

CLOUD BASED LEARNING PLATFORM

Milestone 3 Update

Grant # AID-OAA-F-13-00033

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

Status

The alpha of the math application has been developed. We were delayed in submitting this milestone pending the completion of a field visit to review protocols and conduct assessment of external validity.

Updates

We are exploring adding another school to the Pilot to test the effectiveness of our Platform at a Punjab Board school in addition to the CBSE school currently selected for the Pilot.

Develop and deliver math application



The alpha release of the math application is attached. We are currently integrating the UI (attached in Math_Whiz_UI_Design.PDF) and making enhancements to the application to add admin usage synchronization as well as app data synchronization with cloud back-end server. The beta release of the app will be available on Feb 17 with the UI integrated and the GA release of the app will be available on March 3.

The login credentials for the alpha release are:

user-id: riaz
pass: 1

Protocols on how students will be allotted time on the tablets and how student progress will be monitored are developed. Deliverable is a copy of the protocols.

Tablet Usage Protocols

Given its partnership in implementing our Pilot, the National Public School is making a commitment to increasing its focus on math education. Both the control and treatment groups will be given additional focus times on math in 2014 school year.

There are clusters of time already allotted to students. We will utilize existing time periods and reallocate them to tablet usage.

Tablet Installation & Allocation

- 35 Tablets will be installed in the library and used by each treatment group section in grades 3, 4, 5
- Wifi will be made accessible in the library for syncing the software with the Cloud Platform
- Each student in the treatment group will be assigned to each tablet

Time Allocation

Class time is structured so that students spend 35-minute periods on a given subject each day. In addition, students have two 35-minute library periods, which have traditionally been used for independent study and homework, each week. The school has decided to devote its library periods for mathematics practice time for both treatment and control group students.

- Each treatment group class section will be assigned access to the tablets 3 days a week, for 35-minute sessions on each day:
 - Twice a week during 35 minute library periods
 - Once a week during a 35 minute math period; on these days, the class will take place in the library rather than in the regular classroom. On the other four days per week, students will receive traditional math instruction during their regularly scheduled math periods.
- The Control Group classes will receive traditional instruction in math:
 - Traditional instruction during their regularly scheduled math periods on all days per week.
 - During their scheduled library periods, they will devote the self-study time to mathematics independent student and practice using traditional materials.

Monitoring Protocols

- Treatment group students:
 - Each student will be assigned a unique userid and password to access the application. We will ensure the userid and password are simple and easy to remember.
 - The software and the cloud platform will monitor how often the tablets are used and track each student's progress.
 - Each teacher will be able to view student progress on a daily basis and monitor areas where students are exceling or doing poorly.
 - Students will be given monthly tests using the tablets
- All students:
 - Students in both treatment and control groups will be given paper and pencil assessment tests every 2 months

An assessment of the external validity, particularly the extent to which the pilot school is representative. The report should discuss any plans to gather data (qualitative or quantitative) on this issue.

During the field visit at the National Public School, our Pilot site, in Jan 2014, a pretest was administered by the Pixatel team to one section in each of the 3rd, 4th, and 5th grade classes. The average scores for each grade were:

Grade 3: 41.5%

Grade 4: 52.5%

Grade 5: 32.0%

Comparing these results with Pratham’s 2013 Annual Status of Education Report (ASER) for the state of Punjab indicates that the data collected is representative of schools in the region.

The National Public School uses a Central Board of Secondary Education (CBSE) curriculum, which is the national Indian curriculum. However, many government (public) schools in the country use local state board curricula; for example, most government-run schools in Punjab use the Punjab Board curriculum. Based on discussions with educators, government officials, and NGOs (including Pratham), we would like to add a second school that uses Punjab Board to augment the learning from the pilot. We visited 3 Punjab Board schools during the Jan 2014 field visit and have found one near Amritsar that would be suitable as a second Pilot school. The school is more rural than the current pilot school and has fewer facilities, making it very close to government run schools. Our India team is meeting with the school administration again this week. Once their enrollment in the pilot is finalized, we plan to administer the same pretest this month, and anticipate the test scores to be lower than those in the first pilot school.

These two schools well encapsulate the various types of environments in which our tablets and software would need to function—CBSE (Central Board curricula standard) and Punjab Board (representing a state curricula standard), as well as both a rural and more remote location. Running the pilot in both these schools will lend the pilot study better external validity, and help us learn how to make the proposed intervention successful in both types of environments. Such learnings will be very useful for scale-up.

While these basic features of the schools—curriculum and location—provide some measure of representativeness, we plan to collect quantitative data to compare the performance of pilot schools to state level results, enabling us to more concretely assess external validity. This will enable us to understand how representative the schools are in terms of academic achievement. Second, we will use the baseline survey during the pilot to collect demographic and socioeconomic information from the parents’ of a random subsample of the children in the

schools. Comparing this to the demographics of the state as a whole—using public use survey data like India’s National Sample Survey—will enable us to understand how representative the schools are in terms of socioeconomic status and other demographic measures.