USBE Analysis of 2019 RISE Data

Research Questions

- Are statewide 2019 mean scale scores and standard deviations comparable to the prior three years at the test subject and grade levels?

- Is the standard error for each test within an expected range, compared to prior years assessments?

- Are score distributions different from prior test administrations?

Data Preparation

- Cleaned RISE mid-year file from 763,679 rows to 3,663 rows
  - deleted 'demo' and missing scale scores
- Joined RISE mid-year and spring summative files
- Joined RISE data with USBE student enrollment table
- Joined with previous years SAGE results: removed writing from RISE (no scale scores)

Comparison of means by grade and test subject

- Mean scale scores for 2019 are comparable to mean scale scores from the prior three years for subject and grade at the state level.
  - student groups, school level, and LEA level not yet analyzed.

- The standard error for 2019 scale scores is within an expected range compared to prior years assessments.

Means Comparisons: ANOVA 3rd grade ELA

Year	N	Mean	SD	SE
2016	49,638	326.86	62.138	0.279
2017	49,574	327.06	62.998	0.283
2018	48,565	324.98	69.824	0.317
2019	48,745	328.88	69.699	0.316

School Year	School Year	Mean Difference	SE	Sig.
2016	2017	-0.20	0.421	0.972
	2018	1.87	0.423	0
	2019	-2.02	0.422	0
2017	2016	0.20	0.421	0.972
	2018	2.08	0.423	0
	2019	-1.82	0.422	0
2018	2016	-1.87	0.423	0
	2017	-2.08	0.423	0
	2019	-3.90	0.425	0
2019	2016	2.02	0.422	0
	2017	1.82	0.422	0
	2018	3.90	0.425	0

Means Comparisons: ANOVA 3ʳᵈ grade Math

Year	N	Mean	SD	SE
2016	49,778	316.01	34.570	0.155
2017	49,703	314.71	35.211	0.158
2018	48,530	315.24	35.576	0.161
2019	48,681	314.35	36.134	0.164

School Year	School Year	Mean Difference	SE	Sig.
2016	2017	1.31	0.224	0
	2018	0.78	0.226	0
	2019	1.67	0.225	0
2017	2016	-1.31	0.224	0
	2018	-0.53	0.226	0.134
	2019	0.36	0.226	0.474
2018	2016	-0.78	0.226	0.008
	2017	0.53	0.226	0.134
	2019	0.89	0.227	0.002
2019	2016	-1.67	0.225	0
	2017	-0.36	0.226	0.474
	2018	-0.89	0.227	0.002

Means Comparisons: ANOVA 4rd grade Science

Year	N	Mean	SD	SE
2016	48,412	835.40	30.635	0.139
2017	49,749	834.83	30.918	0.139
2018	49,519	835.18	31.434	0.141
2019	49,583	838.46	30.396	0.137

School Year	School Year	Mean Difference	SE	Sig.
2016	2017	0.57	0.197	0.039
	2018	0.23	0.197	0.724
	2019	-3.06	0.197	0
2017	2016	-0.57	0.197	0.039
	2018	-0.34	0.196	0.379
	2019	-3.63	0.196	0
2018	2016	-0.23	0.197	0.724
	2017	0.34	0.196	0.379
	2019	-3.29	0.196	0
2019	2016	3.06	0.197	0
	2017	3.63	0.196	0
	2018	3.29	0.196	0

Score Distributions

- The score distributions by tests are similar to prior test administrations.

SCI6

Brooke Anderson
Jordan School District
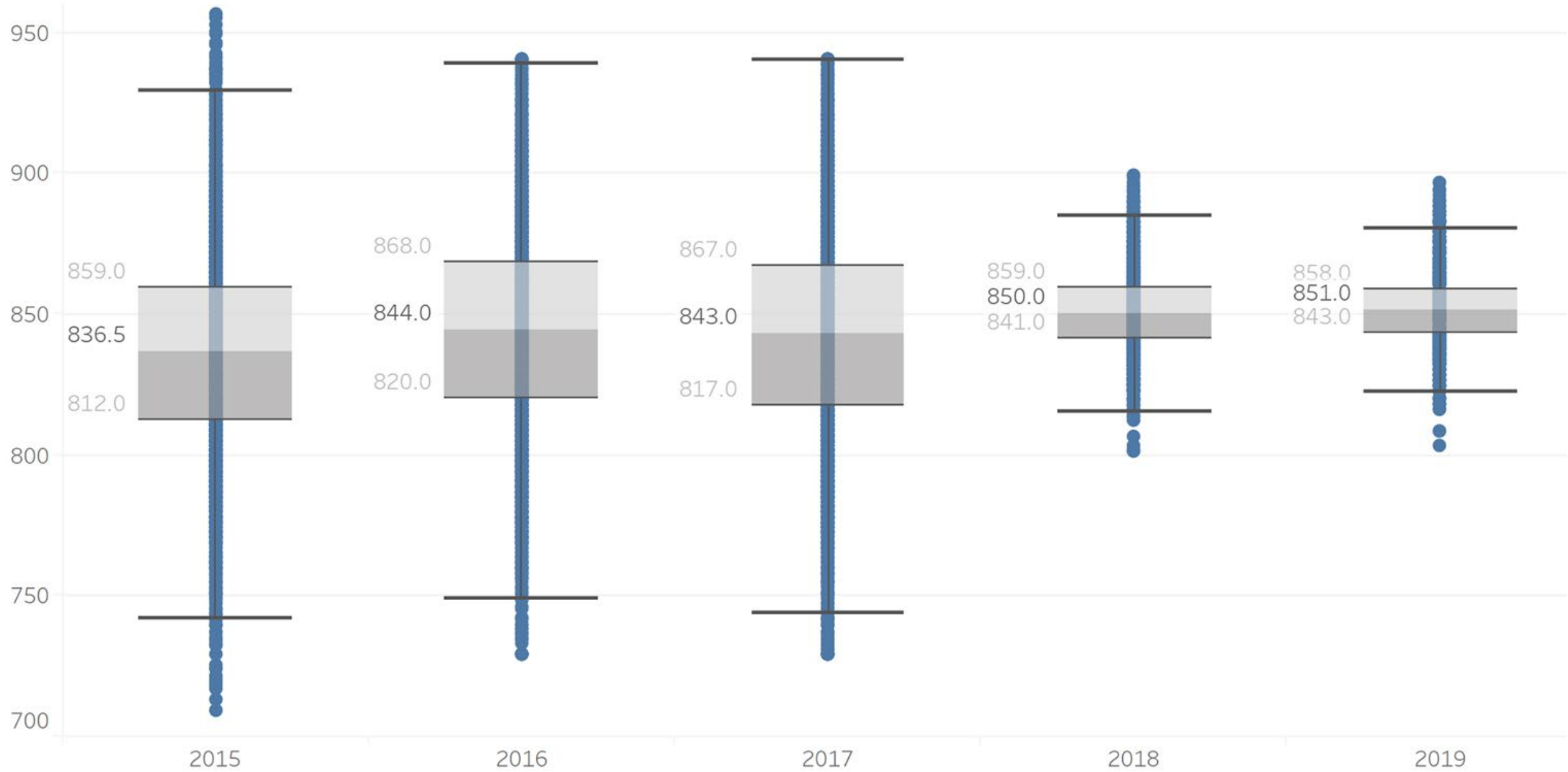
Are student ELA scale scores normally distributed across test grade by year
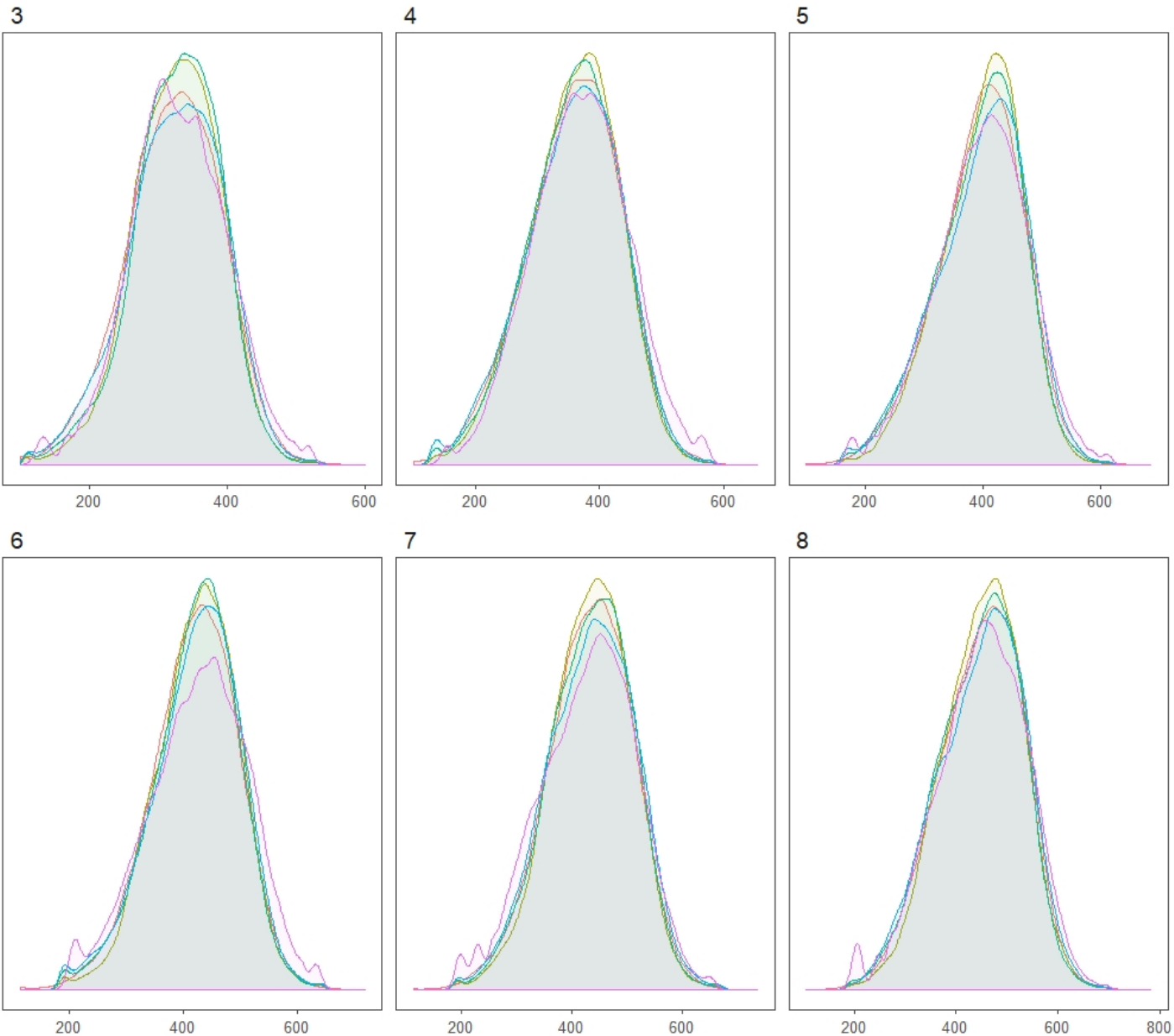
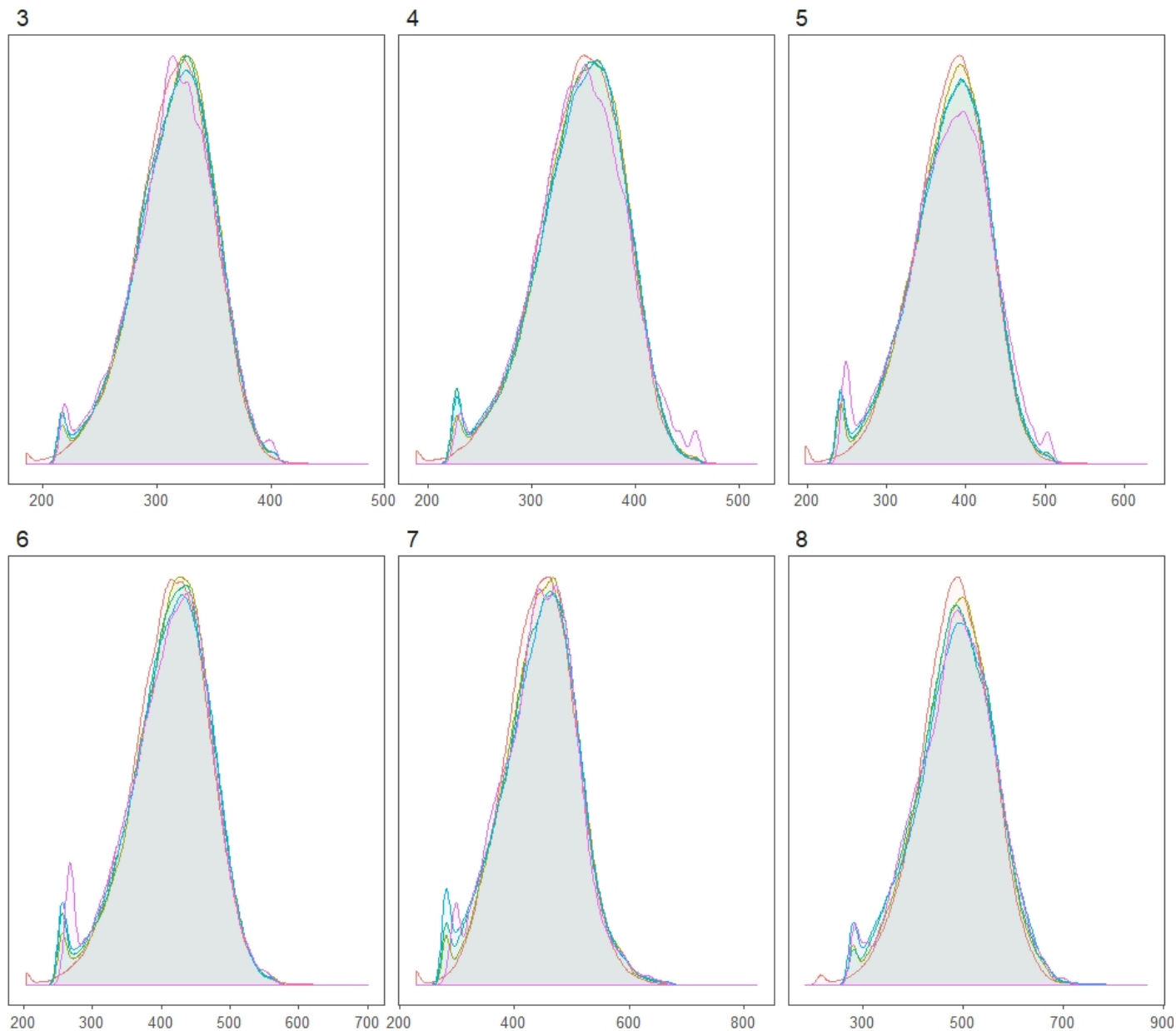Five years of state level ELA scores by grade

Are student Math scale scores normally distributed across test grade by year

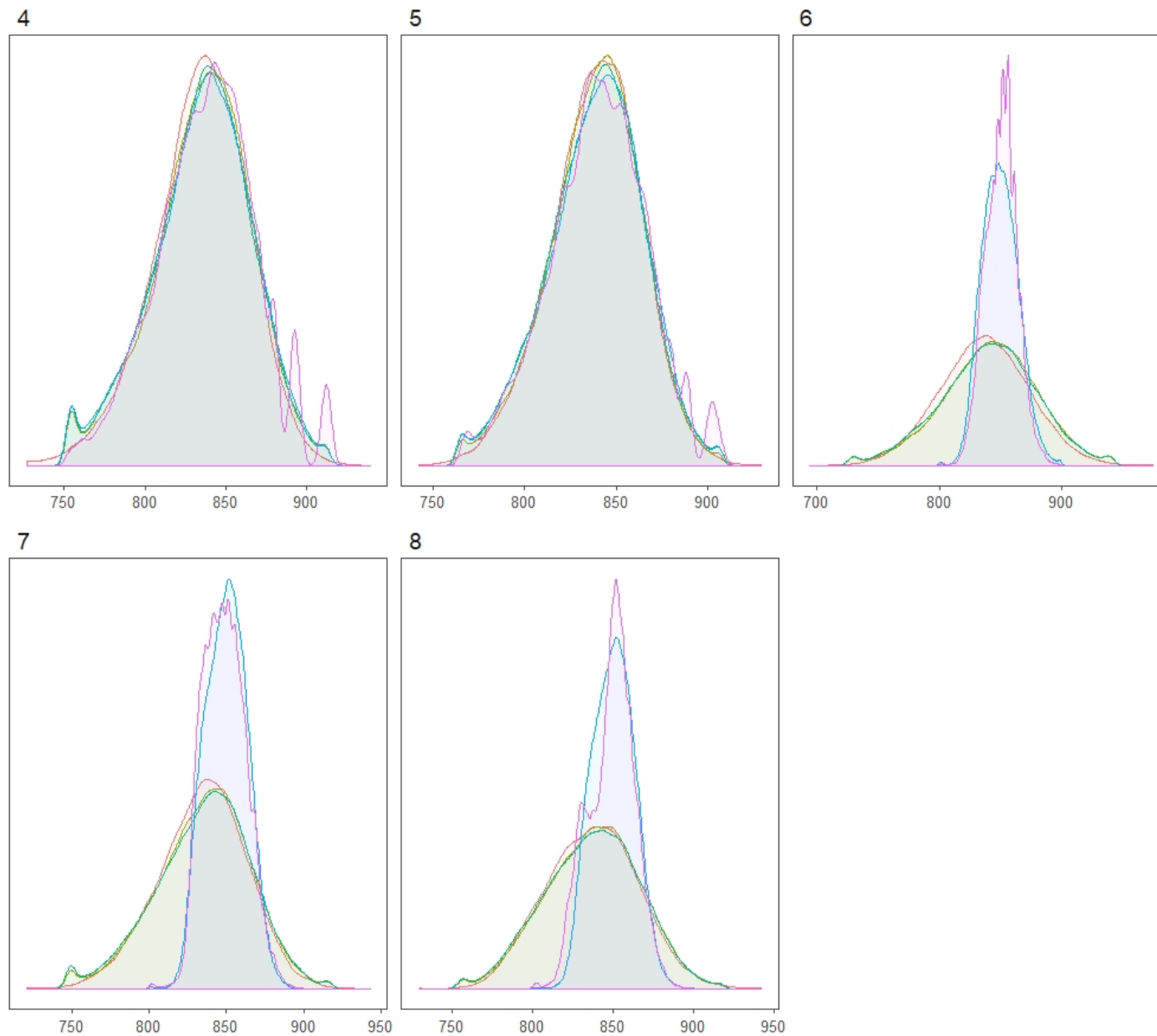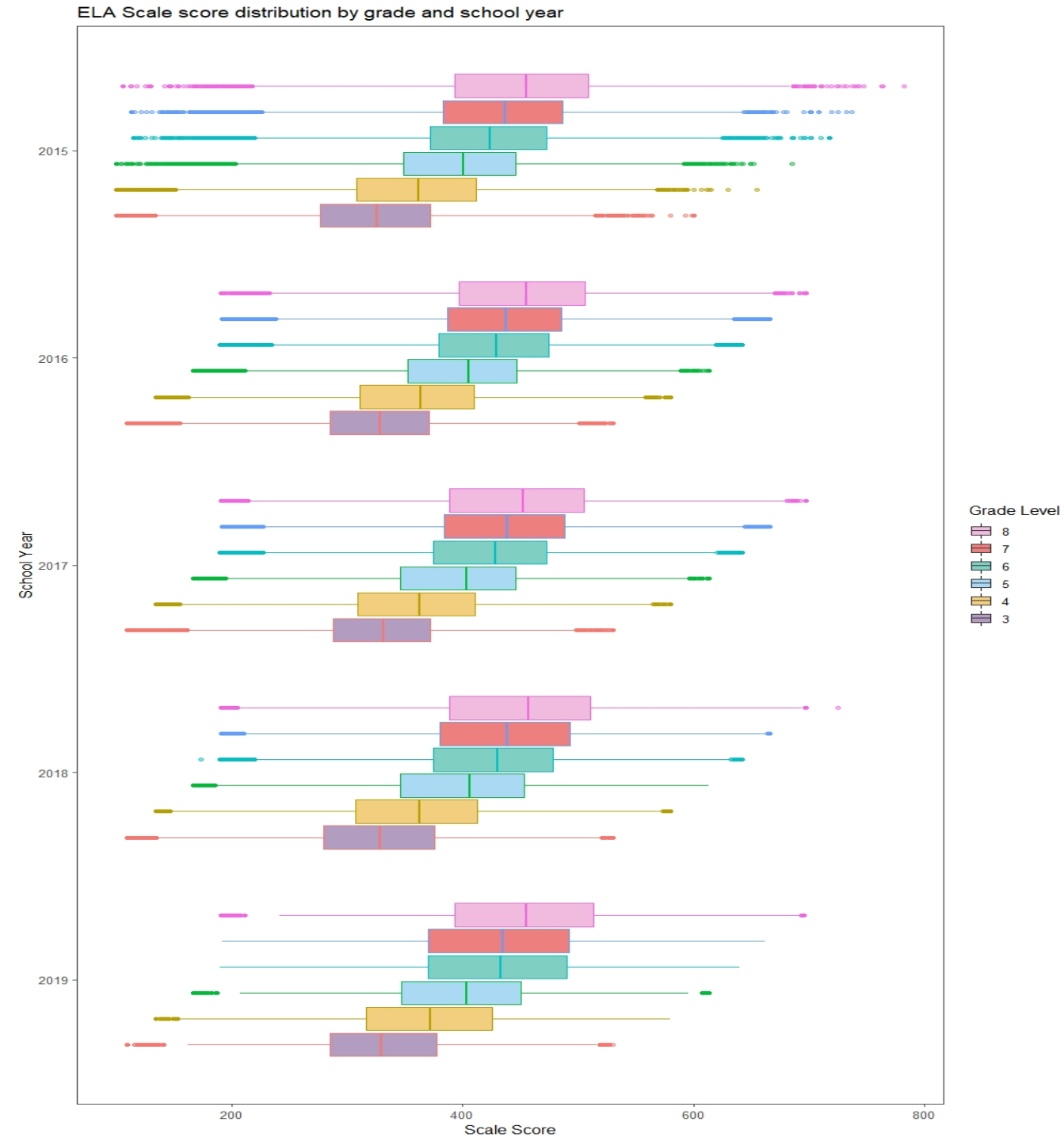Five years of state level Math scores by grade

Data Source: Sage and Rise Student Tests: 2015 - 2019 tests

Are student Science scale scores normally distributed across test grade by year
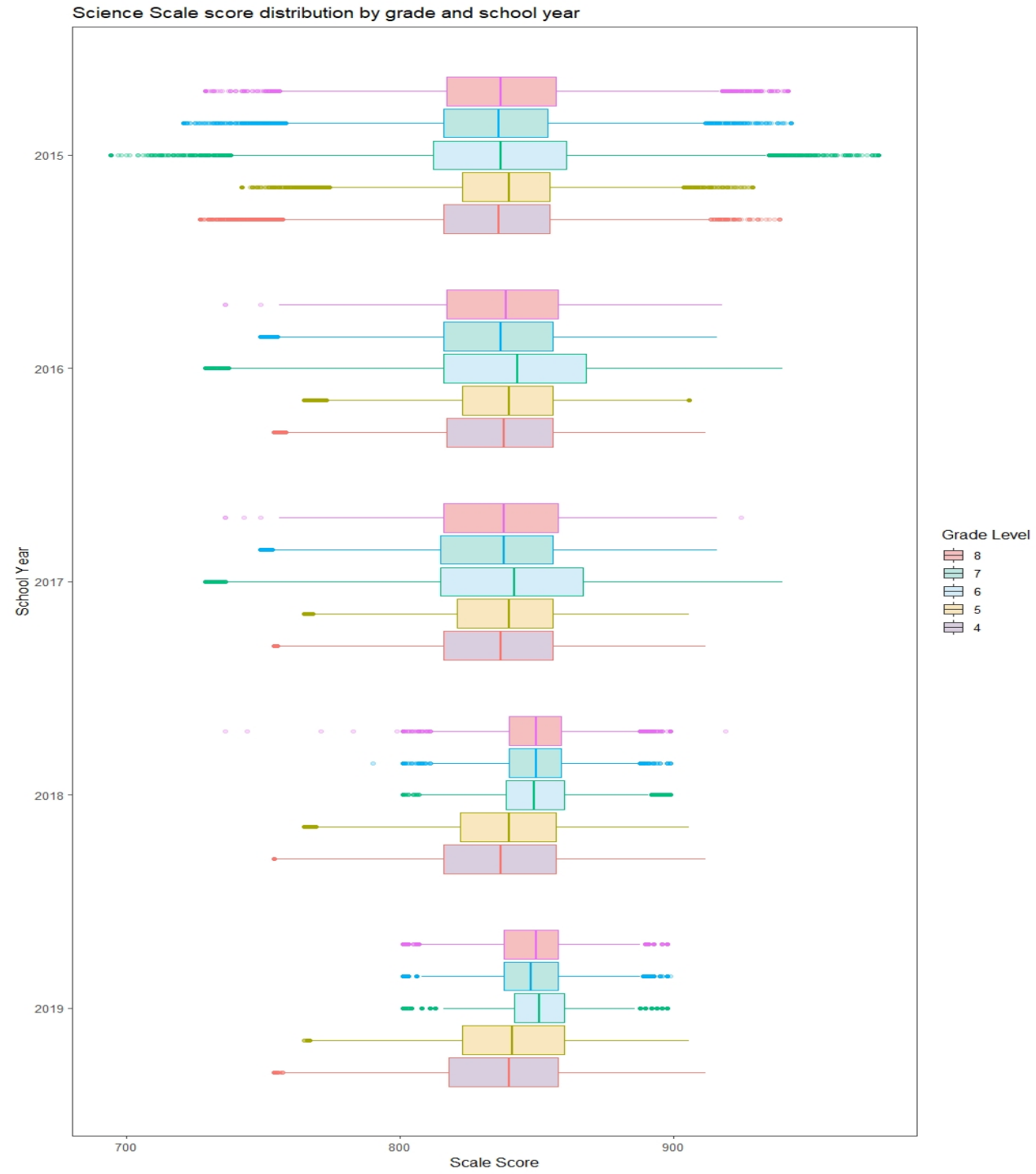
Five years of state level Science scores by grade

State level ELA scores by year and grade level

ELA Scale score distribution by grade and school year

Grade Level
8
7
6
5
4
3

School Year

Scale Score

State level math scores by year and grade level

Science Scale score distribution by grade and school year
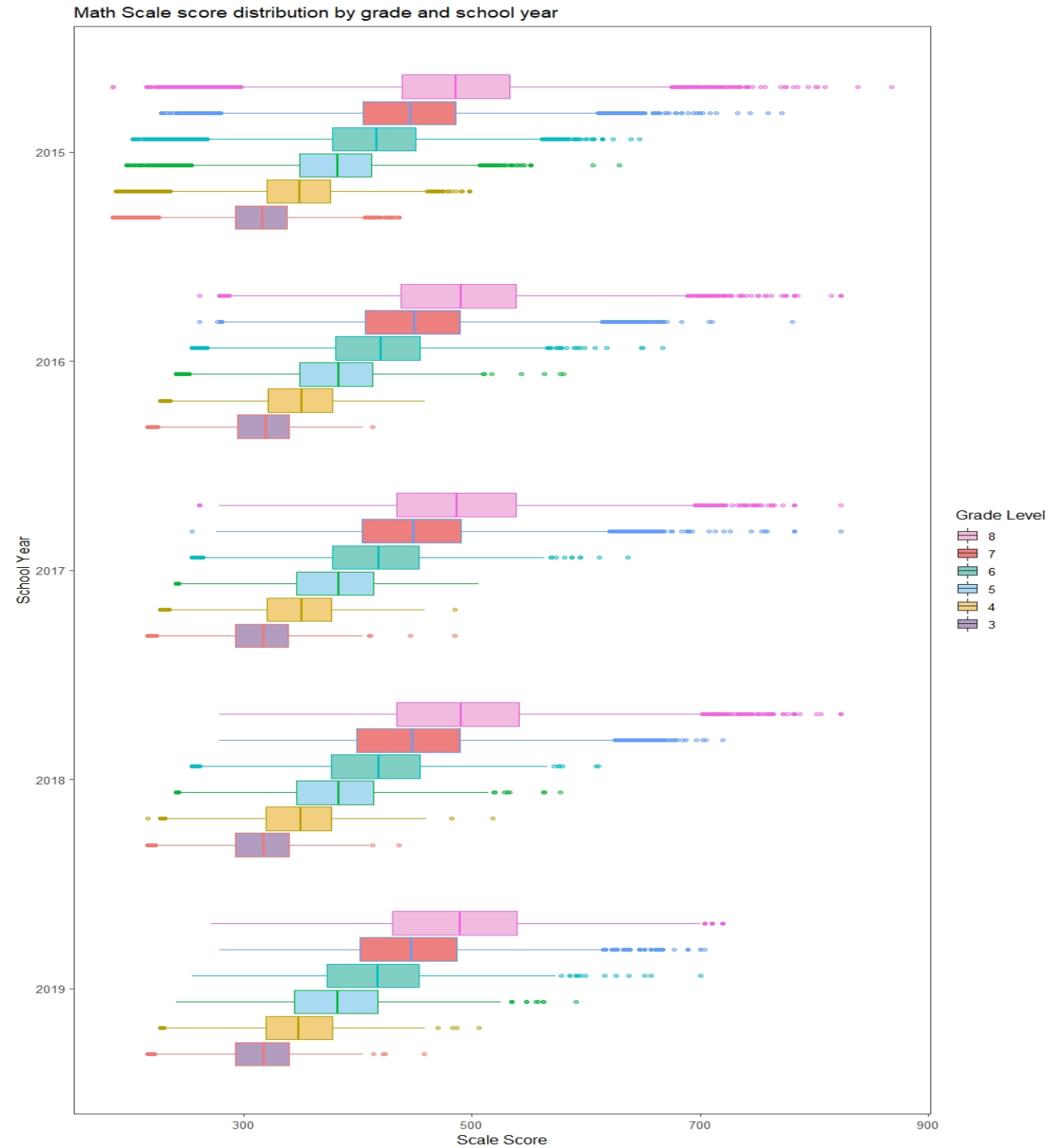
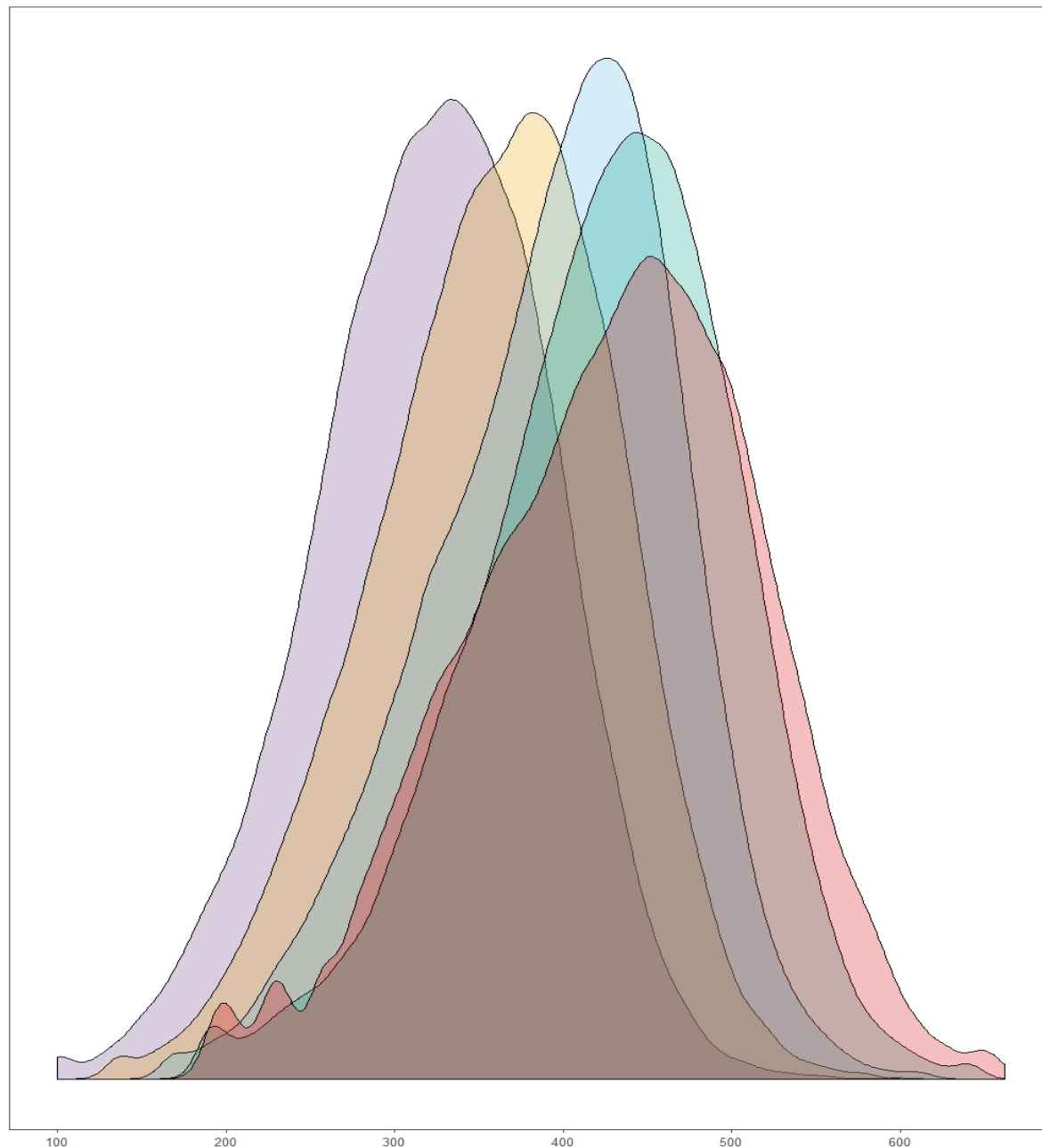State level science scores by year and grade level

Tracking 3rd Grade Language Arts Cohort through time
How has the 2015 cohort scored over time?

School Year   2015   2016   2017   2018   2019

Data Source: Sage and Rise Tests 2015 - 2019

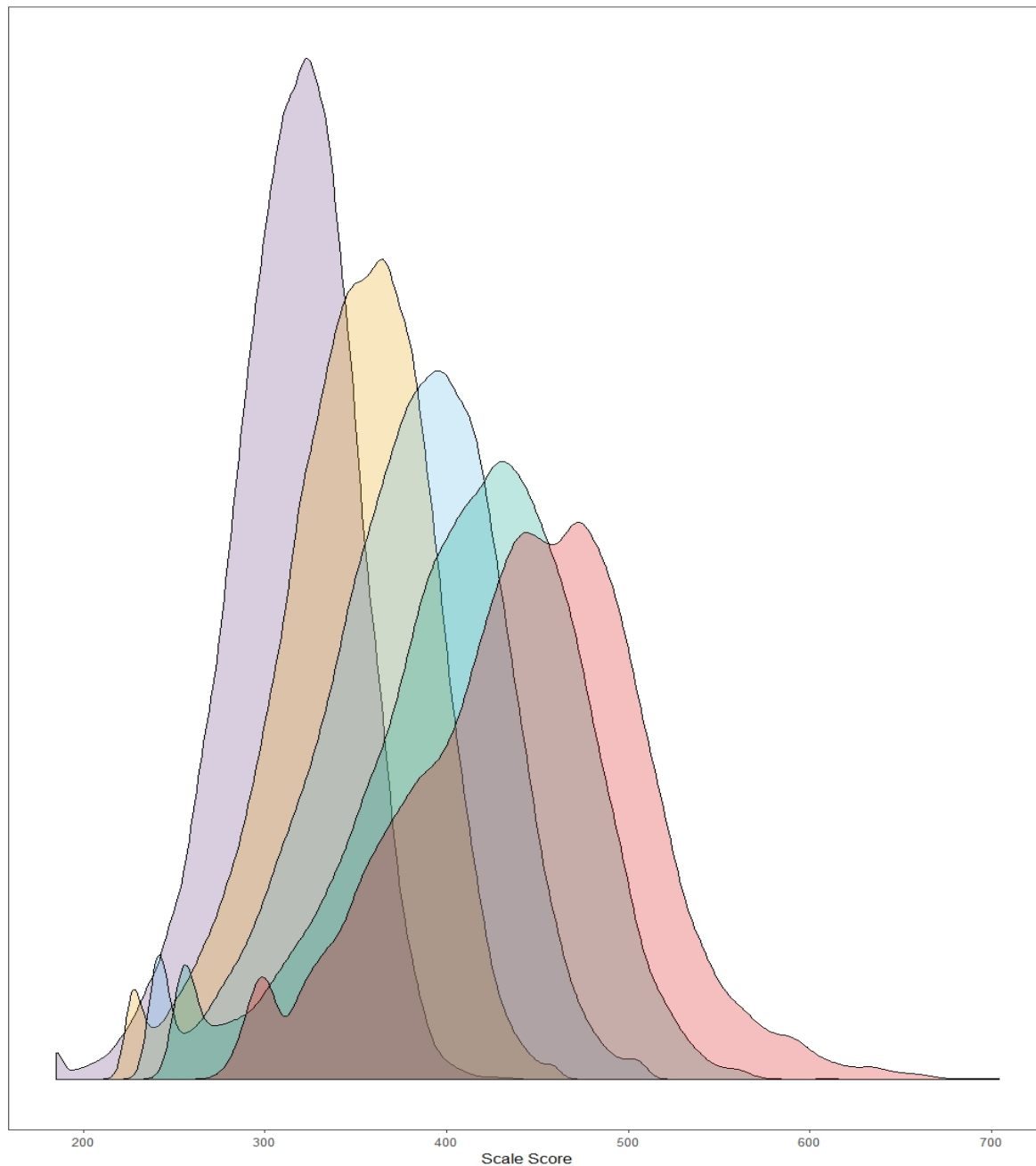Third grade ELA 2015 cohort

2015 – 3rd grade
2016 – 4th grade
2017 – 5th grade
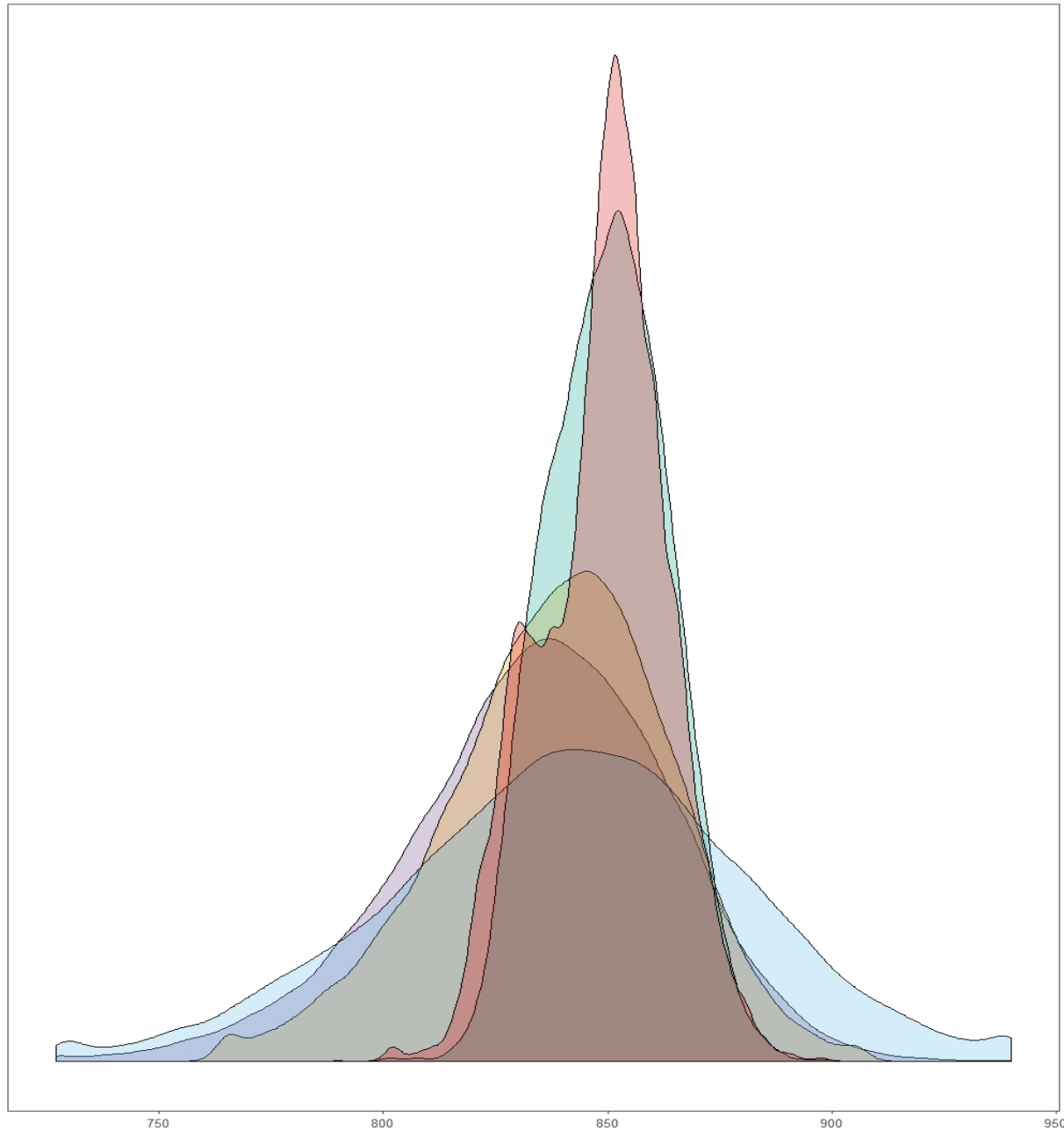2018 – 6th grade
2019 – 7th grade

Tracking 3rd Grade Math Cohort through time
How has the 2015 cohort scored over time?

School Year 2015 2016 2017 2018 2019

Scale Score

Data Source: Sage and Rise Tests 2015 - 2019

Third grade Math 2015 cohort

2015 – 3rd grade
2016 – 4th grade
2017 – 5th grade
2018 – 6th grade
2019 – 7th grade

Tracking 4th Grade Science Cohort through time
How has the 2014 cohort scored over time?

School Year ☐ 2015 ☐ 2016 ☐ 2017 ☐ 2018 ☐ 2019

Data Source: Sage and Rise Tests 2015 - 2019

Third grade Science 2015 cohort

2015 – 4rd grade
2016 – 5th grade
2017 – 6th grade
2018 – 7th grade
2019 – 8th grade

Current Conclusions and Next Steps

- 2019 scale scores and distributions generally align with previous years
- There are some anomalies worth considering
- We have not accounted for LEA level, school level, or student group level score differences