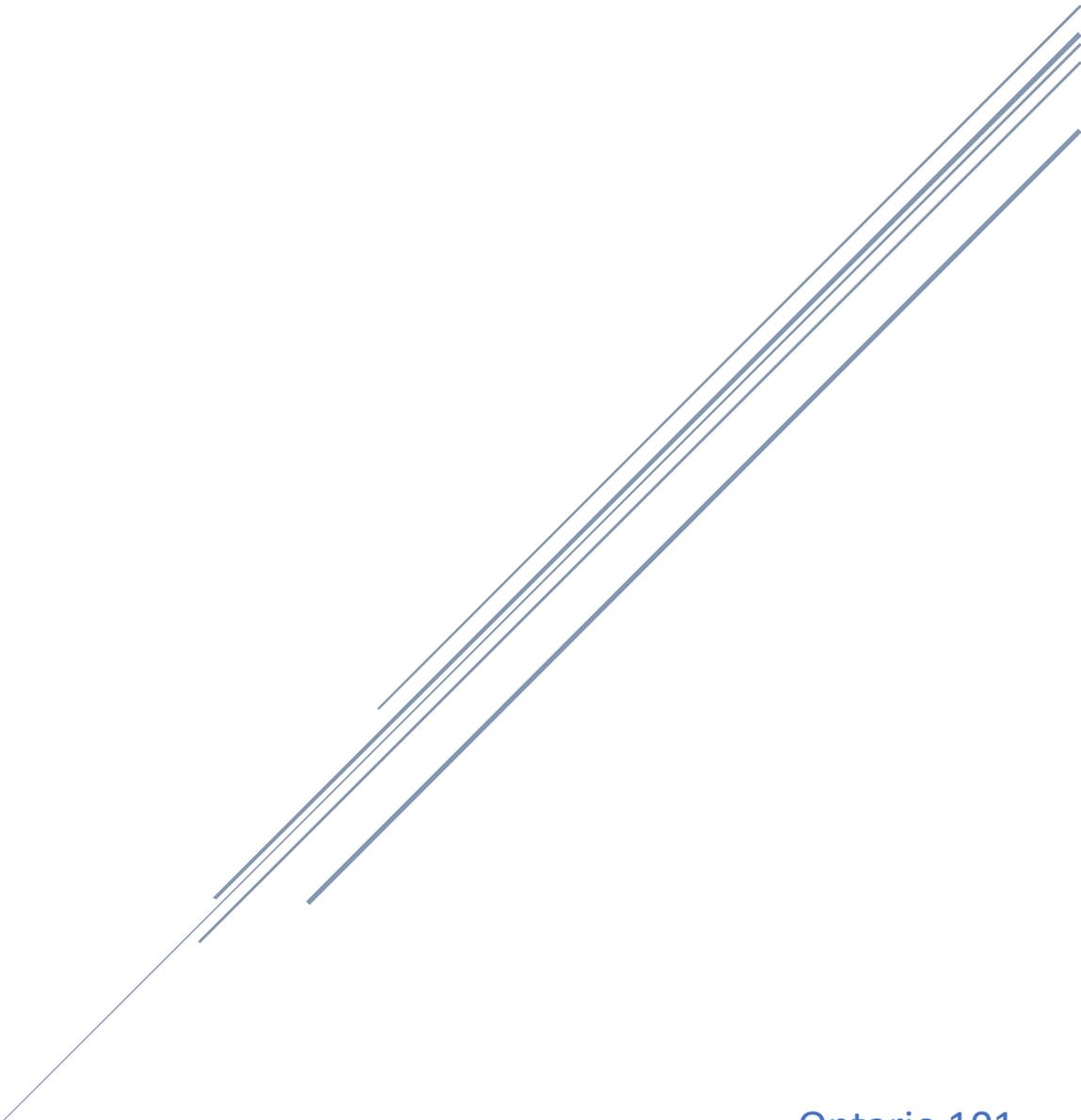


# ART COUNTS

A Quantitative Analysis of Arts Education in the Ontario, CA Area

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## Introduction

Economist Hans Abbing writes in his book, *Why are artists poor*, “the large majority of artists earn less than other professionals do...poverty is built into the arts” (Abbing, 2002, p. 202). Many artists, in order to survive must take on second jobs or rely on the funding from grants and such. Yet, at the same time there is a high allure and status associated with being an artist which leaves us in a sort of predicament. If there are is a desire to be an artist despite the unsustainable nature of it, how are we to support all of these artists?

In the case of the United States, there is some funding for the arts, yet much of it relies on the local level. Despite the hegemonic pull of American arts culture, national grants and policies like the National Endowment of the Arts, are few and far between, and the onus for supporting artists lays mainly on local government and private investors (Anheier & Isar, 2008, pp. 3–4). So, when we situate ourselves in the Inland Empire which lays in the shadows of LA and the LA County Art Commission, we can start to understand the tough conditions for art in the IE. That is not to say that there is a vacuum of culture in the Inland Empire. There are a handful of college programs that produce artists like, Chaffey, CSU SB, UCR, and the Claremont Colleges to name a few. On top of that, there are also a couple Smithsonian affiliated programs in the Sam and Alfreda Maloof Foundation for Arts and Museum of Riverside, as well as a handful of historical and traditional cultural sites (Rutherford et al., n.d.). Yet despite the potential and history of the region the resources are just not there when compared to the bordering LA County. Of the 1,300 California Arts Council Grants awarded in 2018, only 24 were given to projects in the IE. Further, whereas the LA County Arts commission offers millions of dollars in funding in the form of grants, internships as well as school district support,

the arts councils in many of the cities in the IE only have one employee. These economic conditions are reflected in the numbers of artists employed in the region. According to the Arts Area there is a low creative industry employment rate of 2% compared to the statewide level of 12%. Further, when we look at the 2019 Otis Report on Creative Economy, within the state, the Inland Empire only accounts for 3% of the state's creative professionals, despite the Inland Empire accounting for 11% of the State's population (*2019 Otis Report on the Creative Economy*, n.d.). On the other hand, Los Angeles and the Orange County account for 51% of the creative professionals in the state.

Four years ago, John Machado, an Art History professor at Chaffey College, started a program at Chaffey at to support his students after repeatedly hearing the same story from his graduating students. If his students wanted to pursue a career in the arts then he found that they were making the hard choice of choosing to stay in the arts and having to move to LA, or quitting art all together in order to stay in the local area. He founded The Arts Area to rectify that problem and after it grew to become its' own independent non-profit. The mission of the Arts Area is to make "art work for everyone" through "professional development, civic advocacy, resource support, and fiscal sponsorship" (*The Arts Area Story*, n.d.).

How they enact their mission can be split into several parts. First and foremost, the non-profit lends their 501(c)(3) status to independent artists and projects through their fiscal sponsorship program where the organization covers the business licenses, insurance and other related fees in return for a percentage of the sales. In addition to the handful of these partnerships, they offer several resources including a free directory for artists, opportunities posting, and professional development workshops for artists. Next, they will host events

including the quarterly Ontario Art walk. In terms of leadership, there are 8 to 10 board members and a couple of interns all of whom are volunteers. Together the board members are art professionals across numerous institutions, including multiple city arts councils and commissions, the Ontario Museum, Curious Publishing, to name a few.

Because of the voluntary nature of the board, and a lack of an office space, there is no consistent in person day to day operation for the organization. As a result, the work that I did for the organization mostly revolved around going to the various events put on by the Arts Area and its affiliates. At their events I would do anything that was needed, from selling magazines to hanging up artwork. In the downtime from these events, with direction from my supervisor John Machado, I turned towards working on a project that is in line with the mission of civic advocacy. For years now, the organization wanted to turn towards the question of getting a better understanding of the state of Arts Education in the region.

### Research Theme:

Towards this end I plan to do quantitative research into Art Education in the Ontario Area. Given the previously mentioned disparities in its' creative economy, I wonder how this situation might affect the state of art education in the area. As we will see in the literature review there is a history of similar studies being taken albeit either on a larger scale, or more comprehensively done at the city level.

### Literature Review

While there has never been any studies that comprehensively evaluate whether a creative economy has been linked to a vibrant art education program, several sources have flouted a quality art education as a reason for their success. Citing the 2018 Otis Report on

Creative Economy, the Cal Alliance for Art Education quotes from the report, “attendance in arts courses continues to rise through K-12 students, underlining the importance of arts education” (*Otis Report on the Creative Economy | California Alliance for Arts Education*, n.d.). Inversely some other scholars have claimed that a lack of a quality of arts education is the reason for a smaller creative economy (Pacheco, 2015).

Regardless of the link to possible economic growth, Art Education should be valued as a valuable subject on its’ own. In a previous literature review, Lloyd finds that the participation in the arts is often accompanied by tangible gains in academic performance (Lloyd, 2016, p. 4). Furthermore, research suggests that art may help young students “struggling to fill the achievement gap” through the practice of “dramatizing reading material” (Lloyd, 2016, p. 7).

In fact, Art has been recognized by the government, and is currently included in National and California State standards. While art has always been a stated goal of our government it was not codified as a core content area until the No Child Left Behind Act. Yet unlike the other parts of the NCLB act, art exists as a “voluntary standard” that is not mandated. (Katrina R. Woodworth et al., 2007, p. 6).

When we turn to California, our content standards expect that there is participation in music, visual arts, drama and theatre, and dance (Morrison et al., 2019, p. 5). The problem with is that the funding of it follows a boom bust cycle of funding which threatens the stability of it all (Katrina R. Woodworth et al., 2007, p. 12). And as a result, the percent of schools that provide access to the required arts actually lies around 12% of schools, and 26% of students (Morrison et al., 2019, p. 9). Much of this instability in funding, can be traced to the most recent budget cuts in the wake of the 2008 market collapse (*The California Arts Education Data Project FAQs*, n.d.).

Despite that there are several examples of school districts and cities who have been able to reform their art education programs despite a general lack of funds.

For San Diego, their reform came through a non-profit who wanted to give back to its' community. San Diego Youth Symphony and Conservatory wanted to expand their outreach program and ended up collaborating with other non-profits, as well as with working with the school district to create a full partnership which ended won them a Ford foundation grant for their work (Carter & Roucher, 2020, p. 23).

There have also been many successful campaigns from cities like Boston, Seattle, and Dallas, and Los Angeles. Granted, these places generally have more "vibrant" art scenes(*The Top 40 Most Vibrant Arts Communities in America (2019)*. DataArts, n.d.). The most documented success was that of the Boston Public School System, from 2009 to 2016 the Boston public school system, increased from 67% to 94% of students who received weekly arts instruction (Gibson, 2018, p. 218) Through working with a public private partnership, they were able to get and leverage lots of funds to improve the arts education in the area: "Public funding for arts via the BPS budget has increased from \$15M to more than \$26M annually, despite budgetary challenges" (218). In their process they utilized a "data driven, collaboration between government, non-profits and investors, to have workable goals that drew more funding" (226).

Other cities have also used innovative partnerships like Seattle, Chicago, Dallas to restructure arts programs to match the needs of their students. (Perille, 2017, p. 26) While in Canada, a common model of arts education is the "Artists School Partnership" which recognizes the value of having arts professionals involved in all different stages of curriculum planning and

integration (Kukkonen, 2020, p. 44). Through their “ACE Initiative” they are encouraging a multi stake-holder approach to understanding the benefits of increased arts curriculum (50).

In many of these situations and as documented in the case of the Boston public schools, something that was crucial to get the ball rolling was the existence of quality and comprehensive longitudinal data on the quality of arts education in the area (Gibson, 2018, p. 220). Despite that, the onus for collecting this data more often not falls on the school districts to collect, with BPS having contracted a private firm to do their research, while the Los Angeles County Art Commission conducted theirs. In fact, the Los Angeles dataset is interesting because it is all publicly available, which makes it perhaps the only data set to do so (*Arts Ed Profile | Los Angeles - Open Data Portal*, n.d.).

So, when we turn back to the focus of The Arts Area, and its’ focus on the San Bernardino county or the Inland empire, it is pleasantly surprising to find that there is data for this region. The Arts Education Data Project is a nationwide collaboration which called on each state to draw data from their previously gathered data sets to tell a story about Arts Education. In California, this project was enacted as a coalition between Create CA, California Department of Education, and the Arts Education Data Project and most drew from the California Longitudinal Pupil Achievement System. While this does mean that there is data available, that data is of no use unless it is analyzed. In the next section, I will go over the process and steps taken in order to prepare the data to be used for arts advocacy.

## Methodology

In this project, I want to analyze how current statistics and measures of quality art education gathered through the Art Education Data Project depict the state of arts education in the city of Ontario at the High and Middle School level. Through comparing enrollment percentages along with measures correlation between these percentages and other demographical statistics, I hope to compare the data from Chaffey Joint Union, Chino Valley, Ontario Montclair, Mountain View, Cucamonga, and Upland, District to state averages to attempt to paint a picture of what is the experience of taking art in schools in the city of Ontario. Furthermore, I propose an additional survey to be conducted if gathered can provide further nuance and understanding on the issue of arts education in the city of Ontario.

First, I compiled data from the Art Education Data Project (AEDP). The data was all publicly hosted on their interactive dashboard which can be found at: (<http://www.createca.dreamhosters.com/interactive-dashboard/>). This dashboard is a web plugin which is hosted by Tableau and does a lot of really great things when it comes to data visualizations and accessibility. While the site particularly excels at visually displaying enrollment percentages especially as broken up across all 4 disciplines, it only provides the capability of comparing against a handful of demographic data namely, Free and Reduced Lunch, location, type of school, and size of school (See Appendix 1). So, in my own analysis I will introduce multiple new demographic data which hopefully will hopefully provide more data to produce analysis by.

The first step in this process involves compiling the data from the Arts Education Data Project (AEDP) into a excel sheet. This process looked like going to the “school profile tab” and

then searching for the school (See Appendix 1). Once I was on that school's page, I copied every statistics that I could find on the page including demographical data like: type of school, total student body population, location, majority ethnicity, Free and Reduced Lunch category. Then for the arts data I hand copied over data for: total number of students enrolled, students enrolled by grade level, total art instructors, and total course number, for each of the five different categories offered: music, visual arts, theater, dance, other.

Then, I added additional demographic data for each school by going to the website Ed Data: (<https://www.ed-data.org/>). Like AEDP, this site and database is another product of a California Department of Education collaboration. Ed Data exists to provide general demographic and success data for all schools in California. From this website, I pulled school data on actual number of students that fall under free and reduced lunch categories, a diversity index, if they are a Title 1 School, and a compounded category of free and reduced lunch English learners and foster youth

While this process was arduous, by doing this it gives a lot more flexibility to work with the data and compare it to other demographic data. Also, it will open up the possibility of conducting future analysis. I choose to use this data because it is publicly available and should be accurate given that it is collected by the California Department of Education. Because of this situation, the real challenge and work lies not in obtaining the data, but in compiling it and synthesizing this vast amount of data to make some sense of it.

After that, I compiled this spreadsheet I ran similar tests that were used in the Art Education Data Project's executive summary for 2019, as a structure and starting point for understanding this data (See Appendix 2). This analysis looked like calculating the total

weighted percentage of how many students participate in art classes, and then comparing that percentage to a multitude of demographic variables like: locale, Free and Reduced Lunch levels, Title 1 status, Majority Ethnic Group, Grade level of school etc. All of this analysis and calculation was done for the academic year of 2019, which reflects the most current data. With all of those calculations done I was then able to start comparing my findings against the findings in the Executive summary to see how they would fare.

This took a lot longer than I had anticipated, I initially started this process of researching thinking that I wanted to conduct original research in the form of a survey. I had been aware of the data from the AEDP but did not really understand the magnitude of the data that I had already had, until I really had started to work with it. So, factoring in the work that it will take to go through the previously gathered data, as well as complications of further gathering data due to the pandemic I propose this next section as a proposed supplementary research project.

Using the AEDP data, in order to create a more comprehensive understanding of what Arts Education looks like in Ontario California, by surveying all public and high schools in Ontario about non curricular-arts education programming and support. A potential flaw in the data compiled from AEDP is that all of it was asking about art programming that occurs during the school hours, where in reality there are school extra-curricular ways that schools promote art i.e.: field trips, extracurricular activities, non-art courses that incorporate art, and/or partnerships with non-profits and teaching artist. See the Appendix 3 and 4 for the proposed survey questions as well as an email to contextualize it.

This injunction is important because it rectifies the initial bias in the data collection. In the original art data education project, they justify the project by claiming it allows

“Policymakers and citizens use data to craft strategies to address gaps”. This is a position that I certainly am not opposed to, however in vein with Hicks Peterson’s research method of Asset-Based Community Development (ABCD), I believe that if one were to do research in the “gaps” or deficits then they should hone in on other assets and resources that also bolster arts education. This is all to create a more holistic and complete view of the situation at hand (Hicks Peterson, 2017, p. 36).

Lastly, before I go into the findings section, it is important to recognize my position as an academic. Even though all of the analysis that I conducted was secondary in nature, I believe it is important for me to recognize my positionality as an academic and someone who is exterior to the community that I am working with. I am not from the Ontario area and have only known it from two years at college spent there. Regardless, I think the best way to mitigate this affect and bias would be for this paper to be reviewed by someone more familiar with the Ontario area before it is presented as an advocacy tool.

## Findings:

Before I start with the analysis, I will quickly define the population as well as the variables that I will be working with the analysis. While there are many directions that I could have gone, I will attempt to recreate similar measures that were taken in the 2019 Executive Summary for the Art Education Data Project.

## Population:

To start off, the data was compiled from the AEDP project which used data from California Longitudinal Pupil Achievement System (CALPAS), the official database that collects all data on public schools in California. This system collects data for every public-school student

in the state of California, starting from K-8. Barring absences, this data is potentially the closest to having data for a population, so for the purpose of the study, I will treat the data I have as population. For this study, as stated above I wanted to isolate and compile the art data for the school districts of Chaffey Joint Union, Chino Valley, Ontario Montclair, Mountain View, Cucamonga, and Upland. While there are many more school districts in San Bernardino county that I did not report on, for the scope of this project I wanted to focus on school districts that had schools in, or were directly adjacent to the city of Ontario. So, I will call this population Ontario for short.

### Definition of Variables:

Table 1 defines all the variables that I analyzed this data by. It is important to note that most of these variables are not mutually exclusive from each other, with the exception being variables that are in the same category as each other i.e. FRL High vs. FRL Mid-High.

<b>Variable Name</b>	<b>Definition</b>
<b>Alternative</b>	The category for alternative schools including continuation high schools and online schools
<b>Average</b>	The average value for the total local population
<b>City</b>	Qualifier for what locale the school is located in based off of the National Center’s for Education Statistics urban-centric locale categories
<b>FRL High</b>	Free and Reduced Lunch High category, AEDP splits schools into quartiles with High being >75% of students receive Free and Reduced Lunch
<b>FRL Mid-High</b>	Free and Reduced Lunch High category, AEDP splits schools into quartiles with Mid High being >50% and <75% of students receive Free and Reduced Lunch
<b>FRL Mid-Low</b>	Free and Reduced Lunch High category, AEDP splits schools into quartiles with High being >25% and <50% of students receive Free and Reduced Lunch, no schools within the sample size had less than 25% FRL students
<b>Hispanic</b>	Hispanic is the majority ethnicity among the student populace
<b>No Majority</b>	There is no majority ethnicity among the student populace
<b>Suburb</b>	Qualifier for what locale the school is located in based off of the National Center’s for Education Statistics urban-centric locale categories
<b>Title 1 N</b>	Title 1 provides funding to schools that have a higher percentage of students from low income families, to not receive Title 1 means that less than 15% of their student populace qualify.
<b>Title 1 Y</b>	Title 1 provides funding to schools that have a higher percentage of students from low income families, normally this category is split into whether schools receive a targeted or schoolwide Title 1 Grant, however within the population there was only one school with targeted grant, so for the purpose of the study targeted and schoolwide was combined.
<b>Traditional High</b>	The category for public high schools, it should be noted that not all the schools in this category have 9 <sup>th</sup> -12 <sup>th</sup> grades, some were only 10 <sup>th</sup> -12 <sup>th</sup> grade.
<b>Traditional Middle</b>	The category for public middle schools, it should be noted that not all the schools in this category have 6 <sup>th</sup> -8 <sup>th</sup> grades, some were only 7 <sup>th</sup> -8 <sup>th</sup> grade.

Table 1

### Why Weighted Percentages for Student Population?:

Lastly, I would like to recognize an important step that was included in almost all of these calculations. When working with the data for this population, an important consideration is that not all schools have the same student population. There are some schools in this population that have over ten times more population than other schools. For that reason, it felt inaccurate to do a simple mean of school averages. As a result, almost all of the tables and calculations below are weighed for student population. There are cases where the unweighted school average provide insight, but the main calculation that I went by was the weighted student population.

### General Findings:

When we look at the findings and compare them to the results find at the state, there are some similarities, but also some key differences between the Ontario and the rest of the state. In the 2019 Executive Summary for the AEDP they found that 40% of Californian students participated in the arts and 26% of students had access to the required 4 art disciplines at their schools (music, dance, theatre, visual arts) (Morrison et al., 2019). In this study, we found that 41.41% of Ontario students participated in the arts, while 71.40% of the same population that had access to all 4 disciplines. This indicates that Ontario students generally are at if not above state averages for participation in the arts. Interestingly, when we look at the unweighted school averages, the average schools have 38.26% of their student populace participate in the arts, while 39.39% of schools have the 4 required art disciplines. This would seem to indicate that schools that have the 4 required art discipline have a proportionately larger population than schools that do not.

When we turn to the weighted art participation by each discipline there is not much difference between local averages and state average either (*Figure 1*).

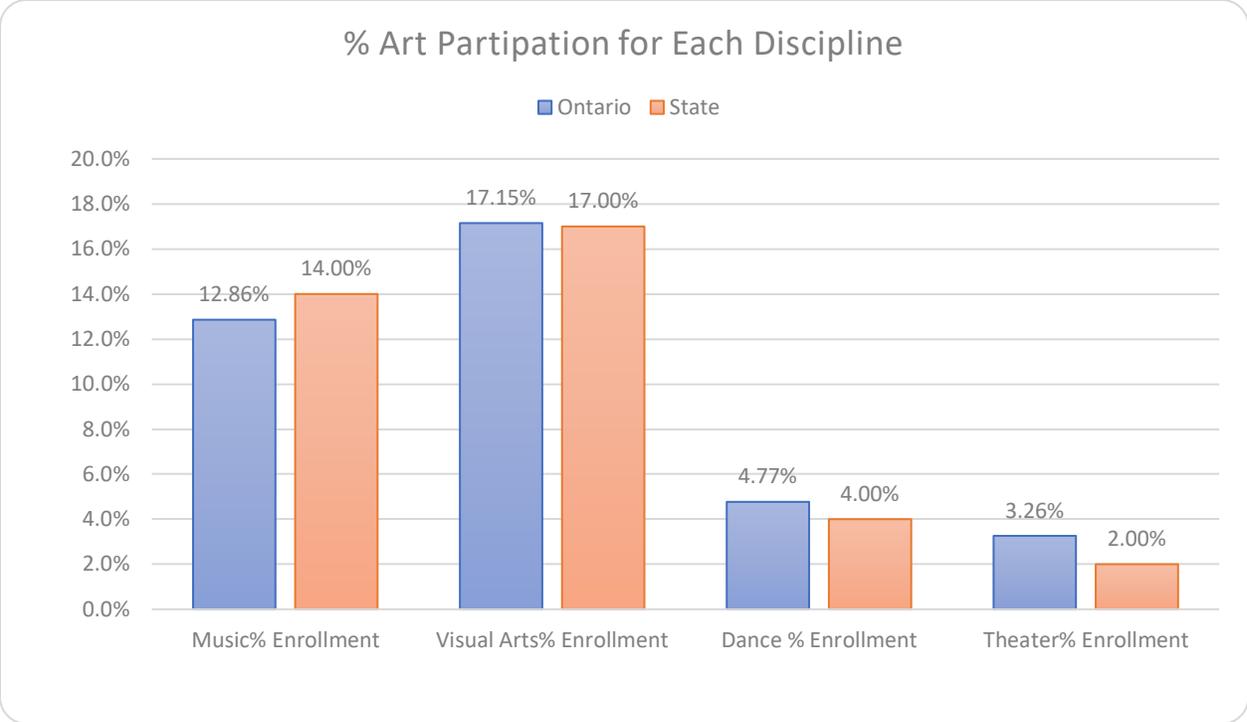


Figure 1

Of the four art disciplines only participation in music is the only percentage that is higher than the state average, while visual arts, dance, and theater all lag behind. However, in each discipline Ontario only lags behind by no more than 1.5% which when compared to the above average total art participation rate seems like a negligible lag. Even if Ontario is not “behind” per say, perhaps there is more to be gleaned when we look at different factors to see their effect on art participation.

How are art participation rates affected by various factors?:

In the state of California, the variables that incur the highest and lowest participation rate are outlined in a table from the same executive report (Table 2).

**Highest Arts Participation Rate****Lowest Arts Participation Rates**

Low Poverty (Free Lunch Students <25%)	High Poverty (Free Lunch Students <25%)
City Schools	Rural Schools
Traditional Public Schools	Charter Schools
Non-Title I Schools	Title I Schoolwide Eligible Schools
Majority Race/Ethnicity "Other"	Majority Race Ethnicity "Hispanic"
High Schools	Elementary/High Combination Schools

*Table 2*

The highest art participation rate variables in this table were associated with a minimum of 40% enrollment to a maximum of 45% enrollment, while the lowest art participation rate variables were associated with a minimum of 28% enrollment to 38% percent of enrollment.

In this study we found similar, but not identical trends in the variables that affected art participation rates, (see Figure 2)

## % Student Art Participation by Various Factors

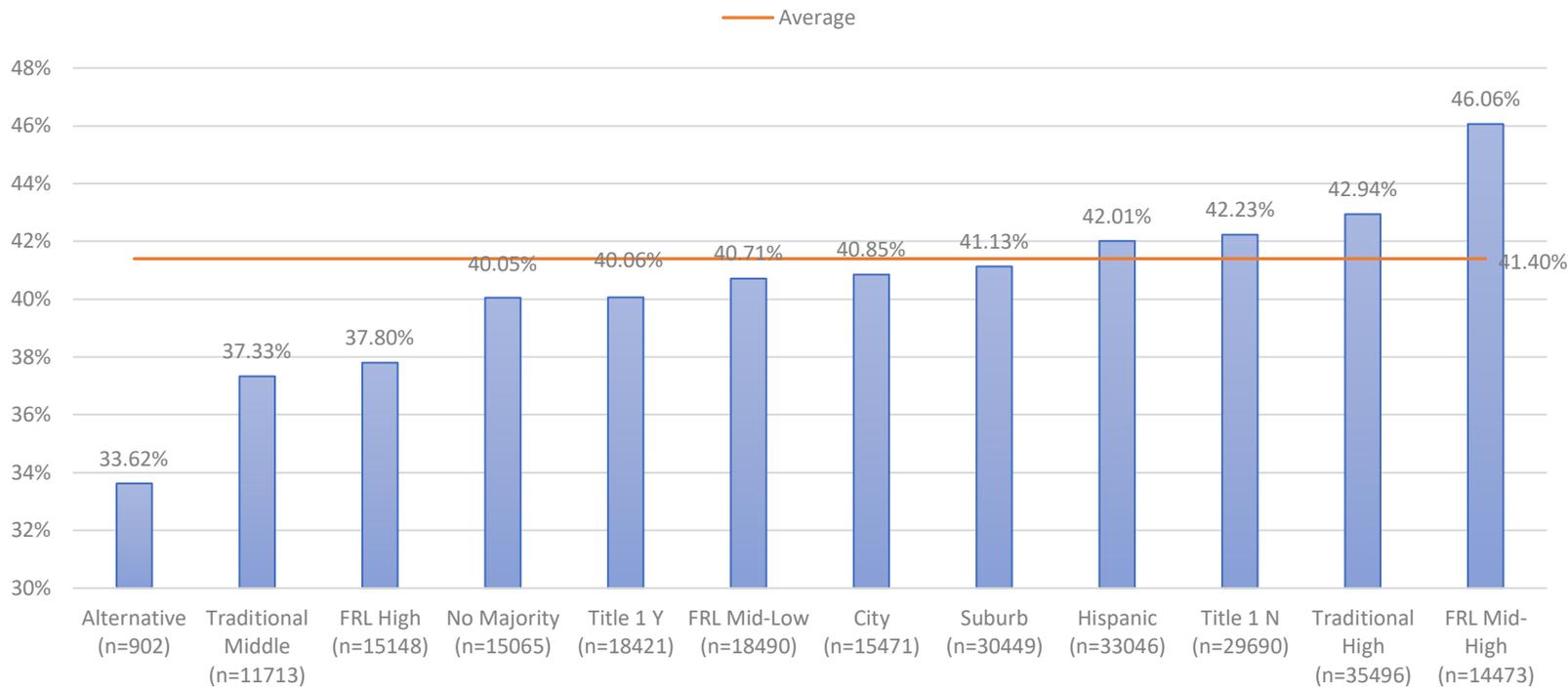


Figure 2

Across all variables the average participation rate was 41.40% while the lowest participation rate was 33.62%, for alternative schools, while the highest was 46.06% was the highest Percentage participation. If we break the variables into a high and low cluster. Our highest rates were associated with variables such as, Free and Reduced Lunch Mid-High percentage, Traditional High Schools, no Title I funding, and majority Hispanic, with those variables having a minimum of 42.01% participation while the maximum was 46.06% participation. On the low end, variables associated with low art participation were Traditional Middle, Free and Reduced Lunch High, No majority ethnicity, and having some Title 1 Funding, with the lowest percentage being 37.33% and the maximum being 40.06%. Compared to the results that were found in the state, there certainly are some differences, the main one being that in the Ontario population there are some variables do not exist at all in the population. For example, in 2019 there were no Charter Schools, which makes it hard to compare. But, across similar

comparisons I found that there were trends that were similar particularly when we look Free and Reduced Lunch (FRL) Percentage, and Type of School both of which we will unpack later. However, there are some trends and observations that I was unable to find were true for Ontario. For example, being in a city was not associated with having a large Art Participation percentage. Some of these observations change when we look at the access to the 4 Required arts percentage.

#### Access to 4 Required Arts:

It is important to note that student participation in school should not be interpreted as a measure of quality at all. A measure of quality might investigate if curriculum standards are met, qualifications for the instructor, what art supplies are provided, are any field trips taken, how much time is devoted to projects, and so and so forth. Unfortunately, the AEDP did not collect such data. What we do have is whether schools have access to 4 required arts, this measure is strictly not really a measure of quality it does provide nuance into the access question. I have graphed this measure against the same set of variables below in Figure 3. From first look, almost all of the variables look similar to the Art Participation percentage except that the disparities between/ the different variables are further exacerbated, with the

lowest value being 0% and the highest being 94.8%. Furthermore, in this chart FRL percentages

### % of Students with Access to 4 Required Arts in Ontario by Various Factors

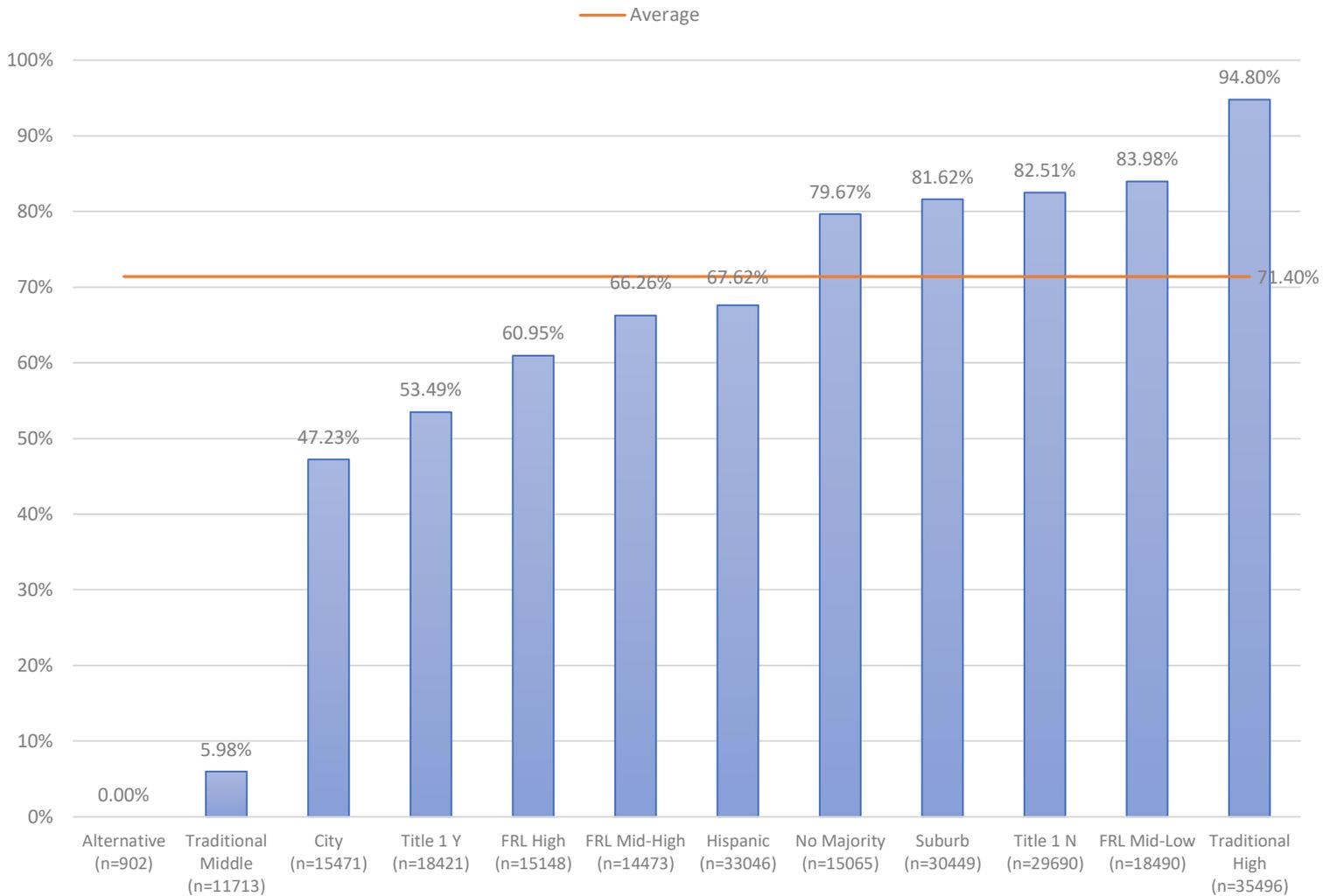


Figure 3

are now in sequential order with the schools in the lowest percentage of FRL having some of the highest percentages of having the 4 required arts. In terms of ranking the differences between the variables there is almost no difference when we weigh the percentages by schools without regards for student populations (Figure 4).

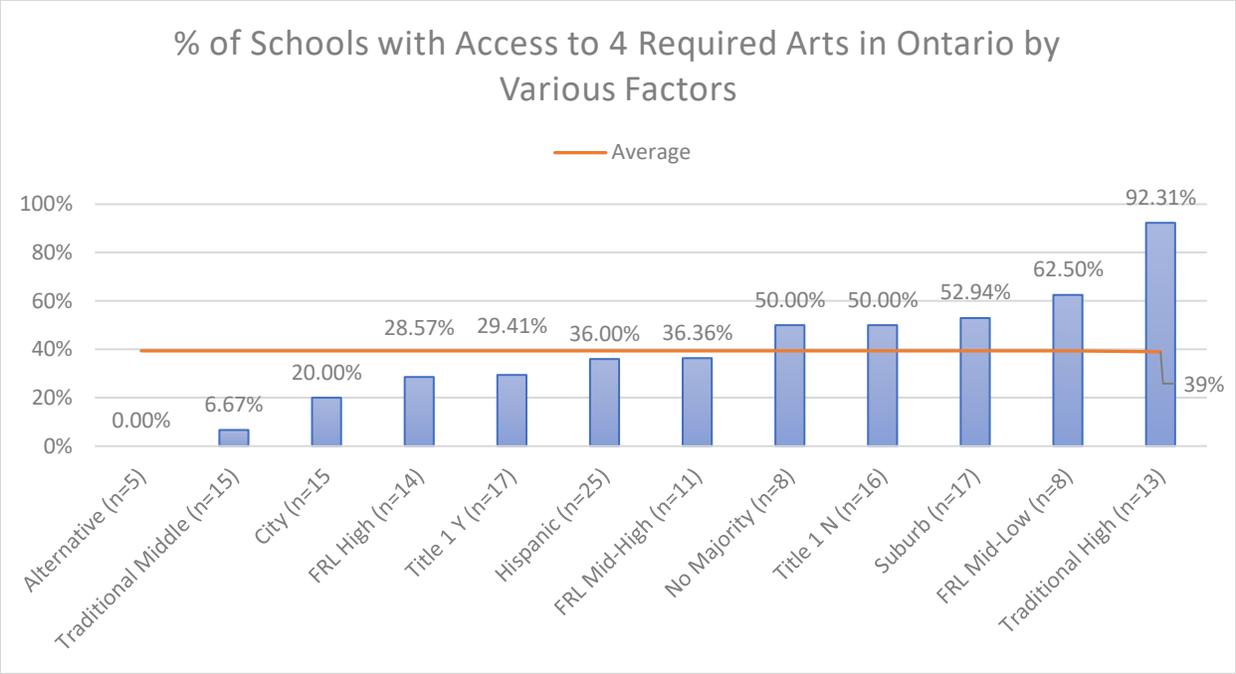


Figure 4

**Inequity: High Schools vs. Alternative vs. Middle Schools**

While I was doing my analysis immediately it became clear what factors were contributing to the low end and high end for art participation as well as the 4 required art measures from the previous section. Consistently, “alternative” (includes online schools, continuation high schools etc.) and “traditionally middle” schools were associated with the lowest art participation and access to 4 required art percentages even when weighed for the number of students. On the opposite end, the factor “Traditional High” school was one of the top factors associated with a high art participation percentage and 4 required art percentage.

The disparity in access to the 4 Required Arts really becomes clear when we isolate this subset of variables. As seen in *Figure 6*, compared to the Ontario average of 71.40%, only 5.98% of middle schoolers and 0 students in alternative schools, in our analyzed population, had access to the 4 required arts. When we run a Chi Square test for independence the p value

result is less than 0.01 which means that there is a significant relationship between type of school and access to 4 required arts.

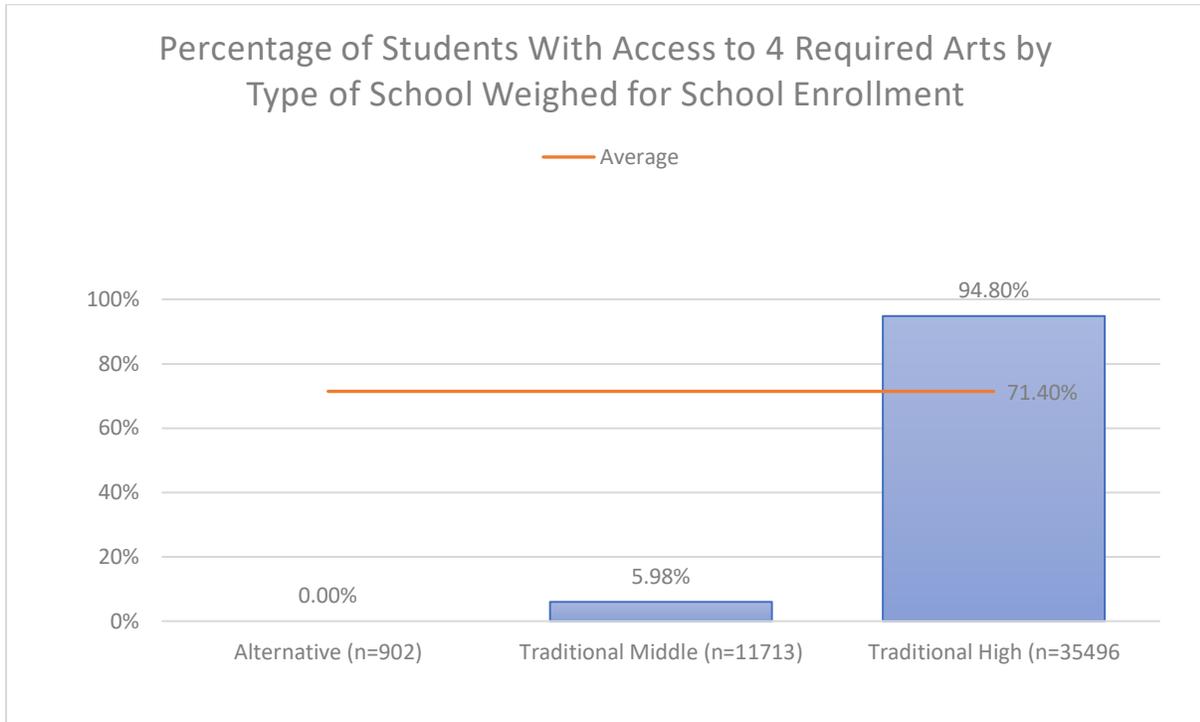


Figure 5

Further, we can see this trend continue when we look at the relationship between Type of School and Art Participation percentages. Because Art Participation percentages is a continuous variable, for the purpose of running a Chi square schools were grouped in quartiles, with “Low” including 0% to 24.99%, “Mid-Low” including 25% to 49.99%, “Mid-High” including 50% to 74.99%, and there were no schools in our population that were over 75%. When graphed (See Figure 7), we can see that the while Middle Schools and Alternative Schools have some students that fall under the Mid-High quartile, both of these categories of schools also have students that fall under the Low category. On the other hand, 100% of high schools in the population fall under the Mid-Low category for art participation. In fact, when a Chi Square test for Independence is run, between School Types and Art Enrollment levels, again

the P value is less than 0.01 which means that there is a significant relationship between the two variables

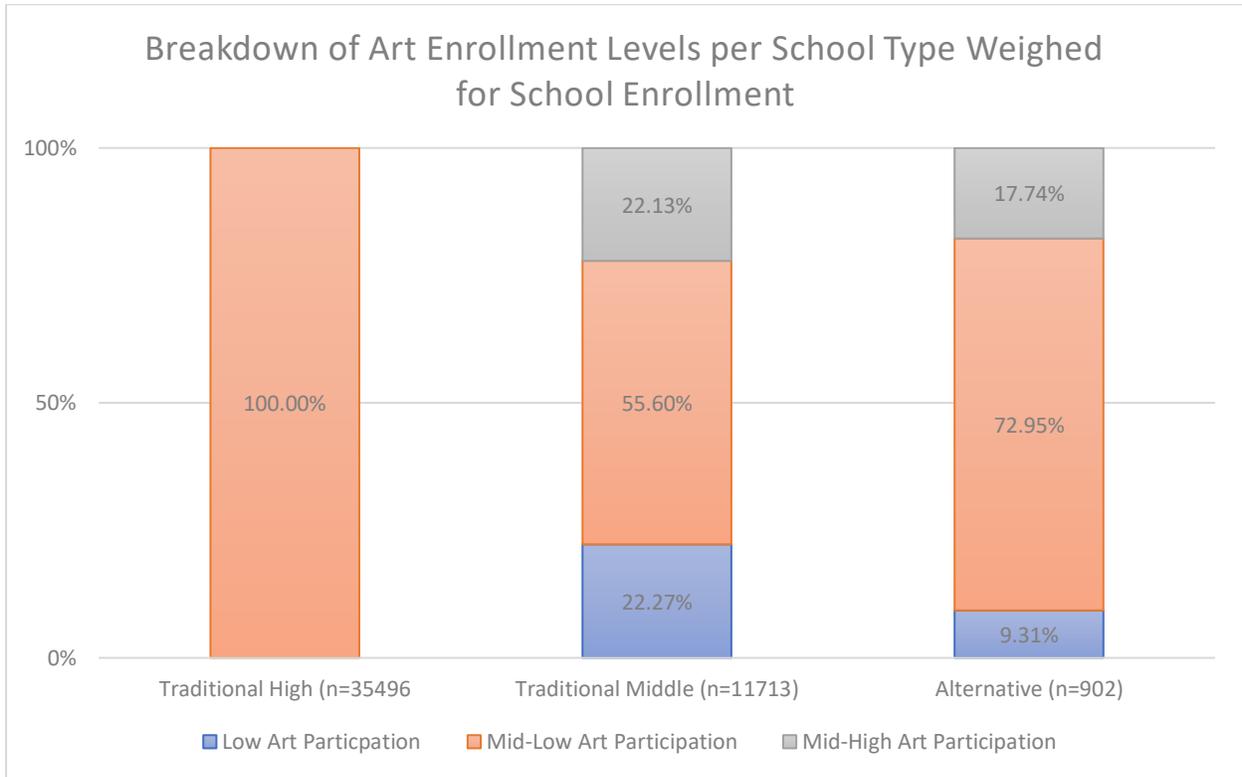


Figure 6

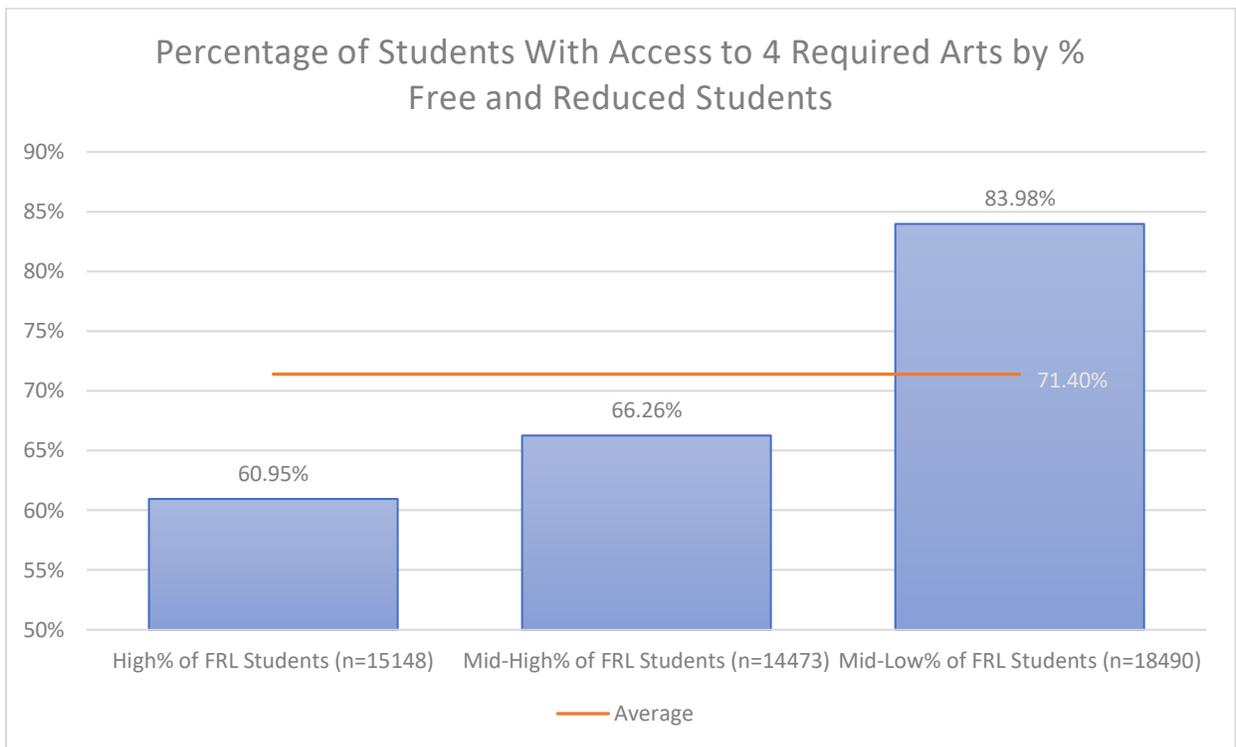
While it was not surprising that Alternative schools would not have good access to art programs, I was surprised that middle schools, who might not have the same pressure on grades were lacking in arts courses.

#### Inequity: Free and Reduced Lunch Levels

While type of schools was the variable that was associated with the furthest ends of the arts participate and 4 required arts data, not far behind was the Free and Reduced Lunch Variable. Percentage of students in a school that qualify for Free and Reduced Lunch is often a proxy for socioeconomic status and need among the students. As a result, the reasoning follows

that a school which has a higher percentage of students will require more support. And you would assume that they would have less money to go towards funding arts.

This hypothesis seems to play out when we graph the weighted percentage of Students with access to the 4 required arts by the Free and Reduced Lunch percentage quartiles (See *Figure 8*).



*Figure 7*

Compared to the same population average of 71.40%, students that are in schools with a high and Mid-High percentage of Free and Reduced Lunch Students fall below that average. While students in schools with a Mid-Low percentage of Free Reduced Lunch students are a whole 10% above the average. When we run a Chi Square test for Independence between Free and Reduced Lunch level and Access to 4 Required art levels, the P value is less than 0.01 which means that there is a significant relationship between the two variables.

Lastly, when comparing art enrollment levels to free and reduced lunch (*Figure 9*), I was able to conclude that there is a significant relationship between these two variables through a chi square test for independence. The P value ended up being less than 0.01 which means that it was highly significant. However, there is not much I am not too sure what this tells about the different levels. As we the percentage of Free and Reduced Lunch students get Higher, there seems to be a higher percentage of both Mid-High Art Participation and Low Art participation.

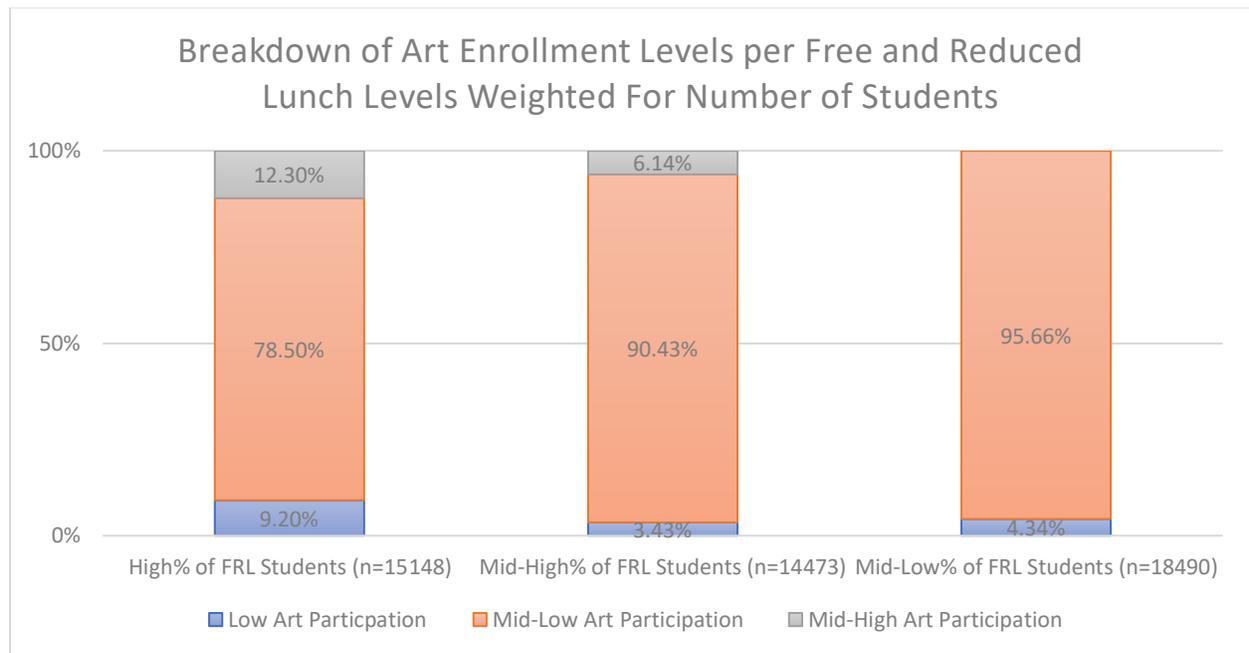


Figure 8

Granted, percentage of Free and Reduced Lunch Students as well as percentage of Student Art Enrollment are both continuous variables, so we should be able to find the correlation between both. However, the next section unpacks the complication with doing so.

### Statistical Correlation between FRL, ELL, and FRL, ELL, Foster youth values and Art Participation/4 Art Choices

Initially, I had started with trying to find the correlation between Free and Reduced Lunch (FRL) and the art participation and access measures. Taking demographical data, from (<https://www.ed-data.org/>) another California Department of Education collaboration, I took the weighted art

participation rates and compared them against Free and Reduced lunch percentage, as well as factors that are commonly used to assess need within students and received these values (Table 3).

<b>Correlation Values Between Art Participation Percentages and School Socioeconomic Measures</b>	<b>Correlation Value</b>
Percentage of Free and Reduced Lunch versus Total Student Art Participation	-0.04
Percentage of English Language Learners versus Total Student Art Participation	0.02
Percentage of Unduplicated Free and Reduced Lunch, English Language, and Foster Youth versus Total Student Art Participation	-0.04

Table 3

However, to my surprise, none of the values have particularly strong correlation. I had hypothesized that these categories would have a strong correlary relationship, because these three percentages are generally considered a proxy for socioeconomic status and need among students. I thought that this would especially be true for the last category which combines number of Free and Reduced Lunch students with English Language Learners and even foster youth, however the value was marginally different from the FRL percentage.

Just to be sure I graphed the last category versus art participation in a scatter chart.

Unsurprisingly because the correlation between the values is near zero, there does not seem to

between the variables at all (Figure 9).

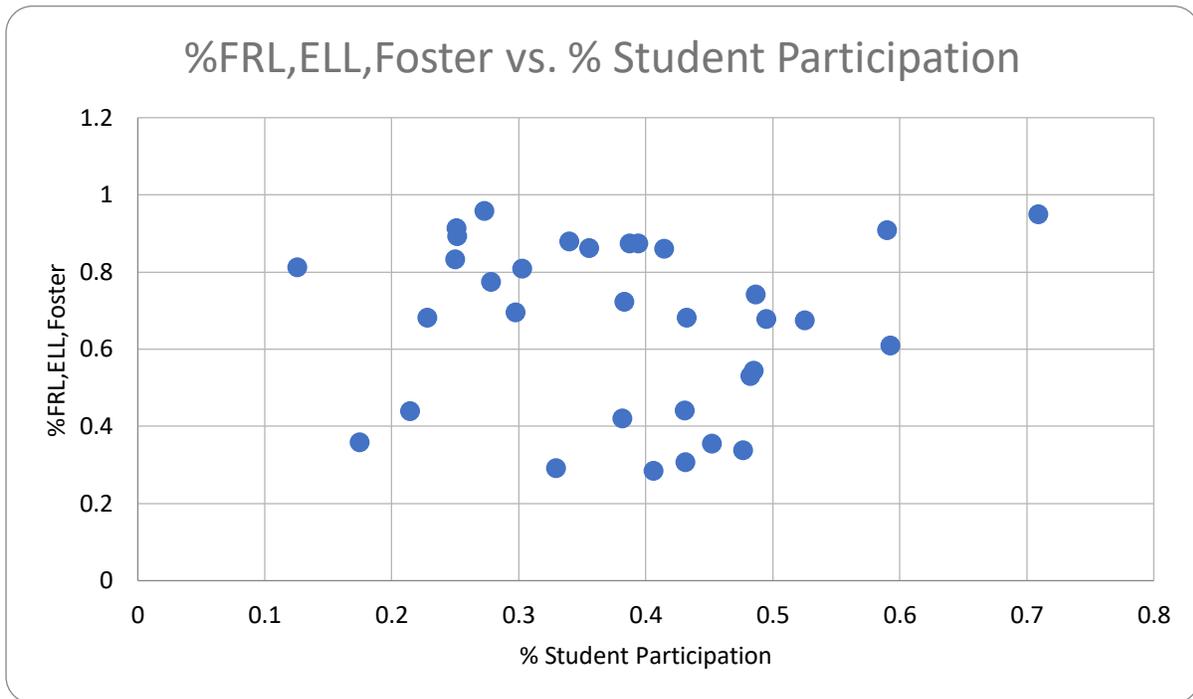


Figure 9

After thinking about it, I realized that correlation weighs each point equally, which would explain how my Chi Square calculation which took into account the actual quantity of student would find far different results than the scatterplot and correlation test. Perhaps more ANOVA tests could be run to find more of the relationship between them.

### Further Directions:

As seen in the last section, I have only scratched the tip of the iceberg on what type of analysis can be run and what trends there are to be found. First, there is a handful of other factors and threads to pull at for the analysis. A big point of analysis could be looking at the longitudinal data that is available at AEDP, to determine if the patterns in this data are repeated or changed over time. This line of analysis may be particularly interesting especially as we start

to get some of the first post pandemic data. Given the historical precedent, it would not be a stretch to imagine that art funding and education will change when there are less net funds available for schools (Katrina R. Woodworth et al., 2007).

Another thing to look is how might interpret art courses that do not fit under the 4 standard categories of visual art, dance, theater, and music, which in the data has its' own category of "other". The most common courses that fall under the category are Graphic Design, Commercial Art, Film and Video production, Media arts, Stage technology, and Multimedia Production. There is no question that all of these categories include some type of art, but technically these types of courses are not required by state code. Perhaps in this further analysis this might be a qualitative check to see if a school has any of these types of "other art". This would be valuable, because these arts are here to stay, according to the executive summary there has been a rise in this category of arts, which is intriguing given that many of these classes incorporate some sort of digital aspect.

Of course, this data can be broken down even more into the district level, grade level, all of which can provide important information for these specific groups. The only concern then is if the population will be too small to perform meaningful analysis.

### Proposed Survey:

Further there is a possibility for certain proposed surveys to be taken which if administered could provide important context and corollary data to be analyzed. First, another survey could be conducted at the Elementary School level. An important exclusion from the Art Education Data Project, was elementary schools, because they were not obligated to collect this data. A possible survey to be used can be found at this link here:

(<http://www.createca.dreamhosters.com/tools-to-collect-elementary-data/>). Alternatively, you there is a Google Drive Folder with all of the resources mentioned throughout the paper (See Appendix 2).

Additionally, there are gaps in the data when it comes the question of quality. As I stated before a lot can be learned if questions are asked about how classes are being taught, by who, and what resources are afforded to them. I have included a draft of a proposed survey that attempts to ask questions about that with a focus on asking questions about activities that occur outside of school hours. (See Appendix 2 and 3).

When it comes to analyzing this proposed data, even when we are out of the pandemic I am unsure about how many of the schools will voluntarily offer the data. So, I envision the best use of the data that is gathered through the proposed survey is to supplement the findings that were found before. This might take the form of a case study, or as another category/variable to compare the measures of participation and access to.

## Conclusion:

While the school districts in and around Ontario are on par with the with state averages for art education, participation and access to comprehensive art education is often inequitable. There are statistical disparities when we look at the differences between School Levels as well as a school's percentage of Free and Reduced Lunch Students. Granted, the state of California also faces similar disparities, however these areas should be places for potential growth and improvement. Furthermore, hopefully this project can provide the impetus for further inquiries into the issue of Art Education, or the beginning of civic action. Towards this end, I am publicly sharing the spreadsheet that I have compiled

along with any other resources that I have found along the way in a Google Sheets file and Google Drive Folder respectively (See Appendix 2).

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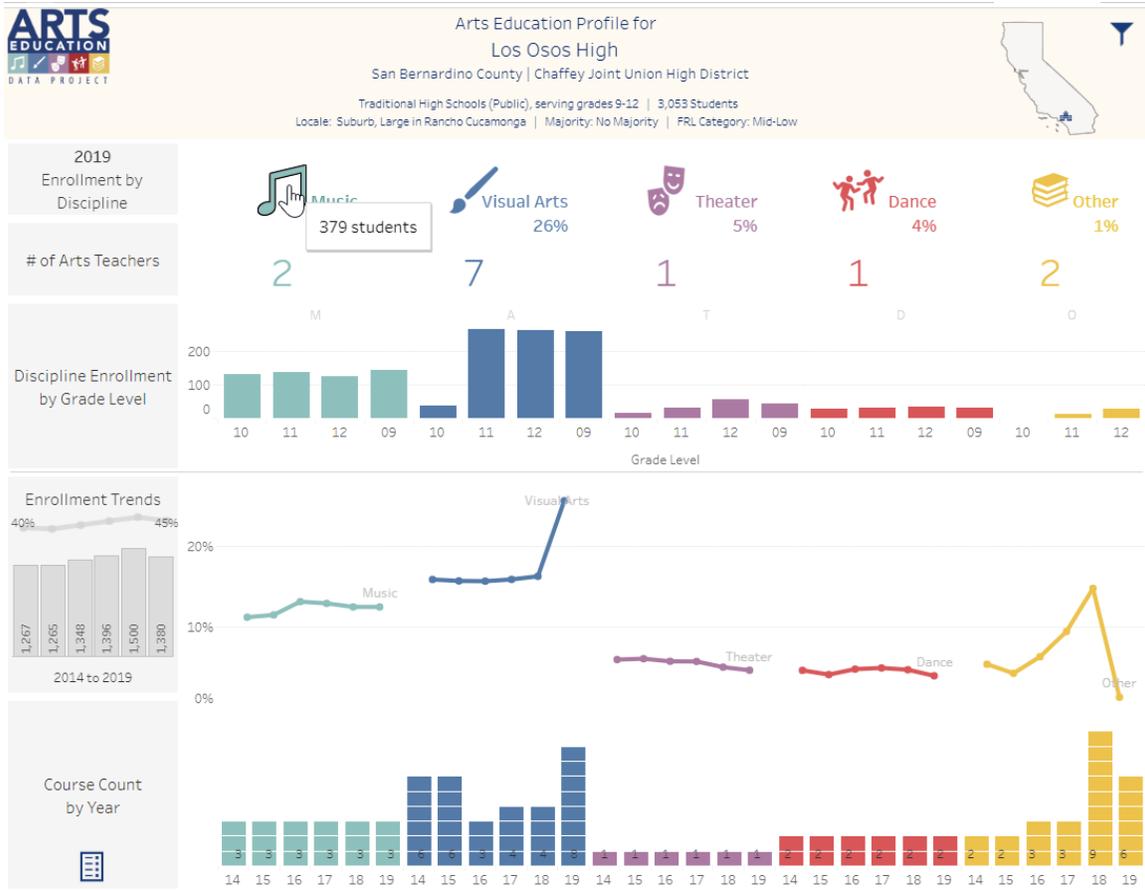
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# Appendix 1:



Appendix #2:

Google Drive Link for the Compiled Ontario Spreadsheet:

<https://docs.google.com/spreadsheets/d/13rULN8qUxnFIRliw6gzWek4N5TI3wuBfNyj7W891gbE/edit?usp=sharing>

Google Drive Link for all resources: <https://drive.google.com/drive/folders/1270xQ2th6KDzOs-LaYUKipC6-aCRBuWG?usp=sharing>

### Appendix #3 Draft Email:

Hi, hope you are well,

My name is [name], and I am an undergraduate student at Pitzer College in Claremont (Assuming they are PZ Student). Currently, I am interning with the Ontario based non-profit, The Arts Area which is working to develop the creative industries in the Inland Empire. As part of our work, we are interested in the state of arts education in Ontario and would like to collect data about extra-curricular and non-curricular ways your schools support for arts education.

Could you assist it in this project? I have attached a survey to the email I know that your school has submitted data in participation with the Create CA Arts Education arts survey, but this survey hopes to supplement that data to create a more holistic view of what arts education looks like at your schools. This data will ultimately be compiled into a report to assist with obtaining support and funding through various public and private funding sources. This might look like grants to supplement curriculum, or changes in Local Control Accountability Plans (LCAP) or other funding formulas in school districts.

It would help greatly if you could respond with the information if you have it or pass it forward to the person who would.

Thank you for the help,

## Appendix 4

### Survey questions:

This is a survey that is being conducted by The Arts Area to get a better understanding of the state of Arts Education in the City of Ontario. This data will ultimately be compiled into a report to assist with obtaining support and funding through various public and private funding sources.

Which school are you representing?

Does your school offer extra-curricular, after school, or non-school hour MUSIC activities?

Yes

No

Prefer not to answer

If you answered yes, which types?

Does your school offer extra-curricular, after school, or non school hour VISUAL ARTS activities?

Yes

No

Prefer not to answer

If you answered yes, which types?

Does your school offer extra-curricular, after school, or non school hour THEATER activities?

Yes

No

Prefer not to answer

If you answered yes, which types?

Does your school offer extra-curricular, after school, or non school hour DANCE activities?

Yes

No

Prefer not to answer

If you answered yes, which types?

Is taking an arts course a graduation requirement?

Yes

No

How often are ANY of the arts integrated with other subject areas at your high school?

1-Very often

2-Often

3-Sometimes

4-Rarely

5-Very Rare/Never

How often is MUSIC integrated with other subject areas at your high school?

1-Very often

2-Often

3-Sometimes

4-Rarely

5-Very Rare/Never

How often is THEATER integrated with other subject areas at your high school?

1-Very often

2-Often

3-Sometimes

4-Rarely

5-Very Rare/Never

How often is VISUAL ARTS integrated with other subject areas at your high school?

1-Very often

2-Often

3-Sometimes

4-Rarely

5-Very Rare/Never

How often is DANCE integrated with other subject areas at your high school?

1-Very often

2-Often

3-Sometimes

4-Rarely

5-Very Rare/Never

Does your school collaborate with outside non-profits in order to provide arts access for students

Yes

No

Prefer not to answer

If so, please list them.

Does your school collaborate with independent artists in order to provide arts access for students?

Yes

No

Prefer not to answer

If so, please list them.

Does your school have dedicated art rooms or facilities? If so please briefly describe.

Yes

No

Prefer not to answer

If so, please list them.