

## Examining Differences in 8<sup>th</sup> Grade STAAR™ Passing Rates for Districts that were High Users of STEMscopes and non-STEMscopes Districts

Multiple regression was used to examine differences in district 8<sup>th</sup> grade STAAR™ passing rates between those districts categorized as moderate to high users of STEMscopes (based on learning analytics data we collect; n = 29 districts) and those districts that did not use STEMscopes (n = 633) in the 2012-2013 school year. We controlled for important district demographic information (i.e., % Hispanic, % Black, % Free/Reduced Lunch, % LEP, % Bilingual, % ESL, % Special Ed, % Gifted/Talented, and % Title 1 schools).

The first analysis examined differences between these two groups, comparing the average 8<sup>th</sup> grade STAAR™ passing rate for all students in each districts (Table 1). Districts that were high STEMscopes users had significantly higher STAAR™ passing rates compared to districts that did not use STEMscopes, after controlling for important district demographic information. **Specifically, the average passing rate for students in non-STEMscopes districts was 73%, and the average passing rate for students in STEMscopes districts was 78%. This indicates that 5% more students received a passing score on the STAAR™ when in districts that were high users of STEMscopes.**

Table 1. Differences in Average STAAR™ Passing Rate.

	Unstandardized B	Standard Error	t	p-value
Average Passing Rate*	72.53	0.43	167.17	< 0.001
High STEMscopes User*	4.88	2.22	2.20	0.028
% Hispanic	-0.19	0.12	-1.58	0.115
% Black	-0.23	0.13	-1.77	0.078
% White	-0.13	0.12	-1.10	0.273
% Free/Reduced Lunch*	-0.25	0.03	-7.28	< 0.001
% LEP	1.15	0.62	1.84	0.066
% Bilingual	-1.07	0.80	-1.34	0.180
% ESL	-1.23	0.63	-1.94	0.053
% Special Ed*	-0.63	0.11	-5.66	< 0.001
% Gifted/Talented*	0.17	0.07	2.37	0.018
% Title 1 Schools*	-0.03	0.01	-2.34	0.019

Note. Dependent variables is average 2013 STAAR passing rates for all students.

The second analysis examined differences between these two groups and the average 8<sup>th</sup> grade STAAR™ passing rate for students who were categorized as economically disadvantaged (as determined by qualification for free/reduced lunch; Table 2). For this analysis, % Free/Reduced Lunch was not included as a covariate to avoid misspecification of the model. Results indicate that districts that were high users of STEMscopes had higher district passing rates for economically disadvantaged students compared to districts that did not use STEMscopes. **Specifically, the average passing rate for economically disadvantaged students in non-STEMscopes districts was 61%, and the average passing rate for economically disadvantaged students in STEMscopes districts was 69%. This indicates that 8% more economically disadvantaged students received a passing score on the STAAR™ when in districts that were high users of STEMscopes.**

Table 2. Differences in STAAR™ Passing Rates for Economically Disadvantaged Students.

	Unstandardized B	Standard Error	<i>t</i>	<i>p</i> -value
Average Passing Rate*	60.91	0.69	87.89	< 0.001
High STEMscopes User*	7.85	3.43	2.29	0.023
% Hispanic	-0.16	0.18	-0.91	0.366
% Black	-0.10	0.20	-0.51	0.610
% White	-0.06	0.19	-0.33	0.743
% LEP	0.93	1.00	0.93	0.354
% Bilingual*	-3.65	1.24	-2.94	0.003
% ESL	-0.84	1.02	-0.82	0.412
% Special Ed*	-0.86	0.19	4.55	< 0.001
% Gifted/Talented	0.12	0.12	1.04	0.298
% Title 1 Schools*	-0.05	0.02	-3.12	0.002

*Note.* Dependent variables is average 2013 STAAR passing rates for students who qualify for free or reduced lunch.