

EDUFRAME –REPORT OF MALDIVES EXPERIENCE

October 2010

Small is Beautiful and Affordable

(A Case Study on early ICT Intervention in a Primary School of Maldives)

Background

The Republic of Maldives is an archipelago of approximately 1,190 coral islands located southwest of the Indian sub-continent. The islands form twenty-six natural atolls, which are grouped into twenty atolls for administrative purposes.

The population is dispersed among 202 inhabited islands, with 90% of them having a population of less than 1,000. Though this unique geographical feature of the Maldives is the biggest challenge hindering the developments in all the areas, ICT development can be considered as the booming trend throughout the country.

The “Edu-frame Project” was inaugurated by the honorable education minister Dr. Musthafa Luthufee in Muhyiddin School on 24th September 2010. This collaborative project with Commonwealth of Education Media Centre for Asia (CEMCA) is initiated by the ministry of education of Maldives in order to bring about a systematic approach to the emerging ad-hoc ICT developments in the education sector. It is the field testing of integrating ICT in the classrooms using especially designed mini-laptops which was initially a digital photo frame. The mini-laptops have the hardware features and software capabilities necessary for the pupils’ to enjoy both the pedagogical and entertaining activities like games and internet facilities.

Methodology

The Grade III A students (9 boys and 12 girls) of Muhyiddin School, Male’ Villingili, was chosen to assess the durability, usage and effectiveness of the mini-laptops. A research team observed and collected data directly from classroom, teachers, students and parents who have the first hand experience of the challenges and potentials of those sleek little devices. Hence both quantitative and qualitative data was documented through questionnaires, interviews as well as lesson observations. In addition to this a thorough physical evaluation of the devices were carried out prior to handing over the laptops to the students.

Analyzing system capabilities and software support

The project came to existence with a digital photo frame, intended as a play back device for educational content stored on a pen-drive. Gradually other features added, like a small screen, memory, 3 USB port, graphics card, mouse & touch pad to form a system which functions like a mini computing device, christened as “Eduframe”. This device costs approximately 75 USD and weight 0.7 Kg.

Students can use this system for word editing on Microsoft Word pad as well as viewing Microsoft PDF, Word, Excel, Picture and PowerPoint. In addition to this multimedia player, chat support, calculator and internet explorer support is included. Initially the systems are provided with scanned copies of the text books of Grade 3 which students can scroll and read. To provide more hands on activities, the mathematic workbook 3B was converted into interactive pages in which the students are able to complete most of the activities using their mini-laptop.

Feedback from the stakeholders

The Students

The students were thrilled to own a small, light weighted laptop which they can carry to school every day and take back home. They have the confidence in using their own “mini-laptop” and experiment with colors, fonts as well as changing backdrops. The students are very much interested in the support material like power point presentations, audio and video used by the teachers to assist in teaching. However as novelty wears off, they feel limited by the interactivity provided.

The Teachers

The teachers are encouraged by the additional visual supports they can use in the classroom with PowerPoint presentations and video files. They find the process of loading and collecting student work on pen drives time consuming and cutting into teaching-learning time. In addition, as the students type slowly compare to working on the book teachers find it difficult to complete the task planned for the day. Furthermore it was noted that the present faded PDF content and the small screen size is a limiting factor for teaching learning activities carried out in the classroom.

The interactive mathematic work pages have added to the hands on activities, however because of the small screen size students find it difficult to read the writings on some pages also prevent them from seeing the full page. Therefore students have to scroll to the top of the page to check the answer and go back to the question again. Students typing speed is very slow, hardly finish the work in time. Therefore teachers cannot give the feedback to the students and also the word pad is not compatible to other computers and laptops, narrowing the option for comments on the students’ work.

The Parents

Almost all the parents responded stating that the children are very excited to have their “own” laptops even though more than two third of the students have access to a computer at home. The students are said to spend between 90-180 minutes on the device at home and eager to do school work on computers initially. Nevertheless they find the scanned text book content unattractive and causing eye strain when used for a long time because of the small size of the screen. It was also noted by the parents that the slow internet speeds discourage use of mini laptops for browsing and the parents have mixed views on academic improvement.

Conclusions

The twin advantages of Edu Frame are the low cost and portability that make individual access easy and convenient for teaching learning activities. They also increased individual access to ICT because of low cost and also equip children with the skills from an early age. Thus augment and enhance learning experience with varied support material for blended teaching and also reducing the physical burden of carrying heavy books to the school to some extent. However this would be practicable with enhanced system robustness. To maximize the educational gain from the ICT tool it is highly recommended by all the concern parties to increase system capabilities and create special content keeping the learner, curriculum and the system capabilities in mind. A project of this nature should to be introduced at the beginning of the year in order to carry out a systematic study on learning gain across different grades and schools.

Limitations

The main period of observations coincided with the end of school year, where much of the content was already learnt, hence it was not possible to draw conclusions of specific educational improvement or knowledge gain through criterion reference tests. Nature of the available content posed some additional limitations on learning activities. Over half the systems developed some technical snag, creating an uneven situation within the class. These factors could not only have impacts on teaching learning activities but also the attitude of the stakeholders and motivation of the students.