateSurvey ≥ 95%		100 Points

Graduation Rate
(Raw vs. Scored, HS Only)

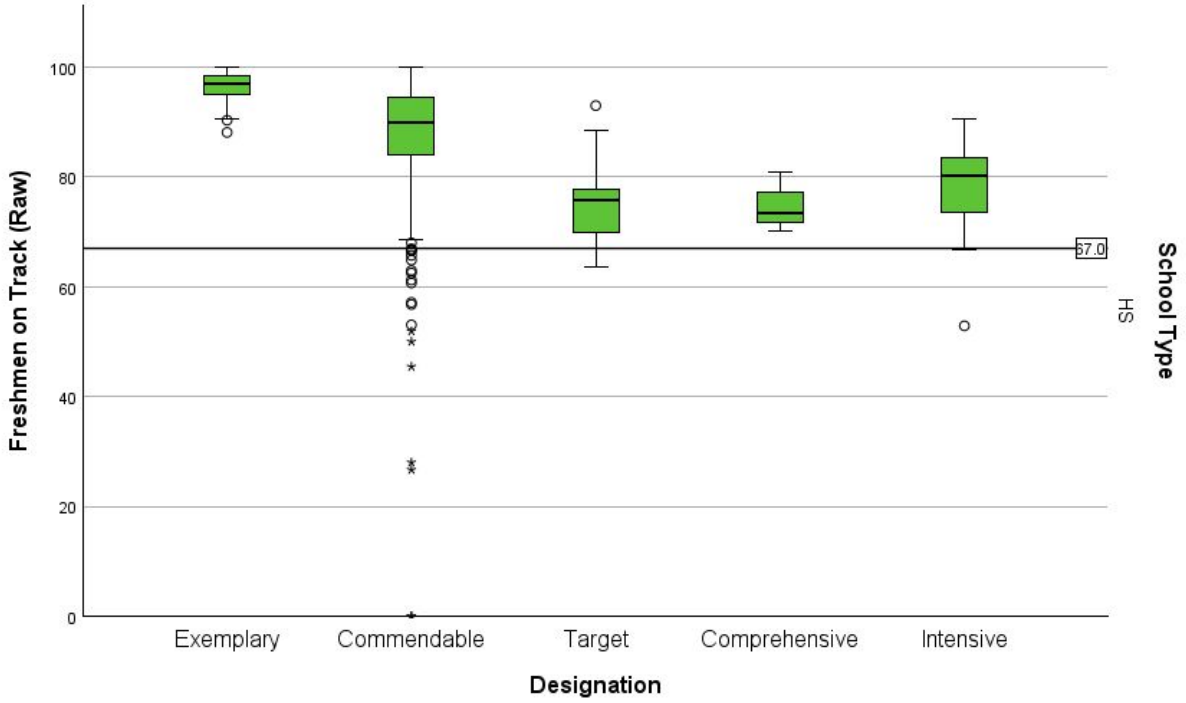


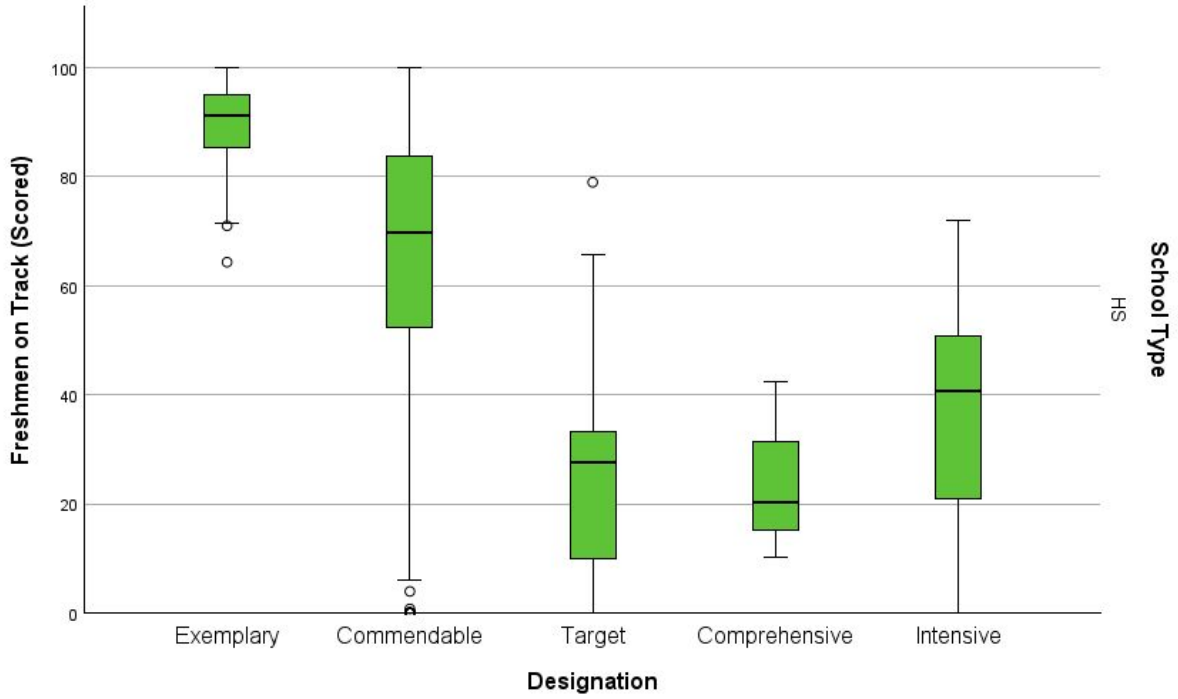


Computation

0% ≤ GradRate ≤ 66.667%	➡	0 Points
66.667% < GradRate < 93%		(GradRate*3.7975 – 253.16456) Points
GradRate ≥ 93%		100 Points

Freshmen on Track
(Raw vs. Scored, HS Only)





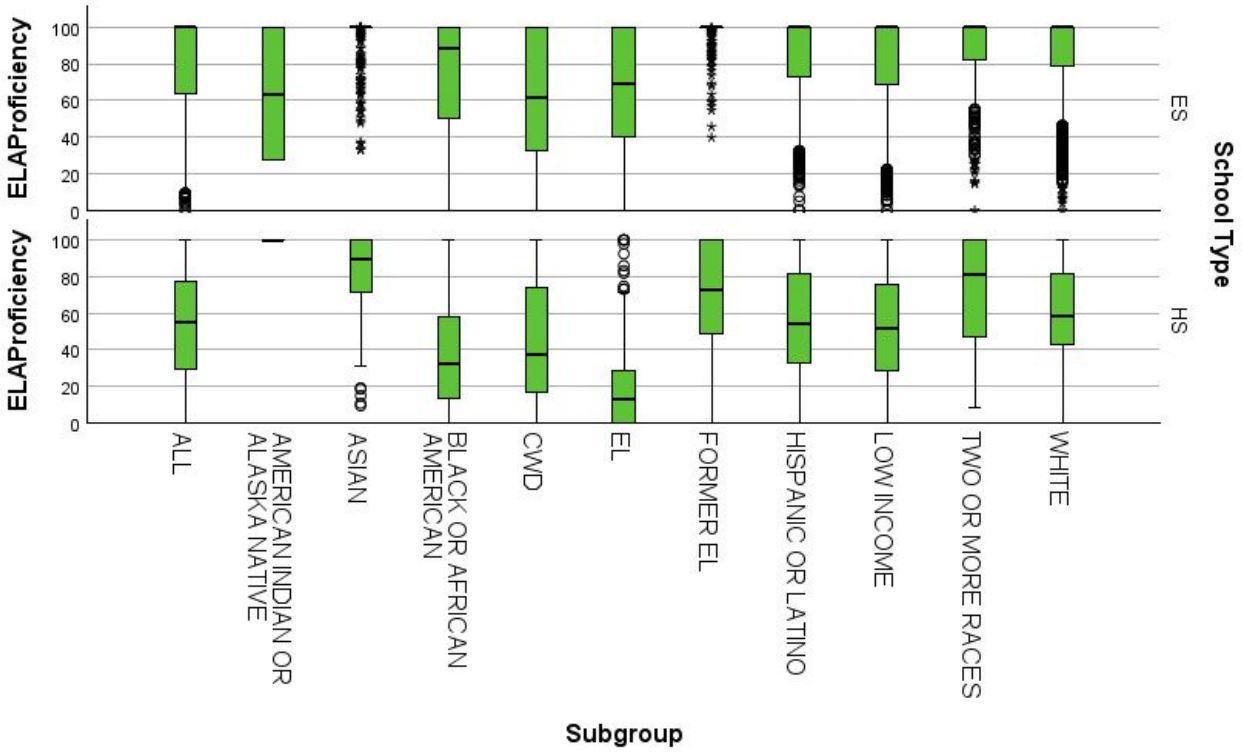
Computation

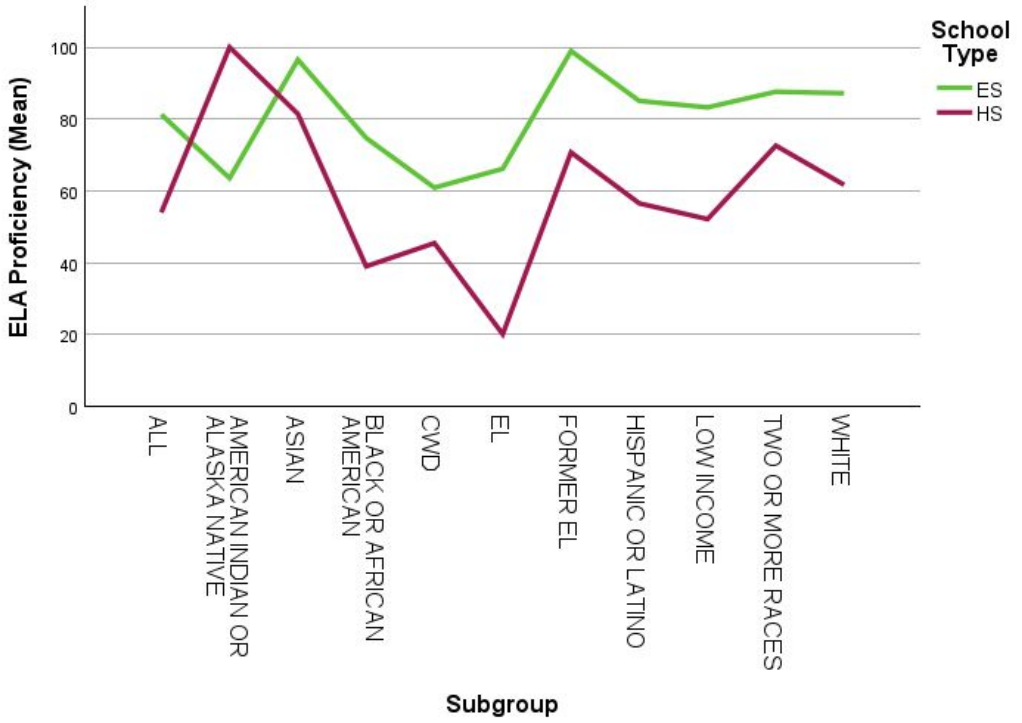
0% ≤ OnTrack ≤ 67%	➡	0 Points
67% < OnTrack < 100%		((OnTrack – 66.6)*3) Points
GradRate ≥ 67%		100 Points

Indicator Distributions

by Subgroup [Scored Values]

ELA Proficiency

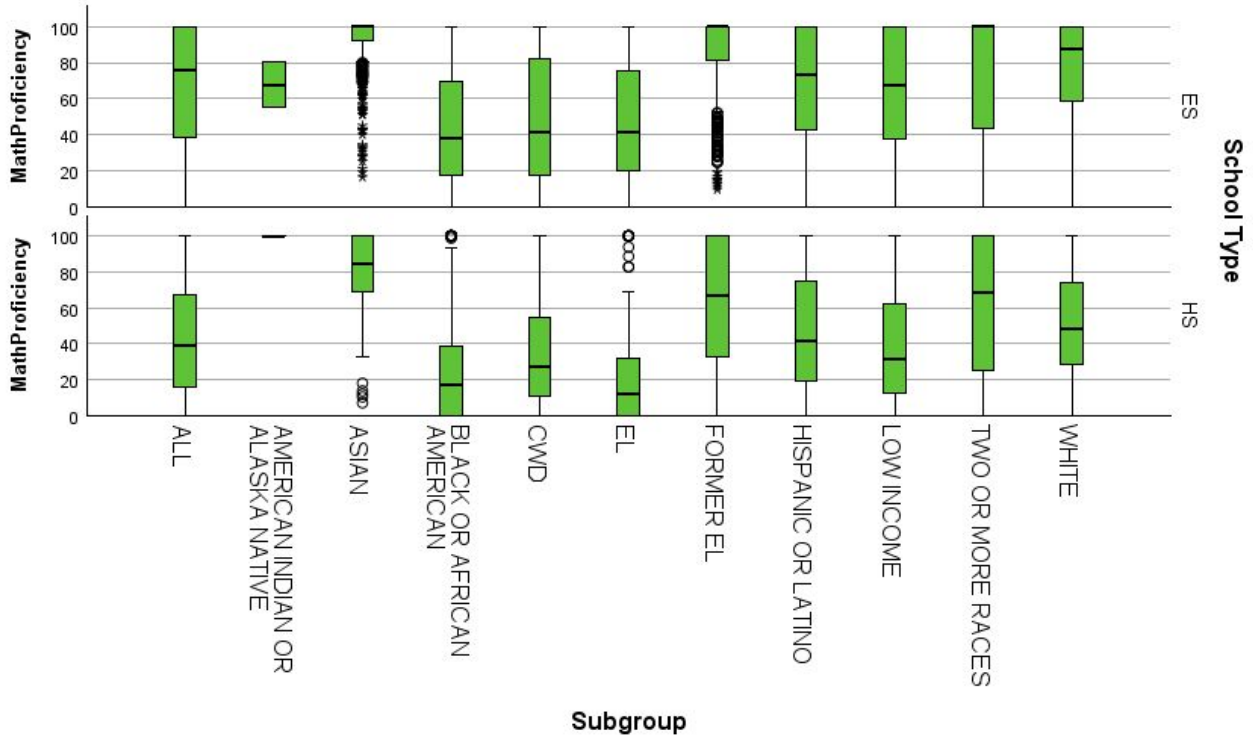


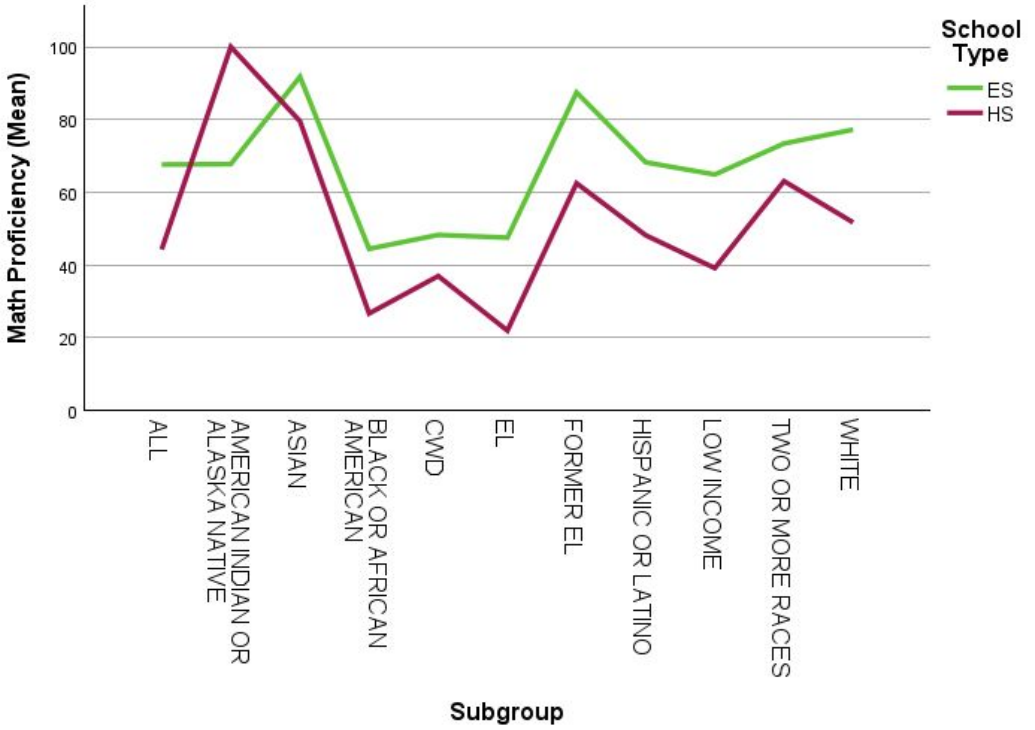


Count

		Subgroup										
		ALL	AMERICAN INDIAN OR ALASKA NATIVE	ASIAN	BLACK OR AFRICAN AMERICAN	CWD	EL	FORMER EL	HISPANIC OR LATINO	LOW INCOME	TWO OR MORE RACES	WHITE
School Type	ES	3056	2	425	1024	2102	1216	751	1529	2671	356	2276
	HS	701	1	94	252	370	207	224	290	561	102	532
Total		3757	3	519	1276	2472	1423	975	1819	3232	458	2808

Math Proficiency

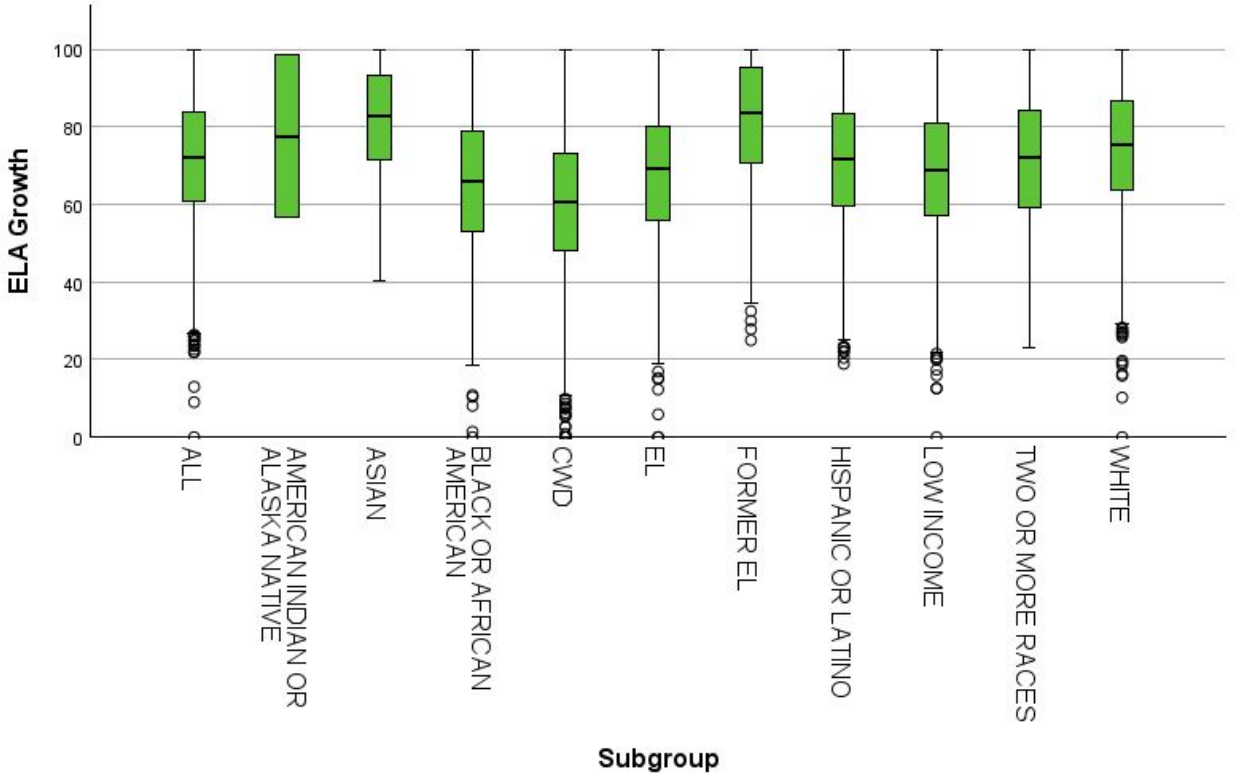


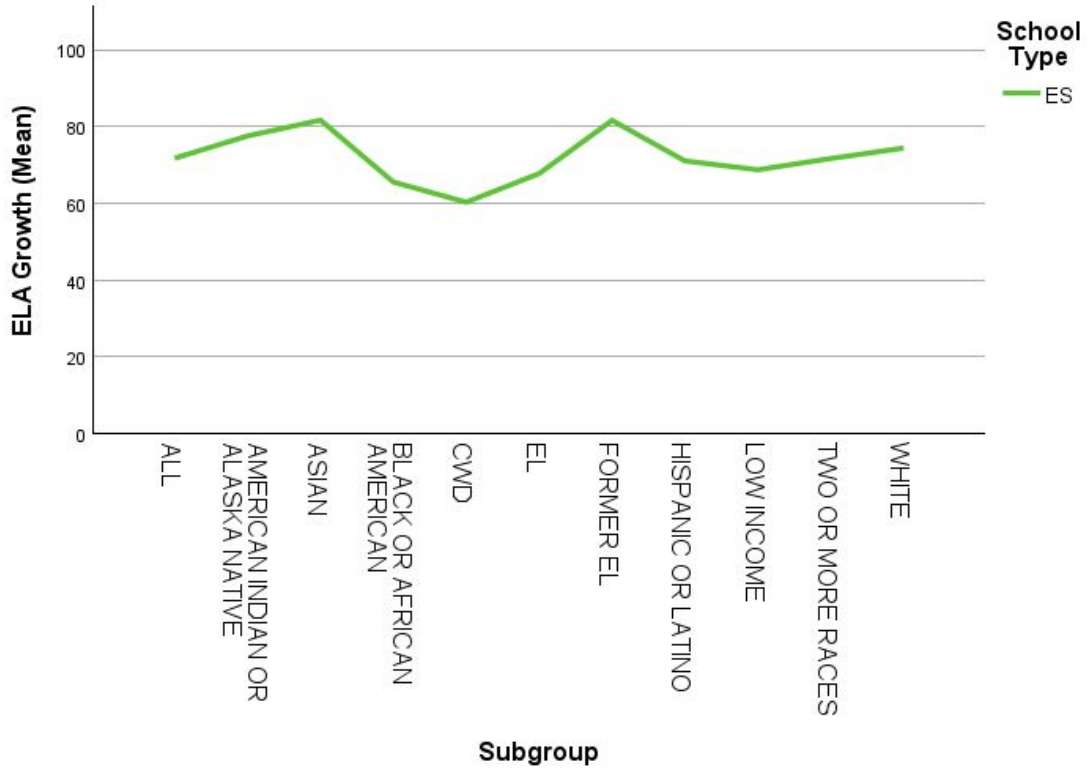


Count

		Subgroup										
		ALL	AMERICAN INDIAN OR ALASKA NATIVE	ASIAN	BLACK OR AFRICAN AMERICAN	CWD	EL	FORMER EL	HISPANIC OR LATINO	LOW INCOME	TWO OR MORE RACES	WHITE
School Type	ES	3056	2	425	1024	2102	1216	751	1529	2671	356	2276
	HS	701	1	94	252	370	207	224	290	561	102	532
Total		3757	3	519	1276	2472	1423	975	1819	3232	458	2808

ELA Growth

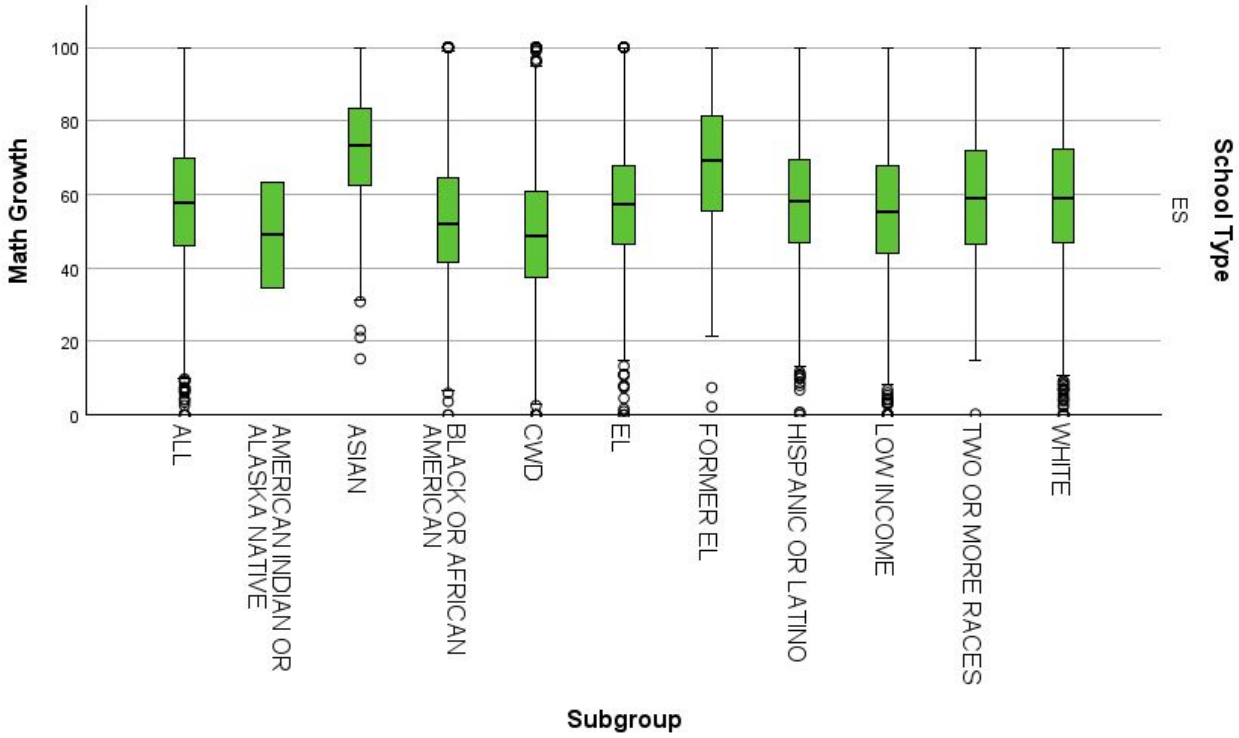


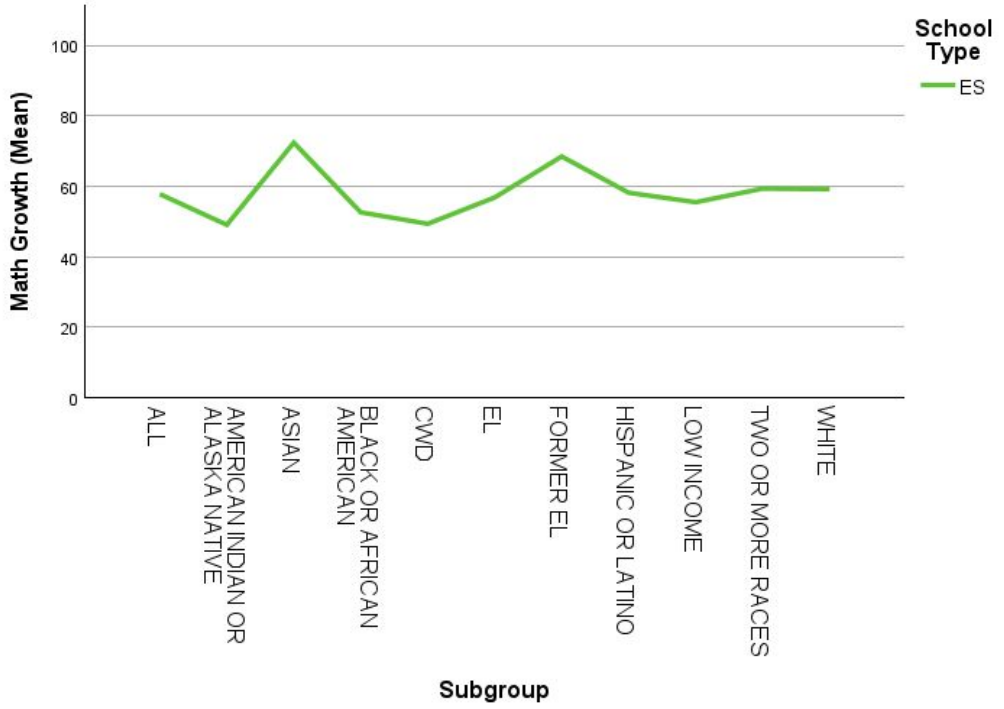


Count

		Subgroup										
		ALL	AMERICAN INDIAN OR ALASKA NATIVE	ASIAN	BLACK OR AFRICAN AMERICAN	CWD	EL	FORMER EL	HISPANIC OR LATINO	LOW INCOME	TWO OR MORE RACES	WHITE
School Type	ES	3056	2	425	1024	2102	1216	751	1529	2671	356	2276
	HS	701	1	94	252	370	207	224	290	561	102	532
Total		3757	3	519	1276	2472	1423	975	1819	3232	458	2808

Math Growth

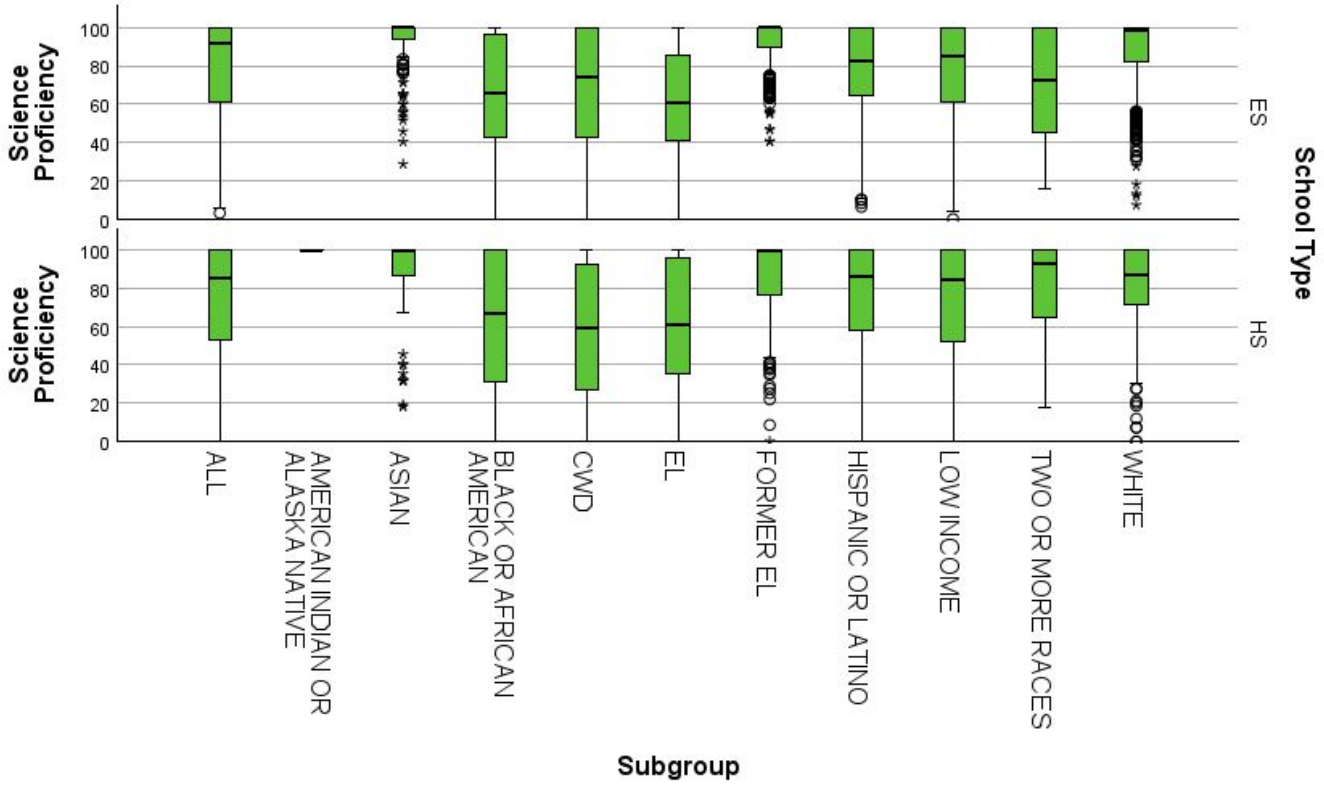


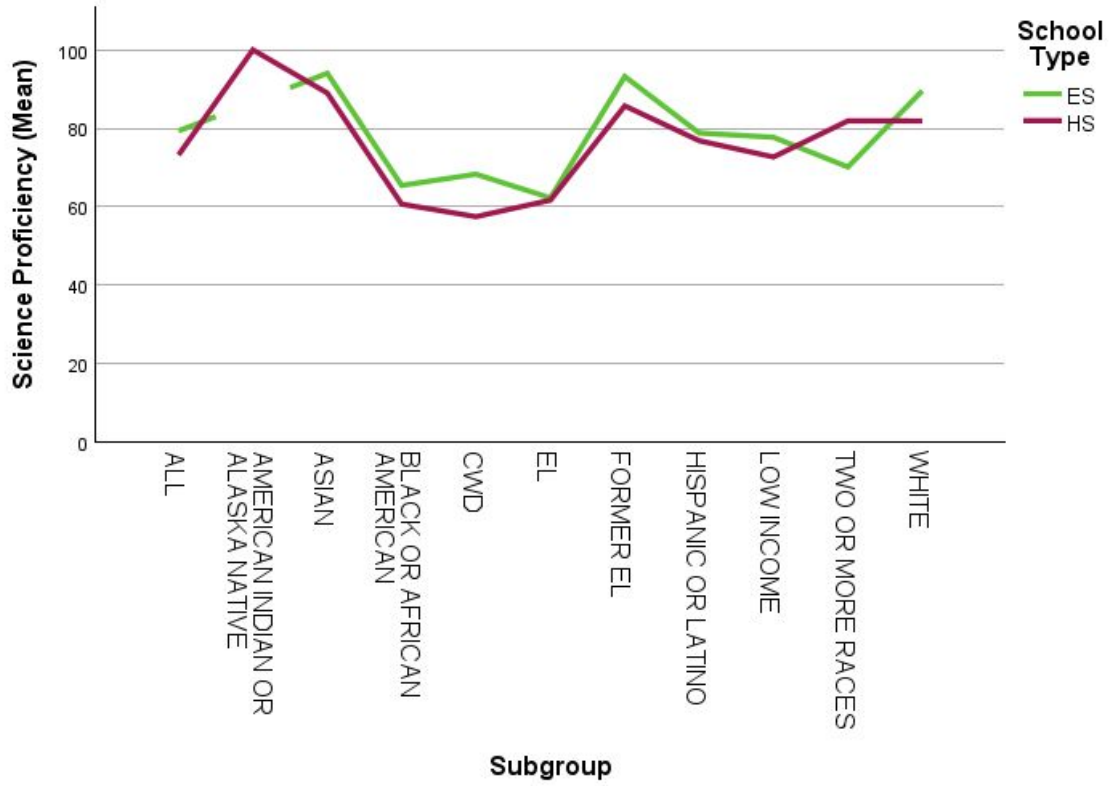


Count

		Subgroup										
		ALL	AMERICAN INDIAN OR ALASKA NATIVE	ASIAN	BLACK OR AFRICAN AMERICAN	CWD	EL	FORMER EL	HISPANIC OR LATINO	LOW INCOME	TWO OR MORE RACES	WHITE
School Type	ES	3056	2	425	1024	2102	1216	751	1529	2671	356	2276
	HS	701	1	94	252	370	207	224	290	561	102	532
Total		3757	3	519	1276	2472	1423	975	1819	3232	458	2808

Science Proficiency

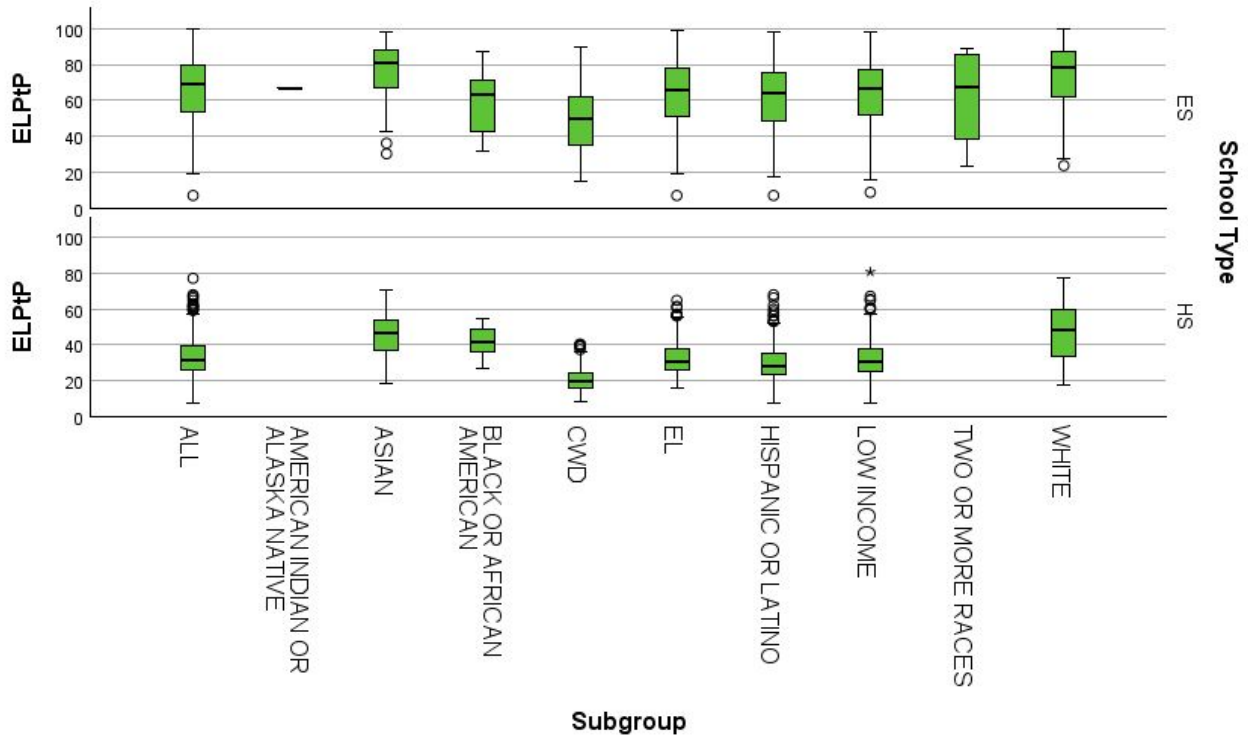


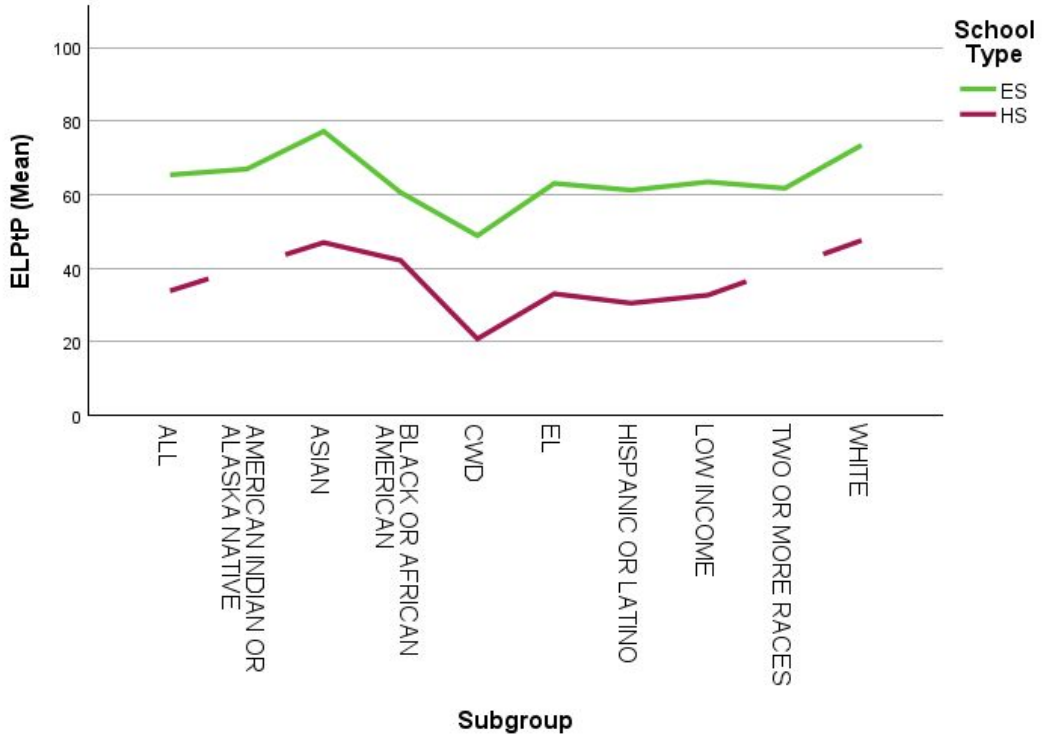


Count

		Subgroup										
		ALL	AMERICAN INDIAN OR ALASKA NATIVE	ASIAN	BLACK OR AFRICAN AMERICAN	CWD	EL	FORMER EL	HISPANIC OR LATINO	LOW INCOME	TWO OR MORE RACES	WHITE
School Type	ES	3056	2	425	1024	2102	1216	751	1529	2671	356	2276
	HS	701	1	94	252	370	207	224	290	561	102	532
Total		3757	3	519	1276	2472	1423	975	1819	3232	458	2808

ELPtP

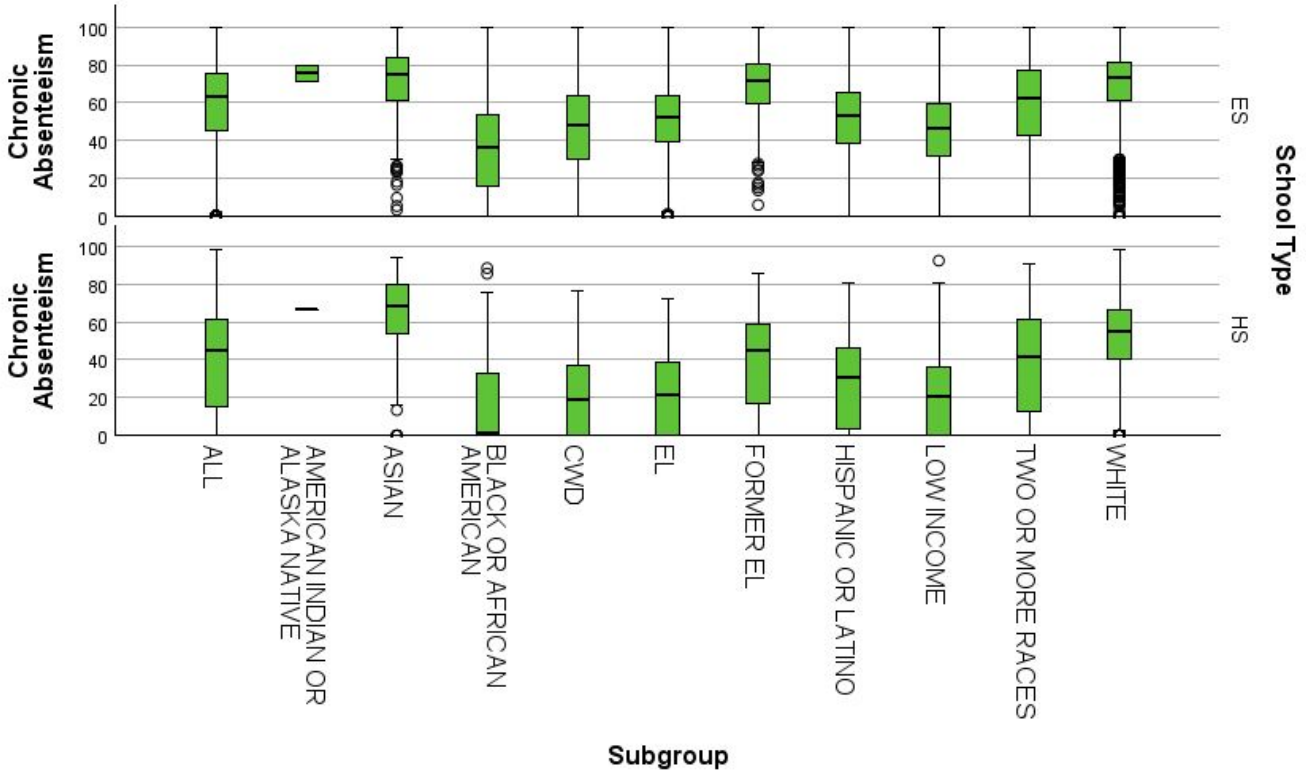


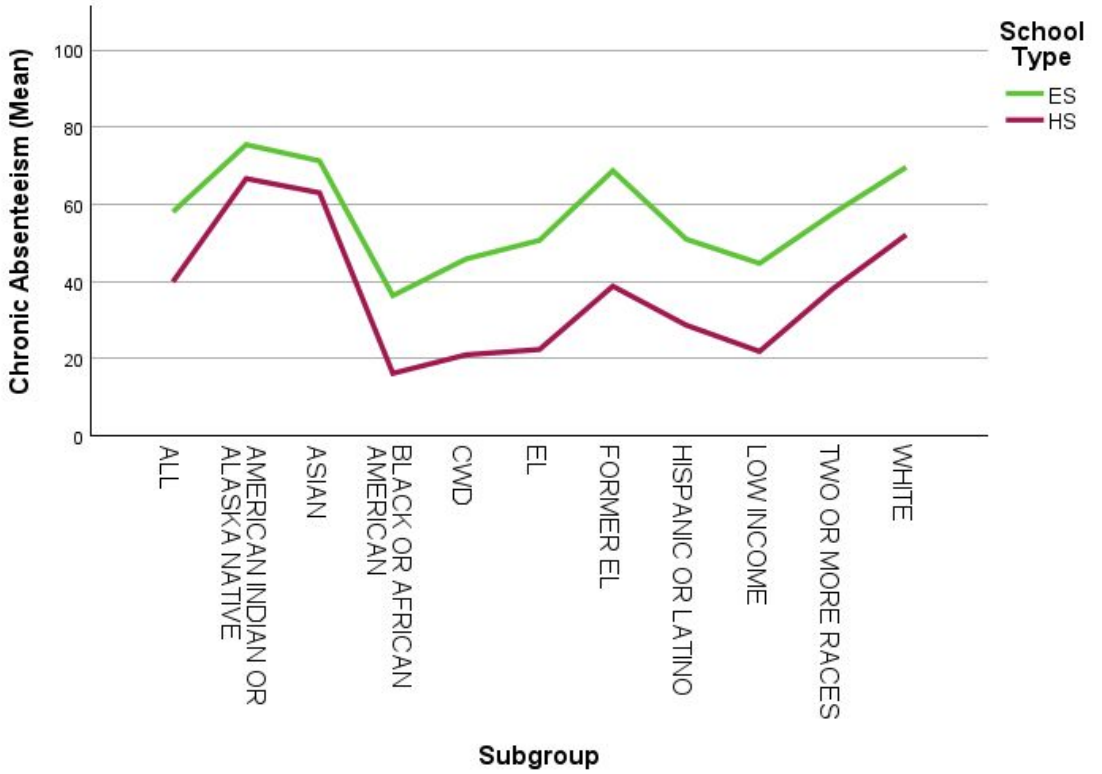


Count

		Subgroup										
		ALL	AMERICAN INDIAN OR ALASKA NATIVE	ASIAN	BLACK OR AFRICAN AMERICAN	CWD	EL	FORMER EL	HISPANIC OR LATINO	LOW INCOME	TWO OR MORE RACES	WHITE
School Type	ES	3056	2	425	1024	2102	1216	751	1529	2671	356	2276
	HS	701	1	94	252	370	207	224	290	561	102	532
Total		3757	3	519	1276	2472	1423	975	1819	3232	458	2808

Chronic Absenteeism

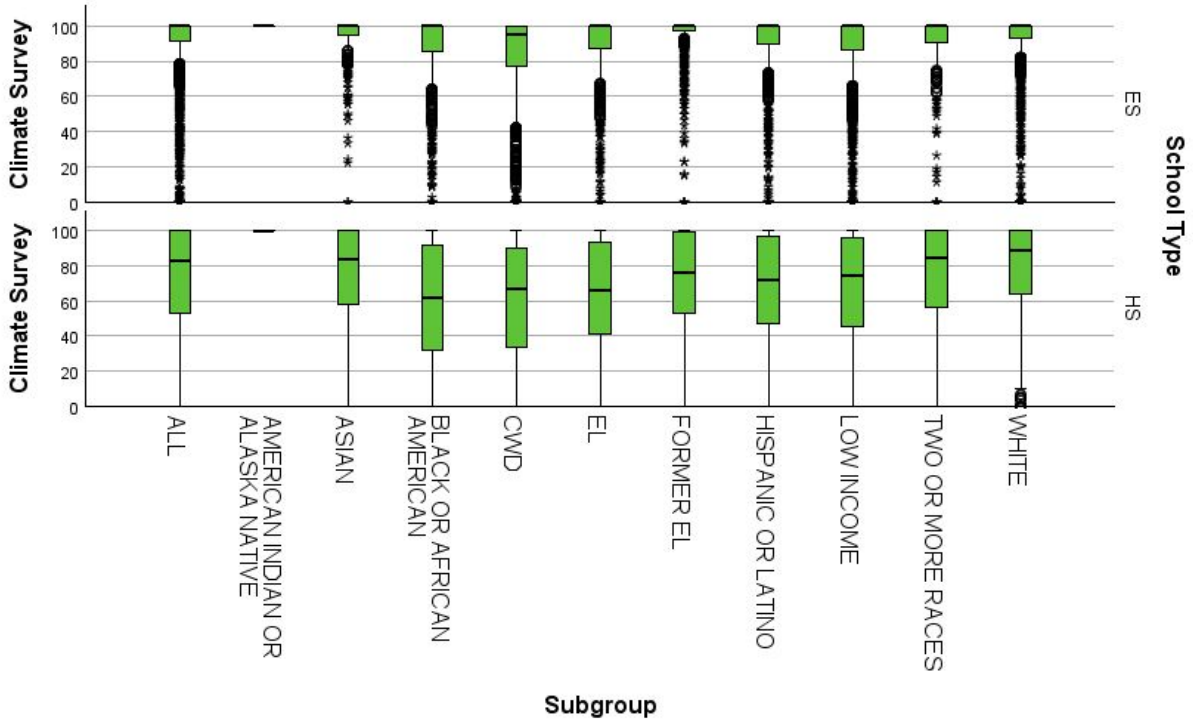


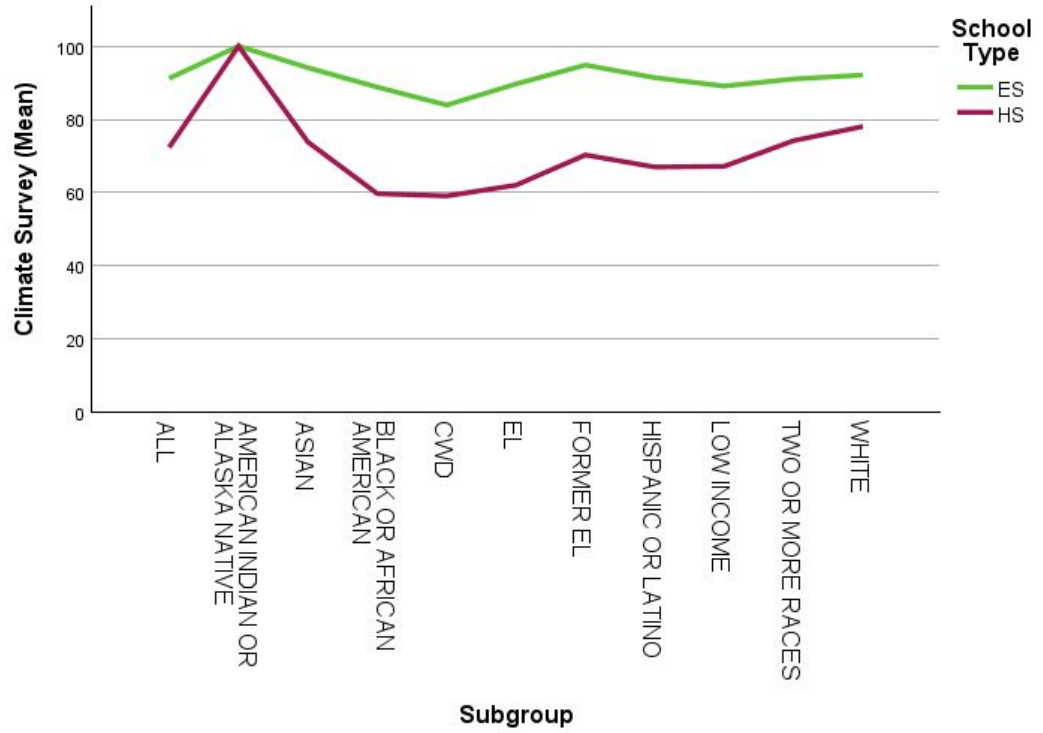


Count

		Subgroup										
		ALL	AMERICAN INDIAN OR ALASKA NATIVE	ASIAN	BLACK OR AFRICAN AMERICAN	CWD	EL	FORMER EL	HISPANIC OR LATINO	LOW INCOME	TWO OR MORE RACES	WHITE
School Type	ES	3056	2	425	1024	2102	1216	751	1529	2671	356	2276
	HS	701	1	94	252	370	207	224	290	561	102	532
Total		3757	3	519	1276	2472	1423	975	1819	3232	458	2808

Climate Survey [Participation]

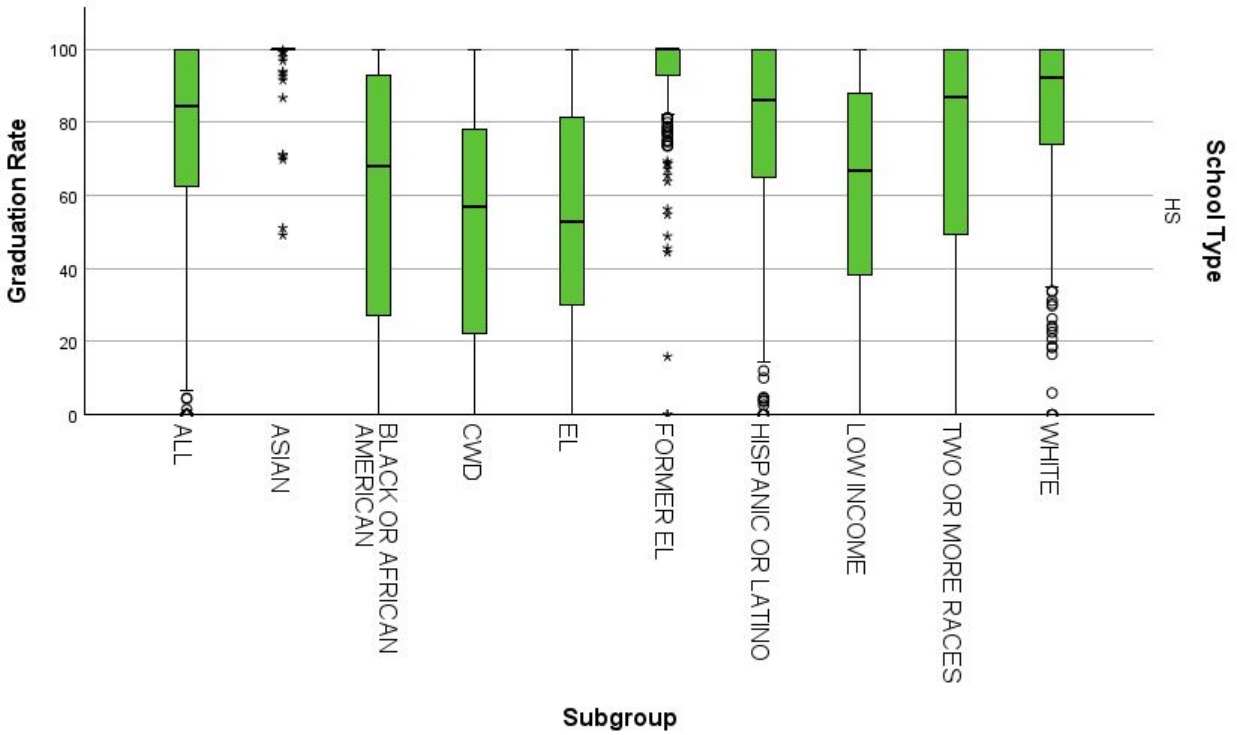


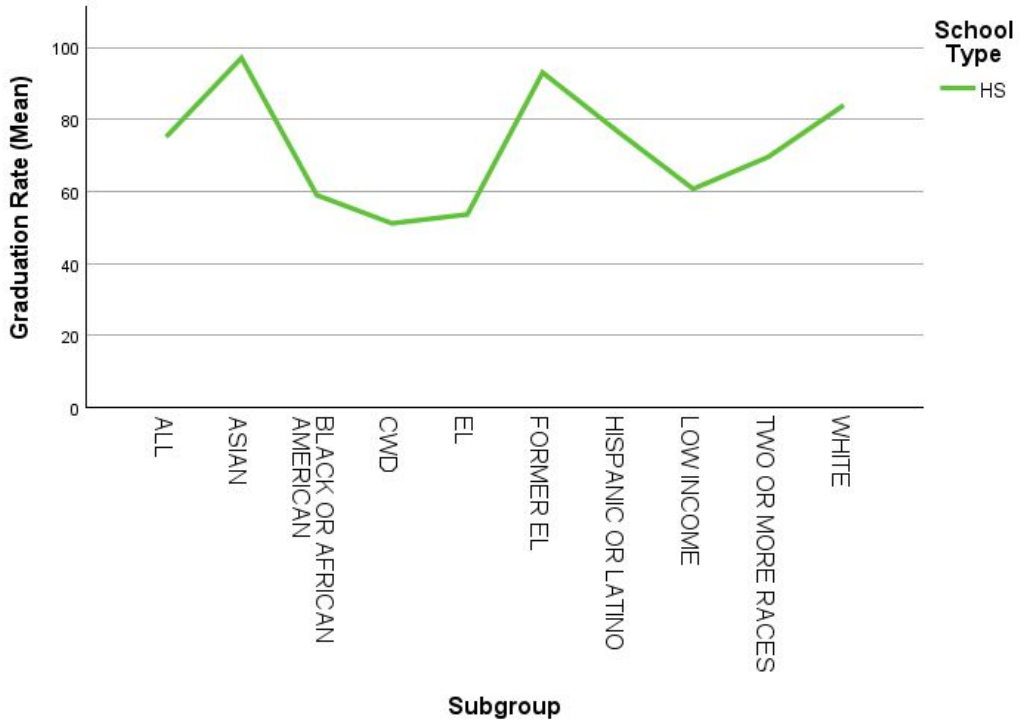


Count

		Subgroup										
		ALL	AMERICAN INDIAN OR ALASKA NATIVE	ASIAN	BLACK OR AFRICAN AMERICAN	CWD	EL	FORMER EL	HISPANIC OR LATINO	LOW INCOME	TWO OR MORE RACES	WHITE
School Type	ES	3056	2	425	1024	2102	1216	751	1529	2671	356	2276
	HS	701	1	94	252	370	207	224	290	561	102	532
Total		3757	3	519	1276	2472	1423	975	1819	3232	458	2808

Graduation Rate

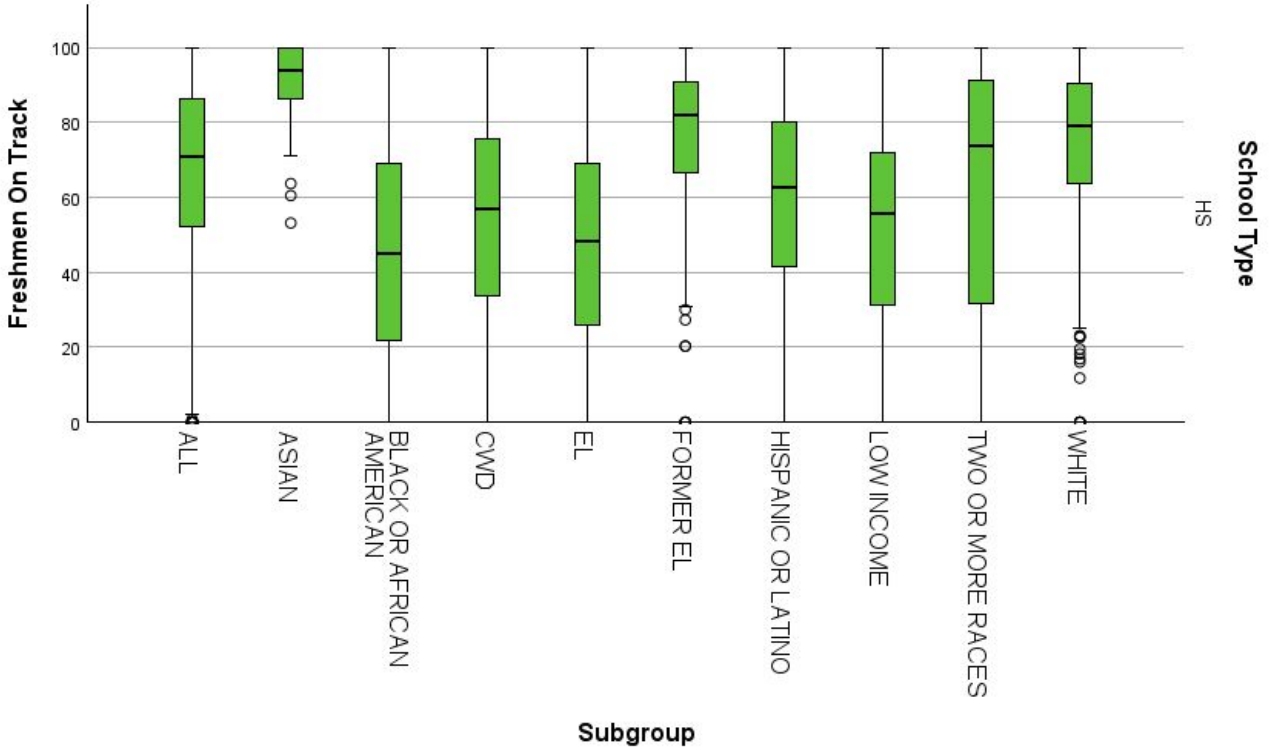


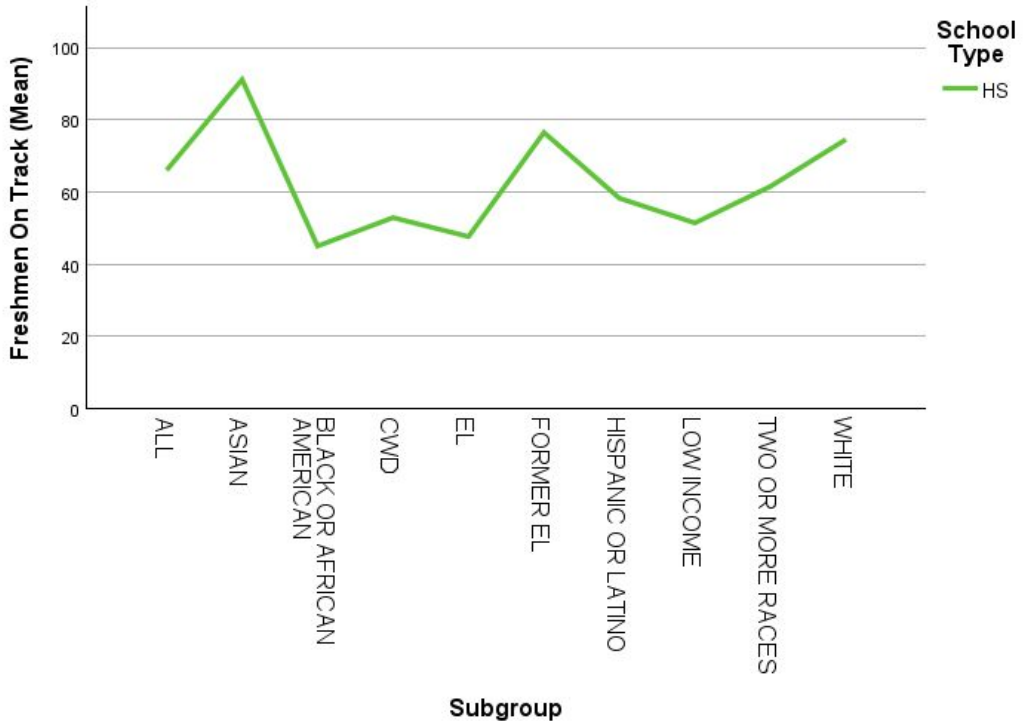


Count

		Subgroup										
		ALL	AMERICAN INDIAN OR ALASKA NATIVE	ASIAN	BLACK OR AFRICAN AMERICAN	CWD	EL	FORMER EL	HISPANIC OR LATINO	LOW INCOME	TWO OR MORE RACES	WHITE
School Type	ES	3056	2	425	1024	2102	1216	751	1529	2671	356	2276
	HS	701	1	94	252	370	207	224	290	561	102	532
Total		3757	3	519	1276	2472	1423	975	1819	3232	458	2808

Freshmen on Track





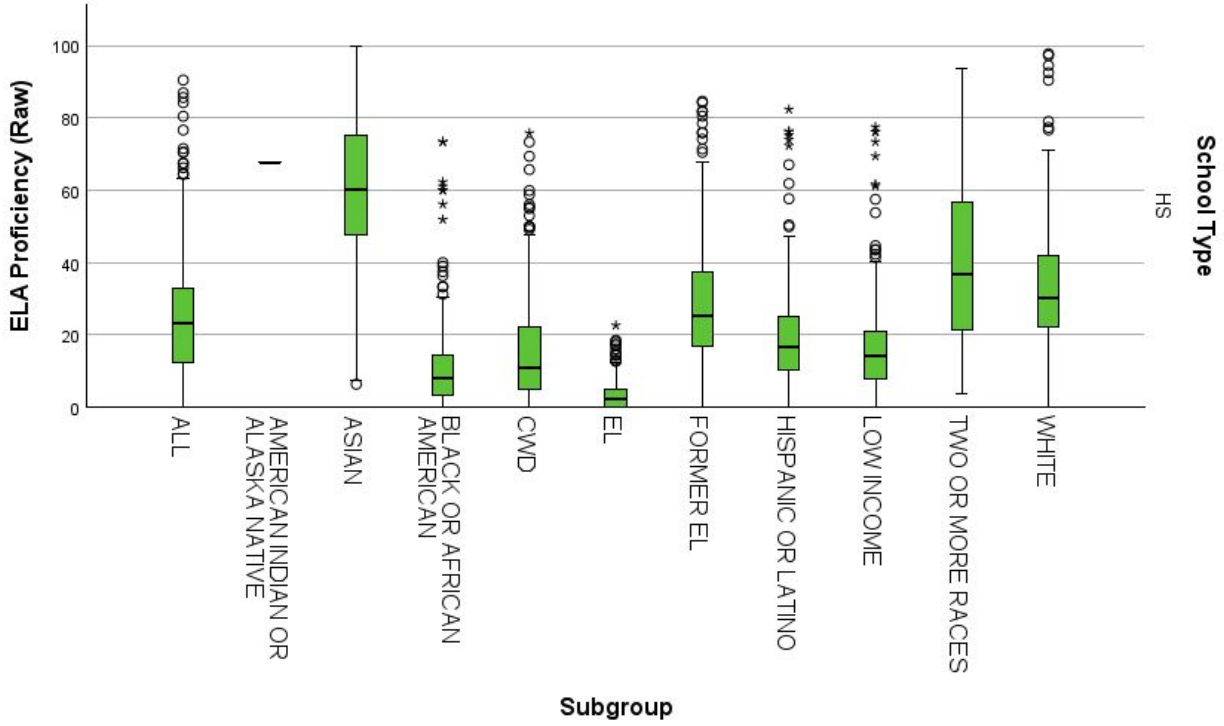
Count

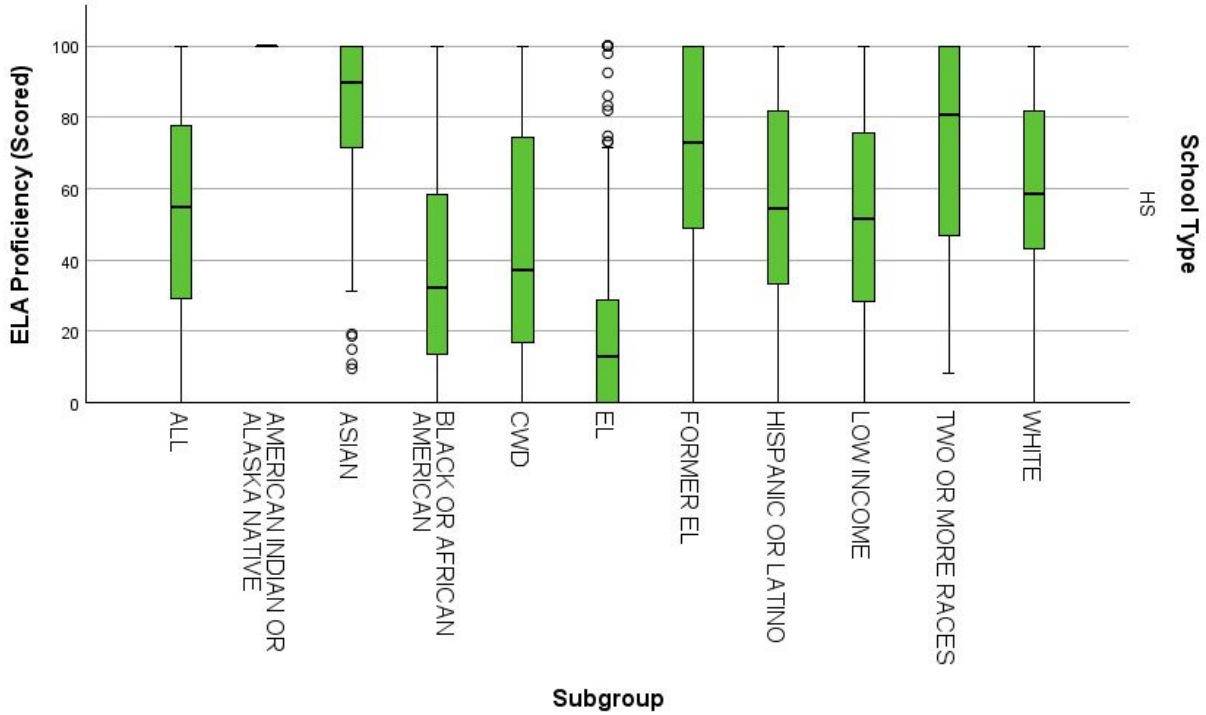
		Subgroup										
		ALL	AMERICAN INDIAN OR ALASKA NATIVE	ASIAN	BLACK OR AFRICAN AMERICAN	CWD	EL	FORMER EL	HISPANIC OR LATINO	LOW INCOME	TWO OR MORE RACES	WHITE
School Type	ES	3056	2	425	1024	2102	1216	751	1529	2671	356	2276
	HS	701	1	94	252	370	207	224	290	561	102	532
Total		3757	3	519	1276	2472	1423	975	1819	3232	458	2808

Indicator Distributions

by Subgroup [Raw vs. Scored]

ELA Proficiency
(Raw vs. Scored, HS Only)

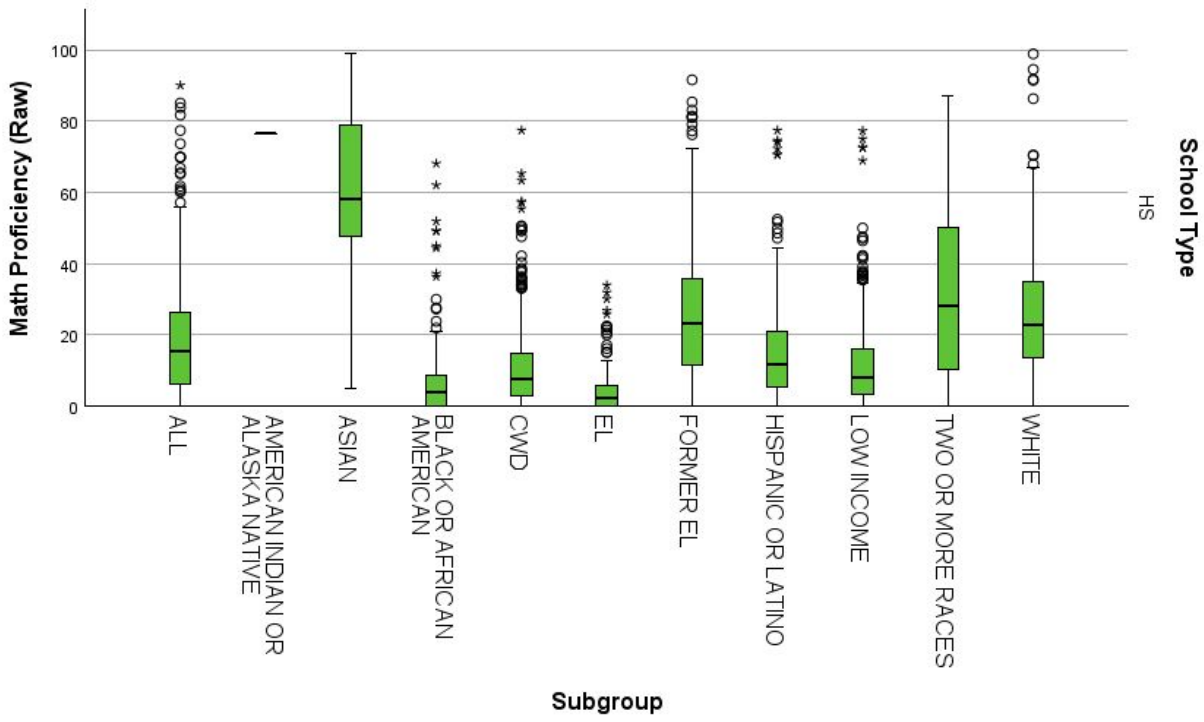


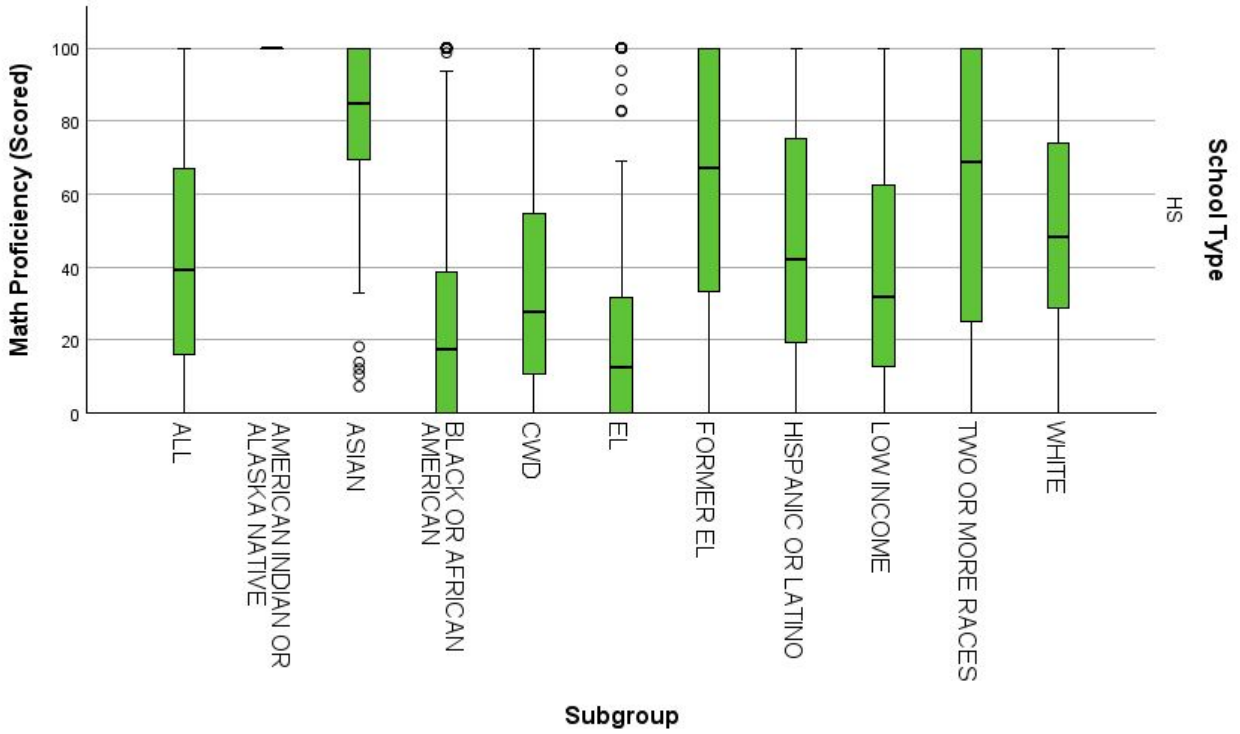


Count

		Subgroup										
		ALL	AMERICAN INDIAN OR ALASKA NATIVE	ASIAN	BLACK OR AFRICAN AMERICAN	CWD	EL	FORMER EL	HISPANIC OR LATINO	LOW INCOME	TWO OR MORE RACES	WHITE
School Type	ES	3056	2	425	1024	2102	1216	751	1529	2671	356	2276
	HS	701	1	94	252	370	207	224	290	561	102	532
Total		3757	3	519	1276	2472	1423	975	1819	3232	458	2808

Math Proficiency
(Raw vs. Scored, HS Only)

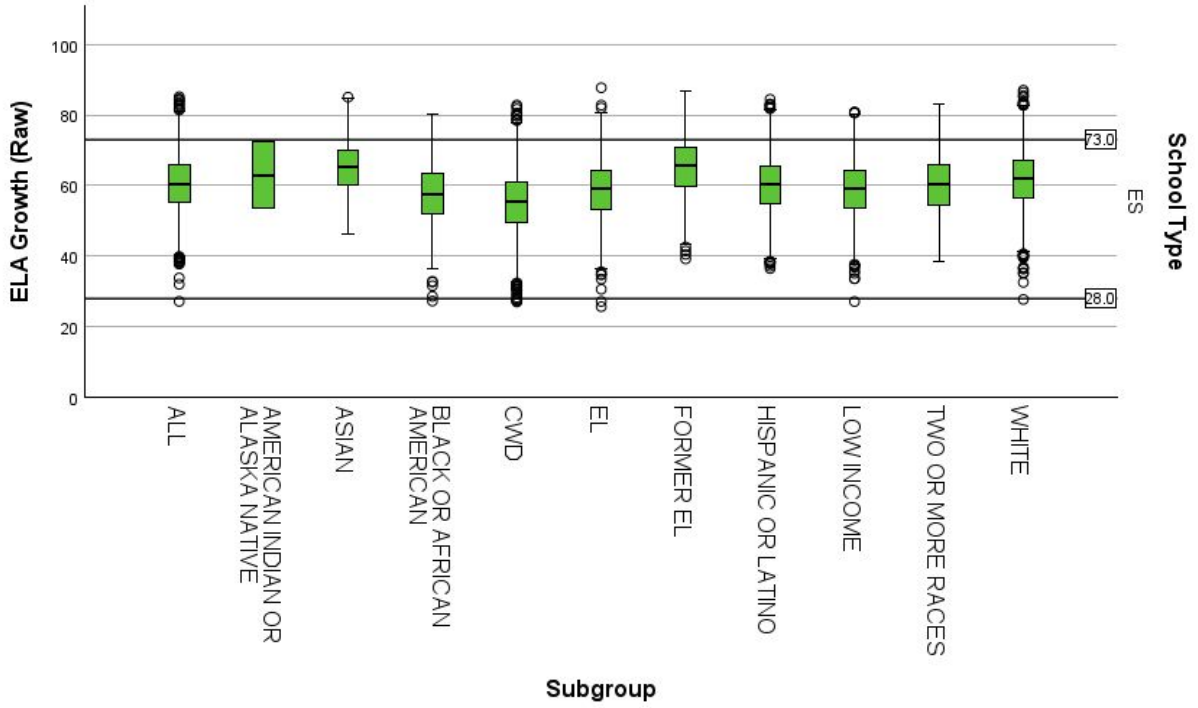


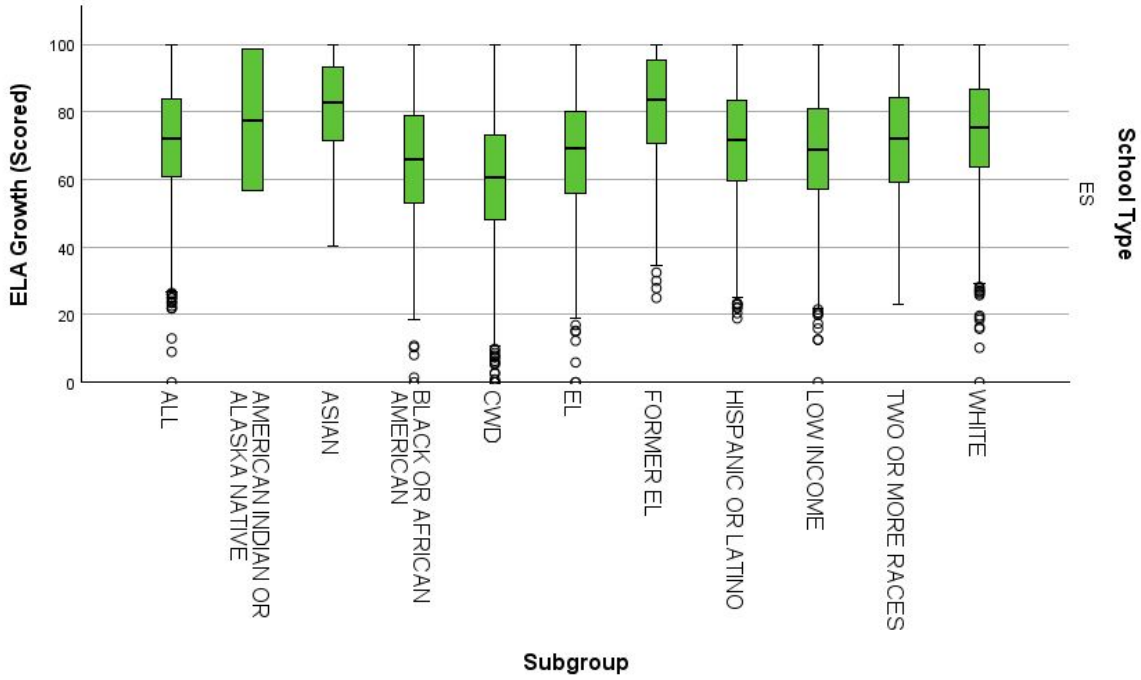


Count

		Subgroup										
		ALL	AMERICAN INDIAN OR ALASKA NATIVE	ASIAN	BLACK OR AFRICAN AMERICAN	CWD	EL	FORMER EL	HISPANIC OR LATINO	LOW INCOME	TWO OR MORE RACES	WHITE
School Type	ES	3056	2	425	1024	2102	1216	751	1529	2671	356	2276
	HS	701	1	94	252	370	207	224	290	561	102	532
Total		3757	3	519	1276	2472	1423	975	1819	3232	458	2808

ELA Growth
(Raw vs. Scored, ES Only)

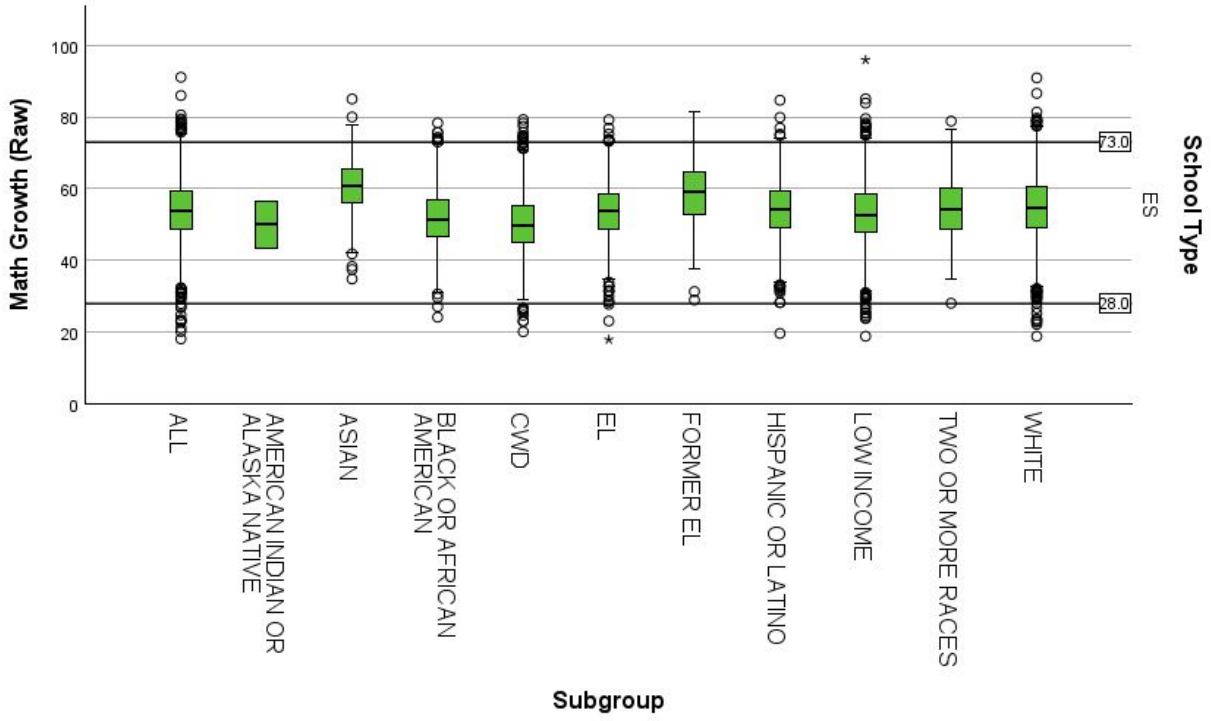


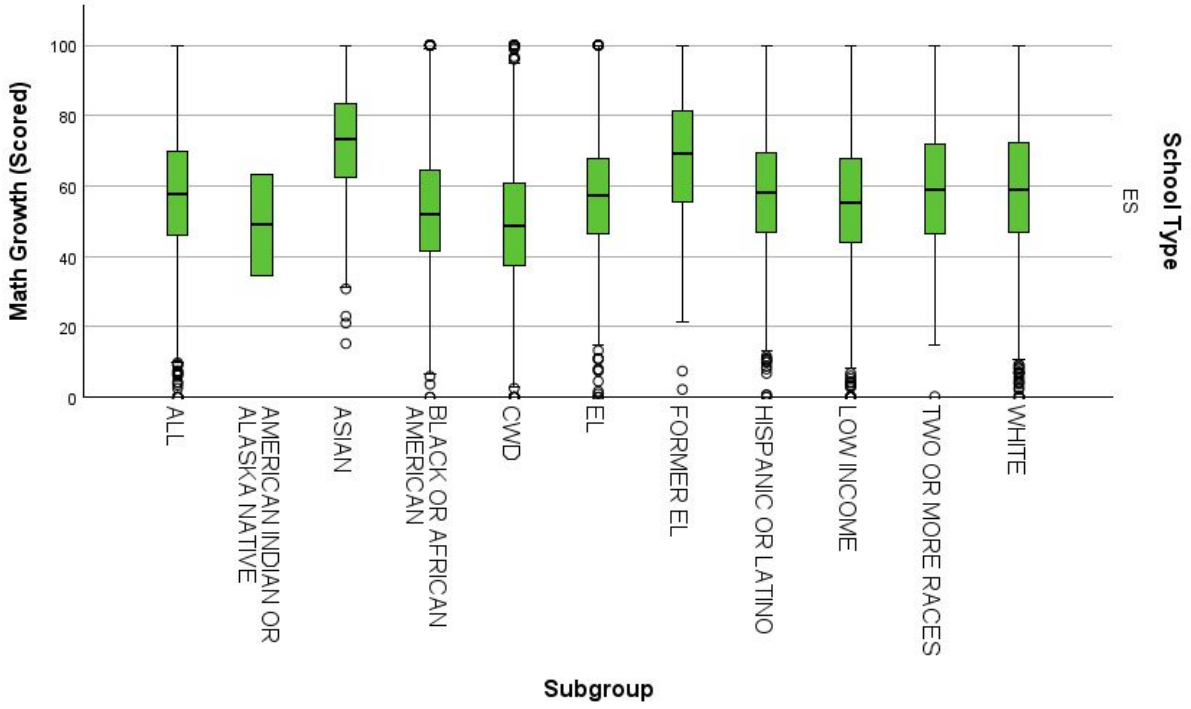


Count

		Subgroup										
		ALL	AMERICAN INDIAN OR ALASKA NATIVE	ASIAN	BLACK OR AFRICAN AMERICAN	CWD	EL	FORMER EL	HISPANIC OR LATINO	LOW INCOME	TWO OR MORE RACES	WHITE
School Type	ES	3056	2	425	1024	2102	1216	751	1529	2671	356	2276
	HS	701	1	94	252	370	207	224	290	561	102	532
Total		3757	3	519	1276	2472	1423	975	1819	3232	458	2808

Math Growth
(Raw vs. Scored, ES Only)

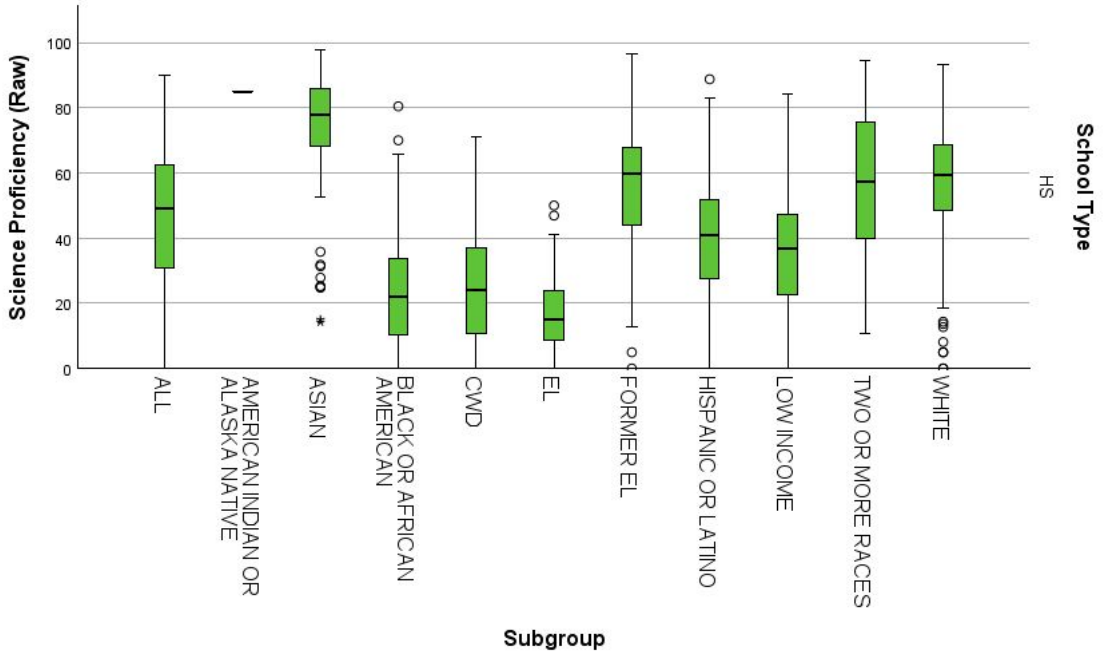


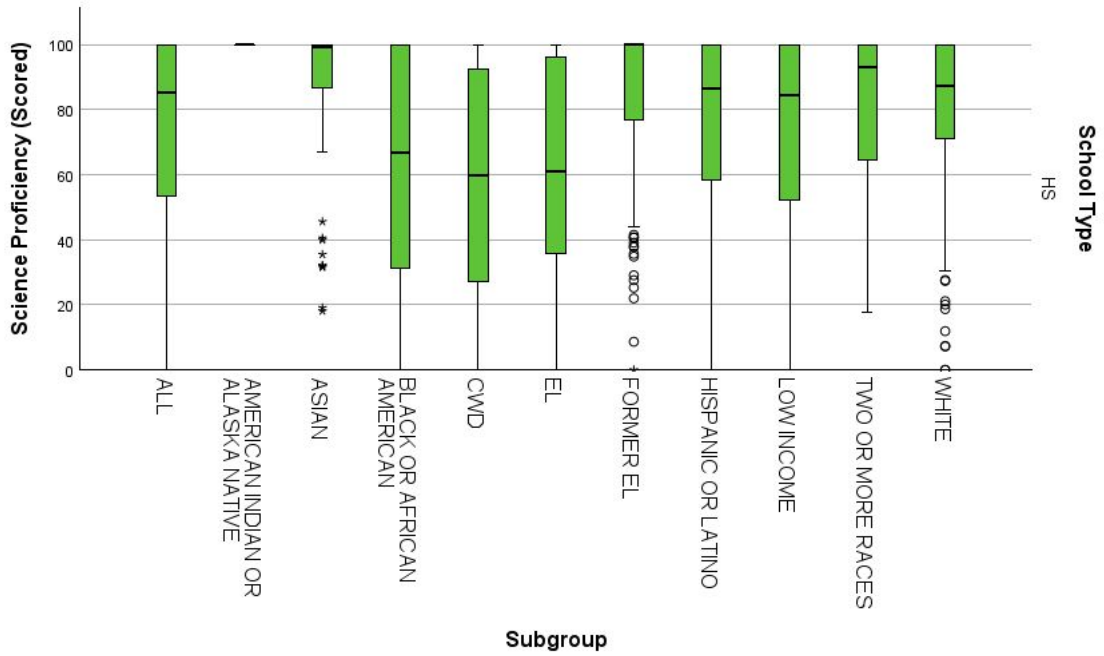


Count

		Subgroup										
		ALL	AMERICAN INDIAN OR ALASKA NATIVE	ASIAN	BLACK OR AFRICAN AMERICAN	CWD	EL	FORMER EL	HISPANIC OR LATINO	LOW INCOME	TWO OR MORE RACES	WHITE
School Type	ES	3056	2	425	1024	2102	1216	751	1529	2671	356	2276
	HS	701	1	94	252	370	207	224	290	561	102	532
Total		3757	3	519	1276	2472	1423	975	1819	3232	458	2808

Science Proficiency
(Raw vs. Scored, HS Only)

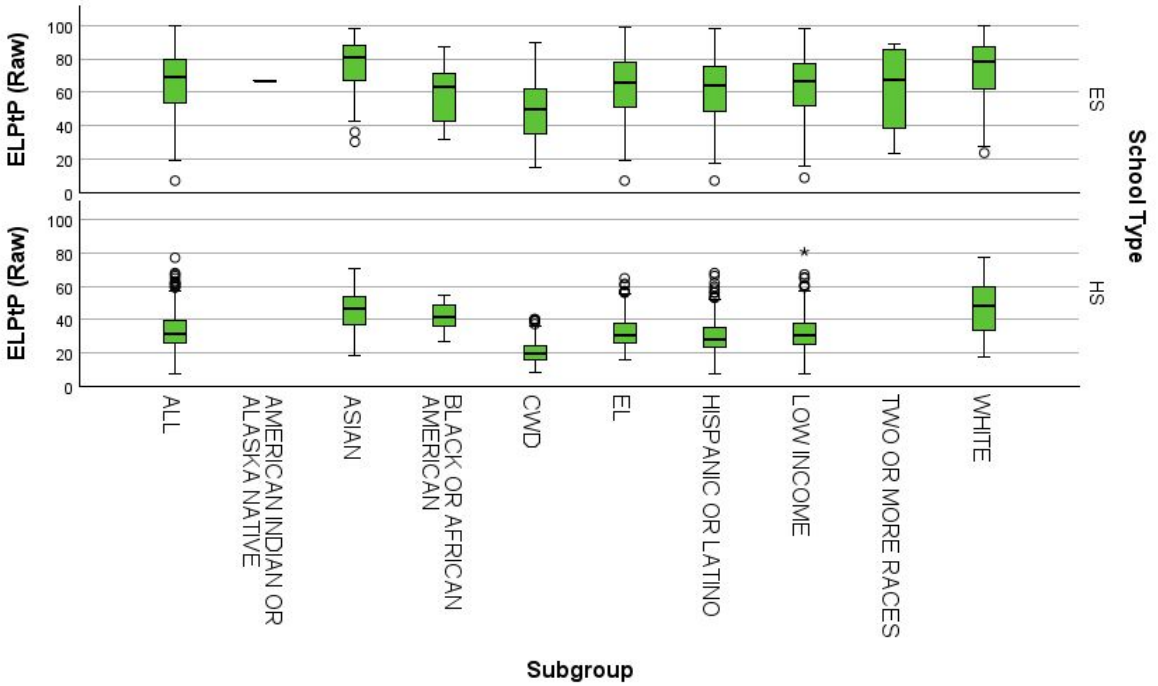


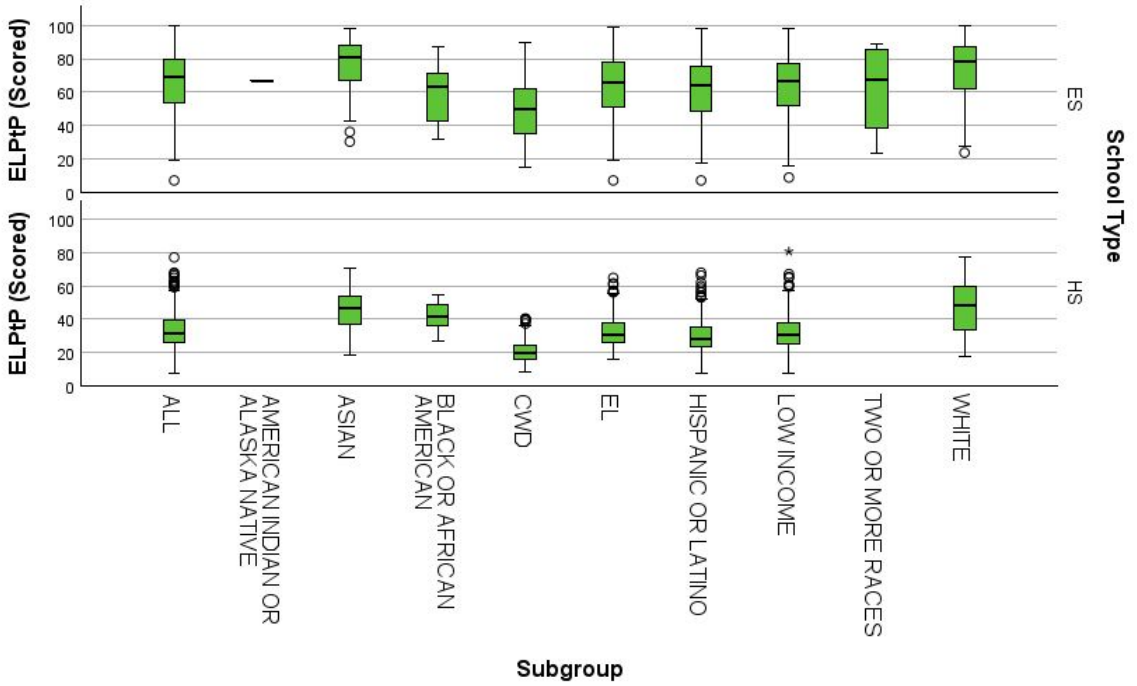


Count

		Subgroup										
		ALL	AMERICAN INDIAN OR ALASKA NATIVE	ASIAN	BLACK OR AFRICAN AMERICAN	CWD	EL	FORMER EL	HISPANIC OR LATINO	LOW INCOME	TWO OR MORE RACES	WHITE
School Type	ES	3056	2	425	1024	2102	1216	751	1529	2671	356	2276
	HS	701	1	94	252	370	207	224	290	561	102	532
Total		3757	3	519	1276	2472	1423	975	1819	3232	458	2808

ELPtP
(Raw vs. Scored)

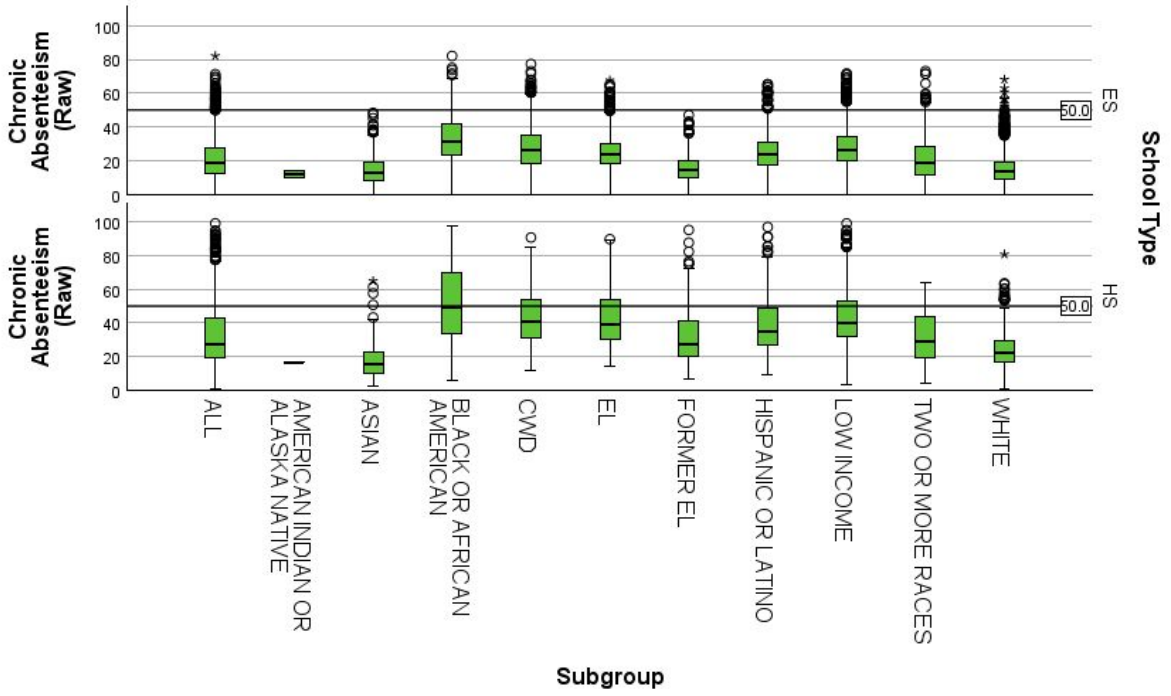


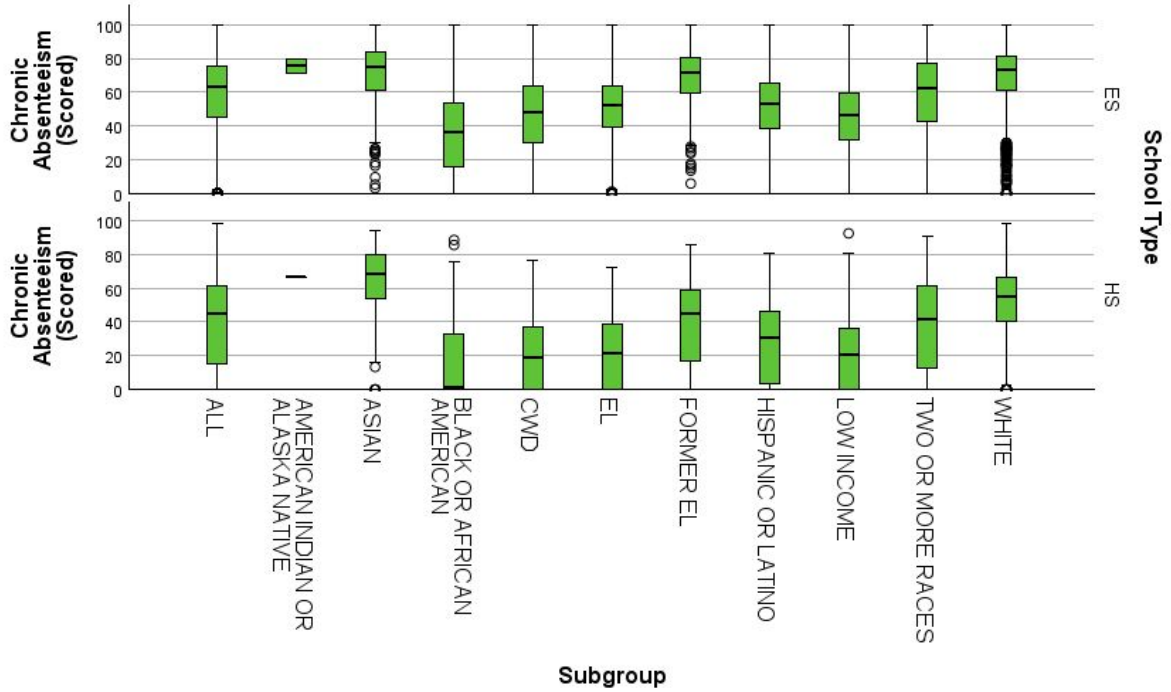


Count

		Subgroup										
		ALL	AMERICAN INDIAN OR ALASKA NATIVE	ASIAN	BLACK OR AFRICAN AMERICAN	CWD	EL	FORMER EL	HISPANIC OR LATINO	LOW INCOME	TWO OR MORE RACES	WHITE
School Type	ES	3056	2	425	1024	2102	1216	751	1529	2671	356	2276
	HS	701	1	94	252	370	207	224	290	561	102	532
Total		3757	3	519	1276	2472	1423	975	1819	3232	458	2808

Chronic Absenteeism
(Raw vs. Scored)

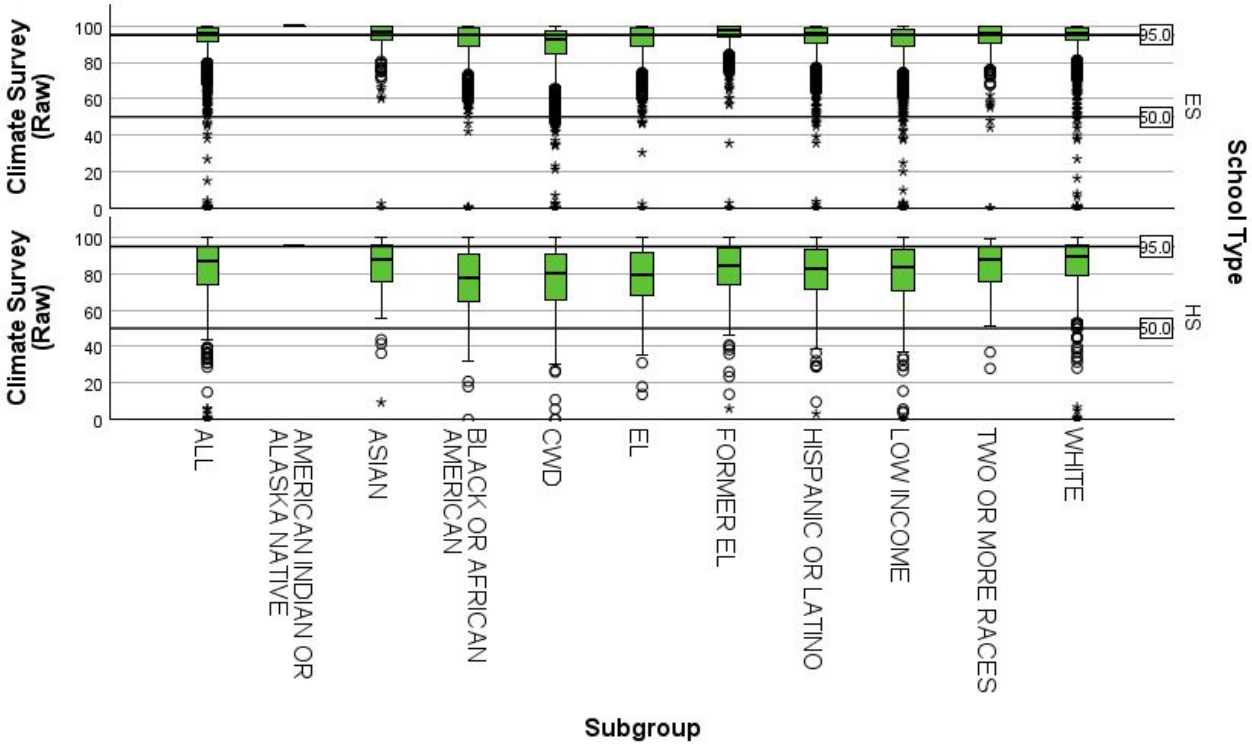


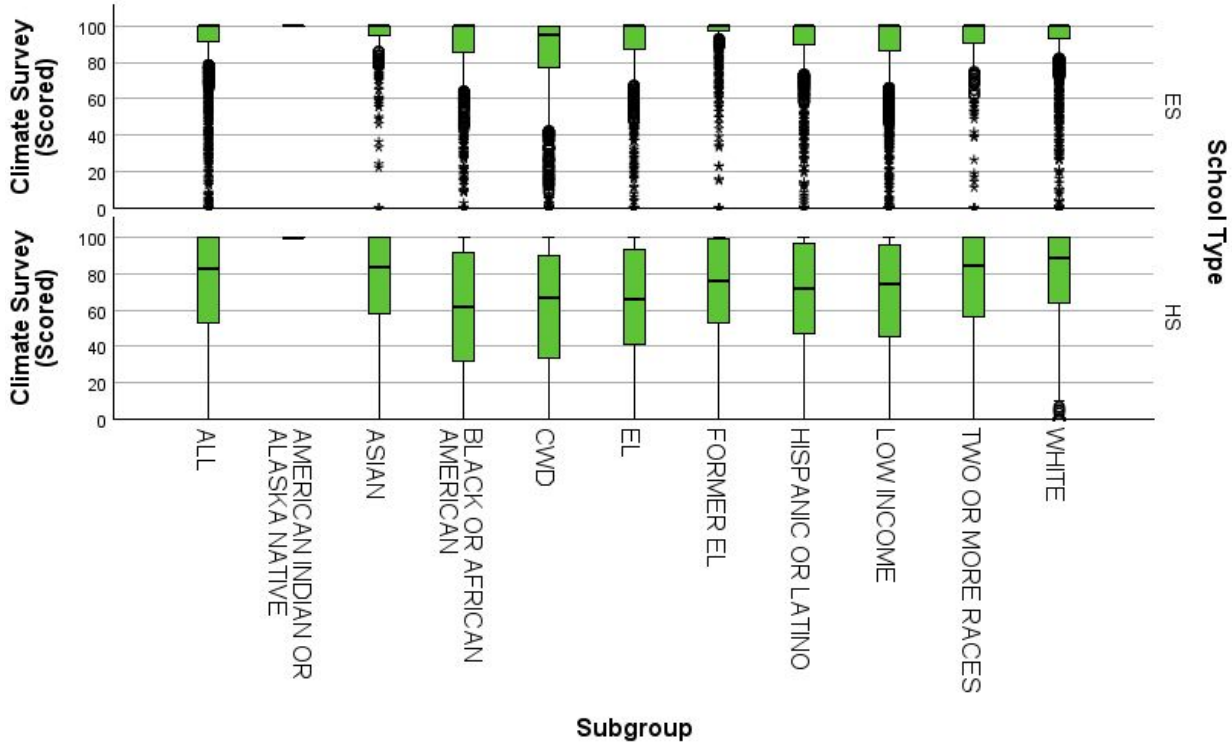


Count

		Subgroup										
		ALL	AMERICAN INDIAN OR ALASKA NATIVE	ASIAN	BLACK OR AFRICAN AMERICAN	CWD	EL	FORMER EL	HISPANIC OR LATINO	LOW INCOME	TWO OR MORE RACES	WHITE
School Type	ES	3056	2	425	1024	2102	1216	751	1529	2671	356	2276
	HS	701	1	94	252	370	207	224	290	561	102	532
Total		3757	3	519	1276	2472	1423	975	1819	3232	458	2808

Climate Survey [Participation]
(Raw vs. Scored)

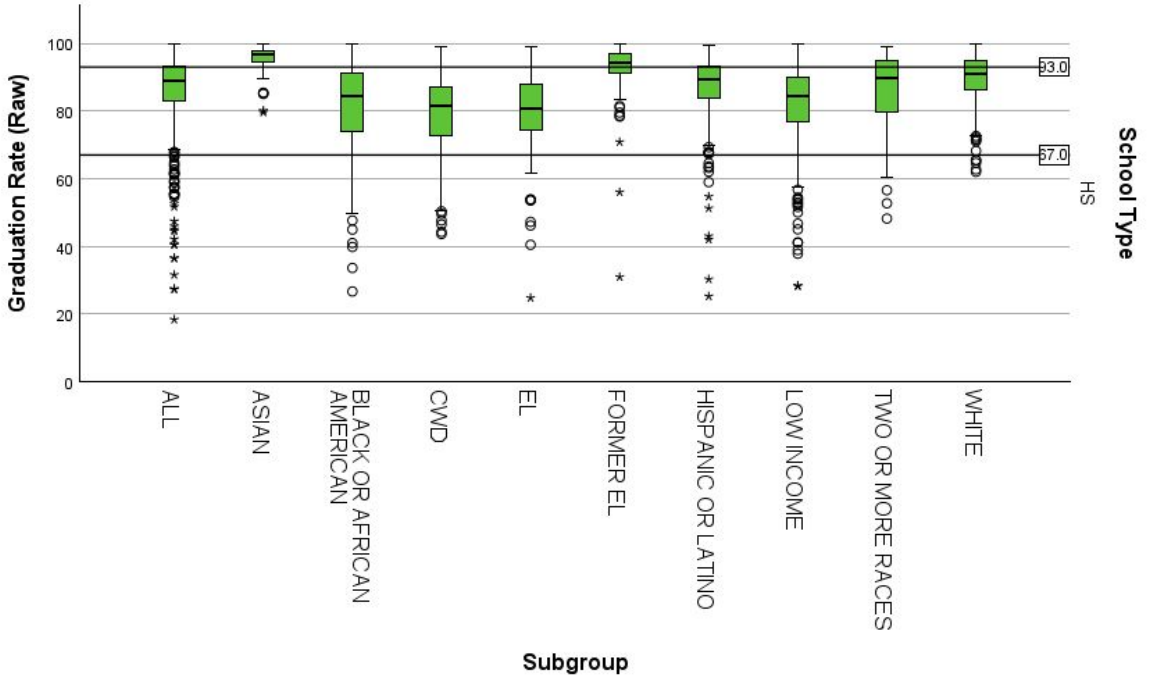


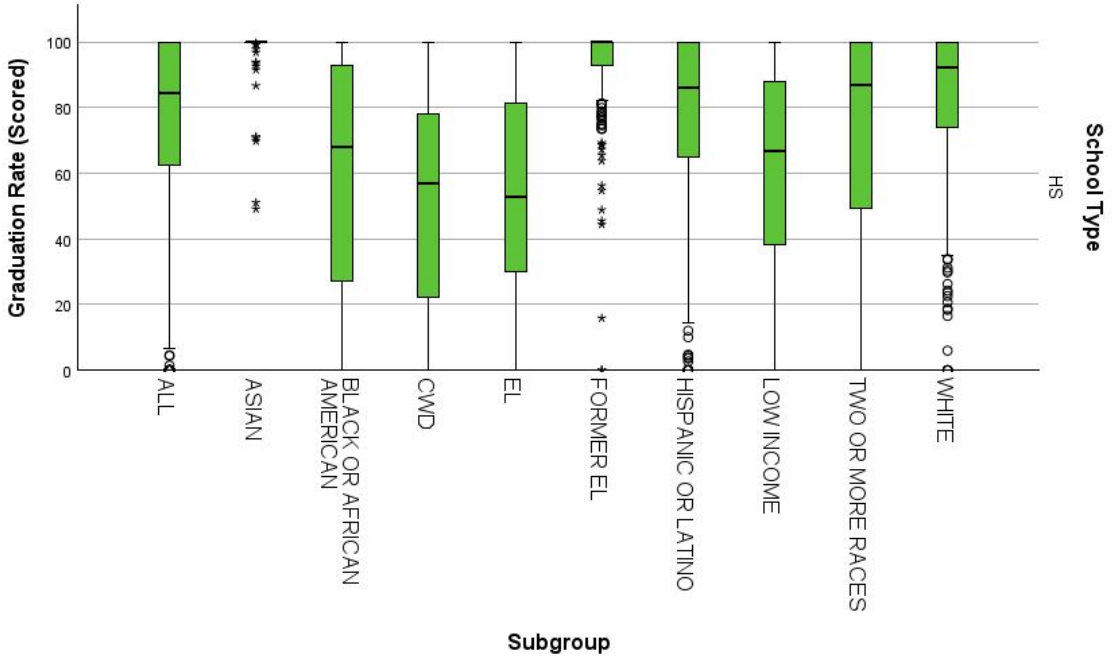


Count

		Subgroup										
		ALL	AMERICAN INDIAN OR ALASKA NATIVE	ASIAN	BLACK OR AFRICAN AMERICAN	CWD	EL	FORMER EL	HISPANIC OR LATINO	LOW INCOME	TWO OR MORE RACES	WHITE
School Type	ES	3056	2	425	1024	2102	1216	751	1529	2671	356	2276
	HS	701	1	94	252	370	207	224	290	561	102	532
Total		3757	3	519	1276	2472	1423	975	1819	3232	458	2808

Graduation Rate
(Raw vs. Scored, HS Only)

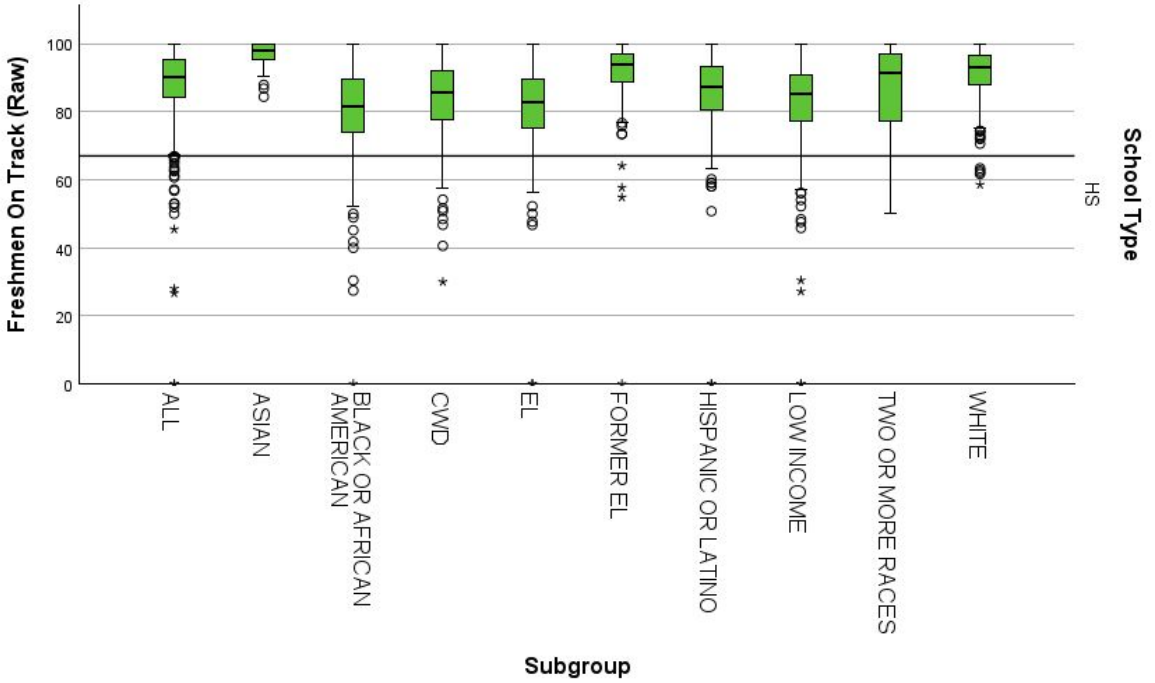


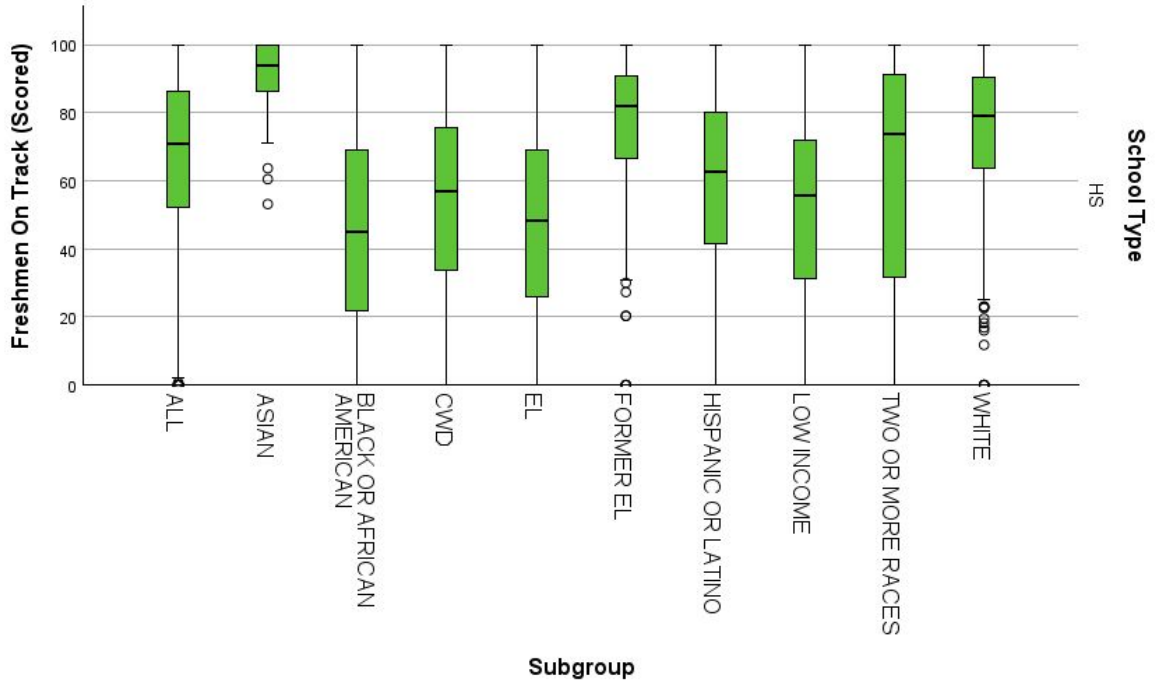


Count

		Subgroup										
		ALL	AMERICAN INDIAN OR ALASKA NATIVE	ASIAN	BLACK OR AFRICAN AMERICAN	CWD	EL	FORMER EL	HISPANIC OR LATINO	LOW INCOME	TWO OR MORE RACES	WHITE
School Type	ES	3056	2	425	1024	2102	1216	751	1529	2671	356	2276
	HS	701	1	94	252	370	207	224	290	561	102	532
Total		3757	3	519	1276	2472	1423	975	1819	3232	458	2808

Freshmen on Track
(Raw vs. Scored, HS Only)





Count

		Subgroup										
		ALL	AMERICAN INDIAN OR ALASKA NATIVE	ASIAN	BLACK OR AFRICAN AMERICAN	CWD	EL	FORMER EL	HISPANIC OR LATINO	LOW INCOME	TWO OR MORE RACES	WHITE
School Type	ES	3056	2	425	1024	2102	1216	751	1529	2671	356	2276
	HS	701	1	94	252	370	207	224	290	561	102	532
Total		3757	3	519	1276	2472	1423	975	1819	3232	458	2808

Indicator Relationships & Weights

Analyses

Goals

- Determine the indicator missingness patterns in the data
- Evaluate the relationship between these patterns and index score distributions
- Evaluate the bivariate relationships amongst indicators as well as index score via correlations
- Compare the policy weights with estimated semi-partial correlations to inspect impact of multicollinearity

Notes

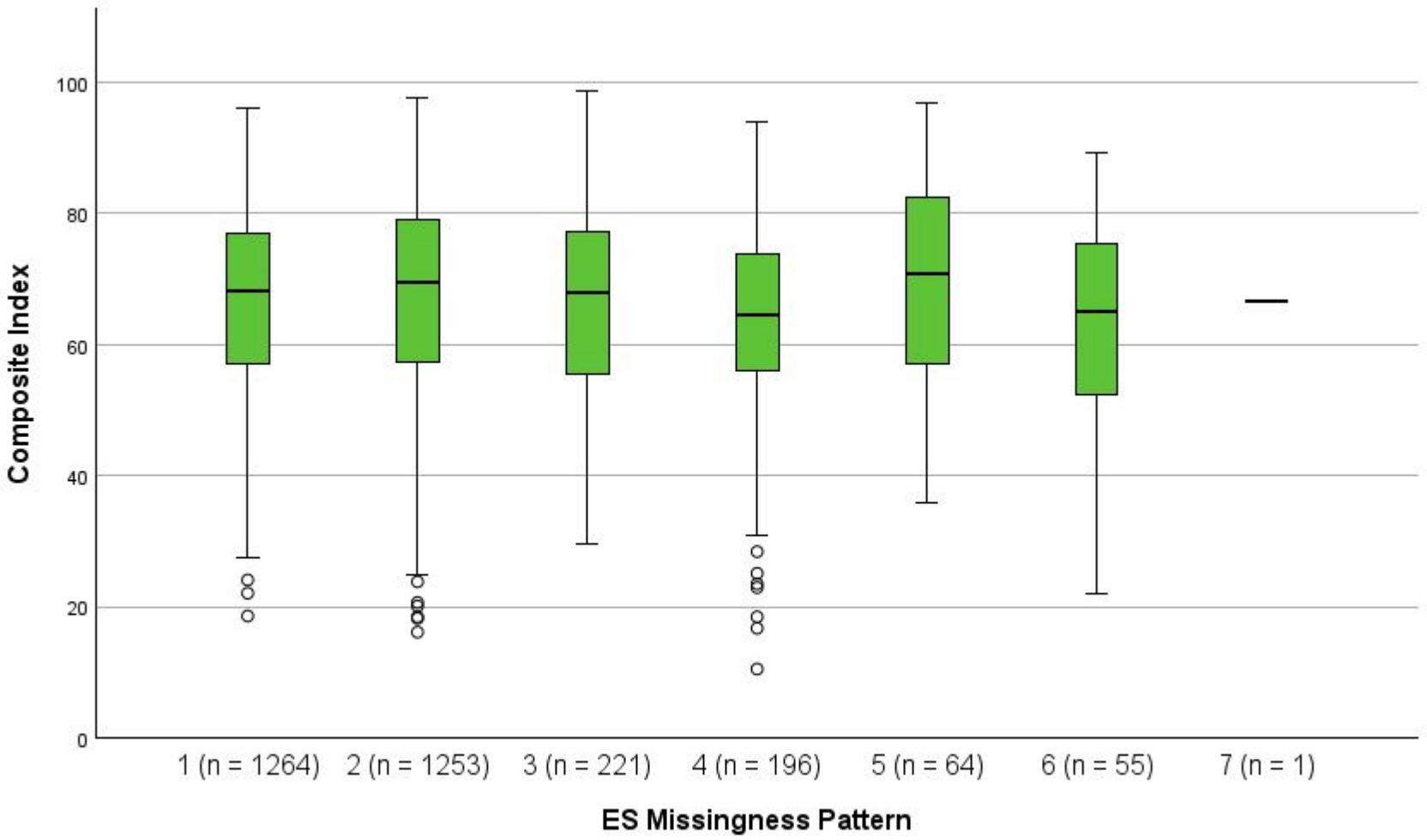
- Results are presented for elementary school first, high school second

Policy Weights
(Elementary Schools)

Center for Assessment

Pattern ID	# Schools	ELA Prof	ELA Growth	Math Prof	Math Growth	Science Prof	ELPtP	Chronic Absent	Climate Survey
1	1264	7.5	25	7.5	25	5	5	20	5
2	1253	8.04	26.79	8.04	26.79	5.36	X	20	5
3	221	8.65	28.85	8.65	28.85	X	X	20	5
4	196	8.65	28.85	8.65	28.85	X	X	25	X
5	64	8.04	26.79	8.04	26.79	X	5.36	20	5
6	55	8.04	26.79	8.04	26.79	X	5.36	25	X
7	1	8.04	26.79	8.04	26.79	5.36	X	25	X

Index Score
(Elementary Schools)



Estimated Semi-partial Correlations vs. Policy Weights (Elementary Schools)

Center for Assessment

Indicator	Missingness Pattern											
	1 (n = 1264)		2 (n = 1253)		3 (n = 221)		4 (n = 196)		5 (n = 64)		6 (n = 55)	
	Semi-partial	Policy	Semi-partial	Policy	Semi-partial	Policy	Semi-partial	Policy	Semi-partial	Policy	Semi-partial	Policy
ELA Prof	0.06	0.08	0.07	0.08	0.08	0.09	0.08	0.09	0.05	0.08	0.09	0.08
ELA Growth	0.20	0.25	0.22	0.27	0.28	0.29	0.25	0.29	0.18	0.27	0.23	0.27
Math Prof	0.07	0.08	0.09	0.08	0.10	0.09	0.08	0.09	0.06	0.08	0.08	0.08
Math Growth	0.22	0.25	0.25	0.27	0.36	0.29	0.32	0.29	0.24	0.27	0.29	0.27
Science Prof	0.04	0.05	0.05	0.05	X	X	X	X	X	X	X	X
ELPtP	0.06	0.05	X	X	X	X	X	X	0.03	0.05	0.03	0.05
Chronic Absent	0.20	0.20	0.20	0.20	0.24	0.20	0.25	0.25	0.18	0.20	0.24	0.25
Climate Survey	0.05	0.05	0.07	0.05	0.08	0.05	X	X	0.07	0.05	X	X

Deviations of estimated weights from policy weights are a reflection of the multicollinearity amongst predictors

VIF = 1 → No multicollinearity.

VIF > 5 → Moderate multicollinearity.

VIF > 10 → Severe multicollinearity.

Pearson's r for ELA Prof and Math Prof = .84 [Model 1]
Pearson's r for ELA Prof and Math Prof = .92 [Model 5]

Correlations (Elementary Schools) (I)

Center for Assessment

Correlations [Model 1, n = 1264]

		Composite Index	ELAProficiency	ELAGrowth	MATHProficiency	MATHGrowth	SciProficiency	ELPtP	ChronicAbsent	ClimateSurvey
Pearson Correlation	Composite Index	1.000	.822	.735	.836	.716	.813	.295	.748	.208
	ELAProficiency	.822	1.000	.553	.842	.394	.842	.146	.598	.076
	ELAGrowth	.735	.553	1.000	.408	.617	.432	.015	.268	.089
	MATHProficiency	.836	.842	.408	1.000	.410	.860	.323	.697	.111
	MATHGrowth	.716	.394	.617	.410	1.000	.371	.092	.274	.081
	SciProficiency	.813	.842	.432	.860	.371	1.000	.251	.692	.114
	ELPtP	.295	.146	.015	.323	.092	.251	1.000	.317	.098
	ChronicAbsent	.748	.598	.268	.697	.274	.692	.317	1.000	.197
	ClimateSurvey	.208	.076	.089	.111	.081	.114	.098	.197	1.000

Correlations [Model 2, n = 1253]

		Composite Index	ELAProficiency	ELAGrowth	MATHProficiency	MATHGrowth	SciProficiency	ChronicAbsent	ClimateSurvey
Pearson Correlation	Composite Index	1.000	.807	.674	.809	.681	.739	.746	.203
	ELAProficiency	.807	1.000	.409	.814	.293	.798	.703	.091
	ELAGrowth	.674	.409	1.000	.280	.584	.214	.178	.080
	MATHProficiency	.809	.814	.280	1.000	.344	.813	.741	.113
	MATHGrowth	.681	.293	.584	.344	1.000	.209	.180	.096
	SciProficiency	.739	.798	.214	.813	.209	1.000	.776	.110
	ChronicAbsent	.746	.703	.178	.741	.180	.776	1.000	.108
	ClimateSurvey	.203	.091	.080	.113	.096	.110	.108	1.000

r > .90

r > .65

Correlations (Elementary Schools) (II)

Center for Assessment

Correlations [Model 3, n = 221]

		Composite Index	ELAProficiency	ELAGrowth	MATHProficiency	MATHGrowth	ChronicAbsent	ClimateSurvey
Pearson Correlation	Composite Index	1.000	.672	.738	.664	.757	.582	.075
	ELAProficiency	.672	1.000	.437	.747	.196	.536	-.061
	ELAGrowth	.738	.437	1.000	.230	.505	.138	.007
	MATHProficiency	.664	.747	.230	1.000	.290	.587	-.050
	MATHGrowth	.757	.196	.505	.290	1.000	.134	.065
	ChronicAbsent	.582	.536	.138	.587	.134	1.000	-.073
	ClimateSurvey	.075	-.061	.007	-.050	.065	-.073	1.000

Correlations [Model 4, n = 196]

		Composite Index	ELAProficiency	ELAGrowth	MATHProficiency	MATHGrowth	ChronicAbsent
Pearson Correlation	Composite Index	1.000	.658	.760	.704	.686	.744
	ELAProficiency	.658	1.000	.262	.834	.116	.664
	ELAGrowth	.760	.262	1.000	.340	.574	.311
	MATHProficiency	.704	.834	.340	1.000	.134	.698
	MATHGrowth	.686	.116	.574	.134	1.000	.179
	ChronicAbsent	.744	.664	.311	.698	.179	1.000

r > .90

r > .65

Correlations (Elementary Schools) (III)

Center for Assessment

Correlations [Model 5, n = 64]

		Composite Index	ELAProficiency	ELAGrowth	MATHProficiency	MATHGrowth	ELPtP	ChronicAbsent	ClimateSurvey
Pearson Correlation	Composite Index	1.000	.793	.850	.813	.822	.290	.744	.270
	ELAProficiency	.793	1.000	.604	.918	.398	.220	.696	.162
	ELAGrowth	.850	.604	1.000	.588	.689	.257	.424	.182
	MATHProficiency	.813	.918	.588	1.000	.488	.214	.667	.145
	MATHGrowth	.822	.398	.689	.488	1.000	.148	.420	.187
	ELPtP	.290	.220	.257	.214	.148	1.000	.227	.104
	ChronicAbsent	.744	.696	.424	.667	.420	.227	1.000	.126
	ClimateSurvey	.270	.162	.182	.145	.187	.104	.126	1.000

Correlations [Model 6, n = 55]

		Composite Index	ELAProficiency	ELAGrowth	MATHProficiency	MATHGrowth	ELPtP	ChronicAbsent
Pearson Correlation	Composite Index	1.000	.746	.864	.670	.688	.390	.740
	ELAProficiency	.746	1.000	.516	.797	.281	.278	.597
	ELAGrowth	.864	.516	1.000	.479	.566	.363	.509
	MATHProficiency	.670	.797	.479	1.000	.153	.389	.538
	MATHGrowth	.688	.281	.566	.153	1.000	.150	.205
	ELPtP	.390	.278	.363	.389	.150	1.000	.259
	ChronicAbsent	.740	.597	.509	.538	.205	.259	1.000

r > .90

r > .65

Elementary Schools

	Complete Data (n = 1264)		
	Semi-partial	Policy	Composite
ELA Prof	0.06	0.08	0.07
ELA Growth	0.20	0.25	0.12
Math Prof	0.07	0.08	0.09
Math Growth	0.22	0.25	0.12
Science Prof	0.04	0.05	0.04
ELPtP	0.06	0.05	0.01
Chronic Absent	0.20	0.20	0.55
Climate Survey	0.05	0.05	0.01

Lower composite weight

Lower composite weight

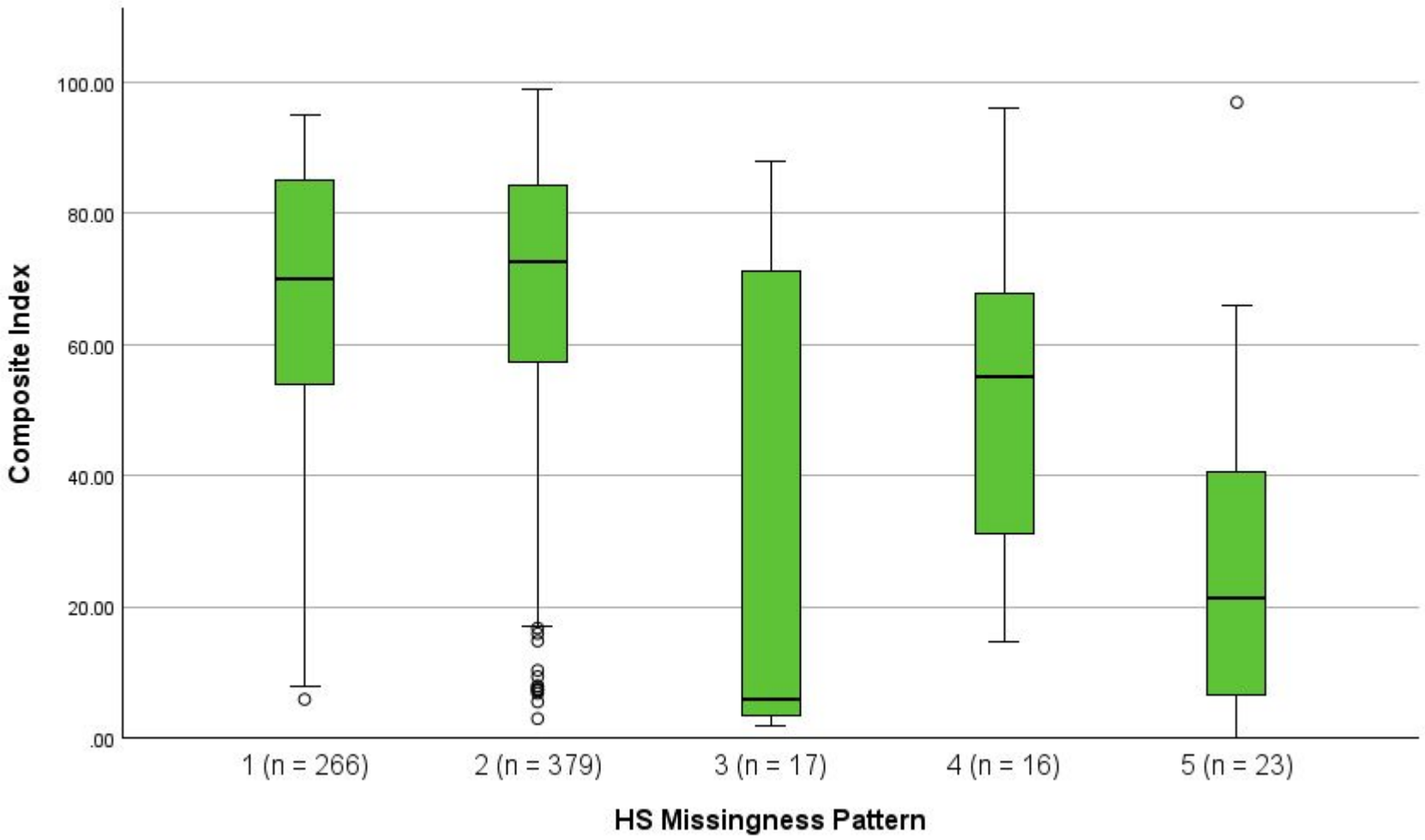
Higher composite weight

Policy Weights (High Schools)

Center for Assessment

Pattern ID	# Schools	ELA Prof	Math Prof	Science Prof	ELPtP	Chronic Absent	Climate Survey	Grad Rate	Fresh On Track
1	266	7.5	7.5	5	5	10	6.67	50	8.33
2	379	8.04	8.04	5.36	X	10	6.67	53.57	8.33
3	17	8.04	8.04	5.36	X	15	10	53.57	X
4	16	28.13	28.13	18.75	X	10	6.67	X	8.33
5	9	8.65	8.65	X	X	15	10	57.69	X
6	4	8.65	8.65	X	X	10	6.67	57.69	8.33
7	3	7.5	7.5	5	5	15	10	50	X
8	3	28.13	28.13	18.75	X	15	10	X	X
9	2	22.5	22.5	15	15	10	6.67	X	8.33
10	1	8.04	8.04	X	5.36	10	6.67	53.57	8.33
11	1	22.5	22.5	15	15	15	10	X	X

Index Score
(High Schools)



Estimated Semi-partial Correlations vs. Policy Weights (High Schools)

Center for Assessment

Indicator	Missingness Pattern			
	1 (n = 266)		2 (n = 379)	
	Semi-partial	Policy	Semi-partial	Policy
ELA Prof	0.03	0.08	0.05	0.08
Math Prof	0.03	0.08	0.06	0.08
Science Prof	0.03	0.05	0.05	0.05
ELPtP	0.02	0.05	X	X
Chronic Absent	0.07	0.10	0.08	0.10
Climate Survey	0.09	0.07	0.09	0.07
Grad Rate	0.39	0.50	0.51	0.54
Fresh On Track	0.07	0.08	0.08	0.08

Deviations of estimated weights from policy weights are a reflection of the multicollinearity amongst predictors.

VIF = 1 → No multicollinearity.

VIF > 5 → Moderate multicollinearity.

VIF > 10 → Severe multicollinearity.

Pearson's r for ELA Prof and Math Prof = .966, other prof corrls also > .80 [Model 1]

Correlations (High Schools)

Center for Assessment

Correlations [Model 1, n = 266]

		Composite Index	ELA Proficiency	Math Proficiency	Science Proficiency	ELPtP	Chronic Absenteeism	Climate Survey	Graduation Rate	Freshmen On Track
Pearson Correlation	Composite Index	1.000	.844	.830	.791	.414	.783	.275	.939	.751
	ELA Proficiency	.844	1.000	.961	.823	.488	.764	.160	.663	.604
	Math Proficiency	.830	.961	1.000	.801	.498	.746	.155	.643	.604
	Science Proficiency	.791	.823	.801	1.000	.371	.772	.225	.626	.519
	ELPtP	.414	.488	.498	.371	1.000	.410	.050	.280	.343
	Chronic Absenteeism	.783	.764	.746	.772	.410	1.000	.274	.593	.596
	Climate Survey	.275	.160	.155	.225	.050	.274	1.000	.156	.100
	Graduation Rate	.939	.663	.643	.626	.280	.593	.156	1.000	.663
	Freshmen On Track	.751	.604	.604	.519	.343	.596	.100	.663	1.000

Correlations [Model 2, n = 379]

		Composite Index	ELA Proficiency	Math Proficiency	Science Proficiency	Chronic Absenteeism	Climate Survey	Graduation Rate	Freshmen On Track
Pearson Correlation	Composite Index	1.000	.731	.712	.653	.735	.322	.933	.627
	ELA Proficiency	.731	1.000	.831	.698	.646	.186	.520	.420
	Math Proficiency	.712	.831	1.000	.605	.602	.171	.514	.395
	Science Proficiency	.653	.698	.605	1.000	.651	.229	.446	.434
	Chronic Absenteeism	.735	.646	.602	.651	1.000	.280	.534	.531
	Climate Survey	.322	.186	.171	.229	.280	1.000	.181	.206
	Graduation Rate	.933	.520	.514	.446	.534	.181	1.000	.495
	Freshmen On Track	.627	.420	.395	.434	.531	.206	.495	1.000

r > .90

r > .65

High Schools

	Complete Data (n = 266)		
	Semi-partial	Policy	Composite
ELA Prof	0.03	0.08	0.09
Math Prof	0.03	0.08	0.10
Science Prof	0.03	0.05	0.05
ELPtP	0.02	0.05	0.01
Chronic Absent	0.07	0.10	0.09
Climate Survey	0.09	0.07	0.03
Grad Rate	0.39	0.50	0.55
Fresh On Track	0.07	0.08	0.08

Lower semi-partial correlation

Findings

- Indicator correlations are generally highest for expected pairings such as:
  - proficiency variables with one another
  - chronic absenteeism and proficiency variables
  - graduation rate and proficiency variables
  - freshmen on track and proficiency variable

  However, strength of correlations depend notably on sample of schools.
- In elementary schools, ELPtP and Climate Survey have the lowest correlations with other variables ($r < .30$ generally). For the Climate Survey, this is due to many schools getting the maximum score.
- For high schools, model 1 reveals strong multicollinearity issues (esp. for ELA and Math proficiency), resulting in differences between semi-partial correlations and policy weights for several variables.
- For high schools, schools that have complete data or that are only missing ELPtP information are outperforming other high schools with other missingness patterns.
- For high schools, composite weights are very similar to policy weights while for elementary schools there are notable differences for ELA and math proficiency variables and chronic absenteeism

Center for Assessment

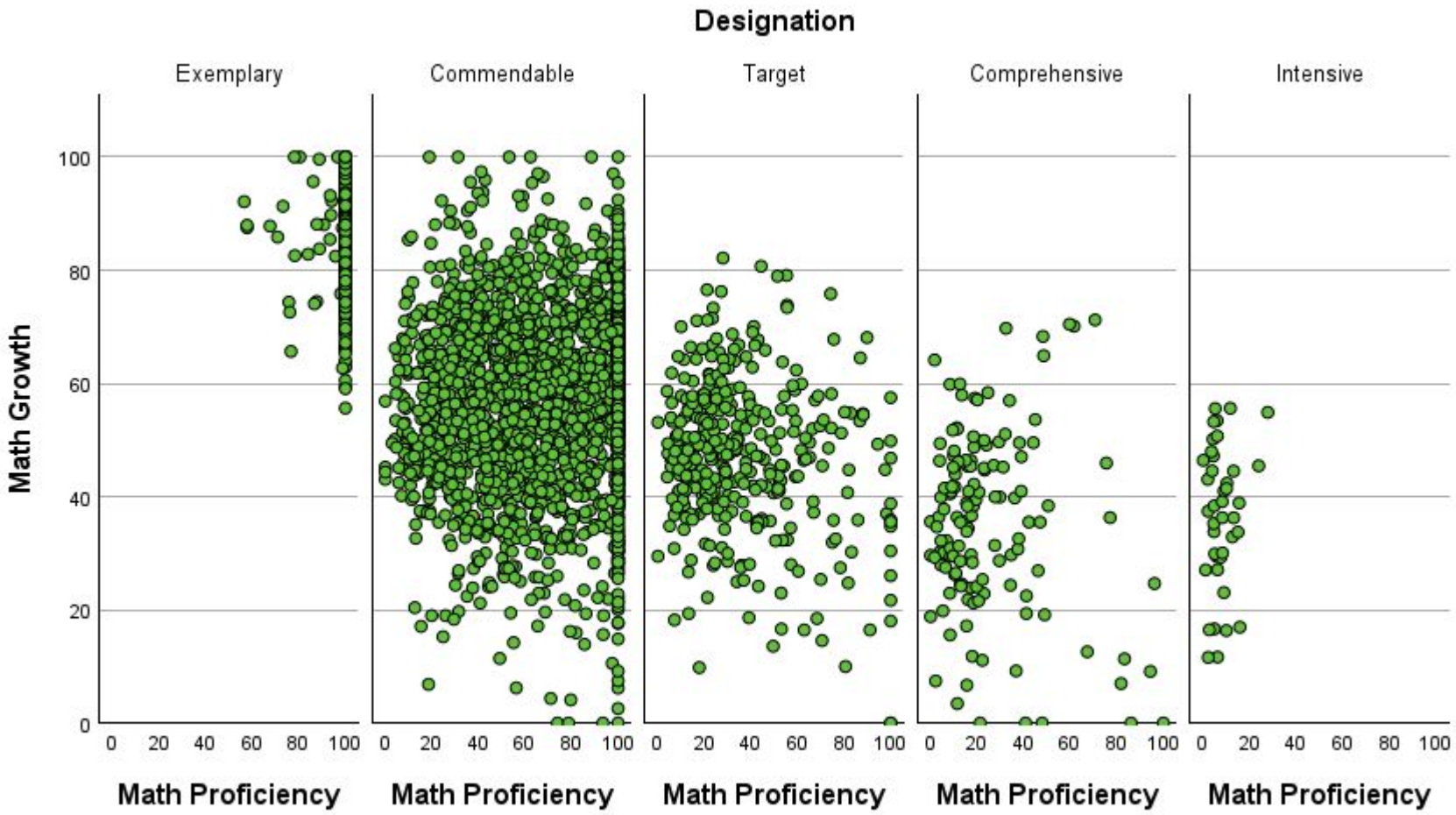
ISBE TAC
Accountability Monitoring Analyses

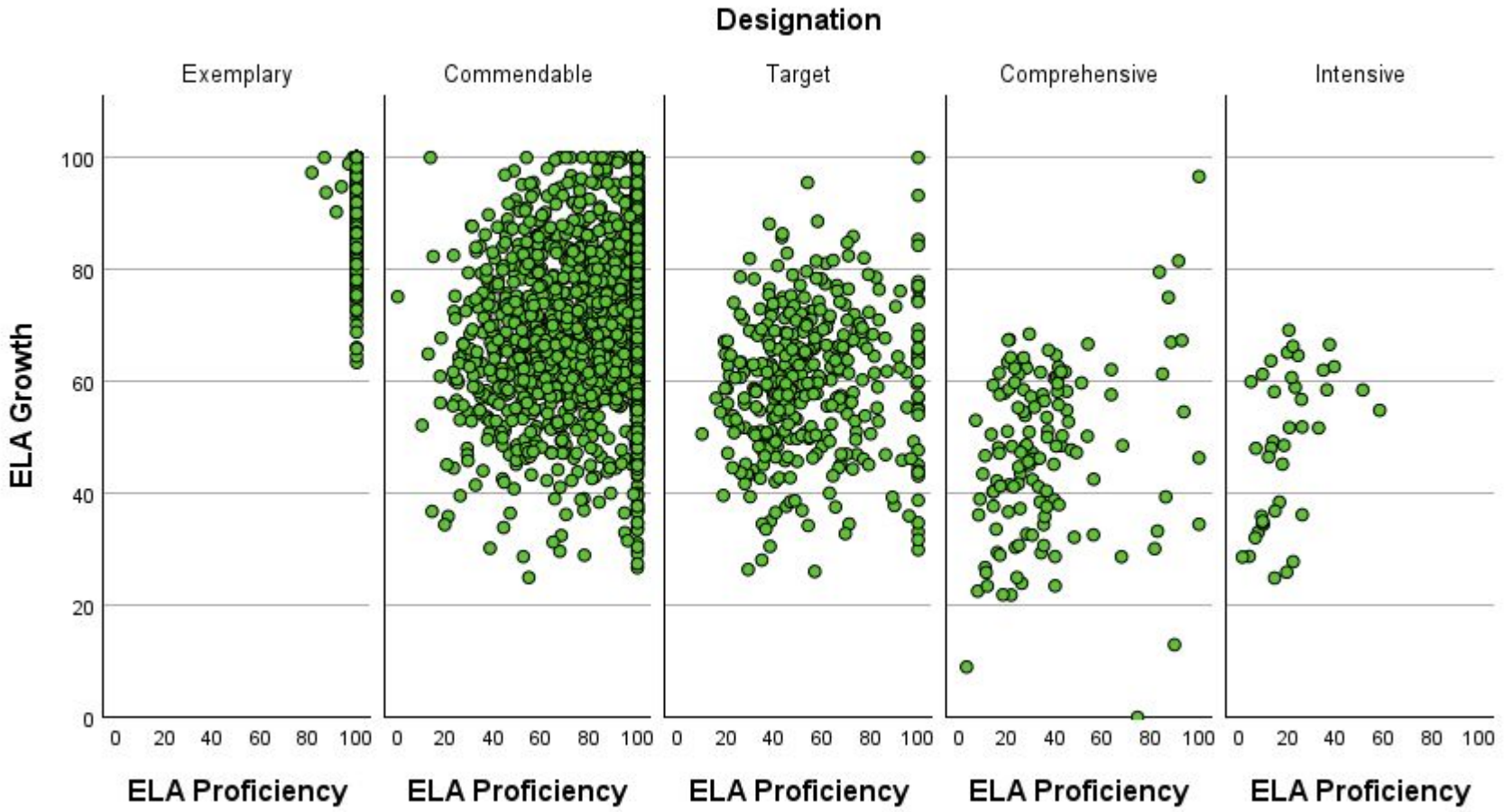
André A. Rupp

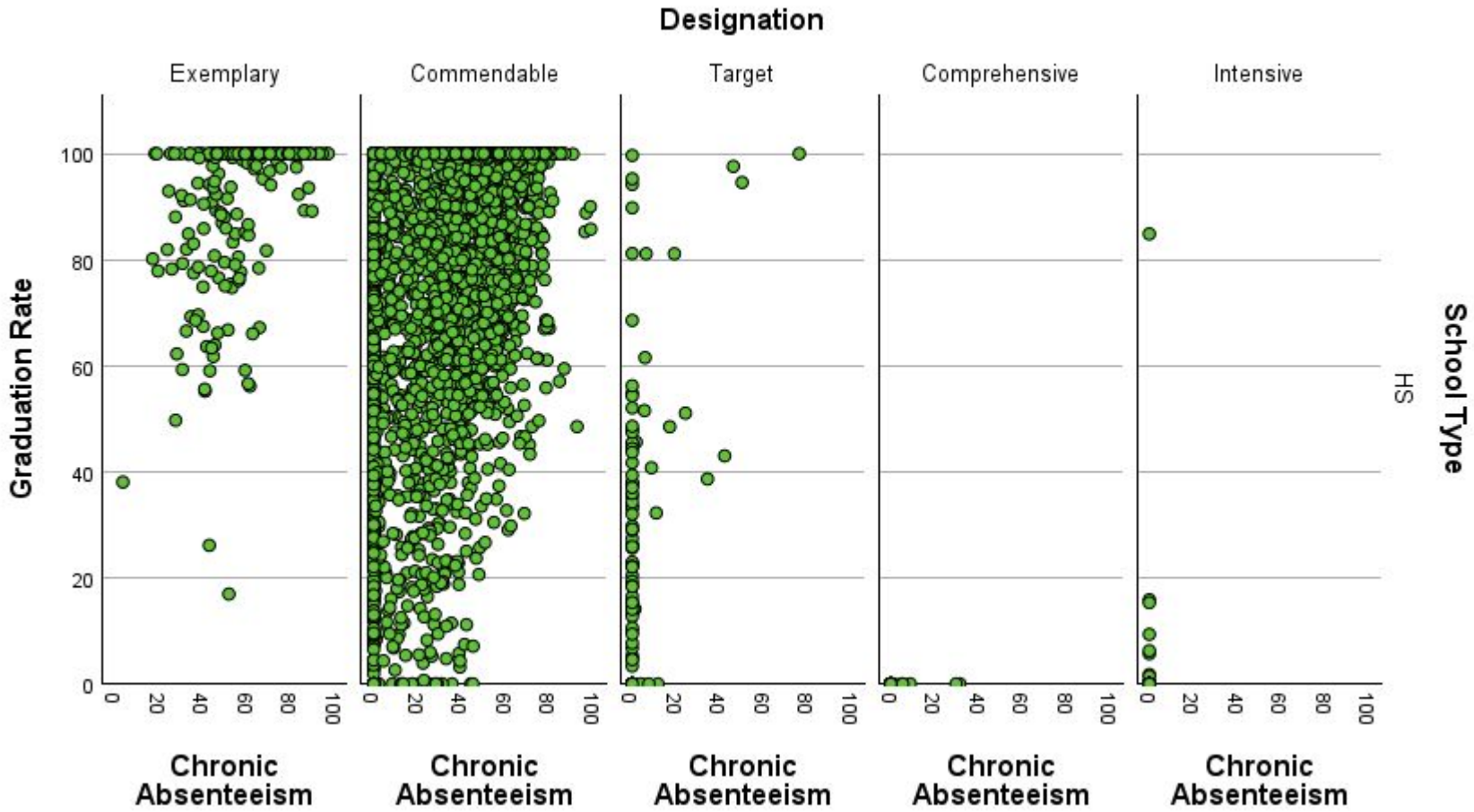
In-person TAC Meeting, January 22-23, 2025
ISBE Offices Chicago, IL

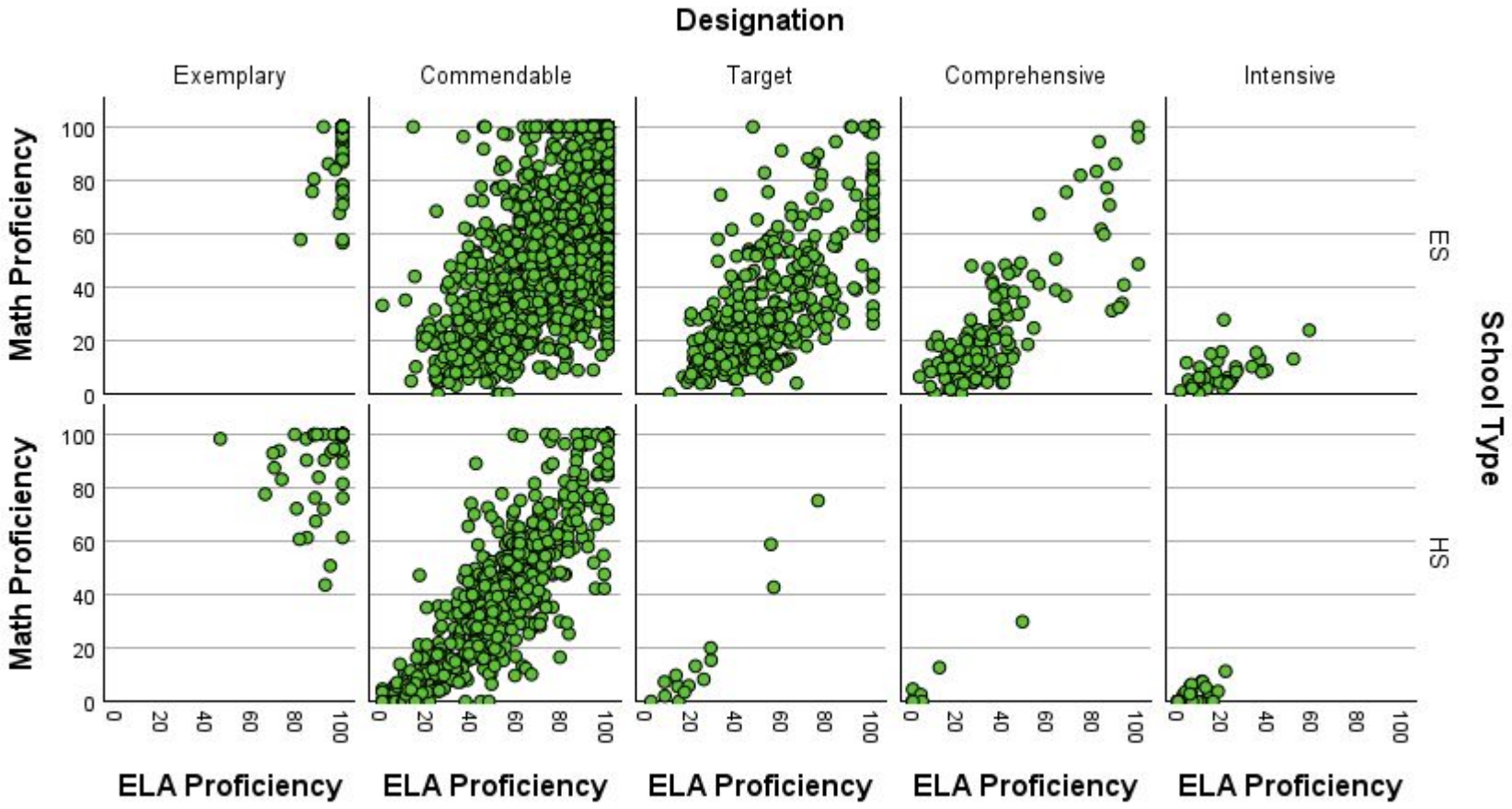
Deck version created January 15, 2025; Minor edits on March 10, 2025

Other Graphics (Parked)


Designation
Exemplary
Commendable
Target
Comprehensive
Intensive
Math Growth
100
80
60
40
20
0
0 20 40 60 80 100
Math Proficiency


Designation
Exemplary
Commendable
Target
Comprehensive
Intensive
ELA Growth
100
80
60
40
20
0
0 20 40 60 80 100
ELA Proficiency


Designation
Exemplary
Commendable
Target
Comprehensive
Intensive
Graduation Rate
100
80
60
40
20
0
0
20
40
60
80
100
Chronic Absenteeism
School Type
HS


Designation
Exemplary
Commendable
Target
Comprehensive
Intensive
Math Proficiency
ELA Proficiency
School Type
ES
HS
0
20
40
60
80
100