

Asha Kanini Report (April - June 2021)

Asha Kanini project of Pravartak has been launched in April 2021 with funding from John Crane. While efforts for this was already underway internally in Asha, the project by Pravartak enables it to be scaled up to support all of Tamilnadu's government schools.

Staffing

As the project started only this quarter we started the project by moving the following staff to the project from Asha:

- Software developers – Rajkumar and Ponkumar.
- System Engineer – Muthu
- Content Developers – Radhika and Nathiya.
- Project Coordinator – Srinivasan

Note that particularly with content development a lot of work is being done by other teachers of Asha and the two lead teachers Radhika and Nathiya, plan the overall structure of the contents and consolidate the output from various teachers.

Software Development

Asha Kanini software has been developed for Windows computers over the last several years. A major technology upgrade was due. We undertook this starting in April. Primarily the upgrade moves us from React 0.14.7 – electron 10.4.3 combination to the newer React 17.0.1 – Electron 13.1.4 combination. In the process we were also upgrading to the latest node and node modules. In terms of features the new Asha Kanini will offer the following additional features,

1. Software upgrade – Earlier this was required to be done manually by download from the website. Further we will also be handling installation of the required third-party software.
2. Bookmarking favourite contents.
3. Integrated search/browse view – Previous version had separate views which made it impossible to search for phrases within say a class-term-subject selection.
4. Caching of contents – Configuration files will be processed and kept in a cache which will speed up the startup and also provide limited space for storing the contents (say 5 GB) which more than that is downloaded, the least used content will be removed.
5. Bug Reporting.

This is still under development. We expect to have the new Windows version by end of July.

We have also started the development of a new Android version with React-native. This is still under development. We expect a new version by the end of July. It will be made available through Google Play-store. The first version is expected to have the following features.

1. Integrated Search and browse contents including QR scanning.
2. Bookmark contents.
3. Support most of the existing mapped contents for windows. In particular our own lesson plans should be supported completely.
4. Package and content download with caching. Cached configuration files as well as limiting the size of the downloaded contents.
5. Network independence.

The first version itself is intended to be a full-featured version. Library view, tracking usage data (likes and views), bug reporting etc. will be done in the next release. Note that the Android version doesn't login or validate the user and therefore it also cannot report usage/likes data.

Along with these the following updates are also being done in the server:

1. A broad redesign of the static contents of our kanini.ashanet.org website. This will also not include information about all the additional packages that we have mapped.
2. UI for managing packages.
3. Server CPU and disk monitoring.

We hope to come out with an upgrade to our Windows client, a new Android client and an upgraded server by the end of July.

Content Development

Content development has also been keeping pace. For a number of years our focus was just to bring new contents into the Asha Kanini framework. We started with the contents that the schools were already using from the government like the textbooks, Azim Premji Foundation CDs, Hello English, Fund with English, etc. We then picked reputed contents from the private space like Khan academy, PhET, NLVM, Geogebra, Tuxmath, GCompris etc. We continued finding good contents in various websites like Starfall, MathPlayground, MathIsFund, EasyTeaching etc. These were all mapped and made available locally where possible (i.e. can be used without the Internet) and through the click of a link where it is a content on a website. As the teachers were free for many periods during the last year, we got them to map more websites and enhance the contents in other ways too. For Tamilnadu we now have some 70 packages and for Uttar Pradesh we made a start only this year and mapped 20 packages.

While we are continuing to keep the mappings up to date, we have shifted the focus to creating rich lesson plans. In particular we are creating lesson plans for Maths, English and Science. The idea is to not replicate the good lesson plans already created by the SCERT for the Tamilnadu textbooks. We are providing the following things as part of our lesson plans,

- A curated collection of the best digital resources to use with a lesson. These contents are also given the context required to effectively use them. i.e. Are they intended for teaching in the classroom or by students directly for practicing or provides resources for teachers to prepare for teaching a lesson? Further are these for weaker children or for stronger children etc. We envision the lesson plan as the primary interface a teacher will use to access contents required to teach a lesson.

- Provide worksheets aligned to the lesson – both digital worksheets to be solved on the computer and printable worksheets to distribute to children.
- Provide classroom activities aligned to the lesson to enhance conceptual learning. Provide a video of the activity being performed by a class and a list of easily accessible resources required to perform the activity.

We have started this process for the English, Maths and Science lesson plans. A good version of this will also be available to go with the new release in mid-July.

Plan for the Next Quarter

As the schools have remained closed, and during a good part of the quarter, the entire state was under lockdown, we have not been able to start the training program. We hope to launch the training program in the upcoming quarter. We will meet with the education department officials at the state level to get the necessary permissions and establish relations at every block.

We will also hire the lead trainer and the other trainers for the project during the quarter and create all the materials required for the training. The July release should be stabilised and another update will be planned for later in the quarter for both the contents and the software.