

## **Computers Are Free For Everyone (CAFFE)**

BFSS Grant received £7,000

Matching donation of £7,000 (from second donor)

Total project costs £14,000

Report Date: 28th August 2014

### **Outputs achieved against outputs proposed:**

#### **Phase I**

Develop an educational application to teach early reading skills to illiterate children and adults

- *App development is in its final stages and will be completed by mid-september 2014*

Train CAFFE students in android application development

- *15 CAFFE students have been receiving programming lessons for the past 10 months. So far they have made a music player, basic piano application and are currently working on simple interactive story apps in Bangla.*

*In addition, three students are working on a project for a UK client to make an android app based on a book he has written. The students will be paid for their work.*

#### **Phase II**

Tablets to be placed in homes located in slum areas and training given to parents

- *Area for deployment has been selected. Students selection to begin in October/November 2014*

Children to use the educational app in the home with their parents

- *Scheduled to start in November 2014*

Assessments carried out to see what impact using the app has on literacy levels of users

#### **Phase III**

Share research findings with local NGOs, universities

Develop partnerships with other NGOs / schools where app can be used and reach a wider audience

Seek funding to further develop this application (or similar) based on our research and findings

## **Outcomes / Benefits**

Until the app is deployed in homes, it is not possible to know how effective it will be at improving reading ability and literacy. We have seen positive responses from the children who attend CAFFE primary classes but as these children are also receiving other teaching input we cannot carry out any effective research into the impact of the app alone.

So far, some of the very successful aspects of this project has been in teaching android app development to CAFFE students. Students with no previous programming experience are now producing simple apps which we are releasing on Google Play (<https://play.google.com/store/apps/developer?id=CAFFE&hl=en>).

We have also been delighted that some of the more advanced students have even received a paid contract to develop an app for a client in the UK.

We are very proud of one of teachers who has played a huge role in the development of the application. Throughout the process she has helped in producing the script, recording audio, and editing audio. We have been very impressed by the new skills she has learned and her dedication to the project.

One of the developers we hired has been very involved in the training of the CAFFE students. He even volunteered to run his own programming class. He is well liked by the students and staff and we hope that even after he leaves us, at the end of his contract, he will keep in touch and be involved with CAFFE.

In addition, our work in this area has led to CAFFE developing links with other organisations. As a result of a consultant reading about this project on our website, we were asked to work on an English language assessment app for the British Council.

We are also working with the Bangladesh branch of Sesame Street to turn one of their story books into an interactive android app. This project is being funded by Sesame Workshop in Bangladesh and means that we will be able to keep one of our developers from the BFSS project employed. He will lead a development team consisting of our advanced students to develop the story app. This is an incredible opportunity for our students to work with a very well known brand and to contribute to an application that will reach many children across the country. Developing a relationship with Sisimpur also means that we have a much greater chance of reaching more students with our own reading app.

All of this puts CAFFE in a much stronger position of achieving our aim of being able to provide skills which will lead to paid work for our older students.

## **Lessons Learned**

One of the most challenging aspects of the project was recruiting the right developers. Our budget allowed us to employ recent graduates and it was difficult to find people with the right skills. A significant amount of time at the start of the project was spent on our two developers getting up-to-speed on android application development.

Prior to this project, no-one at CAFFE had ever worked on such a large software application. We definitely made many mistakes along the way and we have had to rethink several parts of the application to make it work effectively. Over the course of the project we developed more successful systems for communication between the developers, designers and management team.

One early frustration was the fact that the two developers and one graphic designer were not able to work successfully independently. It seems they were used to being told every single step and

following rigid instructions. This was not what we were looking for, however, as we wanted them to use their own judgement to solve problems rather than asking every time they faced an issue. This way of working is likely to be a result of the education system in Bangladesh and is one of the reasons CAFFE exists in the first place. In the end, at least one of the developer's made huge improvements in this area and began bringing his own ideas to the application.

### ***Future Activities***

In the immediate future we will complete the app; select students for our research and then place the app in homes. This will involve carrying out pre-tests with students to ascertain their current literacy levels. We will carry out frequent home visits to check student progress. After 3 months we will carry out post-assessment to see how far the students literacy level has improved (if any). As the app also records all student responses we will want to see if their performance on the app matched their performance when tested offline.

We also intends to expand our program of seeking paid work to students who are able to work on programming and design tasks for other organisations.

### ***Sustainability***

From the outset of the project, our long term goal has always been to train our older students so that they can produce future educational applications for our younger students and for other students in Bangladesh. While we are not quite at this stage, we feel we are making good progress towards it. The main costs of this project has been in employing computer science graduates, who require a high salary (by Bangladeshi standard). In the future, if our own students can develop similar applications then there will be no cost to sustain this project. In addition, our older students will build up a portfolio of work which can be used either to gain employment elsewhere or to take on outsourcing jobs.

Ultimately we hope the outcomes will be:

- 1) High quality educational applications developed for especially **for** students from underprivileged backgrounds **by** students from the very same backgrounds.
- 2) Older students will have developed valuable skills in programming and design, which they would never have had the chance to learn otherwise.
- 3) Older students will find paid work and employment opportunities which will offer salaries far greater than they would otherwise have received.
- 4) Older, expert, students will pass on their skills to younger CAFFE students, thus meaning we can sustain our project with minimal costs.

## **Financial Report**

BFSS contributed £7000 towards the total cost of the project. Figures here show how all of the money is being spent over the 12 month project.

<b>Job Description</b>	<b>Monthly Salary (BDT)</b>	<b>Salary for 12 months (BDT)</b>
Android Developer	50000	600000
Android Developer	50000	600000
Graphic Artist	30000	360000
	<b>TOTAL BDT</b>	<b>1560000</b>
	<b>TOTAL GBP (£1 = 124 BDT)</b>	<b>£12580.65</b>

Due to an improving exchange rate between Bangladeshi Taka and Sterling, we have been fortunate to have had money left over after the 12 months. We will use this money to keep one developer employed so that he can help us with bug fixing and continue student training.

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