EDLD 651 Final Project Draft

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Author Note

All work done herein represents contributions from all authors equally. Author order is alphabetical.

Abstract

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Keywords: keywords

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Introduction

We explore proportion of graduation (outcome), across several categorical variables. In particular, we plan to focus on English learners vs. English proficient students.

Not only will we report these outcomes across different groups, we will also explore these across boroughs, too, to see if English learners are succeeding equally across boroughs, compared to the English proficient students in their boroughs.

Methods

We retrieved the data collected by the Department of Education from *NYC OpenData*. It details graduation outcome information for the classes of 2005 to 2010.

Information about variables, how they were measured here

Information about regents examinations here

Participants

Explain participants' from what we have in data.

First, we import and clean our data:

```
grad <- import(here("data", "2005-2010__Graduation_Outcomes_-__By_Borough.csv"))
grad <- grad %>%
  clean_names() %>%
  as_tibble()


summary(grad$cohort) # needs to be cleaned in new df, change Aug 2006 to 2006
```

```
##    Length     Class      Mode
##       385 character character
```

```
clean_grad <- grad

clean_grad$cohort <-  as.numeric(sub("Aug 2006", "2006", grad$cohort))


kable(head(clean_grad))
```

demographic	borough	cohort	total_cohort	total_grads_n	total_grads_percent_of_coho
Borough Total	Bronx	2001	11453	4913	42
Borough Total	Bronx	2002	12032	5328	44
Borough Total	Bronx	2003	13632	6389	46
Borough Total	Bronx	2004	14364	7448	51
Borough Total	Bronx	2005	15175	8229	54
Borough Total	Bronx	2006	15579	8524	54

PIVOTS

The data we are starting with are already tidy, but for the purposes of demonstrating our rather acute proficiency in our *ability* to tidy data, in this segment will make the data untidy and then tidy it once more.

```
messy_grad <- clean_grad %>%
  pivot_wider(names_from = borough,
              values_from = total_cohort)
kable(head(messy_grad))
```

demographic	cohort	total_grads_n	total_grads_percent_of_cohort	total_regents_n	to
Borough Total	2001	4913	42.9	2644	
Borough Total	2002	5328	44.3	3118	
Borough Total	2003	6389	46.9	3861	
Borough Total	2004	7448	51.9	4625	
Borough Total	2005	8229	54.2	5618	
Borough Total	2006	8524	54.7	6312	

```
clean_grad_2 <- messy_grad %>%
  pivot_longer(cols = c("Bronx":"Staten Island"),
               names_to = "borough",
               values_to = "total_cohort",
               values_drop_na = TRUE)

clean_grad_2 <- clean_grad_2[, c(1,21,2,22,3:20)]
apa_table(clean_grad_2)
```

```
kable(head(clean_grad_2))
```

demographic	borough	cohort	total_cohort	total_grads_n	total_grads_percent_of_coho
Borough Total	Bronx	2001	11453	4913	42
Borough Total	Bronx	2002	12032	5328	44
Borough Total	Bronx	2003	13632	6389	46
Borough Total	Bronx	2004	14364	7448	51
Borough Total	Bronx	2005	15175	8229	54
Borough Total	Bronx	2006	15579	8524	54

Other tasks that need to be done:

```
#select() relevant variables to make subsetted dataset
#filter() out cases that are of interest
```

```
# We can do a table of descriptive stats, visuals (bar plots), counts here

# We can also look at the following to get a general sense of the data:
# - total cohorts/grads by borough
# - grad percentage by demographic, then can do a deeper dive by borough
# - the above two repeated with dropout rate
```

Data analysis

All analysis were conducted in R, with heavy reliance upon the `{tidyverse}` packages to manipulate and visualize the data.

Results

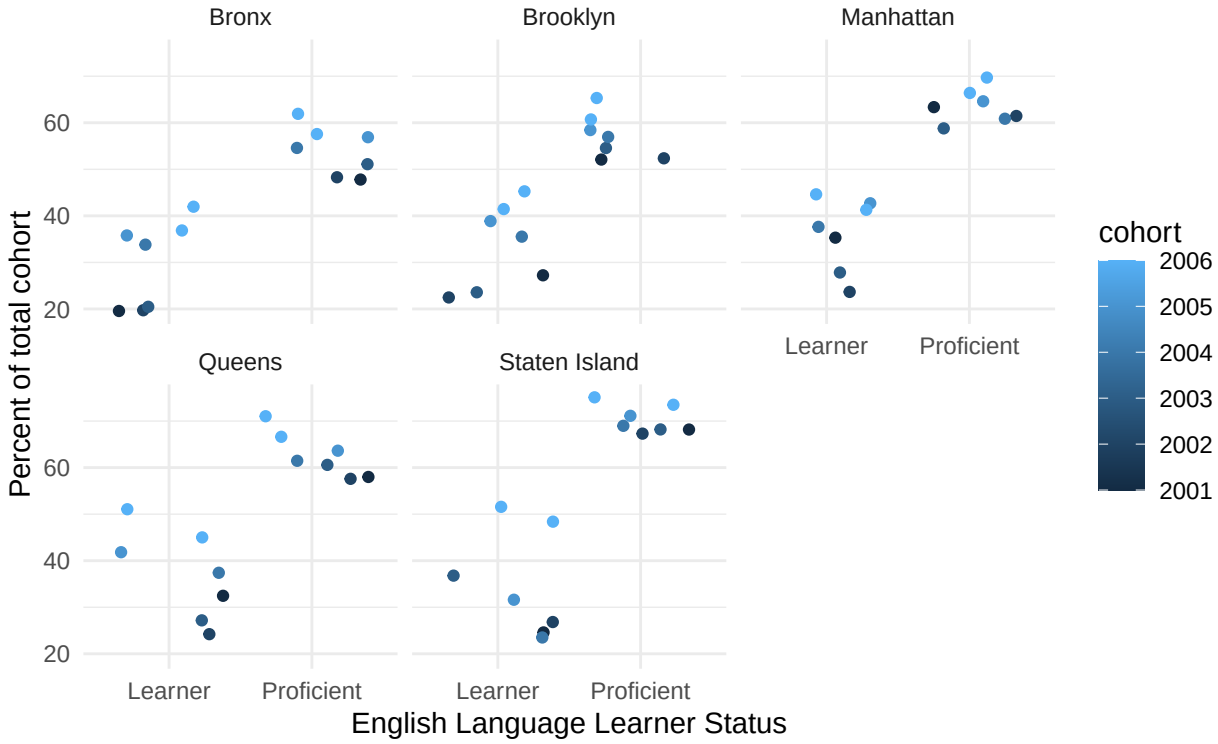
```
#group_by()
#summarize()
#report graduation by borough
#report graduation by english language status
#report graduation by borough & english learner status
```

```
#Chris Loan would like to do this part: graphing.
# my code works assuming we use the "clean_grad" dataset in the ‘final_project.Rmd‘ fi


#graph outcomes by English language status
#facet wrap by borough
#jitter the points so we can see all the years
#give color to all the years so we can differentiate them


clean_grad %>%
  filter(demographic == "English Language Learners" |
           demographic == "English Proficient Students") %>%
  mutate(‘English Language Learner Status‘ =
           factor(demographic,
                  levels = c("English Language Learners",
                      "English Proficient Students"),
                  labels = c('Learner', 'Proficient')
                  )
```

```
        ) %>% group_by(`English Language Learner Status`, borough) %>%
ggplot(aes(x = `English Language Learner Status`,
           y = total_grads_percent_of_cohort)) +
geom_jitter(aes(color = cohort)) + facet_wrap(~borough) +
labs(title = 'Figure 1. Graduation Rates in NYC by English Learner Status',
     subtitle = 'Boroughs are reported separetely with lighter dots indicating more re
     y = 'Percent of total cohort')
```

Figure 1. Graduation Rates in NYC by English Learner Status

Boroughs are reported separetely with lighter dots indicating more recent years



Discussion

Differences appear to be blah by blah for blah. XYZ boroughs should consider blah blah blah, based on the results. Inferential tests are recommended for next directions.

References

Table 1

demographic	borough	cohort	total_cohort	total_grads_n	total_grads_per
Borough Total	Bronx	2,001.00	11453	4913	42.90
Borough Total	Bronx	2,002.00	12032	5328	44.30
Borough Total	Bronx	2,003.00	13632	6389	46.90
Borough Total	Bronx	2,004.00	14364	7448	51.90
Borough Total	Bronx	2,005.00	15175	8229	54.20
Borough Total	Bronx	2,006.00	15579	8524	54.70
Borough Total	Bronx	2,006.00	15579	9215	59.20
Borough Total	Brooklyn	2,001.00	19961	9758	48.90
Borough Total	Brooklyn	2,002.00	20808	10337	49.70
Borough Total	Brooklyn	2,003.00	21334	11064	51.90
Borough Total	Brooklyn	2,004.00	22353	12303	55.00
Borough Total	Brooklyn	2,005.00	22331	12603	56.40
Borough Total	Brooklyn	2,006.00	22177	13040	58.80
Borough Total	Brooklyn	2,006.00	22177	14043	63.30
Borough Total	Manhattan	2,001.00	12670	7480	59.00
Borough Total	Manhattan	2,002.00	13463	7746	57.50
Borough Total	Manhattan	2,003.00	13879	7613	54.90
Borough Total	Manhattan	2,004.00	15127	8780	58.00
Borough Total	Manhattan	2,005.00	15843	9816	62.00
Borough Total	Manhattan	2,006.00	16416	10411	63.40
Borough Total	Manhattan	2,006.00	16416	10947	66.70
Borough Total	Queens	2,001.00	17011	9180	54.00
Borough Total	Queens	2,002.00	18262	9869	54.00
Borough Total	Queens	2,003.00	18415	10455	56.80
Borough Total	Queens	2,004.00	18725	10922	58.30
Borough Total	Queens	2,005.00	19511	11863	60.80