2015 CoACT Data Analysis

Outline

- Data Review
- Analysis Goals
- Macro Level Analysis
- Network Level
- School Level
- Individual School – 452 Case Study

Data Review

- 2015 CoACT results
  - Benchmark for College Preparedness
  - Key thresholds in scoring
    - 18 in English
    - 22 in Mathematics
   - 22 in Reading
    - 18 in Science

Analysis Goals

- Understand Global Performance trends
- Identify relative strengthens and weaknesses at network and school level
- Identify vulnerable student demographics to focus resource distribution for corrective action and prioritization
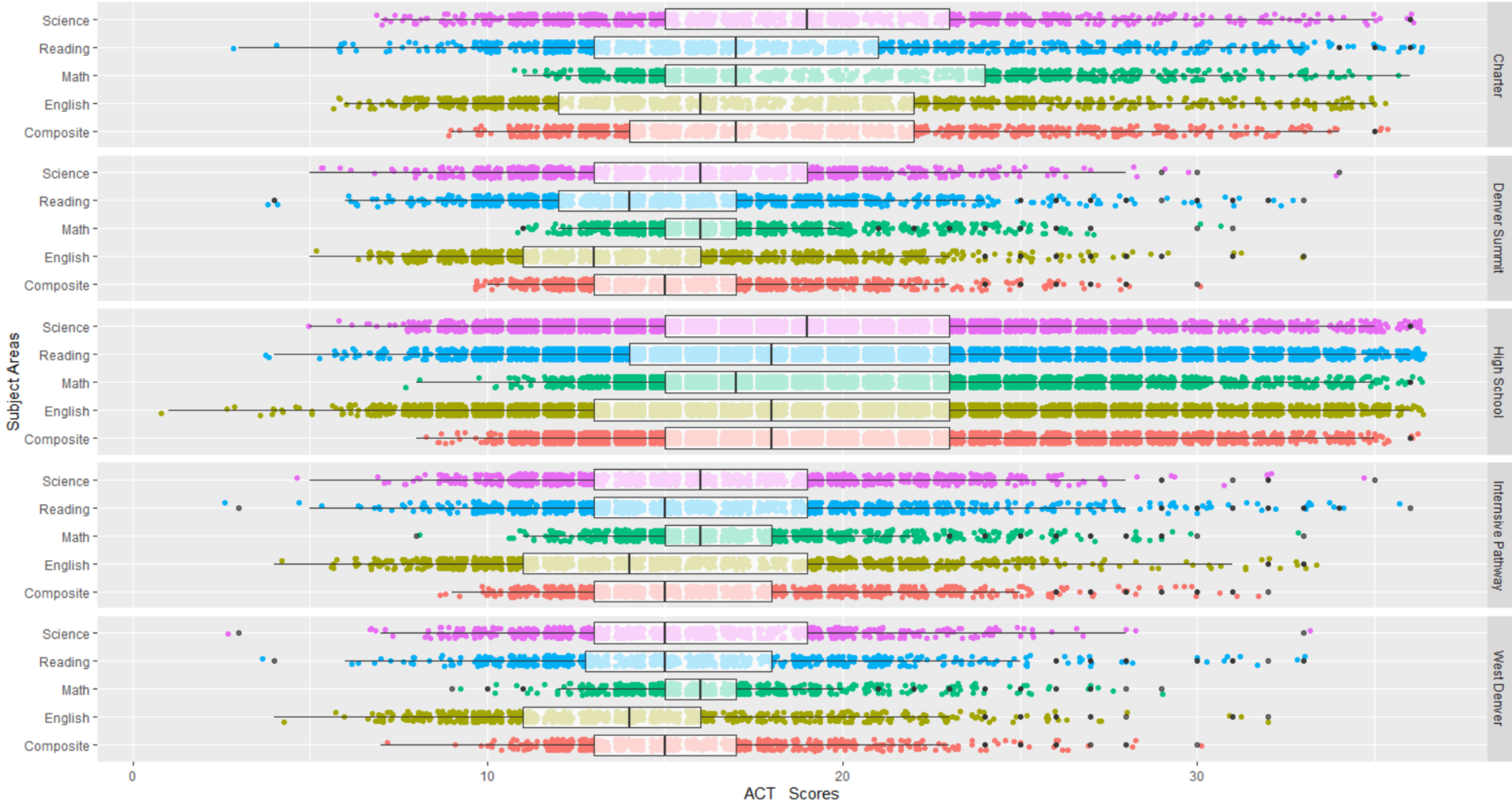
Macro Analysis

Comparison of ACT Scores By Subject Areas
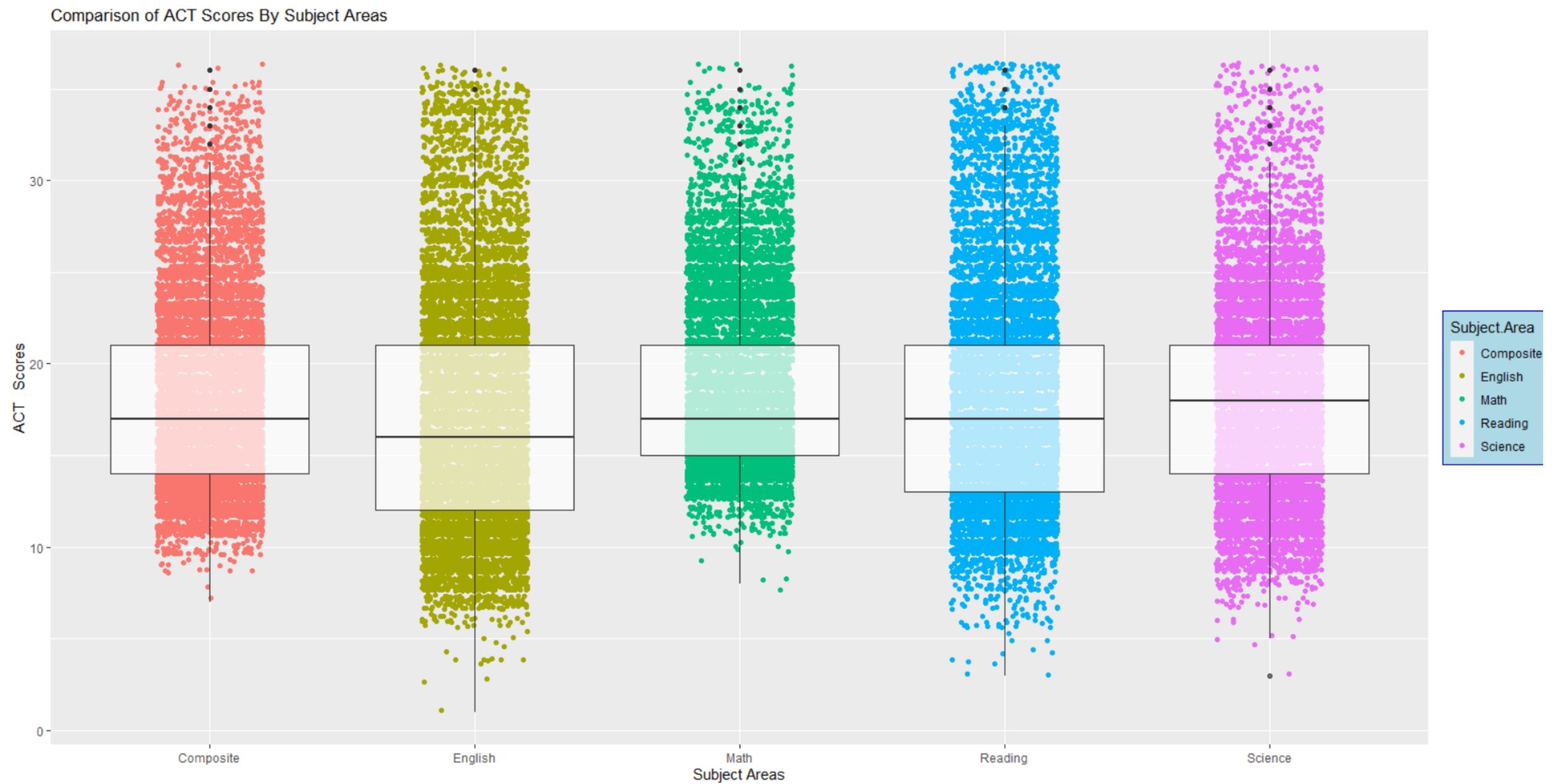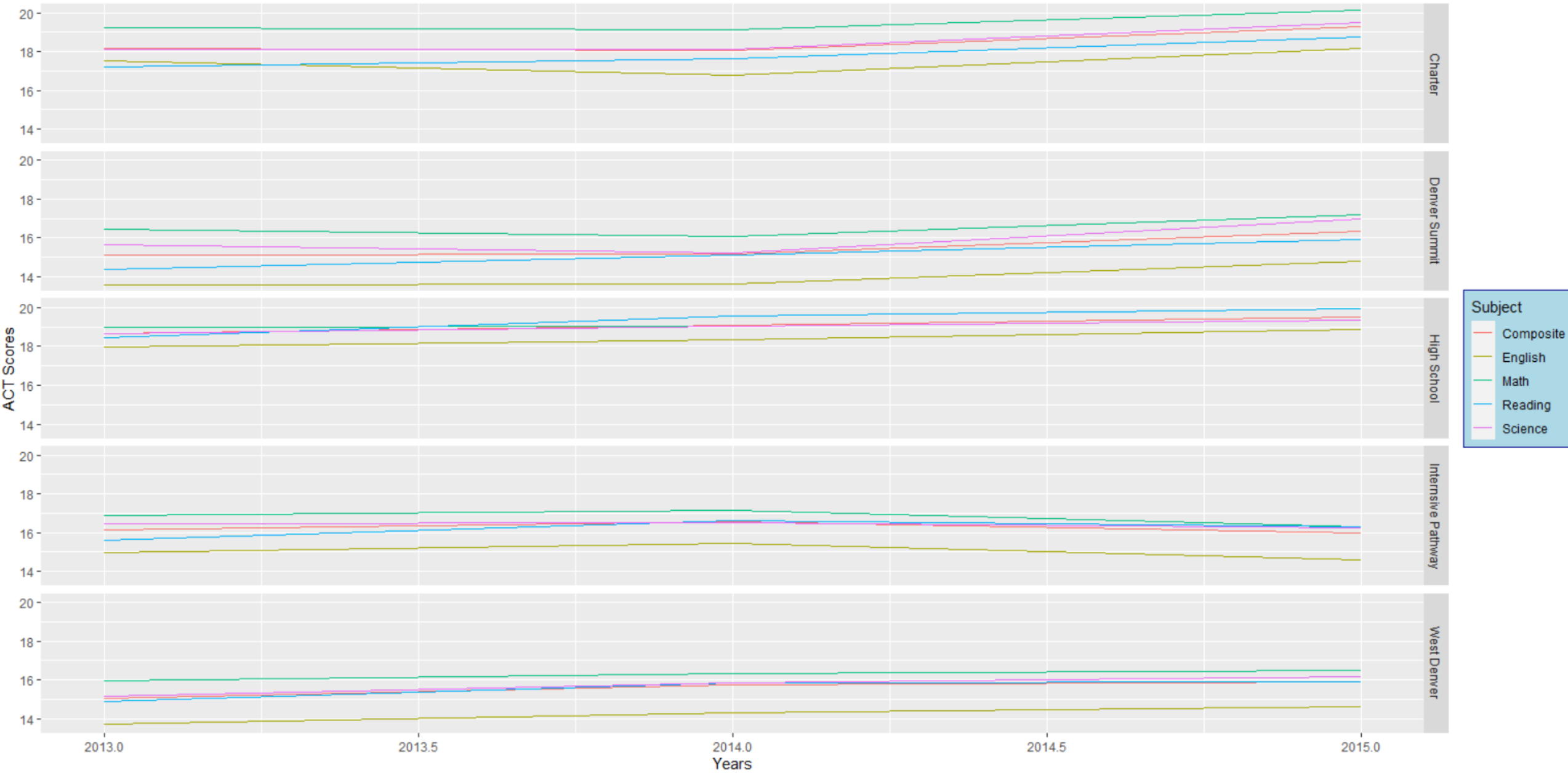
Mean Scores For All Students
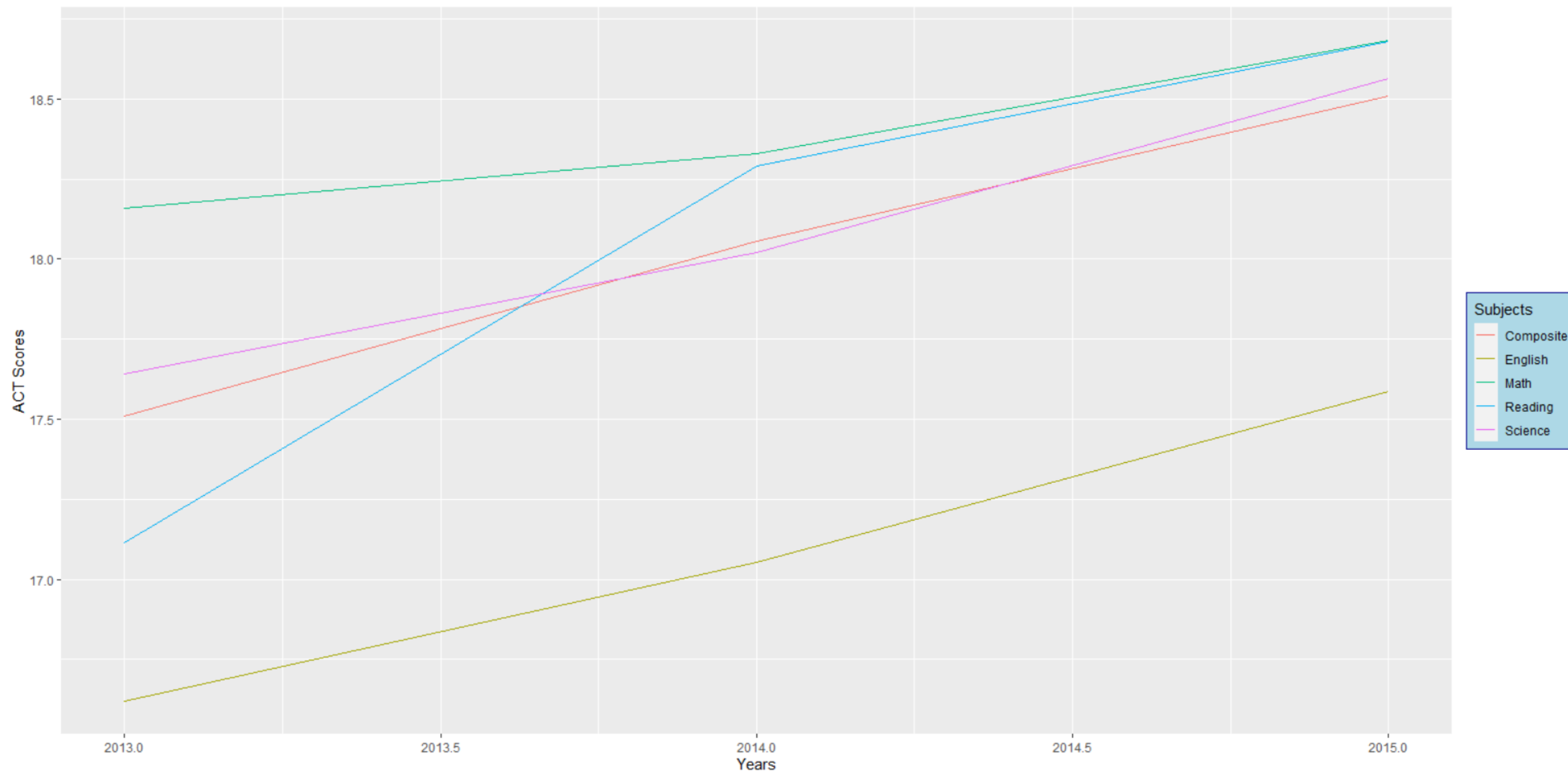
Network Level

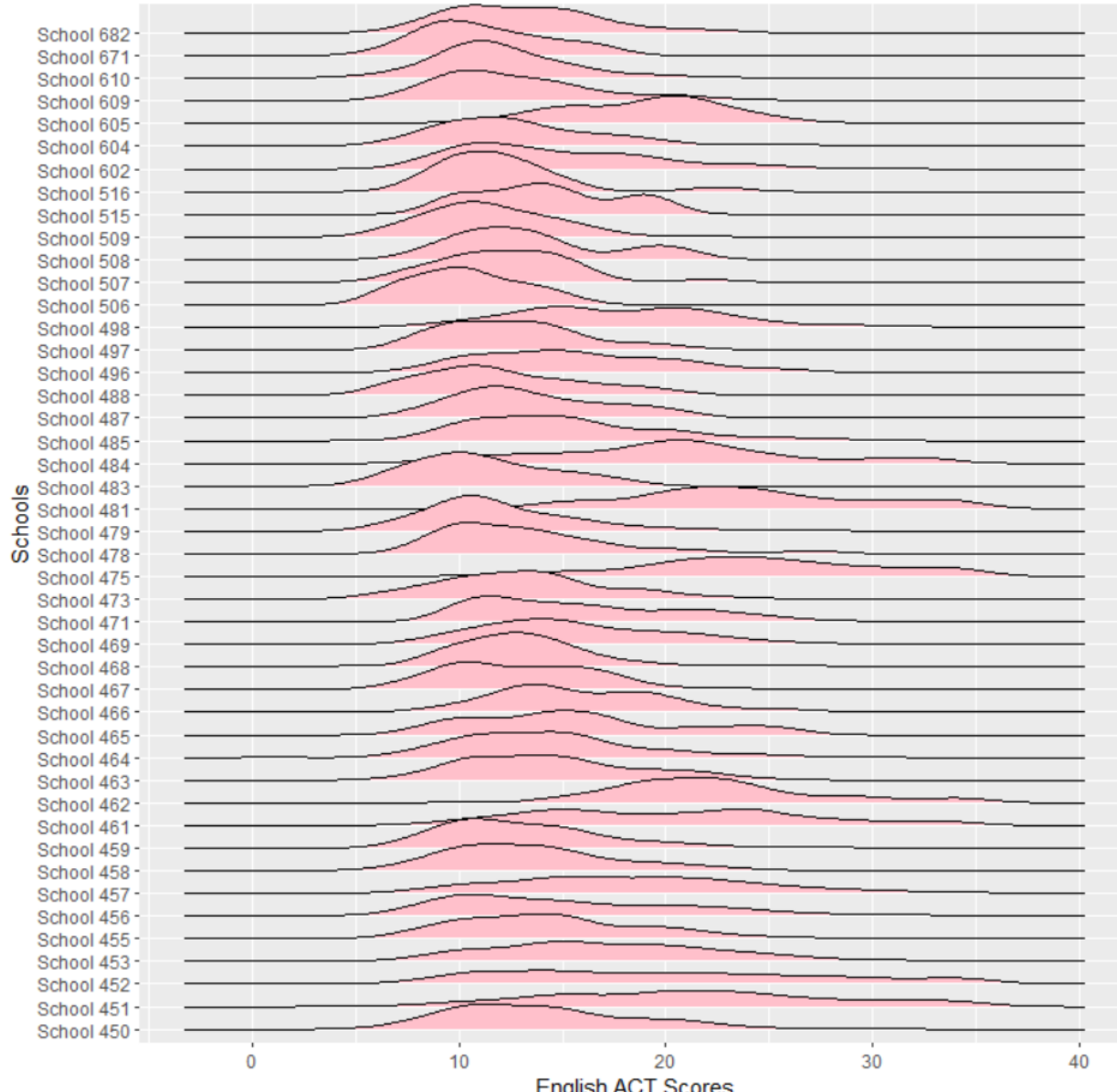Comparison of ACT Scores By Subject Area Per Network

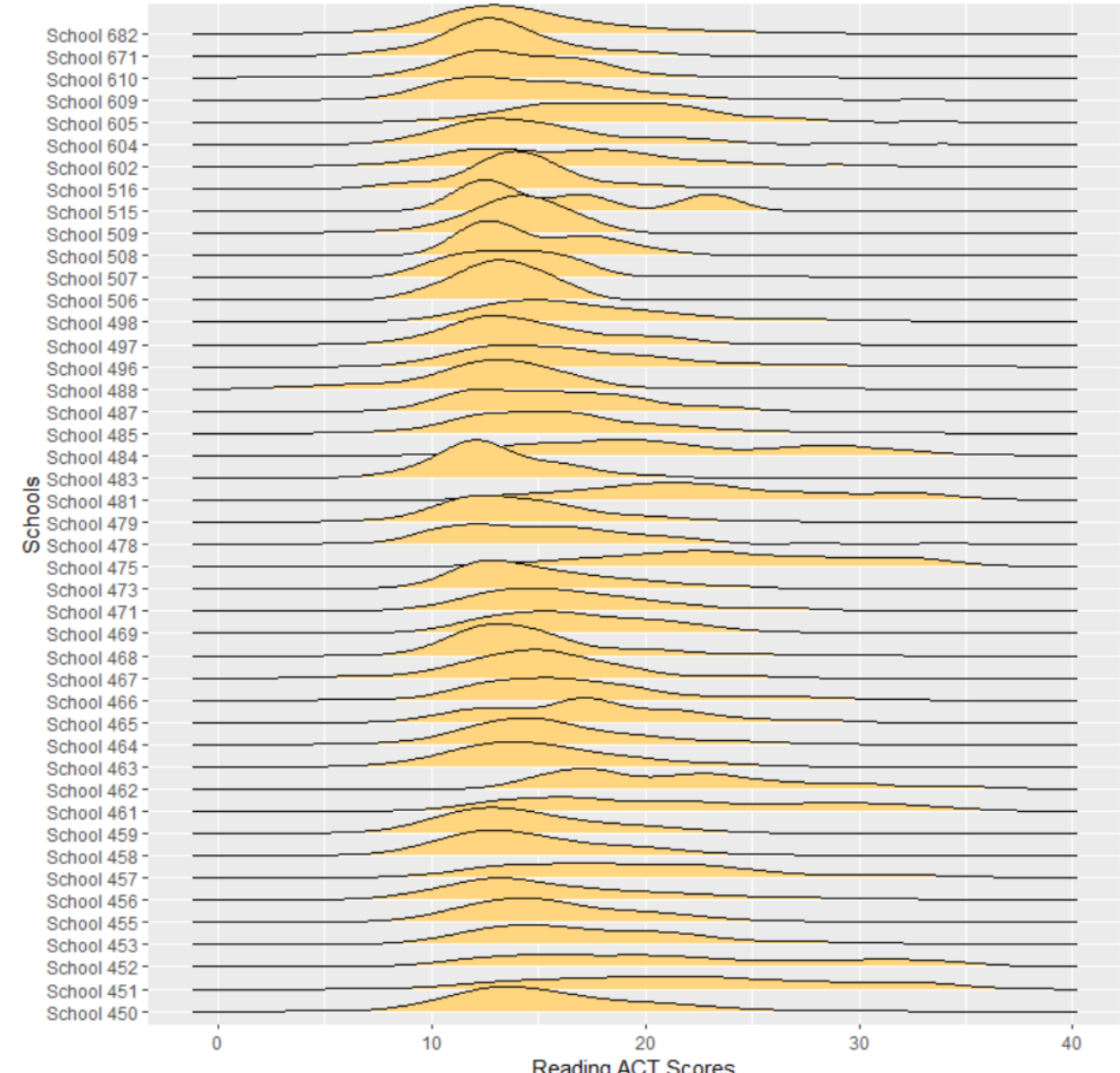Mean Scores For All Students By Network and Subject
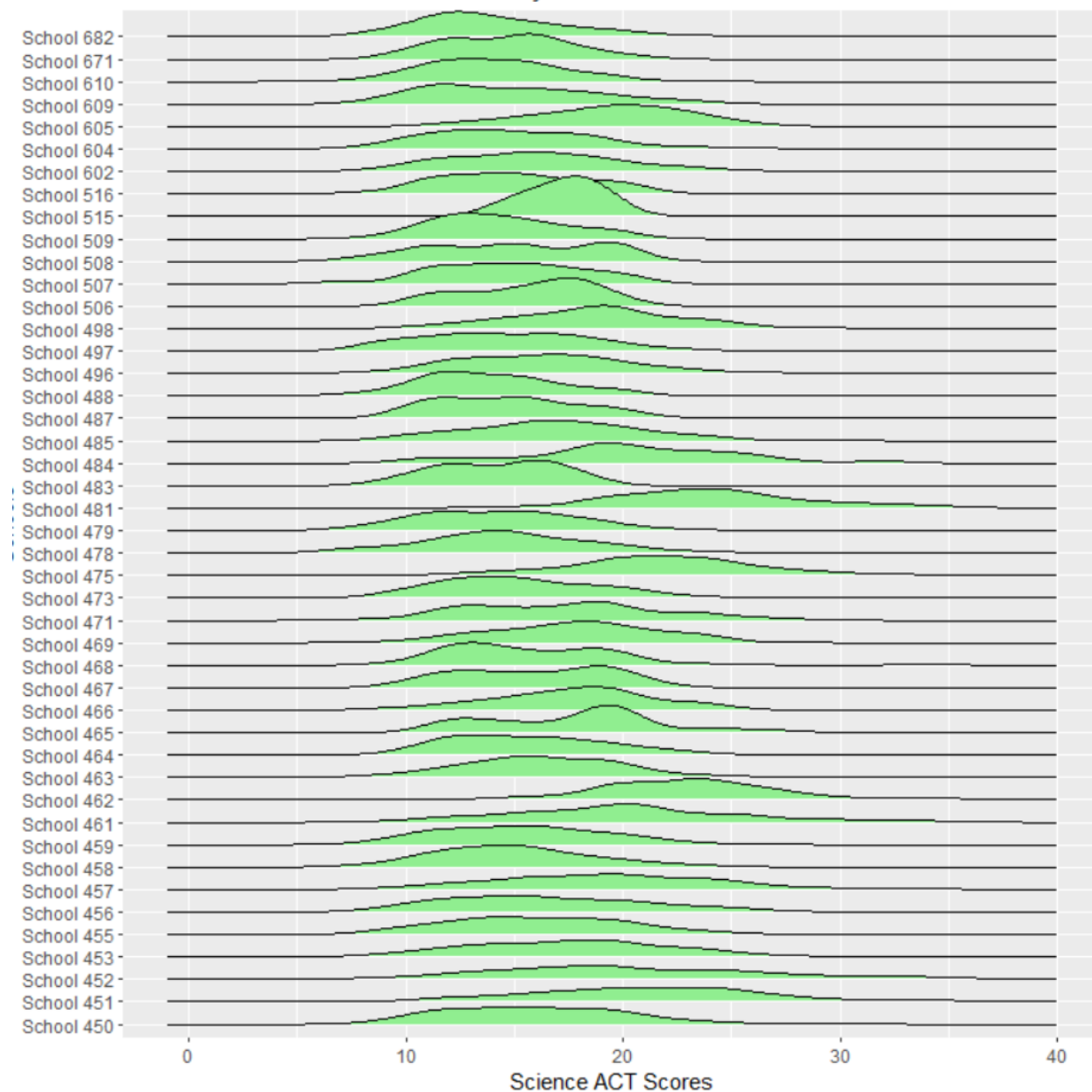
School Level Analysis
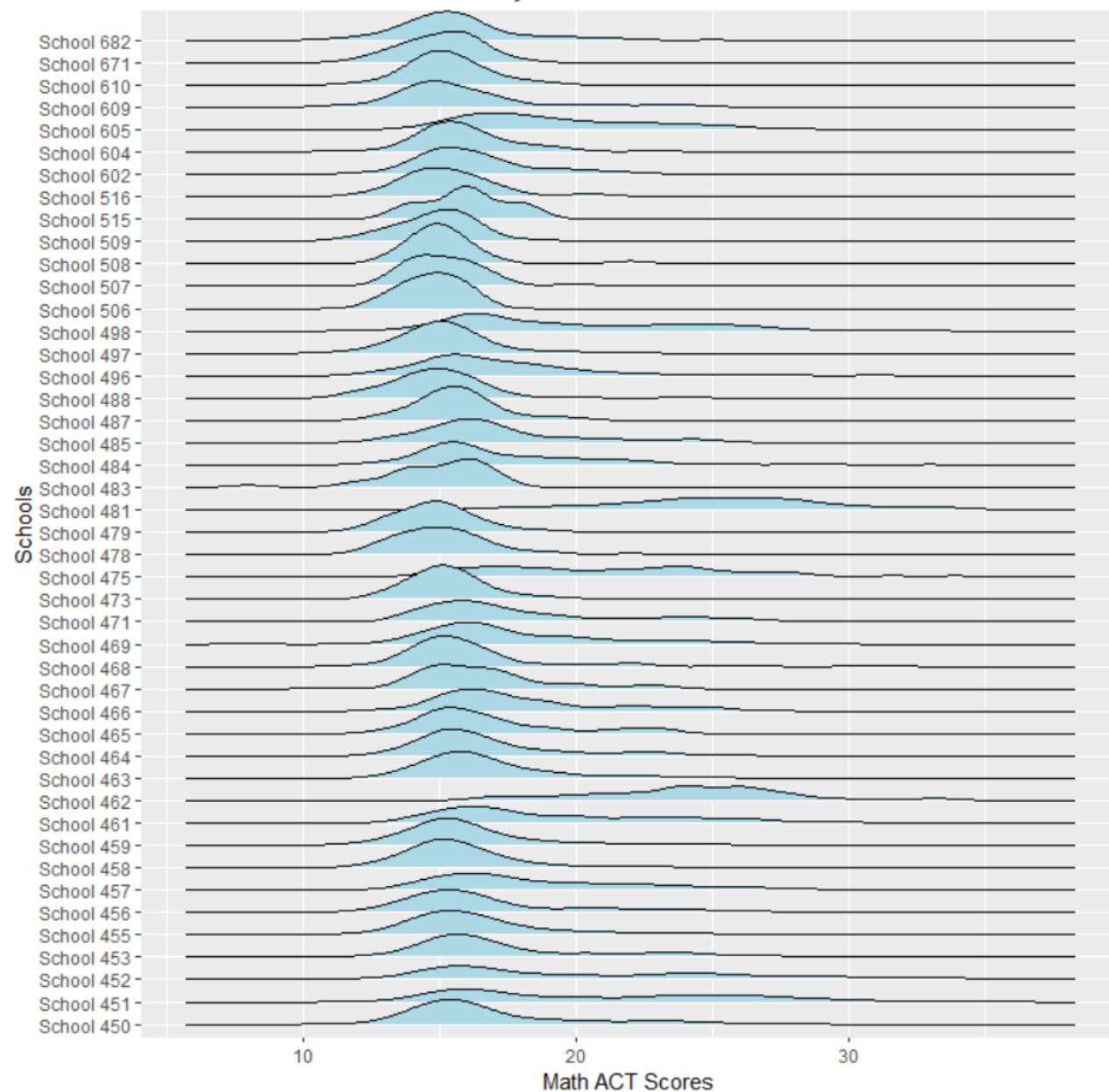

Distribution of English ACT Scores By School

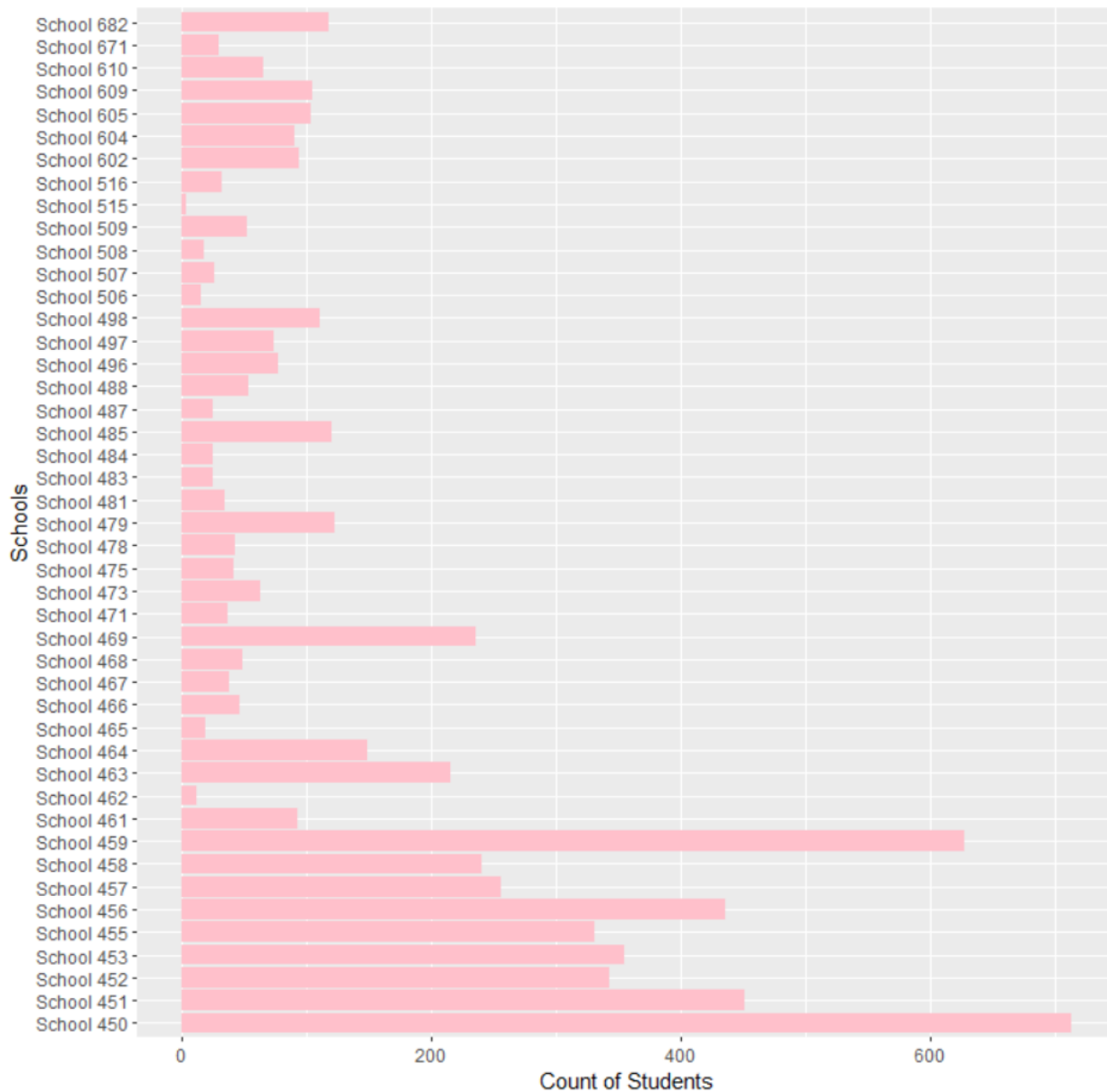Distribution of Reading ACT Scores By School

Distribution of Science ACT Scores By School
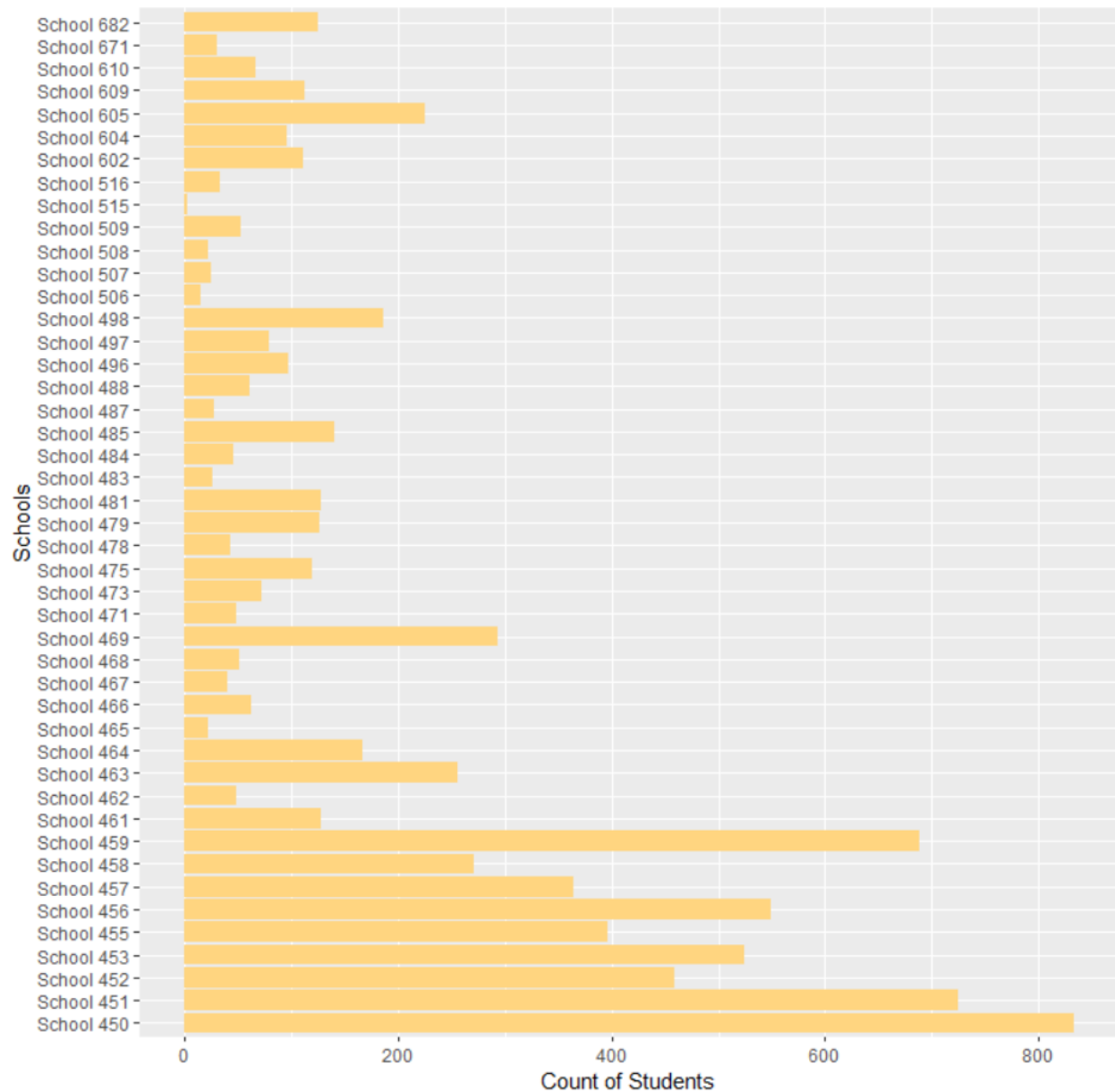
Distribution of Math ACT Scores By School

Count of Students With English Scores Below Performance Goals

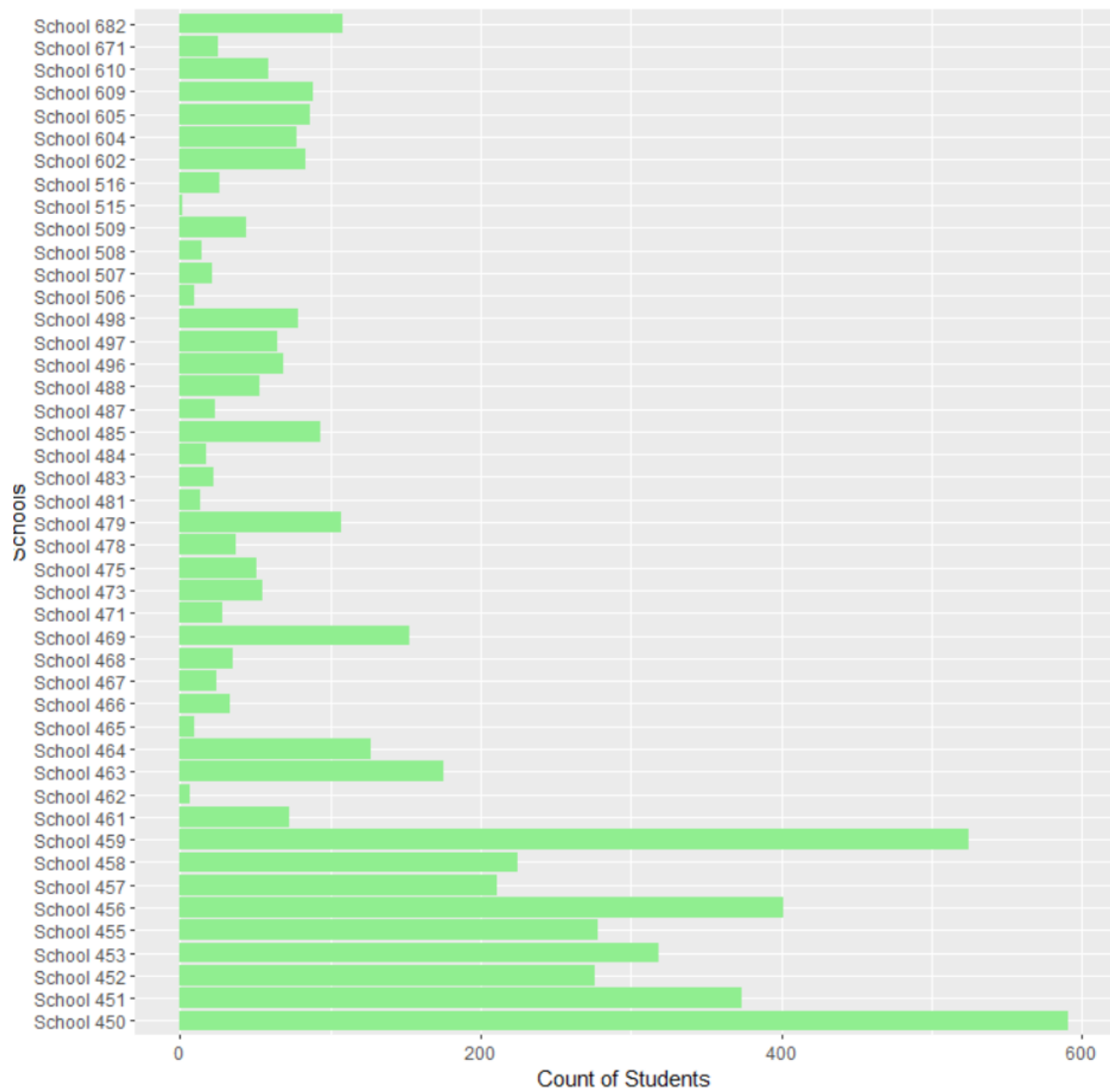Count of Students With Reading Scores Below Performance Goals

Count of Students With Science Scores Below Performance Goals

Count of Students With Math Scores Below Performance Goals

Case Study: School 452
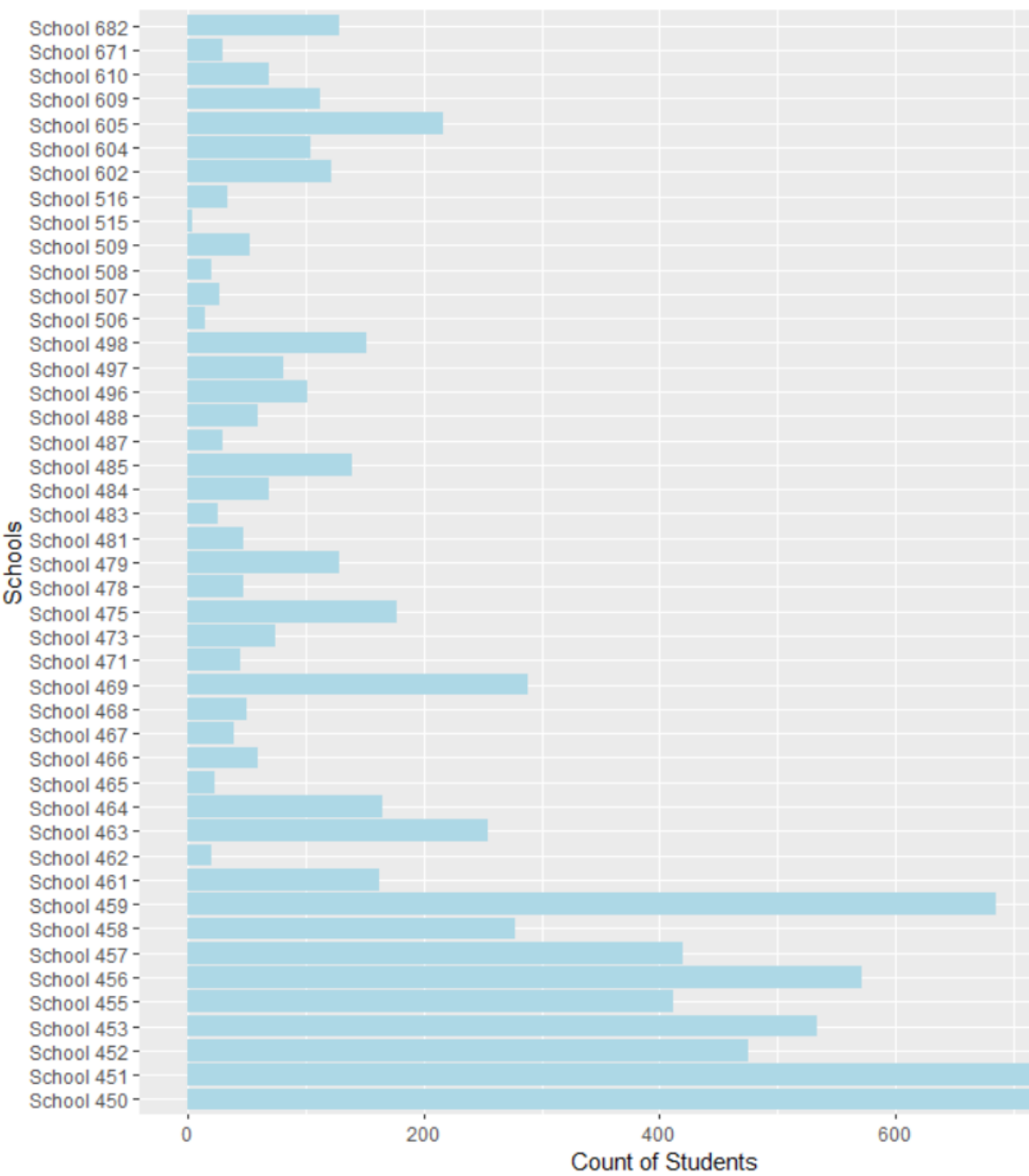
Mean Percent Change in Mean Scores of Underperforming Students School 452
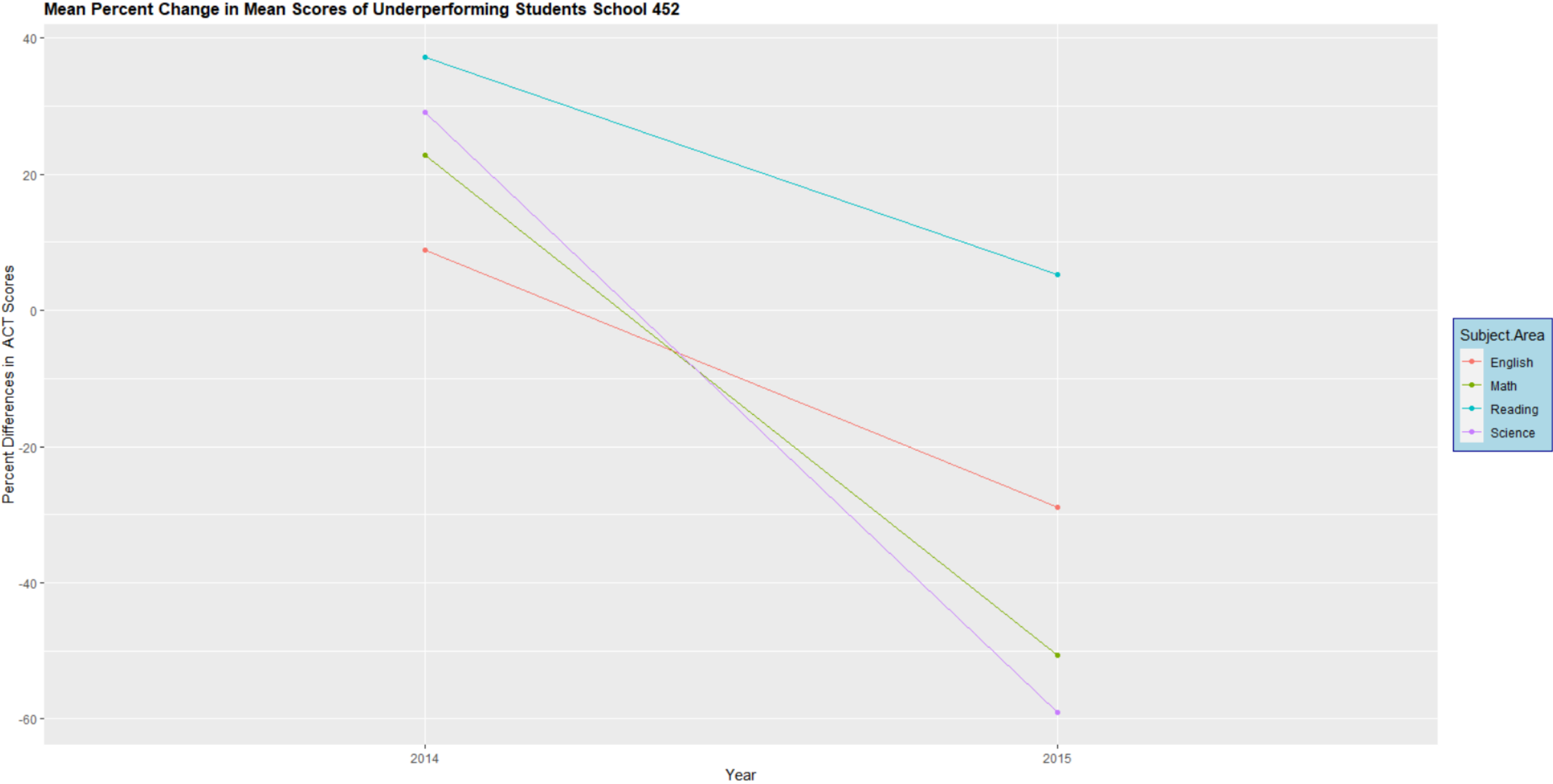
Distribution of Scores By Language Status For Underperforming Students
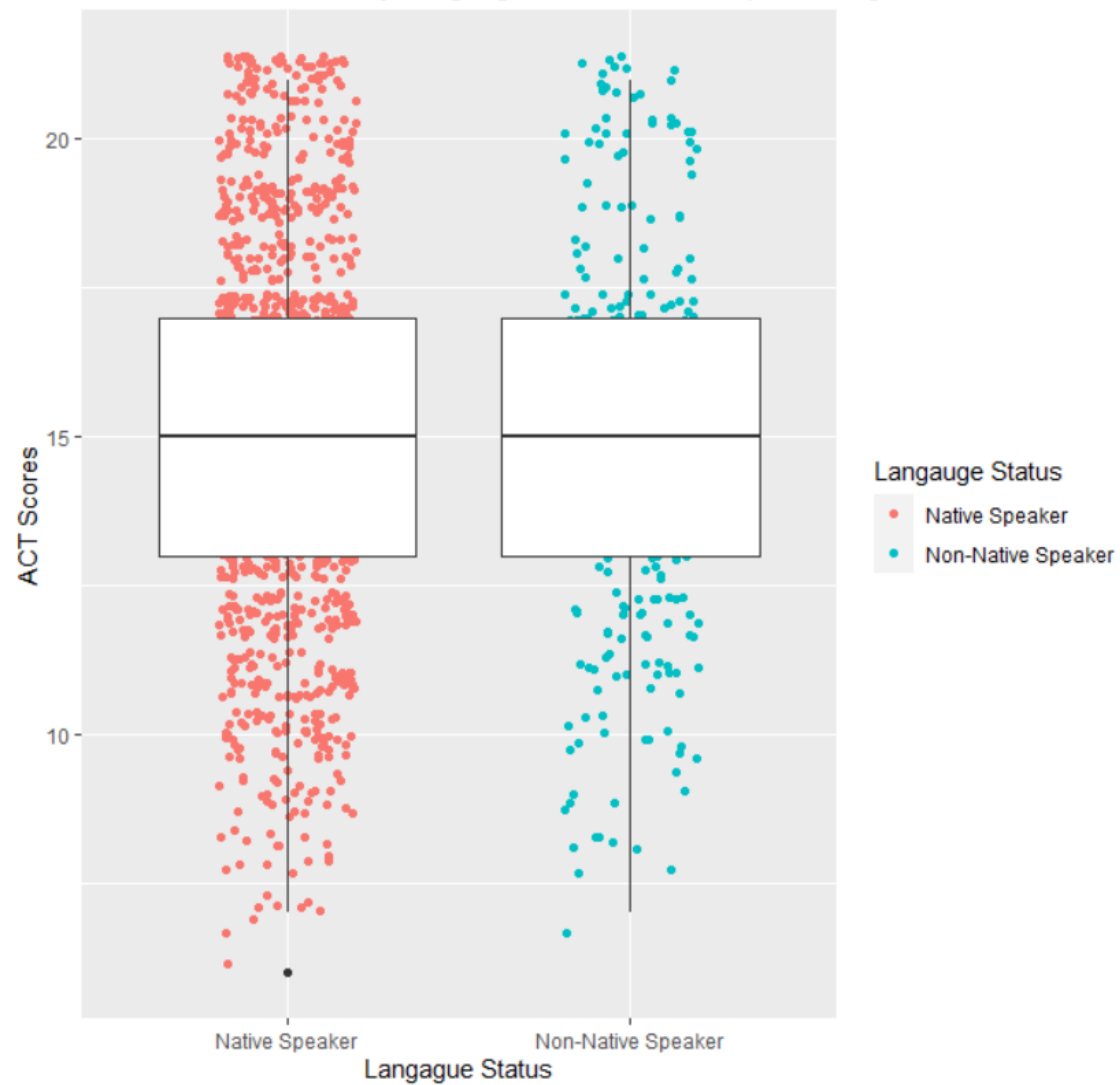
Distribution of Scores By Gender For Underperforming Students

Distribution of Scores By Gender For Underperforming Students

Distribution of Scores By Ethnicity For Underperforming Students

Distribution of Scores By Ethnicity and Gender For Underperforming Students

Regression Analysis

- Probit Model
  - Binary dependent variable
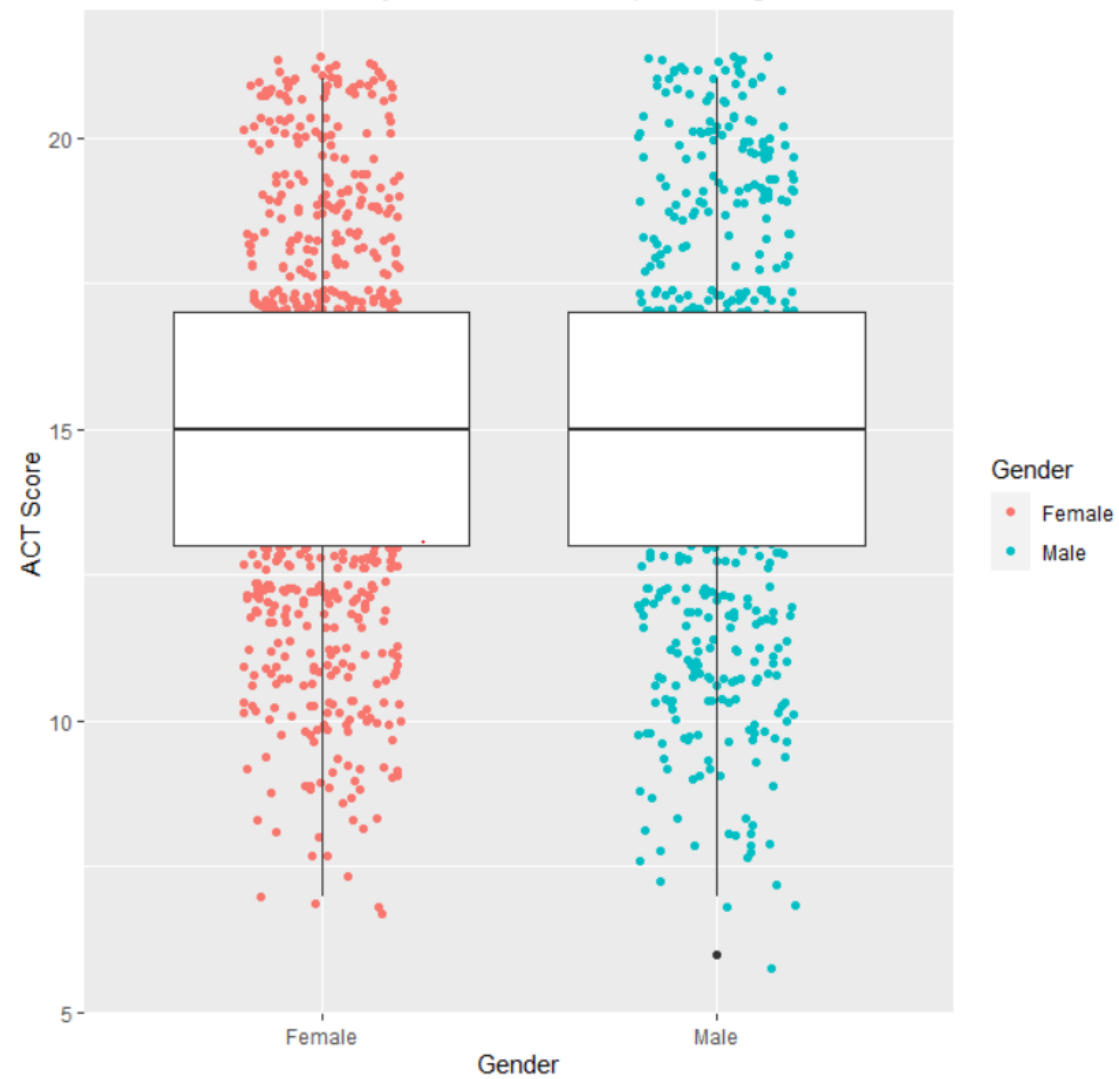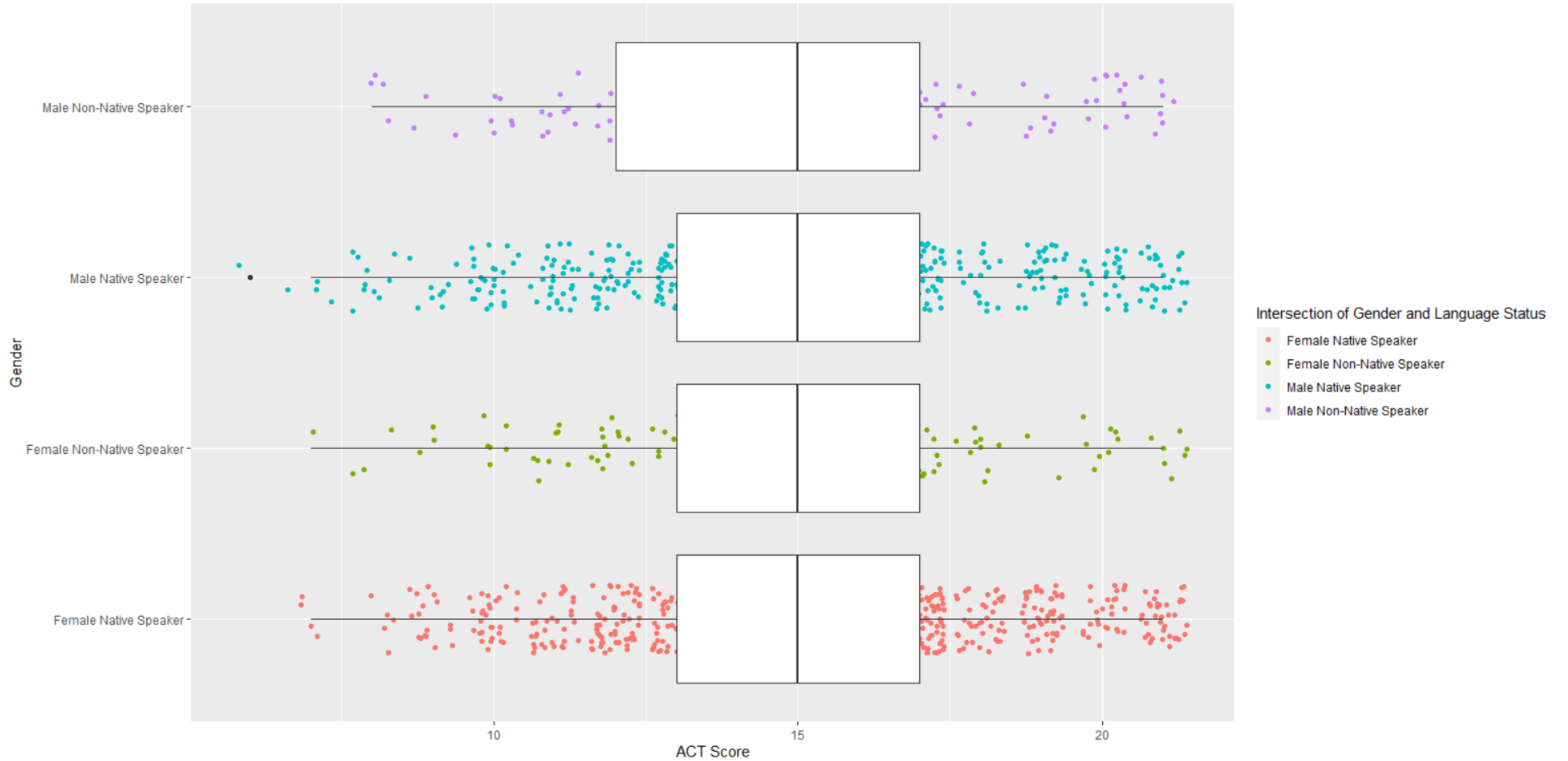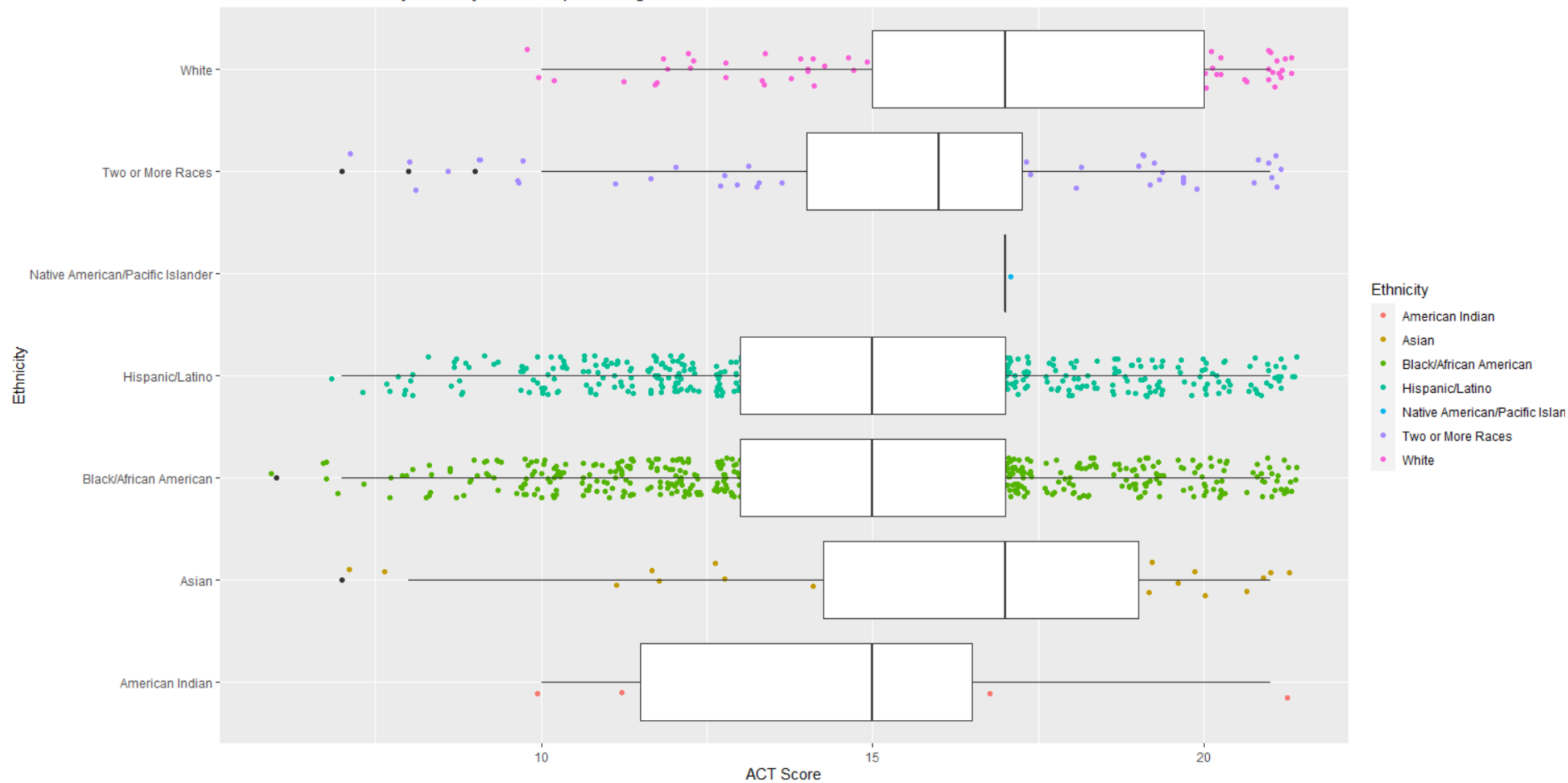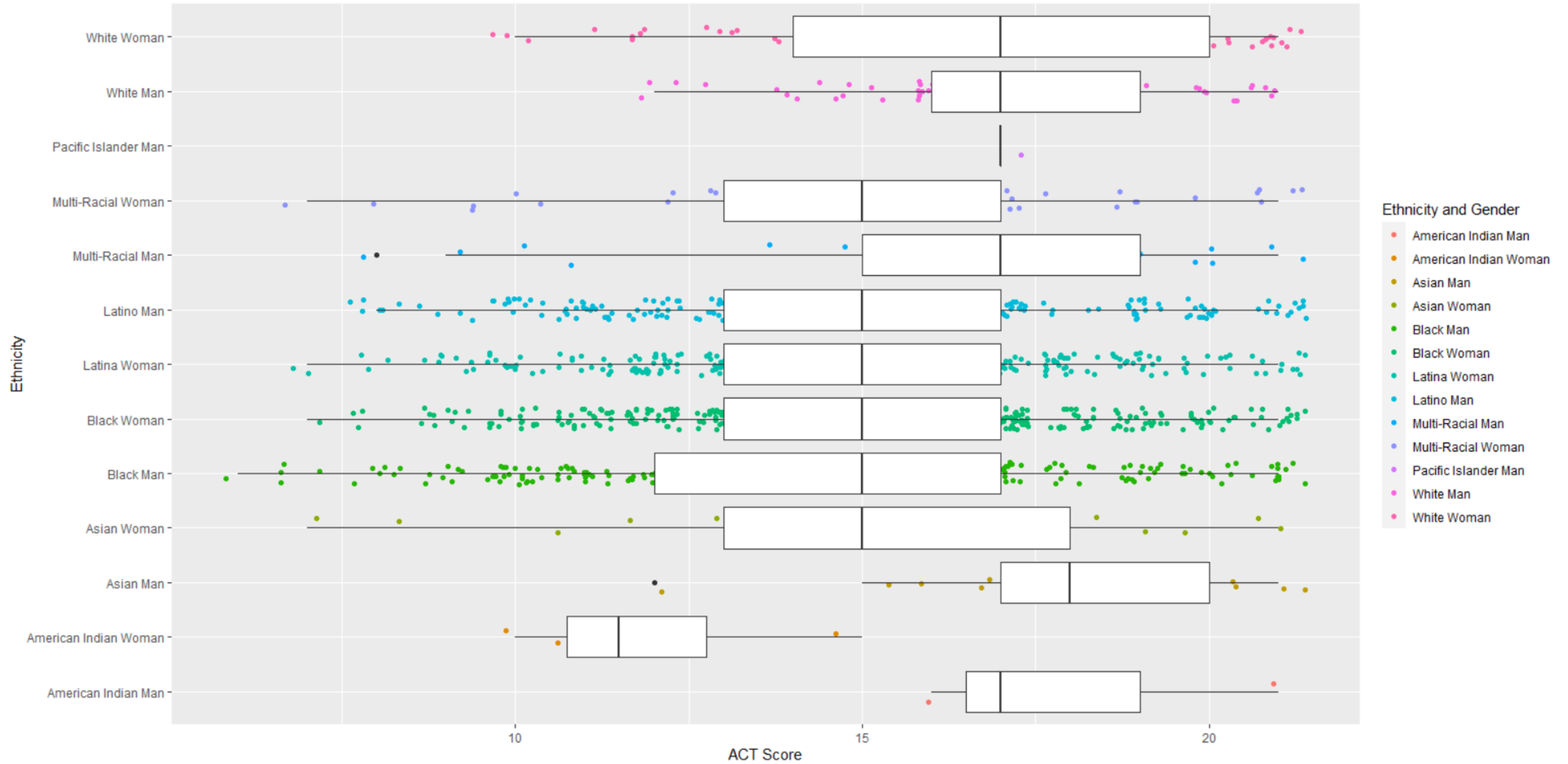- Dependent Variable is if a student was prepared based on threshold values
- Interaction Terms Not included due to VIF

term	estimate	std.error	statistic	p.value
(Intercept)	-0.327171492	0.06935735	-4.7171858	2.391293e-06
Gen	-0.003139008	0.01117432	-0.2809127	7.787773e-01
CDE_ETHNICCODE2	0.510187878	0.07332067	6.9583086	3.443823e-12
CDE_ETHNICCODE3	0.054230622	0.06903735	0.7855259	4.321453e-01
CDE_ETHNICCODE4	0.065985244	0.06827178	0.9665083	3.337899e-01
CDE_ETHNICCODE5	1.027477270	0.06912059	14.8649962	5.561805e-50
CDE_ETHNICCODE6	0.424849103	0.14872980	2.8565163	4.283180e-03
CDE_ETHNICCODE7	0.593062840	0.07439196	7.9721360	1.559550e-15
Home_Prim_Lang	0.017123077	0.01438642	1.1902251	2.339579e-01

Recommendations

- Macro
  - Focus on investment and initiatives with Mathematics and Reading
  - Mean scores still below benchmarks and with Mathematics showing the least progress
- Network
  - Big achievement gap with High School Network and Chart with other networks
  - Denver Submit and West Denver English scores are concerning and require intervention
  - Intensive Pathways network lost gains in recent years and is performing less well
    - Requires intervention starting with a focus on English skills
- School
  - 450's High Schools are generally underperforming
  - Schools generally appear to be struggling with Mathematics
    - Future policy should be tailored for this general need considering the macro view of the district

- Individual – School 452 Case Study
  - Male Non-Native English Speakers and American Indian Woman are the most vulnerable demographics and may require additional support
  - Secondary demographics would be black men as the tail's of their distribution were rather long