

ONLINE APPENDIX

Table A-1: Descriptive Statistics for Teacher-level Analysis

This table contains descriptive statistics for variables used in the teacher-level analysis. The ‘Between schools’ rows provide descriptive statistics for the 30 school-level means and provides insight into how schools differ. The ‘Within schools’ rows provide descriptive statistics for: (teacher value) – (school-level mean) + (overall mean) and provides insight into how teachers differ within a school. The data indicate significant variation in performance and in portal use both within and between schools; however, for all measures there is greater variation among teachers within a school than there is between schools.

	MEAN	STD DEV	MIN	MAX
Dependent Variable (N) ^(a)				
Median mathsgp (505)				
Overall	50.0	15.3	25.5	78.0
Between schools		5.6	40.4	61.9
Within schools		14.2	15.5	83.5
Median elasgp (509)				
Overall	50.6	14.3	25.0	76.5
Between schools		8.6	38.8	74.5
Within schools		12.7	18.6	88.3
25% mathsgp (505)				
Overall	32.6	15.1	11.0	64.0
Between schools		5.5	23.1	45.9
Within schools		14.2	1.6	69.5
25% elasgp (509)				
Overall	29.0	13.4	9.0	56.5
Between schools		8.9	17.3	56.5
Within schools		12.1	-0.29	61.8
75% mathsgp (505)				
Overall	68.0	14.0	41.0	91.0
Between schools		6.1	56.6	80.6
Within schools		12.9	31.9	102.4
75% elasgp (509)				
Overall	71.9	12.5	45.0	91.0
Between schools		7.0	63.3	89.5
Within schools		11.3	40.6	99.6
Independent Variables				
Portal Use (625)				
Overall	29.2	33.1	0.0	269.0
Between schools		11.2	9.0	50.7
Within schools		31.5	-21.5	247.5
Edusoft Use (625)				
Overall	153.8	121.0	0.0	753.0
Between schools		75.4	41.1	341.9
Within schools		98.4	-134.1	564.9

(a) 383 unique teachers, of whom 309 teach ELA and 314 teach math, are associated with 505 teacher-years of math and 509 teacher-years of ELA. Together these teachers are associated with 625 teacher-years of diagnostic tool use.

VARIABLE NAME (N)	MEAN	STD DEV	MIN	MAX
Control Variables				
Teacher Effectiveness (251)				
Overall	87.5	16.0	11.0	100.0
Between schools		8.76	69.5	99.0
Within schools		13.7	20.6	115.4
PctDisadv (638)				
Overall	0.79	0.24	0.00	1.00
Between schools		0.23	0.14	0.99
Within schools		0.07	0.30	1.17
PctEngonly (638)				
Overall	0.48	0.30	0.00	1.00
Between schools		0.29	0.04	0.88
Within schools		0.08	0.16	0.70

Variable definitions:

[X]Mathsgp, [X]ELAsgp: the moments of the distribution of student SGP performance in math or ELA for all students taught by a teacher in a year, where [X] is Median, 25th percentile and 75th percentile
The dependent variables are based on the moments of the distribution of student performance for students taught by a single teacher in a year. The distribution of students to teachers for a given subject and year is: For the 505 teacher-years of math performance, on average the distribution of math performance is based on 28.4 students (median 22, standard deviation 19.0, min 5.0, max 145.0)
For the 509 teacher-years of ELA performance, on average the distribution of ELA performance is based on 27.3 students (median 22.0, standard deviation 15.1, min 5.0, max 100.0)
Portal Use, Edusoft Use: the annual use of each data tool by the teacher for the school year
Teacher Effectiveness: the average principal ratings that the teacher received in 2012-2013 and 2013-2014 (using a single year rating if there is only one). Missing teacher ratings reduce the sample from 383 unique teachers to 251 teachers when this variable is included.
PctDisadv: percentage of the teacher’s students classified as disadvantaged for the school year
PctEngonly: percentage of the teacher’s students classified as native English speakers for the school year

Table A-2: Teacher-level Analysis excluding teacher effectiveness controls - OLS Regression of Median, 25th percentile and 75th percentile Student Growth

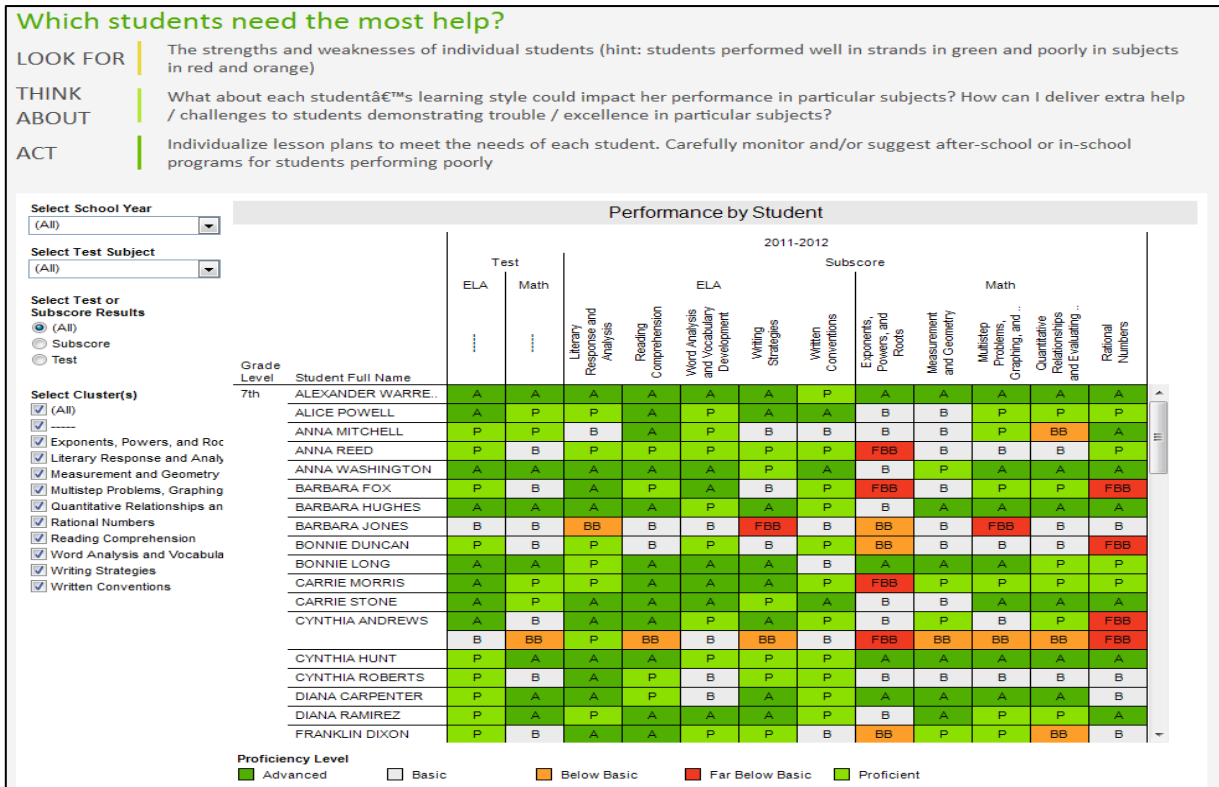
Regression analysis of the association between median, 25th percentile and 75th percentile SGP performance for students taught by a teacher, and the teacher's use of PMSs. Untabulated fixed school effects (N=30 schools) are significant in both models. ^(a)

<i>Independent Variable</i>	<i>Predicted Sign</i>	ELAsgp N=509 <i>Estimated coefficient</i> <i>(t-statistic)</i>			Mathsgp N=505 <i>Estimated coefficient</i> <i>(t-statistic)</i>		
		Median	25th percentile	75th percentile	Median	25th percentile	75th percentile
Portal Use	(+)	0.01 (0.77)	0.02 (1.17)	0.03 (2.03) **	0.06 (2.98) ***	0.07 (3.38) ***	0.04 (2.32) **
Edusoft Use	(+)	0.02 (3.05) ***	0.02 (3.68) ***	0.01 (2.76) ***	0.027 (4.30) ***	0.03 (3.94) ***	0.02 (3.78) ***
PctEngonly		-18.1 (-2.62) ***	-12.9 (-1.81) *	-11.2 (-1.83) *	-11.7 (-1.59)	-8.05 (-1.09)	-11.2 (-1.64)
PctDisadv		-7.05 (-0.83) *	-12.6 (-1.63)	-12.1 (-1.77) *	4.84 (0.62)	0.72 (0.08)	11.4 (1.5)
Adjusted R²		0.17	0.14	0.14	0.15	0.13	0.15

***, **, * p-value $\leq 0.01, 0.05, 0.10$ in one-tailed test of significance for independent variables and two-tailed test for controls.

(a) In untabulated results of maximum likelihood estimation of a two-level model with random school effects, school-level variation (i.e., rho) explains 15, 13, 11 percent of 25th percentile, median, 75th percentile *ELAsgp* variation and 8, 7, 9 percent of 25th percentile, median, 75th percentile *Mathsgp* variation.

Figure A-1:
Examples of Visual Presentation of Student Performance and Improvement in the Data Portal



Source: Schoolzilla.org

Note: All data presented are fictitious and for purposes of illustration only.