# NYC - English Language Arts (ELA) Test Results 2013-2023

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# Agenda

- Introduction

- Data Overview

- Methodology

- The Analysis

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- Questions

# Introduction

- ELA grading utilizes a four-point performance level scale:

- Level 1 (Not Meeting Learning Standards)

- Level 2 (Partially Meeting Learning Standards)

- Level 3 (Meeting Learning Standards), and

- Level 4 (Meeting Learning Standards with Distinction).

- Students in Level 1 and 2 are eligible for Academic intervention Services (AIS).

- **Goal:** Identify trends in Level 1 and 2 Ranges in NYC
    - Which Borough, School District/ Grade in that Boroughs need the most interventions?

# Data Overview

- **Source:** NYC Open Data

- **Dataset Name:** English Language Arts (ELA) Test Results 2013-2023

- **Date Created:** April 2, 2024

- **Last Updated:** November 26, 2024

- **Rows:** 626K | **Columns:** 18

- **Dataset URL:** https://data.cityofnewyork.us/Education/English-Language-Arts-ELA-Test-Results-2013-2023/iebs-5yhr/about_data

- **Limitation of the Dataset:**
  - Due to the COVID-19 pandemic, the exams were not administered in 2020 and were optional for students to take in 2021
  - To comply with regulations of the Family Educational Rights and Privacy Act (FERPA) on public reporting of education outcomes, groups with fewer tested students are suppressed with an "s"
  - Charter schools and District 75 schools are not included
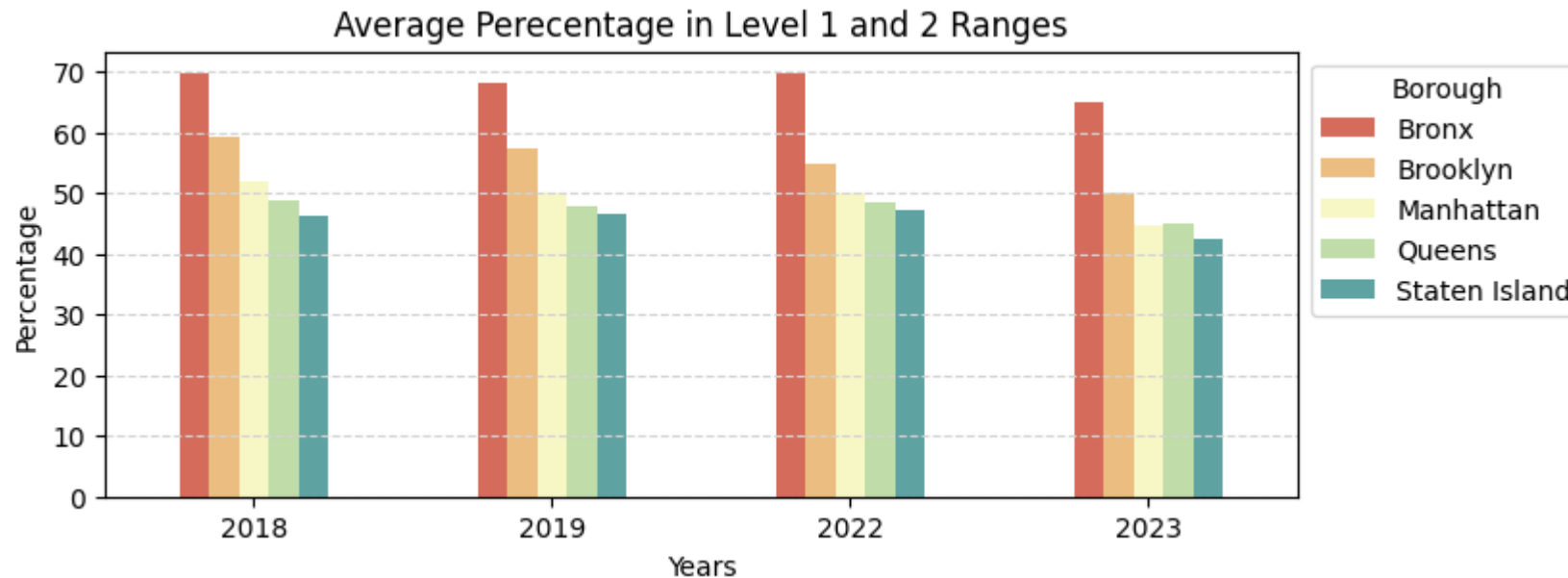
# Methodologies

- **Tools leveraged:** Python and Google Colab.

- **Libraries used:** seaborn, pandas, matplotlib

- Used Descriptive statistics, Bar graphs and Line graphs

- **Data cleaning, transformations:**
  - Subsetting of rows
  - Dropping suppressed values as data was not provided
  - Adding columns with extracted values from the data for a more meaningful analysis
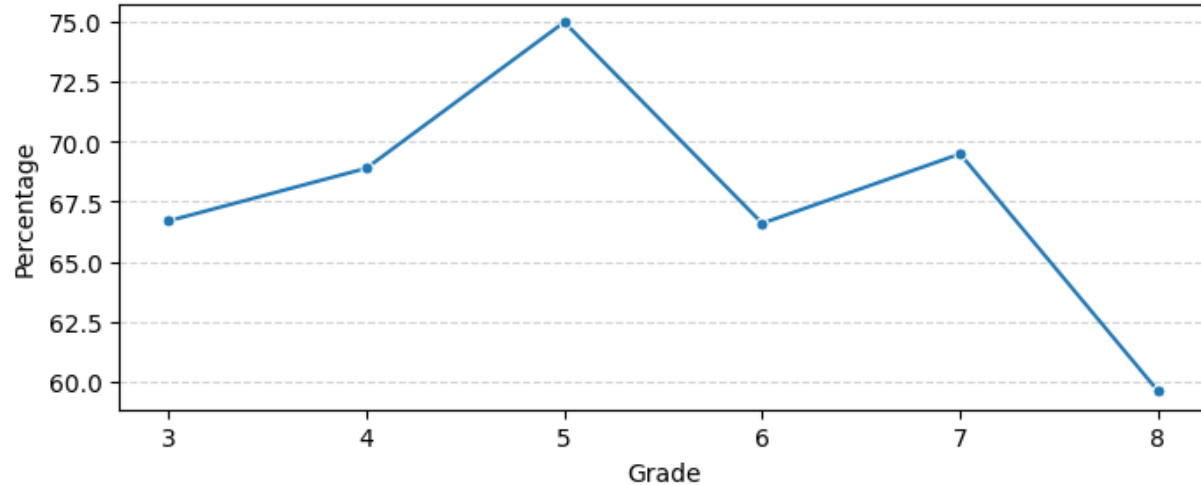
# The Analysis

# Trends in Percentages in Level 1 & 2 in NYC



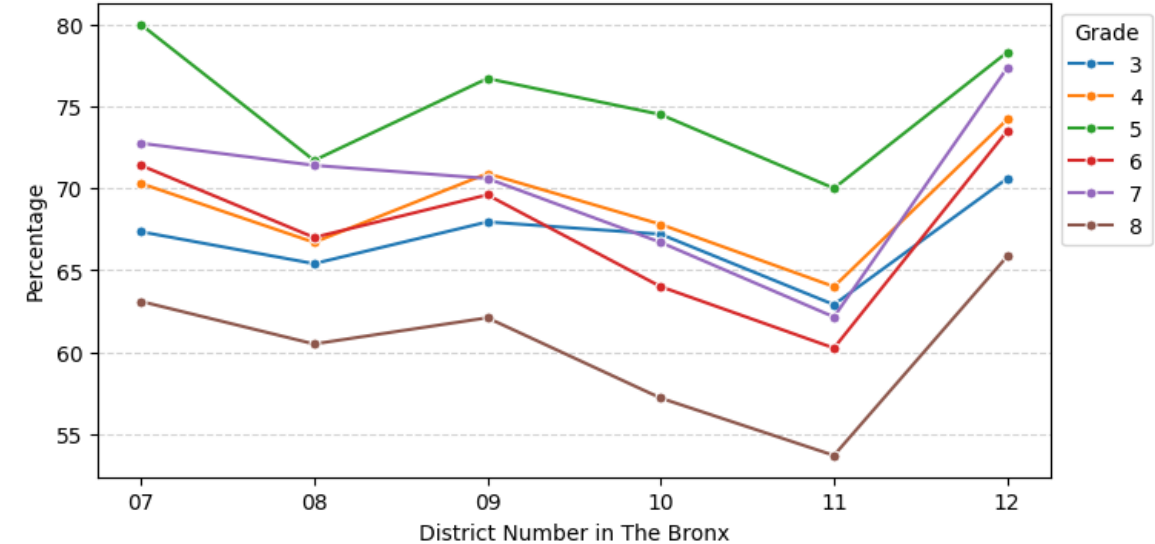Average Perecentage in Level 1 and 2 Ranges

- 2018 – 2023: **The Bronx** has the most Students in Level 1 and 2 Ranges, with **Staten Island** the least.

- 2018 – 2022: **Brooklyn** through the years has made some improvements, while **Queens** and **Manhattan** have stayed approximately static

- In 2023 all Boroughs have shows improvements compared to previous years

# Trends in The Bronx for Level 1 & 2



Avg. Percentages in Level 1 and 2 Ranges by Grade in The Bronx



Level 1 and 2 Ranges by District Number / School Grades in The Bronx

Investigating Bronx:

- Grades 5 and 7 in the Bronx have the highest in Level 1 and 2 while Grade 8 the lowest

- Districts 12 and 07 have the highest in Level 1 and 2 Ranges. In these district Grades 5 and 7 have the highest in Level 1 and 2 Range.

- Grade 4 is just behind Grade 7

- District 11 has the lowest in Level 1 and 2.

# Conclusion and Next steps

- Bronx with highest Levels 1 and 2 Ranges amongst the Boroughs with specific districts and Grades showing higher percentages

- Conduct further analysis on student behaviors – attendance, family socioeconomic status, time spent on self-study

- Comparative analysis between Districts with highest and lowest

- Provide recommendations for a pilot intervention leveraging data-driven decisions

# Questions