Assessing alternatives to the Academic Performance Index (API) for California public schools for administrative and reporting purposes

Executive summary

The Unduplicated Pupil Percentage (UPP) is the most suitable available alternative to the discontinued Academic Performance Index (API) metric for California public schools.

Purpose and current use

As part of California's educational accountability system, the California Department of Education (CDE) produced an Academic Performance Index (API) for public schools until 2013.

The API decile ranking has been used for a variety of administrative and reporting purposes. Admissions and Diversity and Engagement used API to target programs, services, and recruitment efforts to schools and students who may need additional support or guidance to be academically successful. API is also used for reporting and program evaluation to ensure that programs and services have been directed to populations that can benefit the most from them. Since its discontinuation, school-level deciles for Free and Reduced Priced Meals (FRPM) has been used in place of API deciles, although some documents and data requests continue to use API.

An ideal replacement metric for API would:

- Reflect student needs in a school, not just academic performance
- Rely only on publically available data
- Be easily understood by outside stakeholders.

Proposed alternatives and evaluation

Table 1 lists proposed alternative metrics that CDE produces and publishes annually with their definitions.

Table 1: Alternate metrics and definitions

Metric	Description
Free and reduced price meals	Percentage of students who are eligible for free or reduced price meals at their schools
English learners	Percentage of students who are classified as English language learners
Students in foster care	Percentage of students who are in the care of the foster system
Unduplicated pupil percentage	The percentage of students who are in one or more of the previous three categories
Chronic absences	The percentage of students who are considered chronically absent
Expulsions	The percentage of students who have been expelled from a school
Suspensions	The percentage of students who have been suspended from classes

Table 2 shows the linear correlation coefficient for each of the proposed replacement metrics. UPC and the percentage of chronically absent students have the highest correlation with API. Suspension and expulsion rates relatively less correlated with API.

Table 2: Linear correlation coefficient

	API13	FRMP	EL	Foster	UPP	Absent	expel
FRPM	-0.51						
EL	-0.44	0.52					
Foster	-0.22	0.14	0.03				
UPP	-0.57	0.98	0.61	0.15			
Absent	-0.66	0.26	0.27	0.10	0.29		
Expel	-0.17	0.09	0.04	0.01	0.09	0.21	
Suspend	-0.40	0.27	0.11	0.20	0.26	0.37	0.33

Using ordinary least squares regression, we see that there is a statistically significant linear correlation between API and each of the seven alternative metrics. The R^2, or the proportion of the variation in the API that is explained by the variation in the alternative metric, is quite different based on the alternative.

Table 3 shows that unduplicated pupil count has the highest R^2 value followed closely by the proportion of students who receive free or reduced priced lunches. Table 2 shows that UPC and FRPM are very highly correlated metrics.

Table 3: OLS coefficient and R^2 of alternative metrics regressed on API

	Coefficient (p-value)	R^2
FRPM	-233.6 (<.01)	.46
EL	-489.8 (<.01)	.33
Foster	-2106.8 (<.01)	.09
UPP	-240.7 (<.01)	.49
Absent	-4.6 (<.01)	.41
Expel	-45.2 (<.01)	.02
Suspend	-6.5 (<.01)	.13

Conclusion

Based on the data available and analysis shown above, the Unduplicated Pupil Percentage (UPP) is the most suitable available alternative to the discontinued API calculation.

UPC meets all of the criteria laid out in the introduction. First, unlike API, UPP reflects the socioeconomic demographics of student population that could indicate disadvantage, not just a population's academic outcomes. Second, the UPC is publically available. Because UPP is a part of the State's Local Control Funding Formula (LCFF), UPP must be calculated and published every year. Finally, UPP is easily understood by outside stakeholders, especially those involved in public K-12 education. The California State Legislature and State Department of Education have agreed that UPC should be an important part of State funding of public education and a key indicator of a student population's need for additional support.