

SANGAMAM KANINI PROJECT REPORT - APRIL - JUNE 2015

Oracle through CAF is supporting Asha Chennai to enable Technology Aided Education at schools supported by Asha. Asha had started the project in a small way in January 2015. Three of our teachers were given laptops. Development of software and contents have also been moving in a small way since then. We received the approval and subsequently the funds from Oracle and CAF in May 2015. Since then the project has been speeded up.

Laptops for Teachers and other Infrastructure

We had given 3 laptops for teacher at Thiruvallur back in January 2015. We additionally purchased 4 laptops in June. These were installed with software. Two of them have been provided to the teachers at Thiruvallur in early July. The other two have to be given to teachers still. The teachers have started using the original 3 laptops as an aid during their classes, entering assessment scores so that we can use them for data analysis.

We have also been continuing the efforts to repairing and making available all the computers in the various schools (mostly government given laptops and desktop computers). We have also been checking the WiFi hotspots and Wifi dongles in these schools. These are progressing well at our schools in Thiruvallur. We are also starting our efforts in this at the schools in Chennai.

Asha Annual Assessments

We conducted assessments across all the Asha Chennai supported schools. This proved to be a lot more challenging than we thought. Ultimately the data gathered may not even be of any use since there has been significant copying (aided by the teachers) in many of the schools. The analysis has also proved to be a challenge. We are moving forward with this.

We were initially planning to capture the marks, analyse and report on them based on a server software we develop. I also proceeded in this direction. Then we realised it will be much easier to enter the marks into Excel files and use perl scripts to directly transfer the data to our SQL tables in the server. After talking to one Mr. Suresh who has been doing things like this for a while, we thought it will be easy to do the analysis and reports also using Excel. He was an expert in constructing Pivot tables, augmenting Excel with VB script if required to validation and massage the data anyway we want. We were moving in this direction. Recently I have been seeing the

problems in this approach as well. If there are corrections in the data, then there is a lot of work in redoing everything in Excel.

So we are now planning to continue using Excel for data entry but then transfer the data to the SQL DB using Perl scripts, do all the massaging of the data in SQL and then if required we can allow for the analysed data to be saved as CSV files and then we can do reports once again in Excel as required. Some quick reports will also be available in the web interface itself.

The hope is that the efforts spent here will any come in handy going forward since we will be continuing our assessments going forward. Going forward the assessments are going to be a little different thought. Given the challenges in administering a big assessment across all schools, we felt it will be easier to have one of our teachers go and administer smaller assessments one class/subject at a time across our schools. We will start tracking these at our schools this year.

Software for delivering contents

This has been developed. Some further improvements are being worked on: Ability to support all content types, migrating to the latest node webkit, improving the look and feel, testing with the contents etc.

Software for lesson read along

Recently there has been an interest among several Asha Chennai volunteers for the software from EnglishHelper.com. This provides a software for reading along (using Text-to-Speech) with the TN state board English text books. The word being read will be highlighted. After seeing that I felt it will be much better to do the read along using recorded audio instead of TTS. See the demo here: <http://westonruter.github.io/html5-audio-read-along/>. The EnglishHelper.com software also provides dictionary, pronunciation guide, and eventually translation to Tamil. These should be fairly easy for us to incorporate as well into our software. We will probably include this in a second version of our software for delivering contents.

Contents

Here is a summary of where we are with the various contents. Ones in Green have been completed. Ones in blue have been started. The ones in black are yet to be started.

- Khan Academy Tamil -- All videos downloaded and mapped to classes.
- Starfall contents on the web and in videos -- downloaded and mapped to classes.
- English lesson recording -- Mrs. Rekha Balakrishnan has recorded all of these.
- Lesson PDF from the text books -- Individual lesson PDFs are being split from the textbook PDFs. Expect to be complete in a week.
- Maths lesson instructions -- Mrs. Meena Suresh is developing them.
- Simply English, Fun with English, Know your English, E-Speak etc. -- These are standard contents distributed by govt. These are available. It may not be possible to map these to the lessons. We need to try that. Atleast we need to break them out into individual components and make them available through our application.
- ECTAL -- Lakshmi is looking into it to map the contents to the current syllabus. If required she will do minor enhancements as well to align it to the current text books.
- Toon Masti and Azim Premji Foundation contents -- The contents are available. These need to be viewed and mapped to our lessons.
- Create Word search puzzles and other puzzles for the English lessons -- Need to be done.
- NLVM, OneStopEnglish contents -- These need to be downloaded and mapped.
- MathsIsFun, MangaHigh, MathGames, MathPickle etc. contents -- These need to be viewed and mapped.
- Math bingo games for addition, subtraction, multiplication, division etc. -- These need to be created and mapped to lessons.

Earlier (till May) this was not going that fast since we were only relying on volunteers to develop and map contents. However since June 2015, we have decided to use one teacher dedicated for the purpose of mapping contents. She is working from our Project Sangamam office at Thiruvallur. With one teacher working full time on this and potentially another teacher from Project Pearl (who is unable to go to the school for the next few months) also being available part time, we are moving fast on this. I expect to have most of these completed in a month.

Upcoming Events

We are continuing the purchase and deployment of the laptops and other hardware at the schools. We hope to have the first version of the software packaged along with all the free contents identified above by the end of August. The analysis of the April assessments will be available by end of July. We will also start our ongoing assessment to study the state of educational attainment of the children. All the computers all these supported schools will be brought to working condition (if possible) by the end of this quarter (Sept 2015).