

CLOUD BASED LEARNING PLATFORM

Milestone 6 Update

Grant # AID-OAA-F-13-00033

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Update on project implementation including any challenges encountered, and plans to mitigate them.

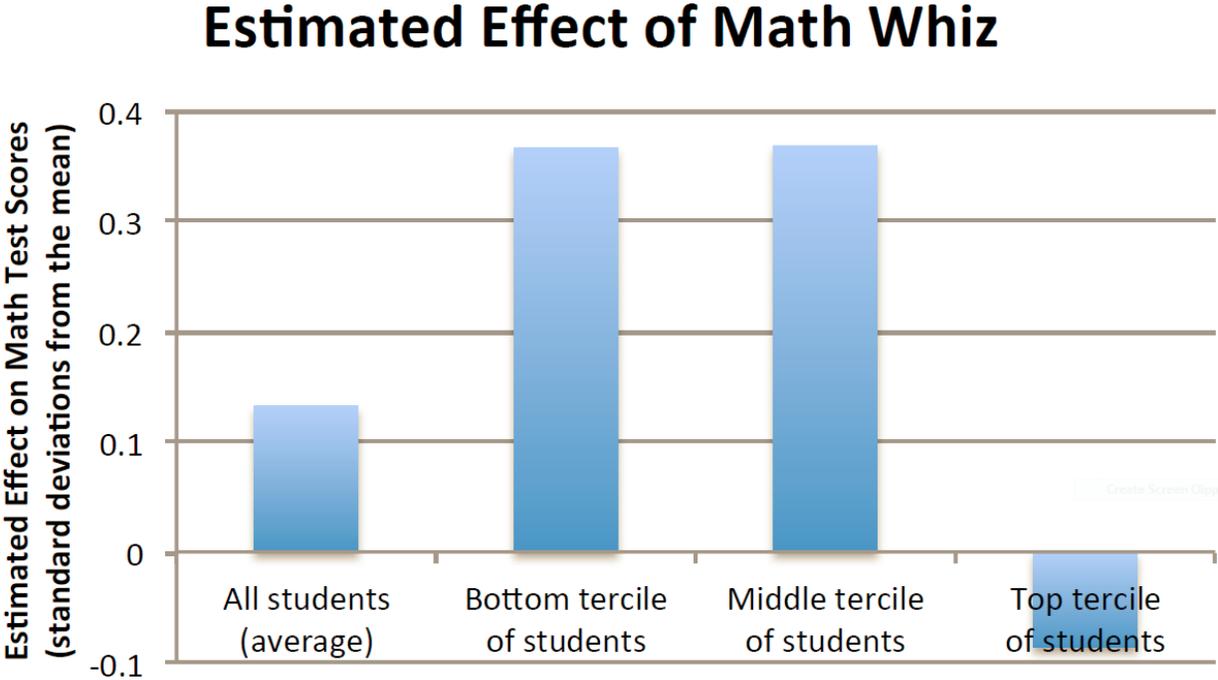
All milestone deliverables have been achieved.

Challenges Encountered: Despite seeing high gains in treatment sections in the bottom and middle terciles, we are seeing some negative treatment effects for the top percentile students. Even though the negative treatment effect is not statistically significant, we are attempting to understand the causes for the negative effect so they can be addressed.

Our current hypothesis is that the Math Whiz algorithm and content base is calibrated to help the weakest students. We need to optimize the algorithm and potentially also add higher difficulty questions to create a positive effect for the top performing students.

Delivery of second midterm exam scores highlighting student status at both Pilot school sites.

The below chart provides overview of the estimated effect of Math Whiz at both pilot sites.



Graph 1

All students (average)	0.1320213
Bottom tercile of students	0.3659062

Middle tercile of students	0.3678
Top tercile of students	-0.0866

For the analysis, we used a difference in differences, combining both pilot schools. The sample is comprised of grades 2-7 at the two schools and the non-treated sections are used as counterfactuals for the treated ones. This is a panel for each student (their 2013 score and 2014 score). The identifying assumption is that the T students would have experienced the same trend as the C students from last year to this year. This is violated if, e.g., the schools reallocate teachers to systematically put good teachers to the T sections this year.

Overall, the T students had on average 0.13 standard deviation higher test score increase from last year to this year in treatment, relative to control (table 1). These results are concentrated among the weaker kids as shown the summary (i.e. in the bottom 2 terciles) (table 2). There are only 15 sections, so really I should bootstrap the standard errors (will do that at some point if we write this up).

TABLE 1: DIFFERENCE IN DIFFERENCE (Harchowal and NPS, grades 2-7)

```
. xi: reg examscore_std treat yr2014 treatyear if balance==1 & term!=3, cluster(sectid)
```

```
Linear regression                               Number of obs =    1346
                                                F(   3,   14) =    0.13
                                                Prob > F      =  0.9424
                                                R-squared     =  0.0022
                                                Root MSE     =  .98419
```

(Std. Err. adjusted for 15 clusters in sectid)

examscore_~d	Coef.	Robust Std. Err.	t	P> t	[95% Conf. Interval]	
treat	-.0840866	.1570297	-0.54	0.601	-.4208819	.2527086
yr2014	.0076642	.0770426	0.10	0.922	-.1575757	.172904
treatyear	.1320213	.2727961	0.48	0.636	-.453068	.7171107
_cons	.0443363	.0770243	0.58	0.574	-.1208643	.2095369

