MTV/Paramount Capstone Final Report

Master of Interdisciplinary Data Science

Duke University

Dapo Adegbile, Jasmine Young, Pranav Manjunath

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Executive Summary

In this study we looked at voting access on college campuses in 2012, 2016, 2018, and 2020. We used distance from the college campus to the nearest polling place as a proxy for access. Students and colleges with an on-campus polling place have the most access by our terms. Here we summarize some of our most important findings, keeping in mind that the following report contains greater detail and depth.

- Most colleges across the United States do not have access to a polling place on campus. 74% of colleges did not have a polling place on campus in 2020. When we look specifically at early voting, that number jumps to 90% of colleges without an early voting polling place on campus.
- We found that voting access for colleges worsened in 2016 and 2018 when compared to 2012. Voting access for colleges then improved again in 2020. We found this to be true for distance, travel times, and the share of on-campus polling places.
- In each year (2012 - 2020) we can see that compared to Predominantly Non-White colleges, Predominantly White colleges have a higher percentage of polling places on their campus. This means the Predominantly White colleges have slightly more access than Predominantly Non-White colleges in terms of on-campus polling places.

Key Findings

Our study focused on understanding voting access on college campuses. Here we will summarize some of the most important findings from our study in distinct points. For more details on our methodology and additional results, please continue on to the report below.

1. Most college students across the country do not have access to election day voting on campus. To be more specific, 76% of college campuses did not have an election day polling place on their campus in 2020. That number was even higher in 2018 (84%), 2016 (85%), and 2012 (81%).
2. Even more students do not have access to early voting polling places on campus. In 2020, 90% of college campuses did not have an early voting polling place on their campus.
3. We found that 2-Year colleges appeared to have less voting access than 4-Year colleges. Over 20% of 2-Year colleges were over 1 mile from their nearest election day polling place. On the other hand, only 9% of 4-year colleges were over 1 mile from their nearest election day polling place. A higher percentage of 2-Year Colleges had to travel far to get to their nearest polling place.
4. In addition to looking at access by campus, we looked at access for all of the college students for which we had data. We found that a majority of students in 2020, 54%, did not have any voting option on campus.
5. To think about the lack of voting access numerically, 6.6 million students had neither early voting nor election day voting on their campus in 2020. College students without voting access on campus make up a large part of our population.
6. When we look at all schools with data from 2012 - 2020, we find that voting access worsened in 2016 & 2018 before improving again in 2020.
7. In presidential election years (2012,2016, & 2020) Predominantly White and Predominantly Non-White colleges were about the same distance from their nearest polling place on average.
8. We also looked into the percentage of Predominantly White and Predominantly Non-White schools with a polling place on campus. In each year (2012 - 2020) we can see that compared to Predominantly Non-White colleges, Predominantly White colleges have a higher percentage of polling places on their campus.
9. When evaluating different modes of transportation (walking, driving, and public transit) the travel distances were higher for all three modes in 2016 and 2018 when compared to 2012 and 2020. This reinforces that voting access worsened in 2016 and 2018 before improving again in 2020.
10. In terms of travel time, the average time it took for students to walk to their nearest election day polling place in 2020 was about 30 mins. Again, this is an important decrease compared to 2016 and 2018, where the average walking duration was 38/39 minutes.

Introduction

Youth voted at a record rate in 2018, but of those who didn't turnout in the last election, nearly half cited access as a reason for not voting. According to a 2019 report by The Leadership Conference, more than 1,600 polling places closed since the 2013 *Shelby v. Holder* decision which removed all jurisdictions from Voting Rights Act "preclearance" coverage. A large number of those 1,600 closures took place in communities of color. In this study we focus on investigating the intersection of voting access as it pertains to college campuses and communities of color. Specifically, we compare voting access at Minority Serving Institutions (MSI's) with predominantly white institutions. In this report, we demonstrate the level of access students at different types of institutions have when it comes to voting.

Key Questions

Our questions of focus are as follows:

1. How many and which schools across the country have election-day voting sites on their college campuses? What types of voting sites are they i.e. early voting, same-day voting, dropboxes etc.?
2. How has this changed, if at all, over the last three presidential election cycles (2012, 2016, 2020)? How has this changed since Shelby v. Holder?
3. How does the presence of a polling place on campus / the distance to the nearest voting location differ depending on the type of school and student demographics?
4. For those schools that do not have on-campus election-day voting options, what is the average travel distance to their nearest early voting booth by foot, public transportation, or car?

Data & Methodologies

Overview of Data Needs

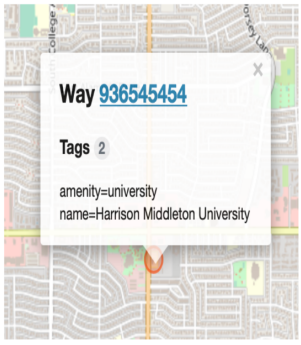
To help answer our project objectives, we require polling place (Election Day and Early Voting) location, college demographics and college campus boundary data. It is necessary to have the latitude and longitude values for the polling locations and the boundaries of college campuses represented by polygons/multipolygon data types. In terms of college demographics, we needed to understand the Minority Serving Institution (MSI) Type, racial student demographics, and if it is a 2 Yr. or 4 Yr. Public/Private University.

Geocoding is the process of transforming a description of a location, such as an address or a name of a place, to a location on the earth's surface. For our project, we geocoded the polling places addresses to obtain their respective latitude and longitude values.

College Campus Boundary Data

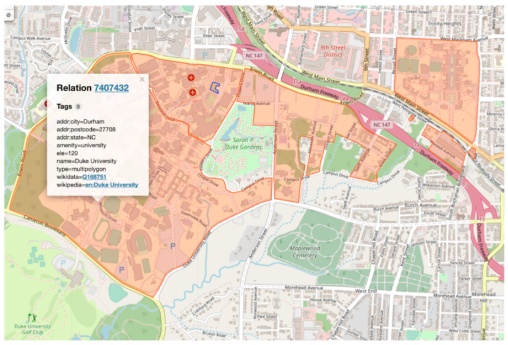
For this project, we needed to determine the location data for college campuses in the US. College campuses could be represented by a point, polygon or a multipolygon. A point representation would be a single longitude/latitude value present anywhere on the campus and a polygon representation depicts the boundaries of the college campus. When a college is spread out in many places, multi-polygons are used to connect multiple polygons as one university. The illustration below depicts the differentiation between a point, polygon, and a multi-polygon.

Point



Polygon

Multi Polygons



The main sources of College Campuses were from:

a) OverPass Turbo. A web-based data filtering tool for OpenStreetMap.
b) Homeland Infrastructure Foundation Level Data (HIFLD). National foundation-level geospatial data within the open public domain that can be useful to support community preparedness, resiliency, research, and more.

For our analysis, college polygons/multi-polygons are a more accurate representation of the college. We initially used the Overpass Turbo Data to extract college campus information but noticed that many colleges were in points format and the polygons were not extremely accurate. Hence we completely migrated to using the college campus data obtained from HIFLD.

The HIFLD data is stored in a shape file and consists of the college name and its respective college polygon coordinates. There was no cleaning required in terms of modifying column data types or with the format of the data. This data consisted of 5396 colleges. With the HIFLD data, there were few cases where specific departments, labs, apartments were specified as individual

college names. For example, along with Duke University, Fuqua School of Business, Sanford School of Public Policy, University Apartments were also included as separate colleges. In order to maintain uniformity, we removed entries from the dataset through string pattern matching techniques.

College Demographics Data

The college demographics dataset was given to us by the +1 Team at MTV. This data was collected as a part of the "Students Learn Students Vote Coalition", and used as a tracker to coordinate their efforts in enrolling campuses in NSLVE. The data consists of columns including College Name, City and State, Institution Type, MSI Type, Student Racial Breakdowns, and other demographic information.

The +1 Team at MTV began with institutions in the National Student Clearinghouse, and added campuses that are designated as minority-serving institutions in the Rutgers Center for MSI Directory. The list was cross-referenced with all the campuses in the National Center for Education Statistics and IPEDS. They cut out for-profit schools, specialized medical schools, and beauty schools. We are confident that this dataset reasonably represents the college campuses in the United States because our dataset contains 16,748,063 college students and the United States 2020 Census reports 17,674,000 college students. This means that our dataset covers 95% of all recorded college students in 2020.

This data was given to us in a structured csv format, hence we did not have to clean or modify the format of the data. This data consisted of 3114 colleges. Similar to the HIFLD, there were rows that contained names other than the college's name. Hence, in order to maintain uniformity, we removed rows with non-college names values from the dataset through string pattern matching techniques.

Polling Place Data

Polling place data can be challenging to acquire. The United States gives states and counties a great deal of say in how they run their elections. Each state has its own voting laws, and each county can record election information differently. For these reasons there is no centralized or easily accessible bank of national election data. Our polling place data comes from a few different sources that went through individual states and sometimes individual counties to gather polling place data. The 2020 polling data used in this analysis comes from the Center for Public Integrity, a nonprofit investigative journalism organization, and covers about 35 states. The 2020 Early Voting data used in our later analysis comes from Ballot Ready, an organization dedicated to helping voters exercise their right to vote while being informed, and covers around 45 states.

Our 2018 Early Voting data also comes from Ballot Ready. The data we have for 2012, 2016, and 2018 comes from the Center for Public Integrity and also covers fewer than 35 states.

Some of our statistics and results rely on different samples of states. When looking at any election year individually, we used the maximum available data in that election year. We also looked at Early Voting and Dropbox voting separately at times. When we sought to compare changes over time, we used the combined dataset for 2012, 2016, 2018, and 2020. The combined dataset only contains colleges in states with polling data present for all years. The specifics of our samples and datasets are detailed below.

Table 1: Sample Breakdown by Year

Election Covered	States Included	Number of Colleges	Source
2012 Election Day	27 States	1,189	Center for Public Integrity
2016 Election Day	26 States	1,148	Center for Public Integrity
2018 Election Day	30 States	1,310	Center for Public Integrity
2018 Dropbox Voting	6 States	198	Ballot Ready
2018 Election Day & Dropbox Voting Combined	6 States	198	Center for Public Integrity & Ballot Ready Combined
2020 Election Day	35 States	1,816	Center for Public Integrity
2020 Early Voting	35 States	1,896	Ballot Ready
2020 Dropbox Voting	48 States	2,241	Ballot Ready
2020 Election Day, Early Voting, & Dropbox Combined	32 States	1,727	Center for Public Integrity & Ballot Ready Combined
2012, 2016, 2018, 2020 Election Day Combined	18 States	902	Center for Public Integrity

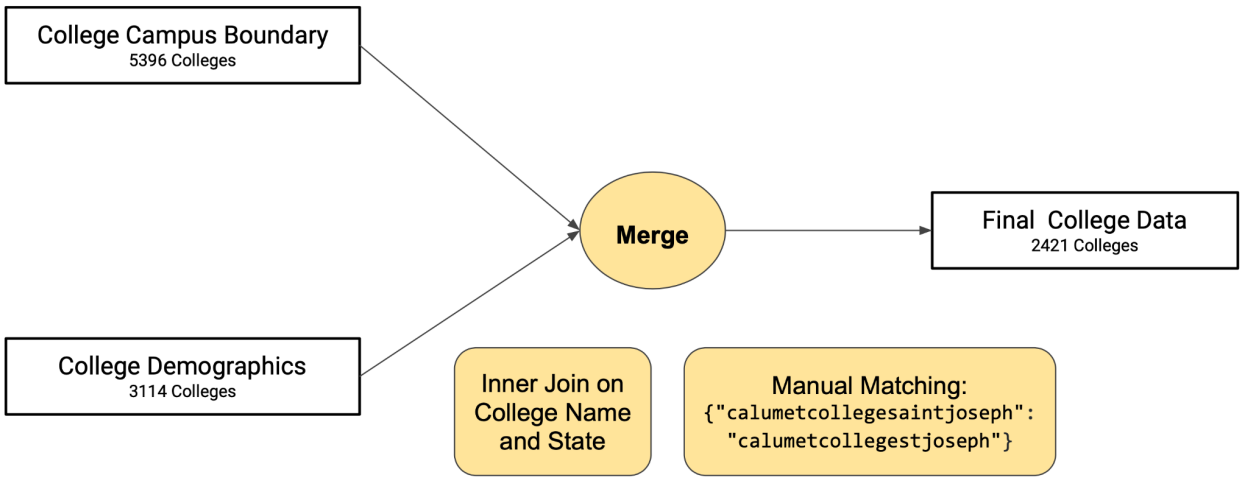
Data Methodologies

Merging College Campus Boundary Data & College Demographic Data

We performed a two step merge to help facilitate the merging of college campus boundary data with the college demographics data (ground truth data). The first step was conducting an inner join between the college polygon and college demographics by the college name and state. While this join was majorly successful, it was not able to include all colleges in the ground truth data. This was because there were several instances where the same college was spelled differently in both datasets and hence did not go through the inner join.

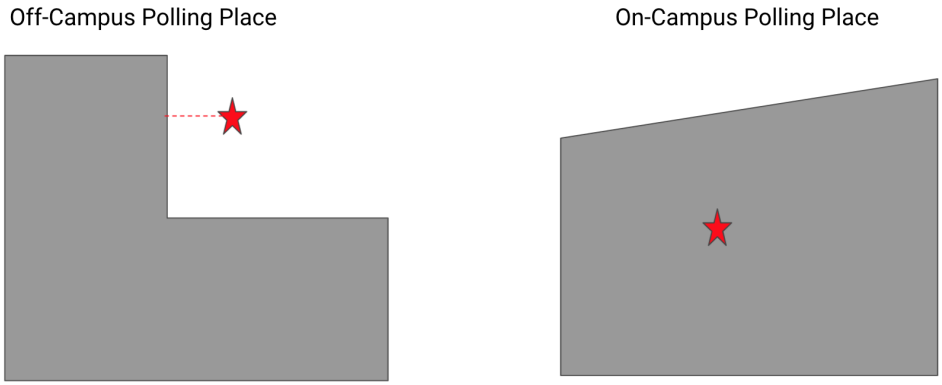
The second step was manually going through the colleges that were not included in the merge and checking if the college exists in both tables and including them as well in the final merged data. The final merged data resulted in a table of 2,421 colleges where each college consisted of its college campus boundary data as well as its college demographics. The colleges that are still missing from the ground truth table are those that are not present in the college campus boundaries dataset.

The below diagram visually represents the merging of the two datasets. It shows the two step matching process and also provides an example explaining why manual matching was required. Calumet College Saint Joseph was spelled as Calumet College St. Joseph and hence did not get matched in the first inner join. Manual matching helped us realize that these universities are the same and include them in the merge.

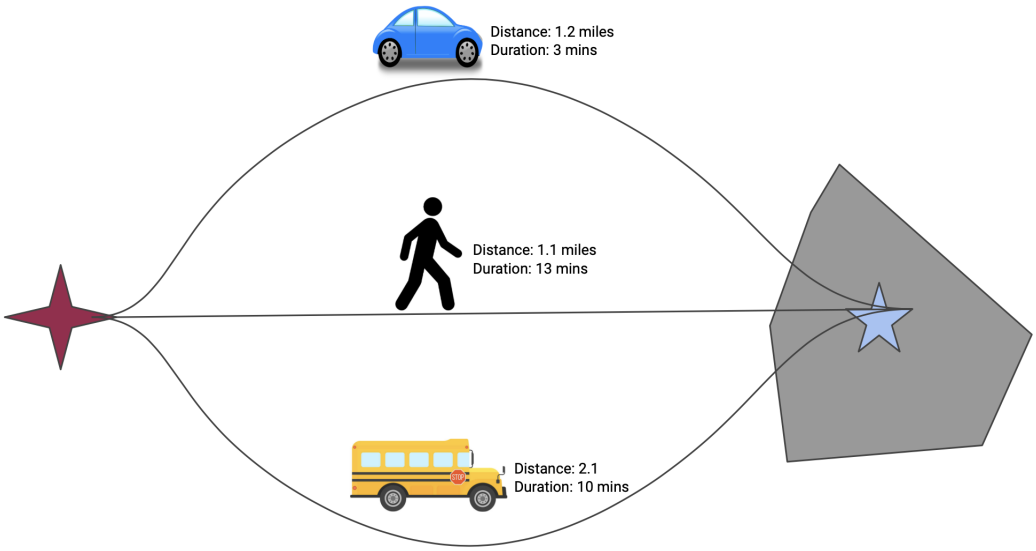


Polling Place and College Campus Distance Calculation

We used a point-to-polygon calculation in GeoPandas to measure the distance between campuses and their nearest polling place. GeoPandas is an open source project to make working with geospatial data in Python. If a polling place was within a campus' polygon boundary, it was labeled on campus and assigned a distance of zero. If a polling place was outside of a campus' polygon boundary, it was considered off-campus and given the distance to the nearest edge.



We used the Google Maps API to calculate the distance (point to point) and duration between the polling place and the college campus centroid through various means of transportation, such as driving, walking, and public transit. This information is used to better understand the travel times, and by proxy access levels, students have by travel modalities from the centroid of the polygon to the polling place. Even if the polling place is located on campus, the Google API will still calculate the distances and durations.



Results & Analysis

How many and which schools across the country have voting sites on their college campuses?

One of our strongest measures of access is whether or not a college campus has a polling place or voting option on-campus. For 2020, we were able to study election day and early voting polling place presence on college campuses. Overwhelmingly, most campuses did not have polling places on campus. In 2020 for the 1,727 colleges in 32 states[1] for which we had all data, 73% of colleges did not have any voting option (election day, early voting, or dropbox) on campus. In 2020, we also saw that 2-Year colleges were typically farther from their nearest polling place than 4-year colleges. 20.5% of 2-Year colleges were over 1 mile from their nearest polling place, while only 8.6% of 4-Year colleges were over 1 mile from their nearest polling place.

When we look at early voting specifically for the 1,896 colleges in the 35 states[2] with meaningful early voting for which we had data, the situation becomes even worse. 90% of these colleges did not have an early voting polling place on campus. Meaningful early voting refers to states that allow people to vote early without meeting specific requirements and allow voting at more locations than just county offices.

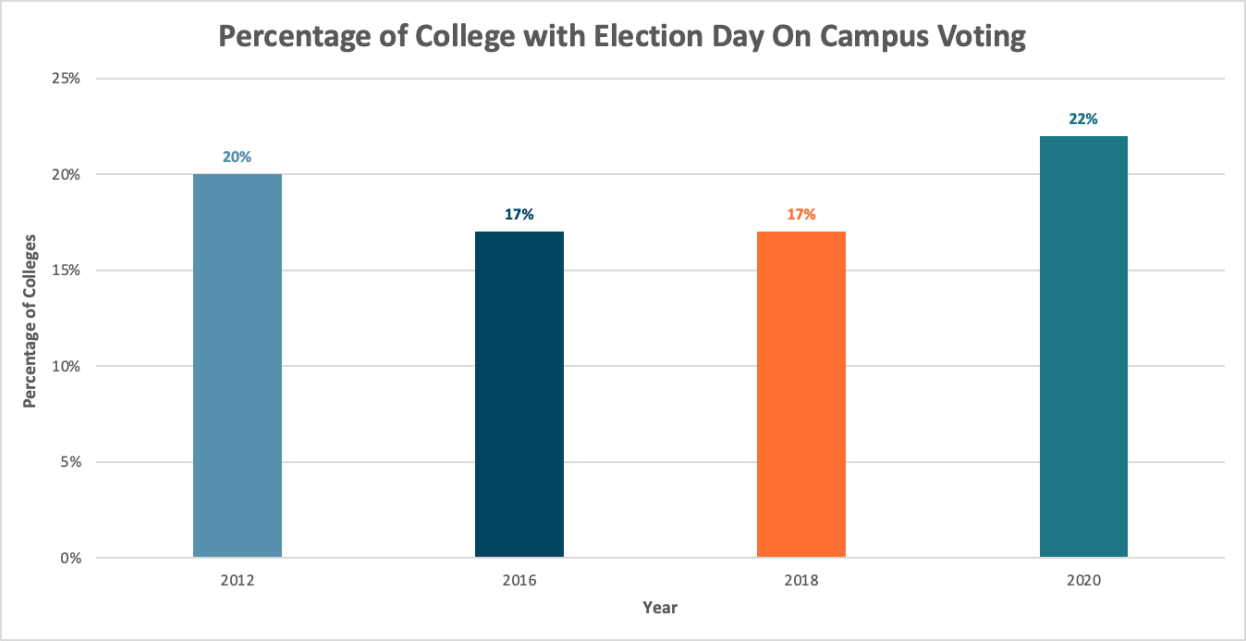
The situation for earlier elections in 2012, 2016, and 2018 remains similar. For these earlier years we had access to election day polling information only. In 2012 a slightly higher 81% of the 1,189 colleges in 26 states[3] for which we have data, did not have an election day polling place on campus. In 2016, this increased again to 85%[4] of colleges not having an election day polling place on campus and in 2018 it remained high at 84%[5] of colleges.

How has this changed, if at all, from 2012 - 2020?

[1] The states for which we have election day, early voting, and dropbox voting data are: MA, NV, WV, OH, OK, AL, NM, IL, LA, ME, FL, RI, ND, MD, VT, VA, NC, UT, NE, CA, SC, IA, MN, IN, WI, AK, TX, PA, AR, NH, MI, and GA.
[2] The states with meaningful early voting for which we have early voting data are: AK, AR, AZ, CA, CO, DC, FL, GA, IA, ID, IL, IN, KS, LA, MA, MD, MI, MN, MT, NC, ND, NE, NM, NV, NY, OH, OK, PA, SD, TN, TX, UT, VA, WI, and WV.
[3] The states for which we have election day voting data in 2012 are: MA, WV, MS, KY, OH, OK, IL, LA, ME, RI, ND, MD, VA, NC, MT, NE, SC, IA, WI, CT, PA, AR, NH, NJ, DE, and MI.
[4] These statistics represent 1,148 colleges in 25 states for which we have election day voting data in 2016. The 25 states are: MA, WV, MS, KY, OH, OK, SD, NM, IL, LA, ME, ND, MD, VA, NC, MT, NE, IA, WI, CT, PA, NH, NJ, DE, and GA.
[5] These statistics represent 1,310 colleges in 29 states for which we have election day voting data in 2018. The 29 states are: MA, WV, MS, KY, OH, OK, SD, NM, IL, LA, ME, RI, ND, MD, VA, NC, MT, NE, SC, IA, MN, WI, CT, PA, AR, NH, NJ, DE, and GA.

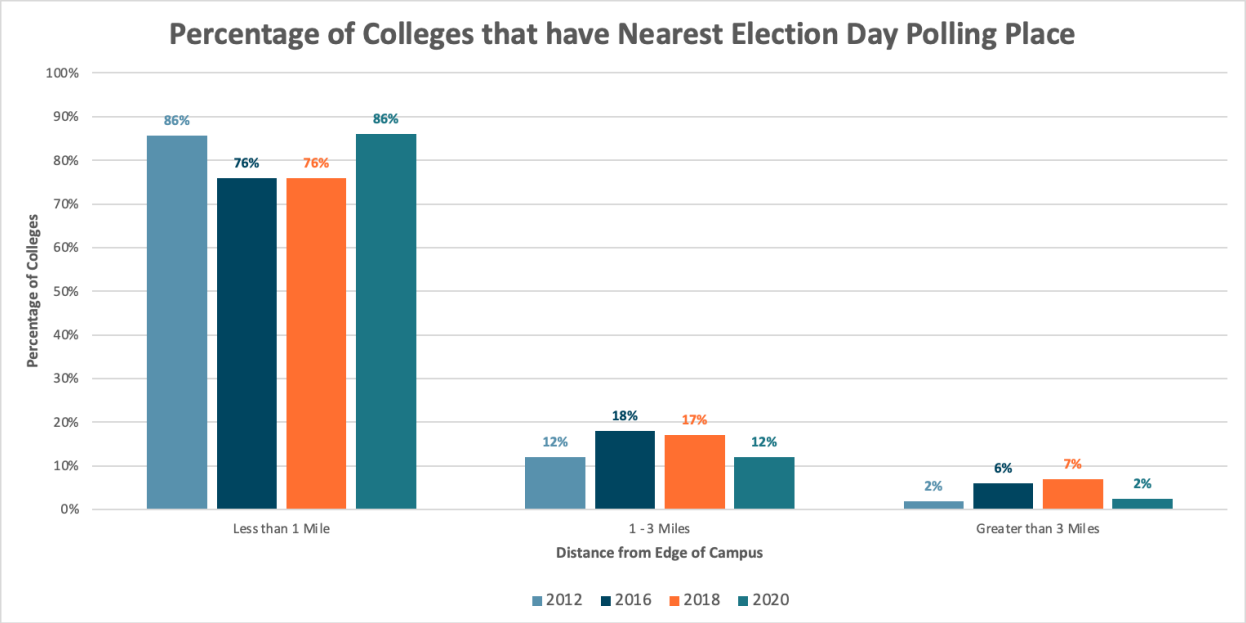
We were able to compare data for 902 colleges across 18 states[6] with data in 2012, 2016, 2018, and 2020. Figure 1 shows the percentage of colleges that had an election day polling place on campus in each year. We see the percentage of colleges with on-campus election day polling drops in 2016 and 2018 before rising again in 2020. In Figure 2 we see that the proportion of colleges that had an election day polling place within 1 mile of campus dropped in 2016 and 2018. Consequently, the percentage of colleges that were 1-3 miles and over 3 miles from their nearest election day polling increased in 2016 and 2018. We take this to mean that college voting access worsened in 2016 and 2018, before improving again in 2020.

Figure 1: Election Day On-Campus Voting By Year



[6] The states for which we have election day voting data in 2012, 2016, 2018, and 2020 are: MA, WV, OH, OK, IL, LA, ME, ND, MD, VA, NC, NE, IA, WI, CT, PA, NH, and DE.

Figure 2: Nearest Election Day Polling Place Distance By Year



After seeing a drop in voting access in 2016 and 2018, we looked more closely at how voting access changed for colleges in each Region of the United States. Figure 3 shows that the percentage of colleges with on-campus election day polling places decreased sharply in the North East and Southern regions in 2016 and 2018 before rising again in 2020. Though the Midwest also experienced a drop in the percentage of colleges, it was not as steep as the drop in the North East and South. The West experienced a drop from 2016 to 2018 and did not improve again in 2020. In Figure 4 we notice something similar, the proportion of schools over 1 mile from their election day polling place increased more sharply in the North East and Southern regions. Our findings reiterate that voting access worsened in 2016 and 2018, and this drop in access was the most pronounced in the North East and Southern regions.

Figure 3: Election Day On-Campus Voting by Year & Region

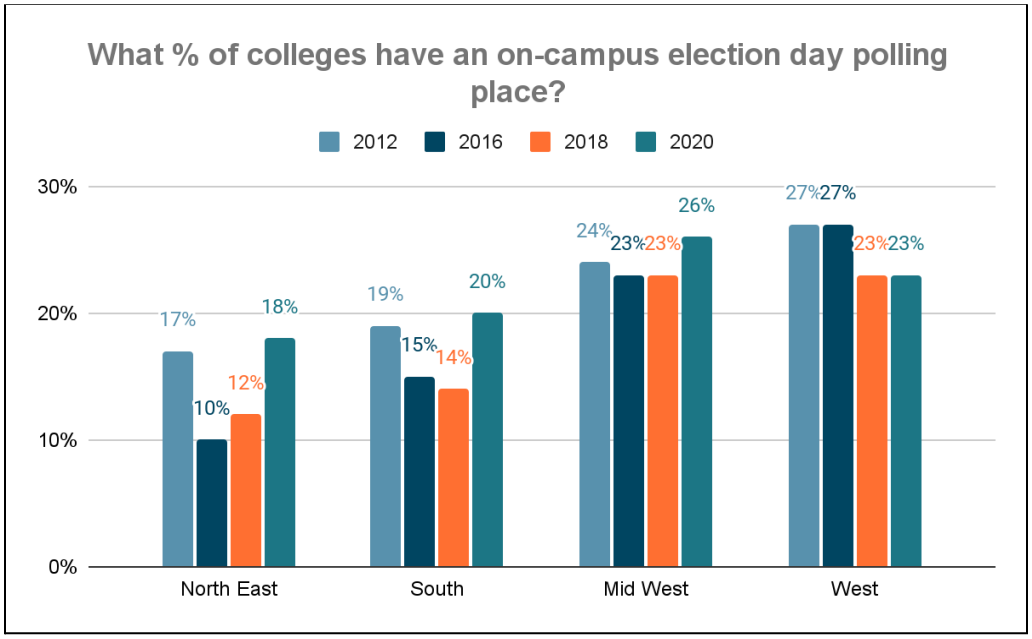
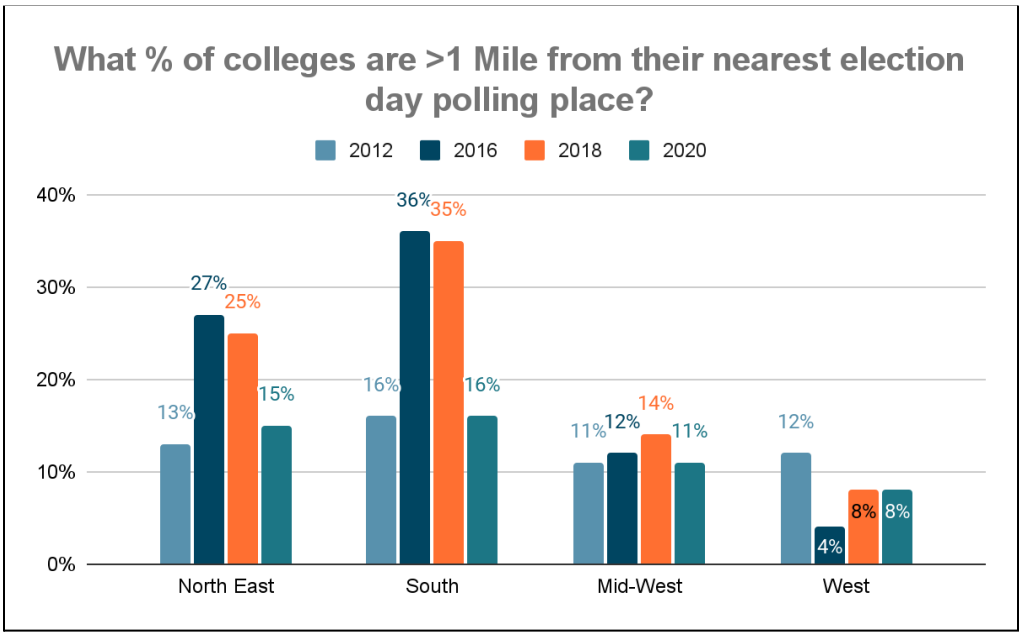


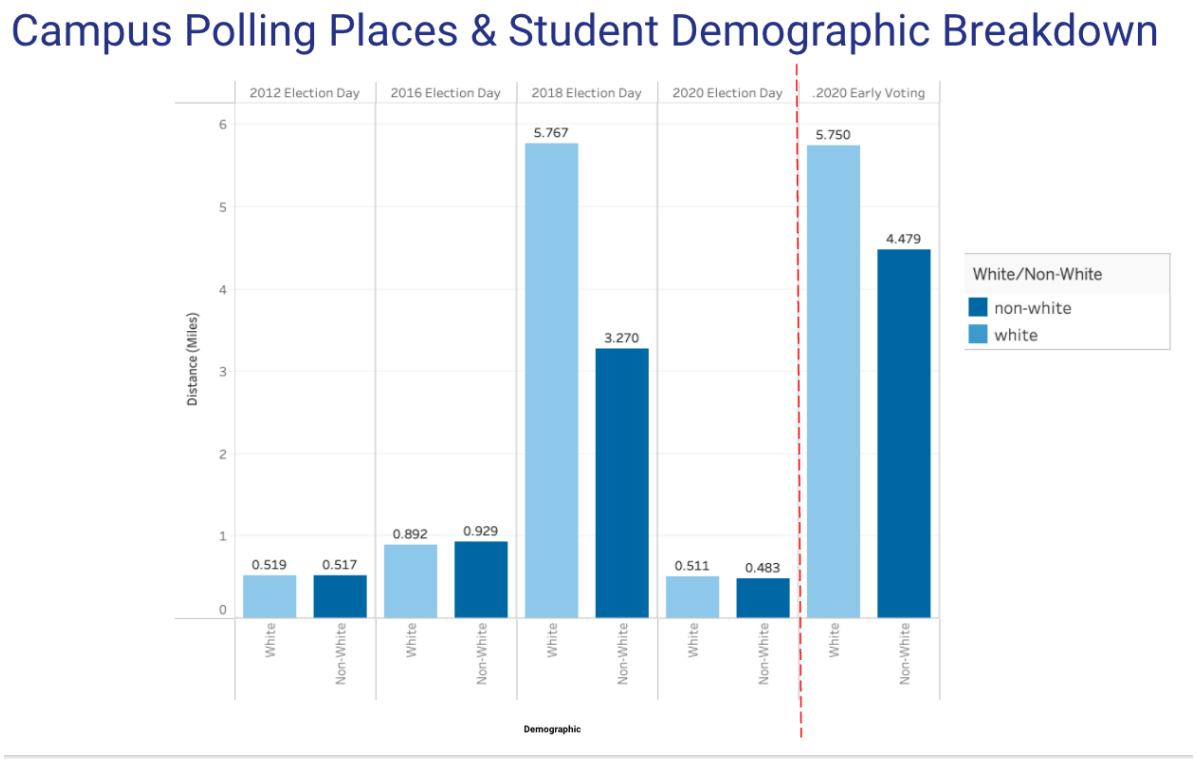
Figure 4: Colleges Over 1 Mile From Their Nearest ED Polling Place by Region & Year



How does the presence of a polling place on or near campus differ depending on the type of school and student demographics?

For this analysis we decided to group schools by the percentage of each racial demographic, instead of their MSI designation. This grouping adds another layer of analysis, allowing us to maintain similar samples for the purpose of comparison. More specifically, if greater than 50% of a school population was White, it was labeled as predominantly White. Conversely, if the minority population was greater than 50%, we labeled it as predominantly non White. After doing this we were left with 1025 predominantly White schools and 173 predominantly Non-White schools. A plot of campus polling place distance by student demographics can be seen below.

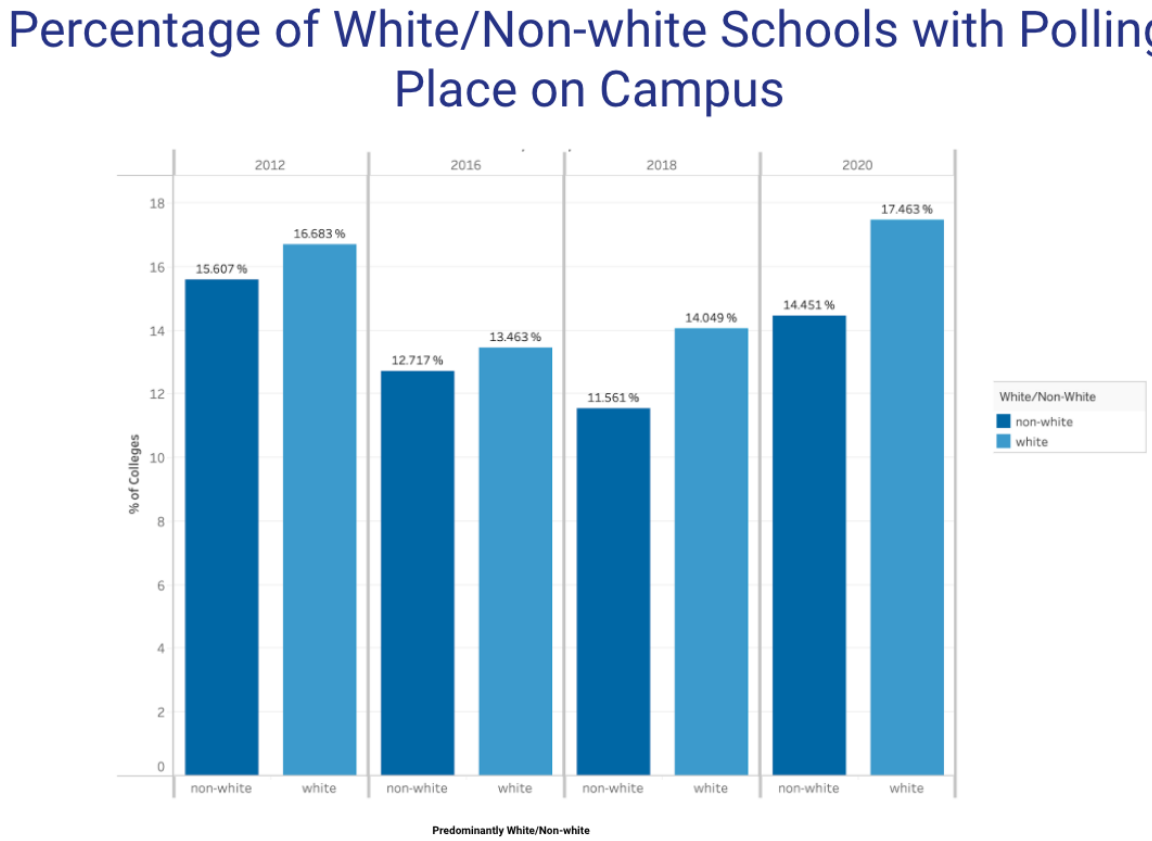
Figure 5: Campus Polling Place and Student Demographic Breakdown



From the plot we can see that in presidential election years (2012,2016, & 2020) the distance from White and non White schools to their nearest polling place is less than one mile on average. Additionally, in these years, on average White and non White schools are roughly the same distance away from their nearest polling place. In 2018, predominantly White schools are roughly 5.8 miles away from their nearest polling place contrasted with the predominantly non White schools, on average, are roughly 3.2 miles away from their nearest polling place. We believe that some of this can be attributed to the fact that schools in rural or less population dense areas are more likely to be predominantly White. To this point, we utilized census designations to label whether or not schools were located in urban or rural areas. Of the 1387 urban schools,

we found that 68% of them were predominantly white institutions, while of the 981 rural schools, we found that 85% of them were predominantly white institutions. Furthermore, to get a more granular look at our data, we took a look at the percentage of White and non White schools that have a polling place on their campus.

Figure 6: Percentage of White and Non White Schools with Polling Place on Campus



In each year we can see that compared to non White schools, predominantly White schools have a higher percentage of polling places on their campus.

For those schools that do not have on-campus election day voting options, what is the average travel distance to their nearest voting option by foot, public transportation, or car?

This question has been answered through the distances and durations calculated from the google maps API which calculates the distance and duration between the college centroid and the polling place. The distances are calculated in miles while the durations are calculated in minutes.

To answer this question, we are using the individual year sample present in Table 1. For example, statistics for 2012 data is calculated using the 1189 colleges in 27 states (first row of Table 1).

Figure 7 shows the average distances between Election Day polling place and the college centroid between 2012 to 2020 by walking (blue), driving (orange) and transit (gray). Interestingly, it can be seen that the distances across the three modes of transportation seem to be similar during the years 2012 and 2020. In all three modes of transportation, the distances seem to be higher during 2016 and 2018 when compared to 2012 and 2020. This indicates that the voting access has been better in 2020 when compared to 2018 and 2016 as the distance from college centroid to polling place reduces by walk, car, and public transportation.

Figure 7: Average Distances from Election Day Polling Place to College Centroid Across Years

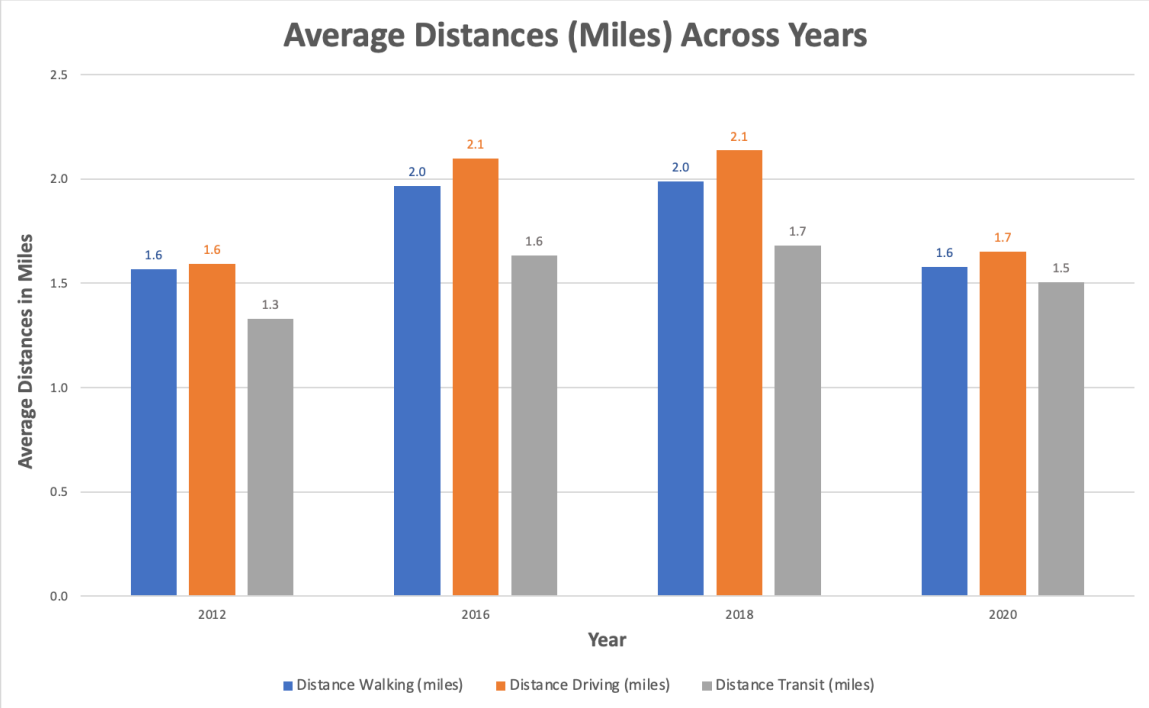


Figure 8 indicates the duration in minutes from the college centroid to the earnest election day polling place by walk, car and public transportation. It can be seen that the trend is similar to Figure 7. It can be seen that the average time it takes to walk in 2020 is 29.8 minutes, similar to the duration in 2012 but lower than the duration in 2018 and 2016. This is supported as since the distances decrease in 2020 when compared to 2018 and 2016, the duration would also decrease. Indicating that voting access improves in 2020.

Figure 8: Average Travel Time from Election Day Polling Place to Campus Centroid Across Years

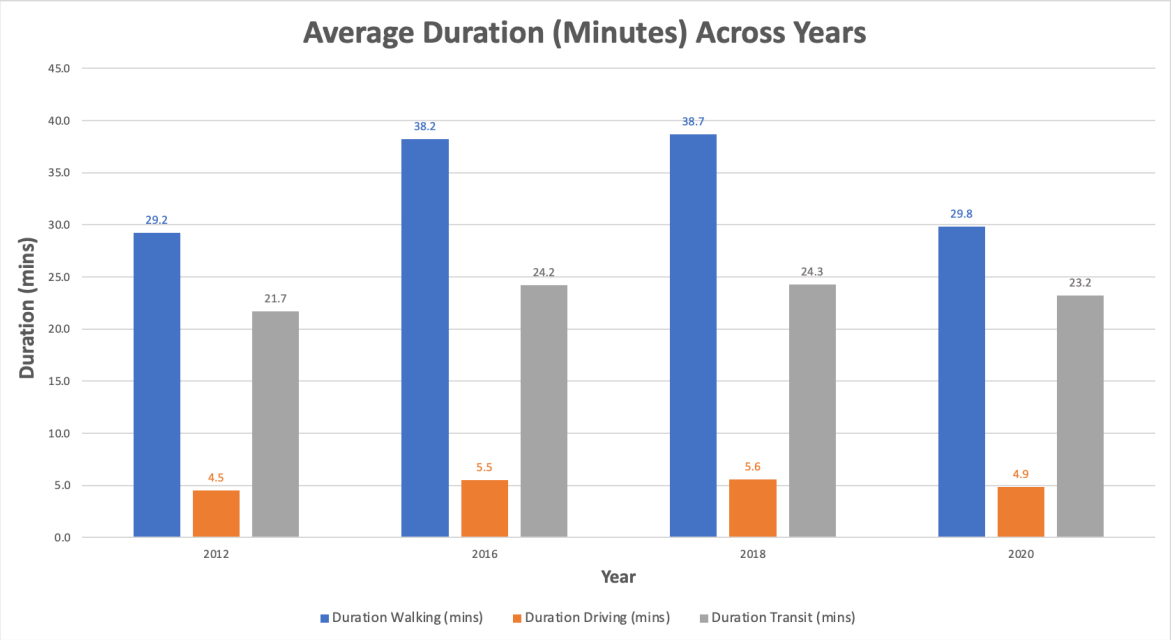
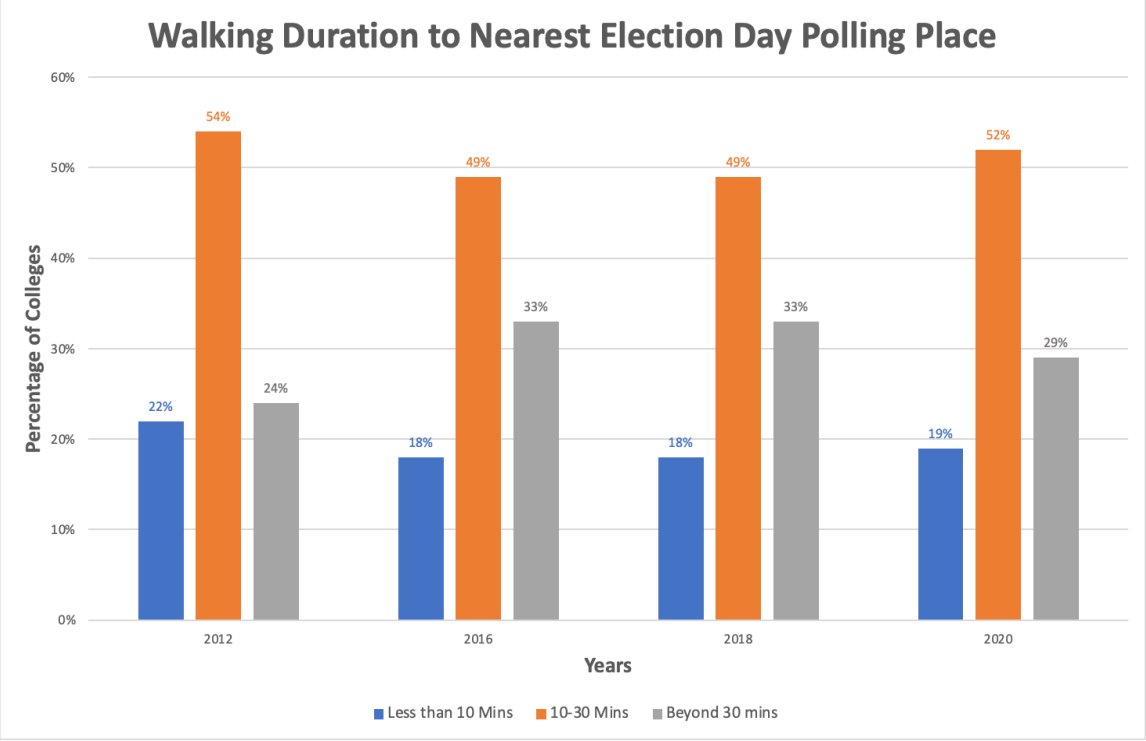


Figure 9: Walking Duration to Nearest Election Day Polling Place from College Centroid



Intuitively, analysis in terms of duration can help depict voting access in colleges, as depicted in Figure 9. It can be seen that from the colleges that do not have any on campus election day voting option, students in 52% of colleges have to walk anywhere between 10-30 mins to reach their nearest election day polling place in 2020. This is higher when compared to 2018 where students in 49% of colleges had to walk anywhere between 10-30 mins. We also can see that in

2020, only 19% of colleges have its nearest election day polling place within a 10 minute walk from college centroid, a slight increase when compared to 2018 and 2016. Interestingly, in 2020, nearly 30% of colleges have its nearest election day polling 30 mins away from college centroid, which is a decrease from 2018 and 2016.

Figure 10: Driving Duration to Nearest Election Day Polling Place from College Centroid

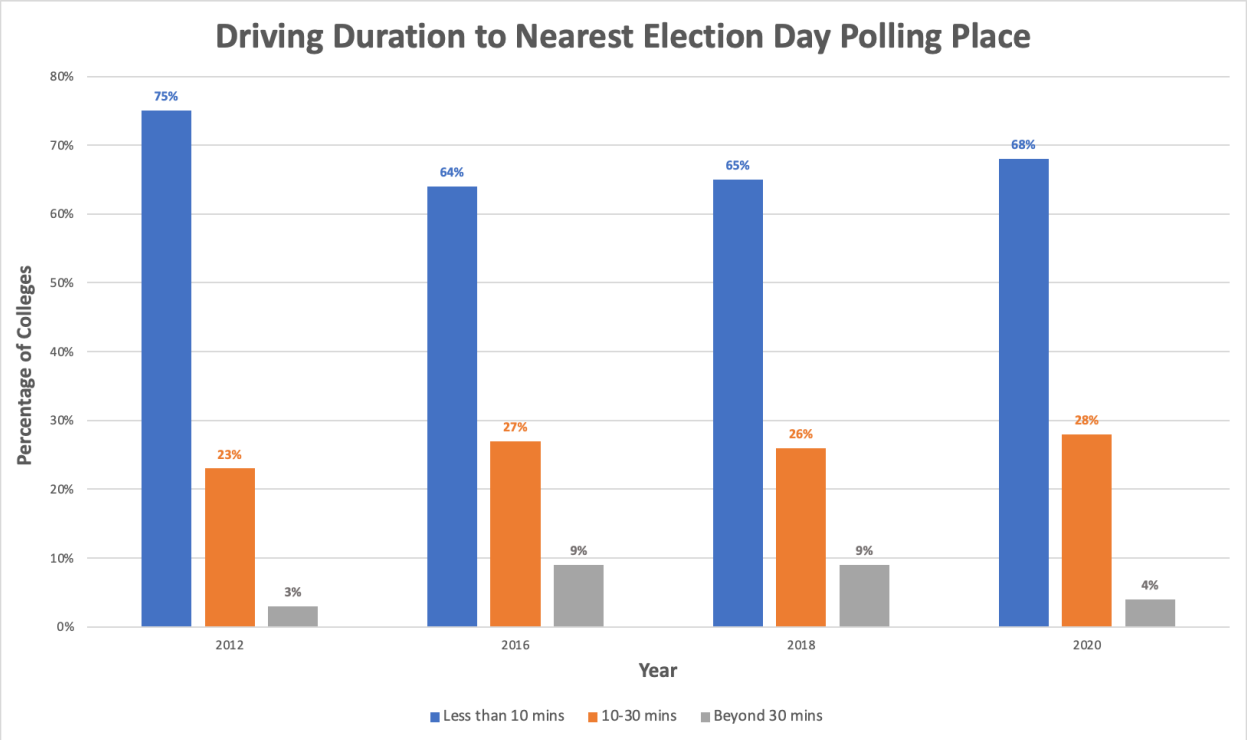


Figure 10 represents the driving duration of colleges without on campus election day voting options between the years of 2012 and 2020. It can be seen that in 2020, 68% colleges have their nearest election day polling place within a 10 minutes drive. Only 4% of colleges have their nearest election day polling place beyond a 30 minute drive, less than 2018 and 2016. 2012 had the best voting access as 75% of colleges had their nearest election day polling place within a 10 minute drive.

What does voting look like on specific college campuses?

We honed in on several colleges to understand what voting looked like for their students. Specifically, we were interested in the location of student housing, how travel times and distances changed, and any obstacles on the journey from campus to the nearest polling place. Here we will share our findings for a few of those colleges.

University of San Diego

The University of San Diego is closest to an elementary school for election day voting. Students face a 15 minute drive, 30 minutes of public transit, or a 1 hour walk to reach the elementary

school. In walking students would face the obstacle of many streets without sidewalks. The University of San Diego is closest to the County Registrar's Office for early voting. Students face a 25 minute drive, 1 hour of public transit, or a 2.5 hour walk to reach the Registrar's office. Again, students would have to walk many streets without sidewalks.

Emory University

Emory University is closest to a high school for election day voting. Students face a 3-5 minute drive, 10-15 minutes of public transit, or 20 minutes of walking. Emory's student housing puts some students 0.3 miles closer to their election day polling place, resulting in a similar drive and slightly shorter walk. Emory University is closest to a library for early voting. Students face a 7 minute drive, 30 minutes of public transit, or a 50 minute walk. Student housing puts some students 0.5 miles farther from their early voting polling place, resulting in a longer drive and a longer walk.

University of Miami

The University of Miami is closest to a public library for election day voting and early voting. Students face a 7 minute drive, 40 minutes of public transit, or a 48 minute walk. The University of Miami's student housing puts some students 0.25 miles farther from the public library, resulting in a longer drive and a longer walk.

Discussion: Hypotheses on the Cause of Our Observations

Our observations may have many causes, here we will discuss our primary hypotheses as to what caused our observations. We believe that 2 Year colleges have larger distances to their nearest polling places than 4 year colleges because they are often community colleges with commuter populations. They may not be located in residentially dense areas. We believe that colleges had less voting access in 2016 and 2018 because there were polling place closures after 2013 (Shelby v. Holder). We believe access rose again in 2020 because the pandemic created many alternative voting options to reduce disease transmission.

We notice that while the distances from the college centroid are similar by various modes of transportation for each year (Figure 7), the duration in minutes varies tremendously (Figure 8). In 2020, it took around 4-5 mins to reach the nearest polling place from the college centroid by car, nearly 30 minutes to travel by walk and around 23 minutes to travel by public transportation. As this intuitively makes sense, accordingly to a 2021 US News Survey[7], a little less than half of the college students in the US have a car. This indicates that the majority of students in the US would travel by walking/public transportation and hence it is also important to reduce the time it takes for students to travel by these modes. Majority of colleges in 2020 had their nearest polling

[7] https://collegeparents.org/2021/11/19/should-my-college-student-have-car-campus/

within a 10-30 walk from college campus. While we do see improvement in terms of closer access (in terms of distance and duration) from 2016 - 2020, it is important to place polling places closer to students by means of walking and public transportation. This has the potential for more students to participate in the US elections.

Additionally, we noticed that predominantly White schools had further, if not similar, average distances to their nearest polling place, when compared to non White schools. This can likely be attributed to the fact that predominantly non White schools are located in urban areas, increasing the likelihood of a close polling place. Conversely, schools that are predominantly White are more likely to be located in rural areas (when compared to their non White counterparts), further away from their nearest polling place.

Conclusions & Limitations

In this section we will discuss the main conclusions from our work thus far and the limitations of our analysis.

Conclusions

We acknowledge that understanding college access to polling places can be layered and very nuanced. With that in mind, of the data we were able to collect, we currently see that in 2020, 73% of colleges did not have any voting option (election day, early voting, or dropbox) on campus. In 2018, 2016 and 2012 81% - 85% of colleges did not have election day polling places on campus. Additionally, 2-Year colleges have larger distances to their nearest polling places than 4-Year colleges.

Through this study, we also noticed voting access decreased from 2012 to 2016 and has increased in 2020. The percentage of on campus election day voting sites increased from 2016 to 2020 indicating that the voting access improved in the most recent election. We also observed that a higher percentage of colleges had their nearest election day polling place between 1-3 miles in 2016 and 2018 when compared to 2012 and 2020, meaning college voting access worsened in 2016 and 2018. When looking at regions - the NorthEast and South have less on campus election day polling places, especially in 2016 and 2018.

When looking at the demographic makeup of schools - we see that White and non-White schools have very similar average distances to their nearest polling place in all election years all under one mile. In terms of the proportion of schools with an on-campus polling place, predominantly White schools have a higher percentage of polling places on their campus compared to

non-White schools.

In terms of travel time, the average time it takes for students to walk to their nearest election day polling place in 2020 is about 30 mins by walk, a significant decrease when compared to 2016 and 2018. When looking at the colleges without on campus voting - 68% of colleges in 2020 have their nearest election day polling place less than 10 mins by car, higher than 2016 and 2018. Voting access has improved from the last two elections and hopefully, our research and work can be used to spread awareness and improve voting access in places that require attention.

Limitations & Future Directions

Using distance as a proxy for access was the primary limitation of our analysis. We assumed that colleges closer to polling places had more access than colleges that were farther from polling places. In actuality, understanding voter access for college students is much more complex. Our analysis could be enhanced and built upon if there were a way to truly evaluate the quality of polling places. Data on the amount of people served at a polling place, or the typical wait times a voter could expect would further the study of voter access for college students. There are also access issues at other stages of voting - for example, registering to vote and requesting an absentee ballot are other important voting access points worth studying.

Additionally, we were limited by the states, years, and colleges for which we had data. Our combined dataset from 2012 - 2020 contained 18 states. Gathering polling data for additional states in the years to come could validate our analysis for a larger part of the country. There are still many avenues of voter access to be studied to improve voting for college students, young people, and voters across the United States.

Appendix

Additional Results: How many and which schools across the country have voting sites on their college campuses?

In 2020, we found that 76% of colleges did not have an election day polling place on campus. The nearest election day voting option was more than 1 mile from the edge of campus for 14.0 % of colleges in 2012. The nearest election day voting option was more than 1 mile from the edge of campus for 23.0 % of colleges in 2016. The nearest election day voting option was more than 1 mile from the edge of campus for 23.0 % of colleges in 2018. Additionally, in 2020 7% of colleges had a voting dropbox on campus. In 2020, the nearest voting option was more than 1 mile from the edge of campus for 14.0 % of colleges.