Suppression and Complementary Suppression

The LaunchBoard adheres to the privacy requirements in the Family Educational Rights and Privacy Act (FERPA) of 1974 along with other best practices in order to protect students' right to privacy. FERPA is a federal law that protects the privacy of student education records and pertains to the release of and access to educational records or any information directly related to a student that are maintained by an educational institution or agency or other party acting on their behalf. The law applies to all schools that receive funds under applicable programs of the US Department of Education.

The California convention for protecting personally identifiable data is that information for groups of less than 10 students may not be reported in aggregated tables. For the LaunchBoard additional practices have been adopted from Federal guidelines as well as from other states such as Texas. This includes complementary suppression. Complementary suppression rules are applied in cases where using simple subtraction from the total could allow viewers to back into the suppressed low value count of a group. Over summer 2020, the Chancellor's Office convened workgroups that met and approved the FERPA suppression policy applied to the LaunchBoard dashboards.

LaunchBoard Suppression Rules Summary

1. Counts less than 10 and greater than 0 are not shown.
2. If an overall disaggregation is masked, all subgroups will be masked as well.
3. We use complementary suppression to de-identify students when only one subgroup is masked. This is because the count from the masked group can be determined by subtracting the unmasked groups from the total. To do this, the smallest unmasked group is then masked and added to "All Masked Values".
4. Whenever there are more than one "generated" or "created" subgroups such as "unknown/non-respondent" or "multiple values reported" and either includes a value less than 10, including zero, then the two subgroups have been combined and masked together to prevent a possible subgroup with ten or greater students from being suppressed.
5. When separate subgroups are masked and added together, they are totaled into a new subgroup called "All Masked Values."

How Suppression and Complementary Suppression Work

The example below shows a simplified view of counts of students by ethnicity.

Unsuppressed:

Ethnicity	Count of Students
American Indian/Alaska Native	6
Asian	88
Black or African American	52
Filipino	37
Hispanic	46
Pacific Islander or Hawaiian Native	14
White	95
Two or More Races	96
Unknown/Non-Respondent	50
Multiple Values Reported	16
Total	500

Table 1

1st Level of Suppression:

Suppresses counts less than 10 and greater than 0

Ethnicity	Count of Students	
American Indian/Alaska Native	*	This level of suppression is not enough because someone could find the students in the American Indian/Alaska Native category by subtracting the sum of the other ethnicities from the total. Total (500) – All Available Ethnicity Groups (494) = American Indian/Alaska Native (6)
Asian	88	
Black or African American	52	
Filipino	37	
Hispanic	46	
Pacific Islander or Hawaiian Native	14	
White	95	
Two or More Races	96	
Unknown/Non-Respondent	50	
Multiple Values Reported	16	
Total	500	

Table 2

Complementary Suppression:

When only one value is masked, suppress the cell with the count less than 10, as well as the next smallest category

Ethnicity	Count of Students	
American Indian/Alaska Native	*	By implementing complementary suppression someone could not use simple mathematics to determine the data for the American Indian/Alaska Native category. Masked values will be grouped together and displayed together in the "All Masked Values" category in the LaunchBoard.
Asian	88	
Black or African American	52	
Filipino	37	
Hispanic	46	
Pacific Islander or Hawaiian Native	*	
White	95	
Two or More Races	96	
Unknown/Non-Respondent	50	
Multiple Values Reported	16	
All Masked Values	20	
Total	500	

Table 3

Complementary Suppression When Two or More Generated Subgroups Are Present

The example below illustrates how step 4 of the suppression rules is being implemented on the LaunchBoard when two or more generated subgroups are present. This additional step was implemented to ensure that data for important populations are displayed wherever possible.

Unsuppressed:

Gender	Count of Students
Female	25
Male	13
Unknown/Non-Respondent	5

Multiple Values Reported	17
Total	60

Table 4

Suppressed:

Suppress counts less than 10 because the suppressed subgroup is a generated subgroup and there are two or more generated subgroups in the category, suppress the value of the other generated subgroup for complementary suppression instead of following the complementary suppression rule above.

Gender	Count of Students	
Female	25	In this instance, the multiple values reported subgroup is masked even though it had a value greater than 10 and was not the next smallest group. This ensures that the Male subgroup is displayed.
Male	13	
Unknown/Non-Respondent	*	
Multiple Values Reported	*	
All Masked Values	22	
Total	60	

Table 5

Suppression for Secondary Gender Disaggregation for Metrics in the Cohort View

A secondary gender drilldown is available for metrics in the Cohort View of the Student Success Metrics dashboard added as part of the 2020-21 build. In order to meet the legislative requirements of Student Equity Achievement (SEA), it was necessary to add this secondary disaggregation allowing data to be displayed for male veterans and female veterans, as an example, in order to determine possible equity gaps for these subpopulations. The Chancellor's Office made the decision to create a new subcategory labeled as "All Other Values" to group together the other gender subgroups including the new non-binary value created in summer 2019 and the two generated subgroups discussed above (multiple values reported and unknown/non-respondent) regardless of the size of the counts. There were several reasons for this decision: legibility of the display of further gender disaggregations of primary disaggregations on a graph, low "n" sizes for those three subgroups leading to data often suppressed, and subsequently colleges inability to determine equity gaps from the data to include in their SEA plans for those subgroups.

Unsuppressed Primary Disaggregation:

First Generation	Count of Students
First Generation	80
Not First Generation	75
Unknown/Unreported	5
Total	160

Table 6

First Level Suppression:

When only one value is masked, suppress the cell with the count less than 10, as well as the next smallest category.

First Generation	Count of Students	Unknown/Unreported is masked since <10. The next highest subgroup, Not First Generation, is also masked for complimentary suppression rules.
First Generation	80	
Not First Generation	*	
Unknown/Unreported	*	
All Masked Values	80	
Total	160	

Table 7

Unsuppressed Secondary Disaggregation by Gender for First Generation:

Gender	First Generation	Count of Students
Female	First Generation	45
Female	Not First Generation	30
Female	Unknown/Unreported	1
Male	First Generation	30
Male	Not First Generation	35
Male	Unknown/Unreported	3
All Other Values	First Generation	5
All Other Values	Not First Generation	10
All Other Values	Unknown/Unreported	1
Total		160

Table 8

Second Level Suppression:

Within the secondary gender disaggregation subgroup (Female, Male, or All Other Values), implement the standard suppression logic for the values displayed for the primary disaggregation selected. This includes masking values of less than 10 and complementary suppression if only one value within the gender subgroup is masked. Then sum together all masked values for display in "All Other Values" category as "All Masked Values."

Gender	First Generation	Count of Students	In this instance, Female Not First Generation is masked due to complementary suppression with Female Unknown/Unreported. Same case with Male First Generation and Unknown/Unreported. All Other Values First Generation and Unknown/Unreported are masked because values are <10. All masked subgroups are summed together and reported as All Masked Values in the All Other Values subgroup.
Female	First Generation	45	
Female	Not First Generation	*	
Female	Unknown/Unreported	*	
Male	First Generation	*	
Male	Not First Generation	35	
Male	Unknown/Unreported	*	
All Other Values	First Generation	*	
All Other Values	Not First Generation	10	
All Other Values	Unknown/Unreported	*	
All Other Values	All Masked Values	80	
Total		160	

Table 9

Notes:

- For all metrics generated by data from the CTE Outcomes Survey, the threshold for suppression is lowered to three since viewers do not have the information as to which students responded to the survey question.
- For metrics that display median values, e.g. Median Annual Earnings, complementary suppression is not necessary because the results of suppressed groups cannot be derived from the overall results.