School Study #4

Information and Communication Technology (ICT) in Australian Primary Schools

UTAS FACULTY OF EDUCATION
School of Education

Laptops Investigation – impact on schooling

River Fields Public School (4June09) **New South Wales**

River Fields Public School (Botany, NSW) has 10 classes in an 1883 heritage building, the 1923 block, and two fully air conditioned demountable rooms. There are very spacious grounds (which include a protected heritage area of rare acacia scrubland). The school population has grown dramatically over the past decade (enrolments now 237).

Since 2007 there has been a focus on ICT in the school, with the aim of having pupils learn a range of skills such as making their own web-pages. Robotics was introduced in 2008 and will continue in 2009 and includes all Year 5 & 5 pupils. These pupils will also be involved in movie making.

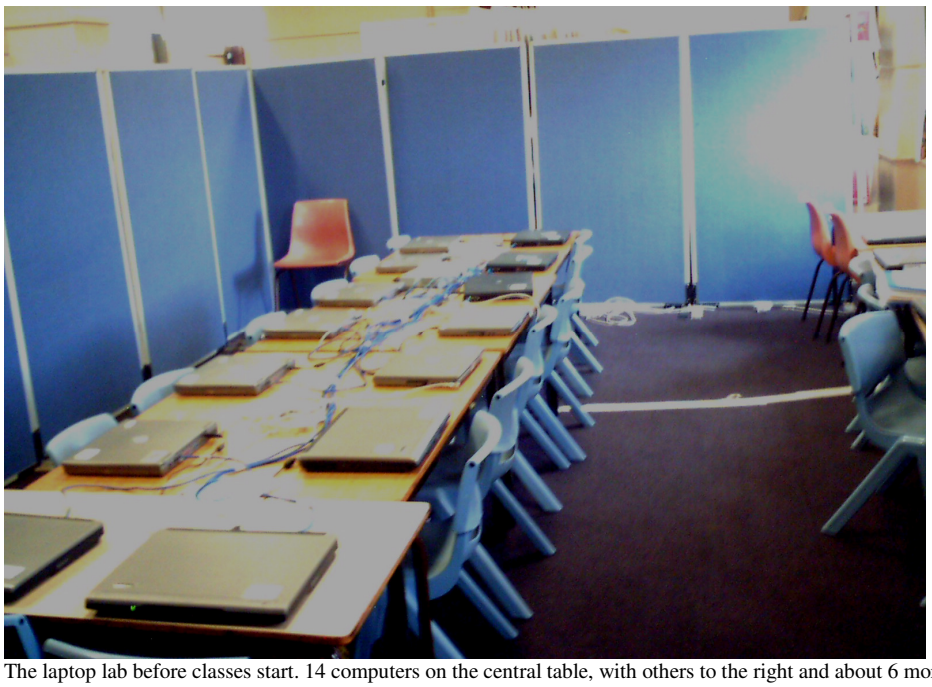
General notes
There are a couple of desktop computers in each of the10 classes, but nearly 30 laptops have been collected together in the top floor hall, which is sufficient for almost every class. Many laptops came as rollovers from a bank via a parent. Since the installation of air-conditioned demountable rooms, the school electrical system has been unreliable, so the laptop batteries have provided continuous operation even when fuses have blown.

The Department of Education and Training has provided a server and is sending an interactive whiteboard and a video-conference suite to the school. Plans are underway to partition the top hall to provide a customised laboratory and video-conferencing suite.

Kelly has an IT background and is employed part-time to provide technical support. She has also provided considerable ICT leadership and conducts many of the lessons in the computer lab in conjunction with classroom teachers. The school now has a network, server and internet connection as well as the laptop lab.

The school day is unusual: where recess would be expected, there is a 1 hour lunch break from 11-12, and a short 15 minute break later in the afternoon. This ameliorates the effects of not eating breakfast and gives pupils valuable physical activity.

The Principal went on a university course to learn about robotics, bought 10 LEGO Mindstorms kits and now teaches Year 5/6 pupils, hopefully to participate in RoboCup.


The laptop lab before classes start. 14 computers on the central table, with others to the right and about 6 more behind POV and around the corner.

Year 1: ABC Reading Eggs (links to published books) [http://readingeggs.com/]
All the computers were logged into ABC Reading Eggs. This is highly coloured and supports literacy learning. Pupils were clearly engaged, aware they had to progress by finishing 'maps' and attain higher 'levels'. The program is highly coloured and gives audio instructions and feedback. Without headphones, it was amazing that each pupil could know which voices were directed at them!

Year 1+2: Rainforest Maths & Mathletics
This class undertook maths consolidation using the RainForest Maths program (by Jenny Eather see http://www.blake.com.au/Rainforest-Maths-s/2186.htm), and were then allowed to progress to online competitions with Mathletics. The seating plan was used each week (so every pupil got to use the same computer each session), with any Year 1 pupil situated between two Year 2 pupils. This gave access to peer-tutoring as needed.

Year 2 e-mail introduction
85% of the class had been engaging in Mathletics [http://www.mathletics.com.au/] from home. The lesson introduced them to e-mail, with Kelly sending a message to all pupils. They used the 'reply-to-all' function to provide a personal message to all classmates, permitting individual exchanges. The class members were very excited to be sending messages to one another. Memetic spread was observed as some pupils used different fonts, colours and backgrounds.

New Topics brought into the curriculum

- E-mail (Year 2)
- Robotics (Yeas 5/6)
- Digital movie making

Envisioned topics for curriculum consideration

- Mind mapping (using Freemind)
- Game-making (using Scratch)
- Animations (Pivot)

New Pedagogies

- More pupil centred learning
- Mixed ability classes accommodated very easily.

Questions for pre-service teachers to consider

1. The school has chosen to use laptops in a laboratory setting so all classes can use ICT regularly. Comment on the ICT use being made at each age/stage.

2. What are the likely costs for the school to participate in the following learning activities:
    a. Robotics
    b. Mathletics
    c. Reading Eggs
    d. Rain Forest Maths

3. Explain the learning value of Robotics in this school's curriculum.

4. Where in your opinion does this school sit on the ICT integration – ICT transformation scale?

1	**…**	**10**
Computers are rarely used, curriculum delivery, assessment and reporting do not assume or require computer use		Computers are always used where relevant, the curriculum assumes this will be the case and often includes topics that require personal ICT use; assessment and reporting explicitly require and identify knowledge and skills that could not realistically be demonstrated without the use of ICT.