

School Reorganization in SFUSD: Survey II Results

Prepared by Dr. Francis A. Pearman
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Overview

Survey II was designed to:

- A. Introduce metrics to the community.
- B. Gather information about the relative importance that the community places on those metrics.
- C. *Relative importance* will be used to generate the eventual composite scores that will contribute to closure/consolidation/merger decisions.

This slide deck summarizes the results from Survey II

Survey II had a high completion rate.

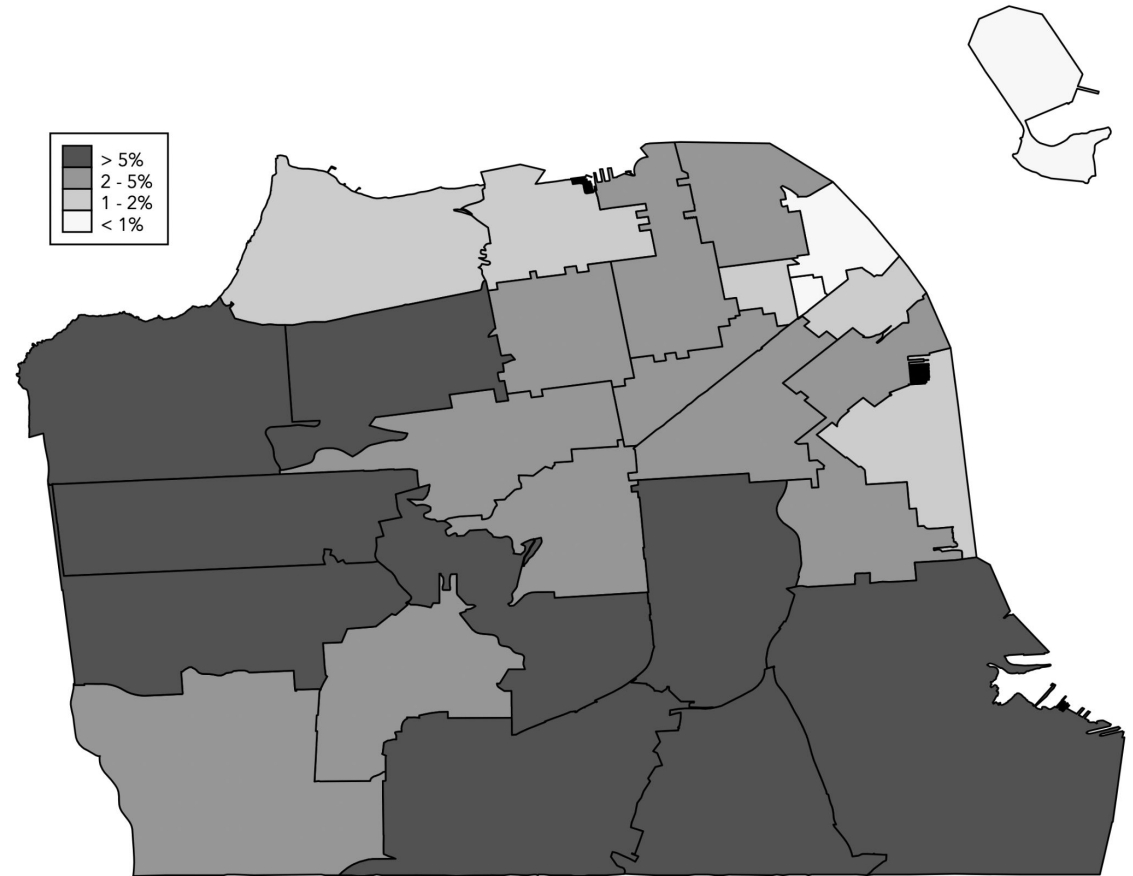
- Survey II opened on April 25th and closed on May 9th
- 9,980 surveys were submitted.
- Between 4,805 and 5,357 surveys were completed with metrics scores (all completed responses for any question were accounted for).
 - Roughly half of respondents who started the survey completed metric questions
- Like Survey I, participation rates varied by geography, school, and respondent background.*

Metric	Completed Responses
School Access	5,357
Program Access	5,357
Historical Inequities	5,357
School Culture and Climate	4,998
Socio-emotional Development	4,998
Academic Performance	4,998
Family Choice and Demand	4,805
Teacher Turnover	4,805
Student Enrollment	4,805
Building Condition	4,805

*all descriptive statistics about survey respondents were restricted to those who completed all metric questions.

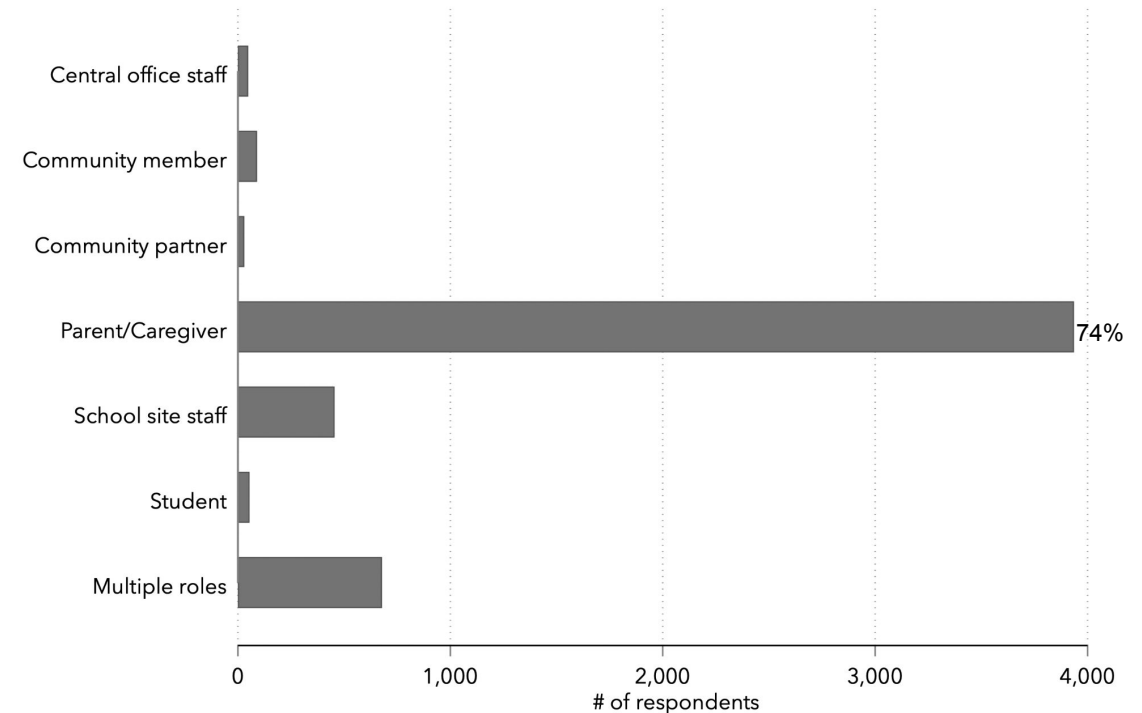
Survey II participation had geographic variation.

- Survey participation varied across SF, reaching as high as 12% in some zip codes.
- Participation was highest in the Outer Richmond, Sunset, Excelsior, Mission, and Bayview/Hunters Point.



Survey participation was highest among parents.

- Participation was highest among parents, who completed 74% of surveys. The second highest group was school staff.
- People with multiple roles in SFUSD had the second-highest participation rate.
- Community members and partners together accounted for roughly 2% of all survey respondents.
- Students accounted for around 1% of respondents.



A meaningful proportion of survey respondents receive special services.

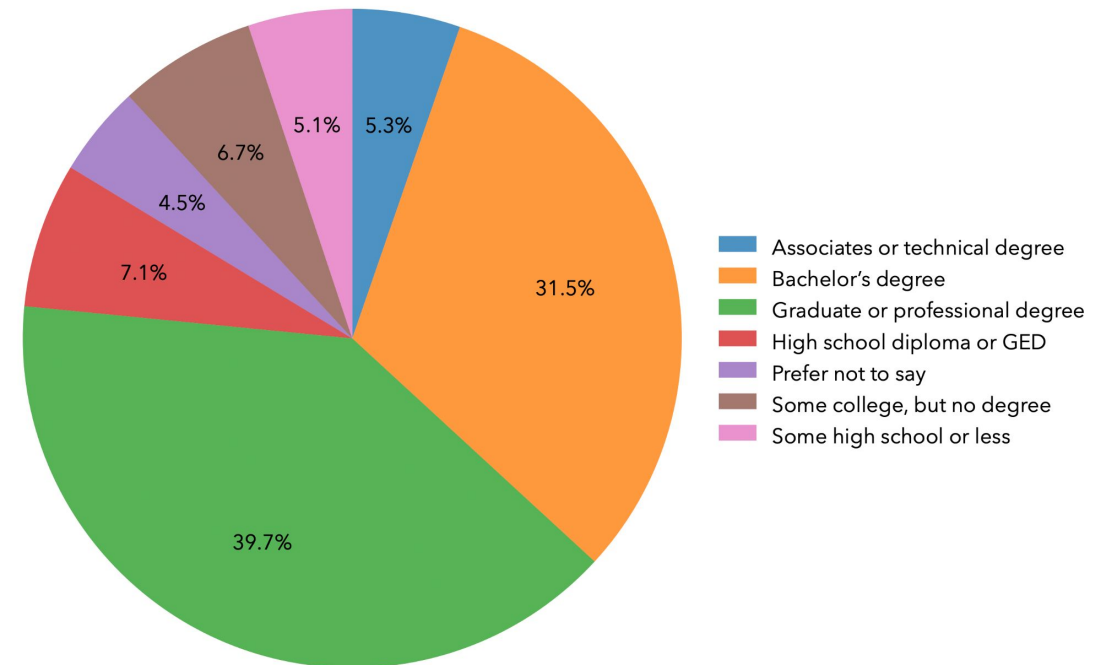
- Many respondents indicated they received special services from SFUSD.
- Over 9% received special education services
- Over 9% received Language Pathways
- 7.2% of respondents received English Language Learner Services
- Few respondents received Homeless or Foster Youth services

PERCENT OF SURVEY RESPONDENTS RECEIVING SPECIAL SERVICES

	%
Special Education	9.4
English Language Learner Services	7.2
Language Pathways	9.6
Foster Youth Services	0.2
Homeless Services	0.3

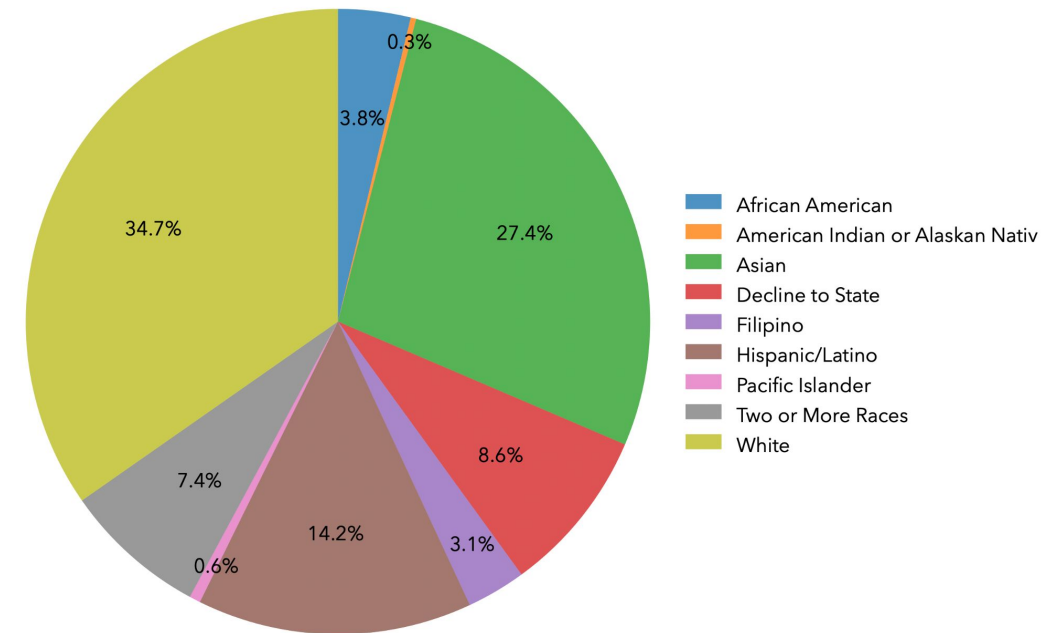
Educational Level of Survey Respondents

Survey participation was disproportionately from respondents who had education beyond high school.



Racial composition of survey respondents

- Surveys were completed from a diverse array of participants.
- Despite making up around 12% of SFUSD students, Whites made up 35% of survey responses.
- Hispanic/Latino make up 32% of the district but only 14.2% of survey responses.
- African Americans make up 6% of the district but only 3.8% of survey responses.



What did community members think about the metrics?

Coin Distribution & Category Weight

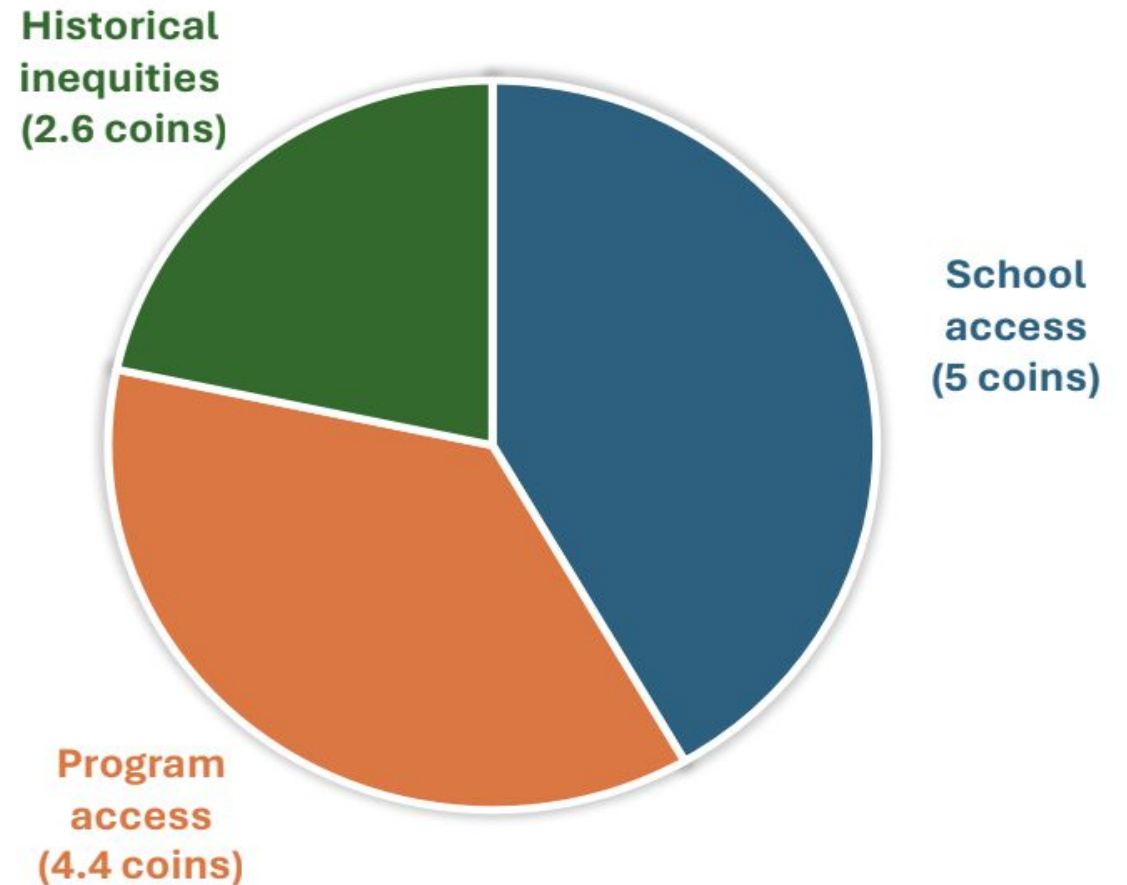
Respondents allocated 12 “coins” to indicate the relative importance they would place on metrics within each category.

The average distribution of coins will be used to determine the relative weight for each metric in the eventual composite score.

Survey respondents were not asked to weight each category in Survey II. In the current plan, each category is weighted equally.

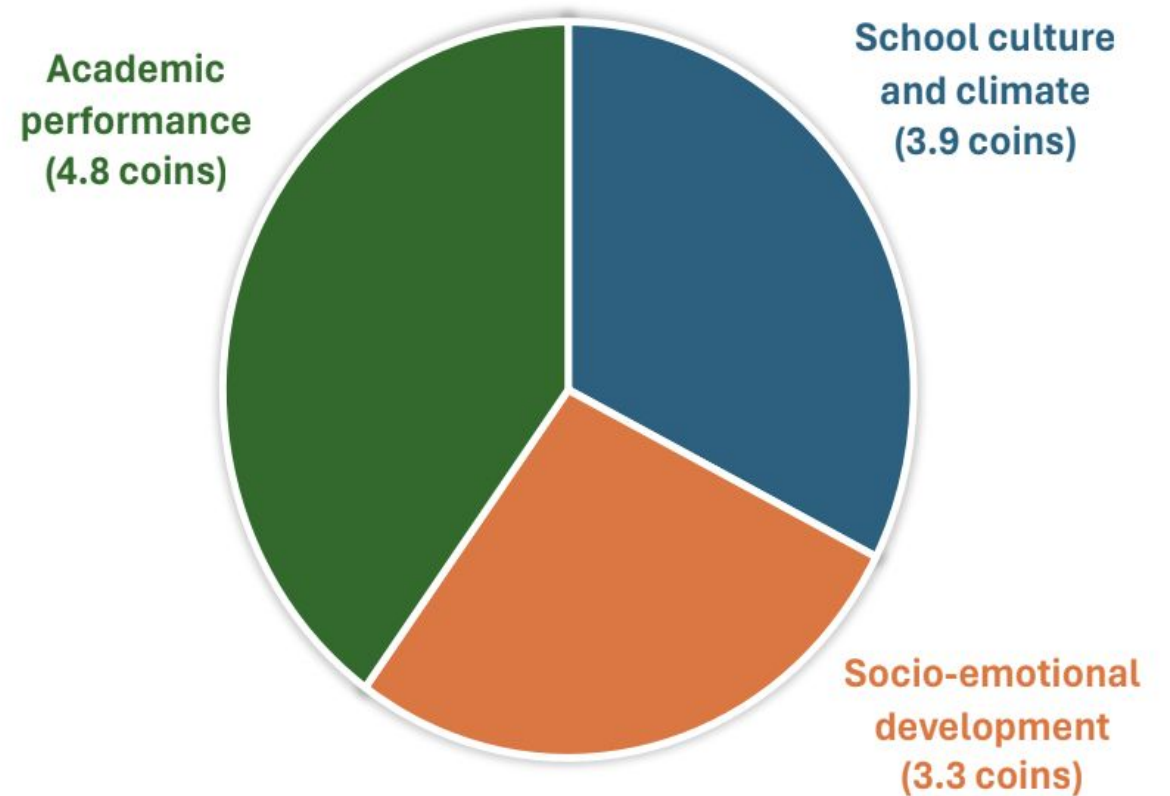
Equity

- Coin allocations for **Equity** indicate that survey respondents prioritize *school access (5 coins)*, followed by *program access (4.4 coins)*, followed by *historical inequities (2.6 coins)*
- *School access* received the most weight of any metric in any category



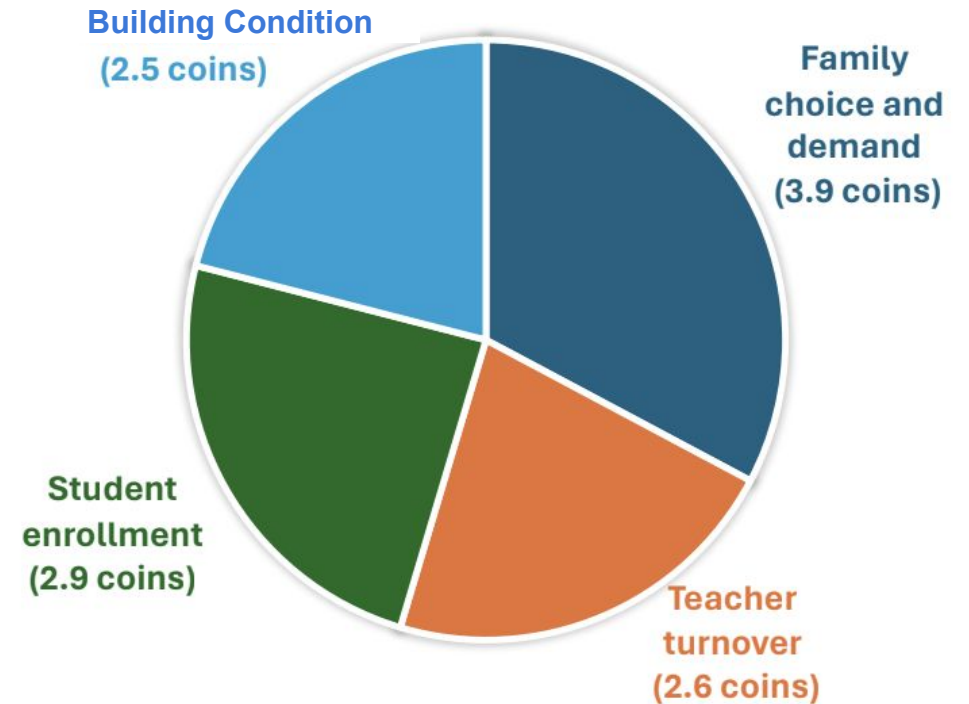
Excellence

Coin allocations for **Excellence** indicate that survey respondents prioritize *academic performance* (4.8 coins), followed by *school culture and climate* (3.9 coins), followed by *socio-emotional development* (3.3 coins)



Effective use of resources

Coin allocations for **Effective use of resources** indicate that survey respondents prioritize *family choice and demand* (3.9 coins), followed by *student enrollment* (2.9 coins), followed by *teacher turnover* (2.6 coins), followed by *building condition* (2.5 coins).



Racial Differences in Coin Distribution

- A key concern is the possibility the coin distribution and eventual composite score may be biased by under- and over-representation of racial groups in the survey.
- Example: Suppose survey respondents who identify as African American place more coins on historical inequity than other groups, and African Americans are under-represented on the survey. In that case, the composite score may underweight the importance of historical inequities.
- The same holds for the (dis)proportionality of other racial groups, their preferences, and the eventual composite score.

Racial Differences in Coin Distribution

- Racial groups do vary somewhat in their coin allocations.
- Weighted estimates of the coin distribution that account for each racial group's potential under- or over-representation produce quantitatively similar results.
- Importantly, the rank order of metrics within each category does not change after weighting.

Racial Differences in Coin Distribution

UNADJUSTED, RACE-SPECIFIC, AND RACE-WEIGHTED CONSOLIDATION PREFERENCES

	Unadjusted	Black	AI/AN	Asian	Decline to state	Filipino	Hispanic/Latino	Pacific Islander	Two or More	White	Skipped Race Question	Weighted
Equity												
School access	5.0	4.4	4.0	4.9	5.5	4.7	5.2	4.2	4.8	4.9	5.0	5.0
Program access	4.4	4.0	4.0	4.8	4.6	4.4	4.3	4.3	4.4	4.1	4.4	4.5
Historical inequities	2.6	3.6	4.0	2.3	1.9	3.0	2.5	3.5	2.9	3.0	2.6	2.6
Excellence												
School culture and climate	3.9	3.7	3.9	3.9	3.5	4.0	4.1	3.5	3.9	4.2	3.7	4.0
Socio-emotional development	3.3	3.6	3.5	3.2	2.7	3.6	3.6	3.8	3.2	3.4	3.1	3.4
Academic performance	4.8	4.7	4.6	4.9	5.9	4.5	4.3	4.8	4.9	4.4	5.1	4.7
Effective Use of resources												
Family choice and demand	3.9	3.3	5.2	4.3	4.8	3.5	3.4	3.6	4.2	3.7	3.9	3.9
Teacher turnover	2.6	2.4	2.2	2.6	2.4	3.0	2.6	2.7	2.5	2.8	2.6	2.6
Students enrollment	2.9	3.1	3.4	3.0	2.8	2.8	2.9	2.6	2.9	2.9	3.0	2.9
Building use	2.5	3.2	1.1	2.1	2.0	2.7	3.1	3.1	2.3	2.6	2.4	2.6
n =	4,998	150	13	1,155	378	125	579	24	317	1,499	758	4,240

Conclusions

- Survey II had a high completion rate that included a diverse sample of survey respondents.
- The district now understands the relative importance that the community places on each metric.
- There is consistency across racial groups in terms of the metrics that should matter most in the reorganization decision.
- Weighted estimates suggest results are unlikely to be biased by over- or under-representation of certain racial groups.
- Results will be used to compute a composite score for each school in the district.

How will the composite score be calculated?

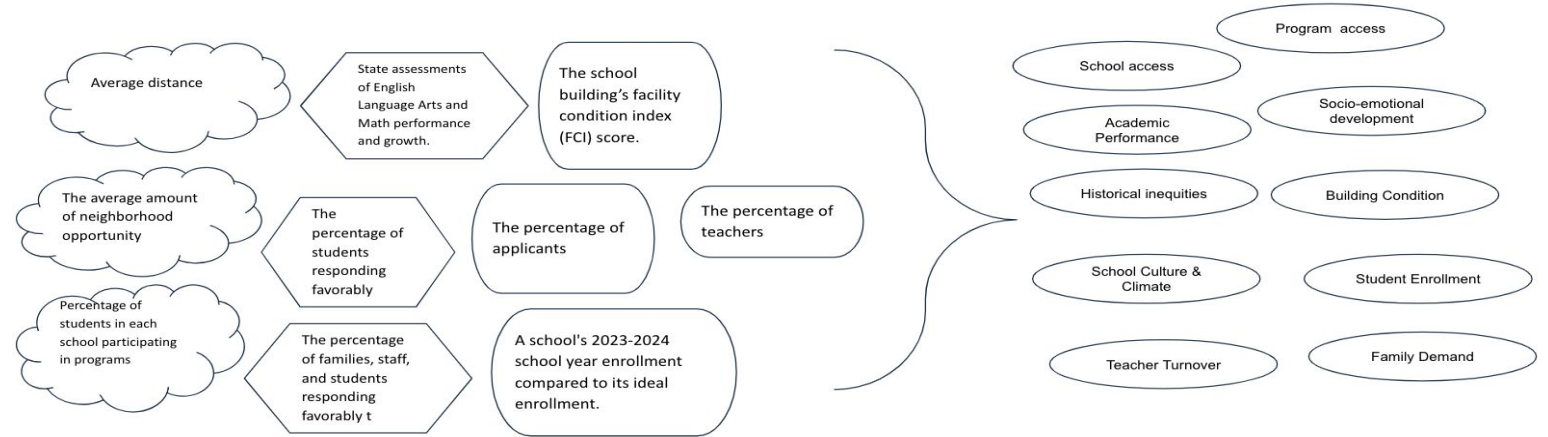
The composite score calculation is a multi- step process

- Each School will receive a **metric score** for every criterion based on the assigned [metric and meaning](#)
- To ensure that each metric can be compared as an apple to apple, a **standardized score** will be calculated for each metric. For example, a standardized score allow us to combine how well a school does academically with the quality of its facilities into the composite score.
- The standardized score will become a **weighted standardized score** based on the number of coins for each metric score (the number of coins is based on the results of community survey)
- The **composite score** will be based on the weight of the category and the weight of the criterion in each the category

$$\text{Composite Score} = \frac{1}{3} \text{Equity} + \frac{1}{3} \text{Excellence} + \frac{1}{3} \text{EffectiveUseResources}$$

The composite score calculation is a multi- step process

To ensure that each **metric score** can be compared as an apple to apple, a “standardized score” will be calculated for each metric.



The **weighted standardized score** will be weighted based on the number of coins for each metric based on the results of community survey

$$\text{Equity} = \left[\frac{5}{12} \text{SchoolAccess} + \frac{4.4}{12} \text{ProgramAccess} + \frac{2.6}{12} \text{HistoricalInequity} \right]$$

$$\text{Excellence} = \left[\frac{4.8}{12} \text{AcademicPerformance} + \frac{3.9}{12} \text{SchoolCulture} + \frac{3.3}{12} \text{SEL} \right]$$

$$\text{Effective Use} = \left[\frac{3.9}{12} \text{Demand} + \frac{2.9}{12} \text{Enrollment} + \frac{2.6}{12} \text{Turnover} + \frac{2.5}{12} \text{Building Condition} \right]$$

The **composite score** will be based on the weight of the category and the weight of the criterion in each the category

$$\text{Composite Score} = \frac{1}{3} \text{Equity} + \frac{1}{3} \text{Excellence} + \frac{1}{3} \text{EffectiveUseResources}$$



$\frac{1}{3} \times$

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$\frac{1}{3} \times$

Weights		Standardized Score	
5.22/12	x	School Access	+
4.4/12	x	Program Access	
2.6/12	x	Historical Inequity	

Weights		Standardized Score	
4.8/12	x	Academic Performance	+
3.9/12	x	School Culture	
3.3/12	x	Social-Emotional Learning	

Weights		Standardized Score	
3.9/12	x	Student Enrollment	+
2.9/12	x	Building Condition	
2.9/12	x	Family Choice & Demand	
2.5/12	x	Teacher Turnover	



Composite score

- A higher composite score means a school is less likely to be identified for closure, merger or co-location.
- Composite scores will be comparable across schools and should be interpreted as a **global score that captures how much a school aligns with the stated preferences, values, and priorities of SFUSD's community.**
- Composite scores can be scaled to allow for a more intuitive distribution (e.g., 1-100).

APPENDIX:

1. Tutorial on standardization, which is a key part of computing the composite score
2. How the composite score will be calculated
3. How the coin distribution going to be used to calculate weights in the final composite score?

Tutorial on standardization, which is a key part of computing the composite score...

Standardization

- A key challenge with creating a composite score based on different metrics is that the metrics are not directly comparable.
 - How do you combine how well a school does academically with the quality of its facilities?
- One way to do it is to **standardize** each metric.
 - Standardization of a given metric tells us where a school lands in the distribution of all schools on the same metric.
 - We can then combine across all metrics a school's relative placement to other schools in the district.
 - Standardization allows for “apples to apples” comparisons across the different metrics.

Standardization

Standardization is accomplished in four steps:

1. Calculate the district-wide average for a given metric.
2. Create a *demeaned score* for each school by subtracting the district-wide average from each school's score on the metric of interest.
3. Calculate the standard deviation, which is another way of saying how much range there is in the distribution.
4. Divide the school's demeaned score by the standard deviation to tell us how much different the school's score is from others.

Standardization

Example: School Access (the average distance to the three nearest schools in the same grade band.)

School A = 1.75 mile

School B = 2.2 mile

School C = .75 mile

Step 1) Calculate the average across all schools:

$$(1.75+2.2+.75)/3 = 1.57 \text{ miles}$$

Standardization

Example: School Access (the average distance to the three nearest schools in the same grade band.)

Step 2) Subtract the average from each school's score:

$$\text{School A} = 1.75 - 1.57 = .18$$

$$\text{School B} = 2.2 - 1.57 = .63$$

$$\text{School C} = .75 - 1.57 = -.82$$

Step 3) Calculate the standard deviation:

Standardization

Example: School Access (the average distance to the three nearest schools in the same grade band.)

Step 3) Calculate the standard deviation:

$$\sigma = \sqrt{\frac{\sum(X - \mu)^2}{n - 1}}$$

$$\sigma = \sqrt{\frac{(1.75 - 1.57)^2 + (2.2 - 1.57)^2 + (.75 - 1.57)^2}{3 - 1}}$$

$$\sigma = 0.74$$

Standardization

Example: School Access (the average distance to the three nearest schools in the same grade band.)

Step 4) Divide each school's demeaned score by the standard deviation to tell us how much different each school's score is from others..

$$\text{School A} = .18/.74 = 0.24$$

$$\text{School B} = .63/.74 = 0.85$$

$$\text{School C} = -.82/.74 = -1.11$$

In this scenario, School B would be less likely to close as the metric score is the highest of the 3.

How will the composite score be calculated?

The composite score calculation is a multi- step process

- Each School will receive a **metric score** for every criterion based on the assigned [metric and meaning](#)
- To ensure that each metric can be compared as an apple to apple, a **standardized score** will be calculated for each metric. For example, a standardized score allow us to combine how well a school does academically with the quality of its facilities into the composite score.
- The standardized score will become a **weighted standardized score** based on the number of coins for each metric score (the number of coins is based on the results of community survey)
- The **composite score** will be based on the weight of the category and the weight of the criterion in each the category

$$\text{Composite Score} = \frac{1}{3} \text{Equity} + \frac{1}{3} \text{Excellence} + \frac{1}{3} \text{EffectiveUseResources}$$

1. Each School will receive a **metric score** for every criterion based on the assigned [metric and meaning](#)

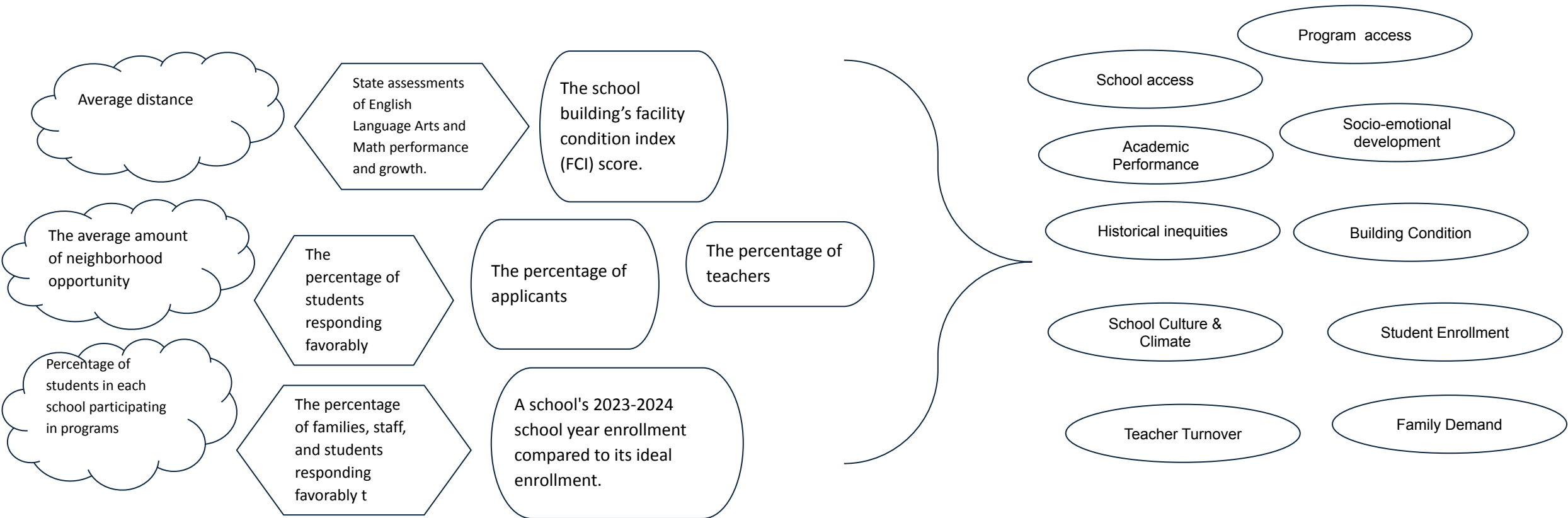
Equity
<i>School Access</i>
<i>Program Access</i>
<i>Historical Inequities</i>

Excellence
School culture & climate
Academic Performance
Socio-emotional development

Effective Use of Resources
Family Choice and Demand for the School
Teacher Turnover
Student Enrollment
Building Condition

Standardization

2. To ensure that each metric score can be compared as an apple to apple, a **standardized score** will be calculated for each metric. This is because each criterion does not have a standard metric - the metric vary to ensure we can measure the different values we have.



Composite Score

3. The “standardized score” will be weighted based on the number of coins for each metric based on the results of community survey

School Access	5.0	0.42
Program Access	4.5	0.38
Historical Inequities	2.6	0.22

School culture & climate	4.0	0.33
Socio-emotional development	3.4	0.28
Academic Performance	4.7	0.39

Family Choice and Demand for the School	3.9	0.33
Teacher Turnover	2.6	0.22
Student Enrollment	2.9	0.24
Building Condition	2.6	0.22

School access X .42

Program access X .38

Historical inequities X .22

School Culture & Climate x .33

Socio-emotional development X .28

Academic Performance x .39

Family Demand x .33

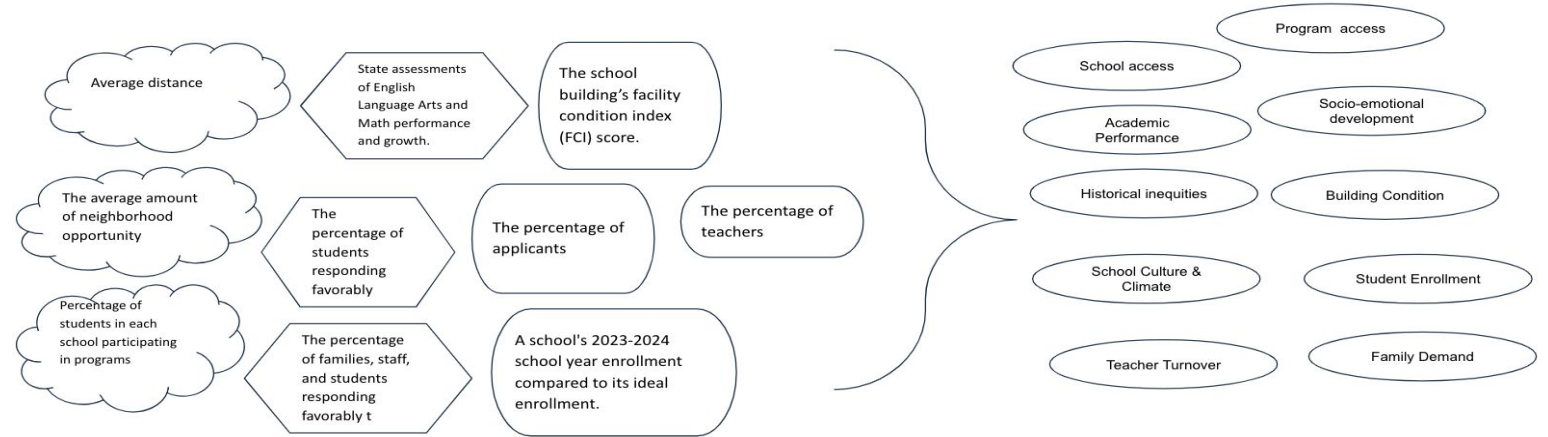
Building Condition x .22

Student Enrollment x .24

Teacher Turnover x .22

The composite score calculation is a multi- step process

To ensure that each **metric score** can be compared as an apple to apple, a “standardized score” will be calculated for each metric.



The **weighted standardized score** will be weighted based on the number of coins for each metric based on the results of community survey

$$\text{Equity} = \left[\frac{5}{12} \text{SchoolAccess} + \frac{4.4}{12} \text{ProgramAccess} + \frac{2.6}{12} \text{HistoricalInequity} \right]$$

$$\text{Excellence} = \left[\frac{4.8}{12} \text{AcademicPerformance} + \frac{3.9}{12} \text{SchoolCulture} + \frac{3.3}{12} \text{SEL} \right]$$

$$\text{Effective Use} = \left[\frac{3.9}{12} \text{Demand} + \frac{2.9}{12} \text{Enrollment} + \frac{2.6}{12} \text{Turnover} + \frac{2.5}{12} \text{Building Condition} \right]$$

The **composite score** will be based on the weight of the category and the weight of the criterion in each the category

$$\text{Composite Score} = \frac{1}{3} \text{Equity} + \frac{1}{3} \text{Excellence} + \frac{1}{3} \text{EffectiveUseResources}$$

How is the coin distribution going to be used to calculate weights in the final composite score?

Composite score

In the current plan, each category (*equity*, *excellence*, *effective use of resources*) will be weighted equally by contributing one-third to the total score.

$$\text{Composite Score} = \frac{1}{3}[\textit{Equity}] + \frac{1}{3}[\textit{Excellence}] + \frac{1}{3}[\textit{Effective Use of Resources}]$$

- Within each category, each metric will receive a weight equal to the relative number of coins that community members gave it.
- As described previously, each metric will be **standardized** so that we can compare “apples” to “apples”

Composite score: Example

- Equity is comprised of three metrics: *school access*, *program access*, and *historical inequity*.
- On average, community members gave *school access* 5 coins, *program access* 4.4 coins, and *historical inequity* 2.6 coins.
- The relative contribution of each metric would be calculated as follows:

$$\text{Equity} = \left[\frac{5}{12} \text{SchoolAccess} + \frac{4.4}{12} \text{ProgramAccess} + \frac{2.6}{12} \text{HistoricalInequity} \right]$$

Example: School A

Each metric will be standardized across all schools.

$$\text{Equity} = \left[\frac{5}{12} \text{SchoolAccess} + \frac{4.4}{12} \text{ProgramAccess} + \frac{2.6}{12} \text{HistoricalInequity} \right]$$

$$\text{Equity} = \left[\frac{5}{12} (1.9) + \frac{4.4}{12} (-0.7) + \frac{2.6}{12} (0.8) \right]$$

$$\text{Equity} = 0.71$$

The same approach is used with the
other categories

Example: School A

$$\text{Excellence} = \left[\frac{4.8}{12} \textit{AcademicPerformance} + \frac{3.9}{12} \textit{SchoolCulture} + \frac{3.3}{12} \textit{SEL} \right]$$

$$\text{Excellence} = \left[\frac{4.8}{12} (-1.1) + \frac{3.9}{12} (0.5) + \frac{3.3}{12} (1.8) \right]$$

$$\text{Excellence} = 0.22$$

Example: School A

$$\text{Effective Use} = \left[\frac{3.9}{12} \textit{Demand} + \frac{2.9}{12} \textit{Enrollment} + \frac{2.6}{12} \textit{Turnover} + \frac{2.5}{12} \textit{Building Condition} \right]$$

$$\text{Effective Use} = \left[\frac{3.9}{12} (1.2) + \frac{2.9}{12} (0.4) + \frac{2.6}{12} (0.8) + \frac{2.5}{12} (-1.8) \right]$$

$$\text{Effective Use} = 0.29$$

Example: School A

The final composite score for Example School A will be a linear composite of the scores for equity, excellence, and effective use of resources:

$$\text{Composite Score} = \frac{1}{3} \textit{Equity} + \frac{1}{3} \textit{Excellence} + \frac{1}{3} \textit{EffectiveUseResources}$$

$$\text{Composite Score} = \frac{1}{3} (0.71) + \frac{1}{3} (0.22) + \frac{1}{3} (0.29)$$

$$\text{Composite Score} = 0.41$$