

Integration of ICT into the Curriculum at Anderson's Creek Primary School

Lyn Regan, Elaine Robertson and Des McKenzie

Anderson's Creek Primary School
Warrandyte, Victoria
Australia

regan@acreekps.vic.edu.au

Keywords: ICT, Primary curriculum, student control.

Anderson's Creek Primary School has integrated ICT across the full range of the primary school curriculum. Through a team approach ICT skills are developed within the curriculum and not taught in isolation. Strategies for professional development of teaching staff and our use of our intranet and network will explain why we do not have a specialist computer teacher and how classroom teachers have become empowered to employ computers to assist in the delivery of student outcomes across the curriculum. Anderson's Creek Primary School provides an integrated curriculum that is supported by team planning within the whole school framework. The integration of ICT within the curriculum has been a major focus at the school and has been supported through staff professional development, a strong eLearning team and team teaching and planning of curriculum. Our program reflects our philosophy that students must be in control of the technology and not merely respond to "educational games" software packages.

School organization has been paramount in the successful implementation of the integration of ICT within our curriculum. Teaching staff work in four Curriculum Standards Framework (CSF) level teams with individual members assuming planning responsibility for a Key Learning Area (KLA) for their team. Teams meet weekly to discuss programs and have whole team planning sessions preceding each term. Our intranet provides access to current policy documents, broad overviews for English and Maths, Integrated Topic frameworks and our ICT Skills Overview. The ICT Skills Overview outlines development for each level of the school and includes outcomes in: desktop and web publishing, multi media, spreadsheets, word processing, file management, graphics, communication tools and use of digital hardware. Integrated Topics rotate on a two-year cycle preventing the two-year levels within each CSF level from repeating major topics. Genre, specific text types and writing frameworks are linked to specific topics, and particular strands of Maths are appropriately linked by

context to integrated topics. The development of ICT skills enhances and enriches the curriculum; skills are taught within the Key Learning Areas.

Teaching teams are established with consideration of staff talents and strengths. The inclusion of a team member with ICT skills in each team enables ongoing professional development for all staff. Each teacher follows the team program and is able to use his or her ICT member as an ongoing mentor who can provide support and skill development at weekly meetings. All class teachers are responsible for developing ICT skills so we do not have a specialist computer teacher. The eLearning team also offers after school skill development for teachers in response to requests and need after staff surveys. Our aim is to support staff with ongoing training and with reliable, state of the art equipment.

We have an extensive and effective network consisting in excess of 100 computers with high-speed connections within the school and to the Internet. Each two classrooms share at least four computers and each team has its own shared workspace with approximately 20 computers. The shared workspaces are shared by five classes so regular daily access is possible for all classes. These shared areas allow students to engage in a variety of activities and use the shared facilities which include data projectors, scanners, printers, digital cameras, drawing tablets as well as reference books, pencils, paper and other materials. All computers are networked and have high-speed connections to the Internet. Children have their own email accounts and are encouraged to use them in a variety of ways to communicate and to lessen the distance between home and school; students email work files and correspond with keypals, teachers, friends and family.

We strongly believe that students benefit by using software that they control and not using computer programs to which they merely respond. Children work with Publisher, Word, PowerPoint, Excel, Access, NetMeeting, PhotoDraw, KidPix, FrontPage, Internet Explorer, Netscape Communicator, Photo Shop and Flash. These applications are used to support the development of learning outcomes across the curriculum and to engage the students in collaborative, co-operative and problem solving activities. Multimedia is particularly beneficial in the development of high order thinking skills and in allowing for different learning styles.

Our English programs have been enriched by technology in many ways throughout the school. Data projectors

have enabled us to use web sites for shared reading, while individual reading of web sites has been undertaken in independent learning centers for our Early Years children. Prep children have created multimedia slideshows to recount excursions and to reinforce letter recognition by making slides with letters matching images beginning with certain sounds. Slideshows have been used to develop story maps, to create electronic storybooks, to innovate text and to recount important events. Children have published stories on the intranet and have used online chat to read and respond to riddles. Older students have responded to text by creating multimedia presentations on plots, creating crosswords in Excel, making movies in Flash and using drawing programs to present parts of their literature responses. Students use the Internet for research, they can use Worldbook Online at home or at school, and can publish and interview for research by email.

Children are encouraged to write and edit their drafts on the computer to make writing tasks less onerous as well as to develop presentation skills that may include the use of text boxes, tables, graphics and borders. They will use headers and footers, copy and paste text, insert images and use drawing tools to enhance their writing. Grades 1 to 6 have published collaborative web sites about our community, engaged in internet collaborative projects and have shared projects on our intranet. Students publish in a variety of formats; newspaper, brochure, CD covers, folded cards, postcards, invitations, detailed labeling and class and individual books. Students use images taken with digital cameras, scan their own illustrations or use programs to create their own digital images to include with many forms of writing. Spelling strategies are encouraged in a variety of ways with young students visually focusing on letter patterns by presenting text in creative ways on the computer, animating words or creating word searches and crosswords. Spelling guessing games can also be played through chat online. Personal pride has been reinforced by creative use of desktop publishing to present their written work while weaker writers have been able to support their writing with the use of multimedia tools.

Numeracy is a priority at Anderson's Creek and many of our Maths tasks include the development of ICT skills. The use of concrete materials is routinely part of concept development in numeracy. Computers allow children time to reflect on their learning, provide them with the opportunity to represent many concepts visually, allow them to take risks and to problem solve. Digital photos can be taken of patterns made with materials so children can reflect and present their learning using many programs. Patterns are made with drawing stamps, students represent number and simple computations, demonstrate symmetry and work with shapes and tessellations in drawing programs. Drawing tools are used by younger students to create picture and simple bar graphs, and are a valuable aid to working with fractions, area and perimeter. Excel is used to sort, display and summarise data collected by students or found on web sites. Students use the coordinates in Excel to create maps and use maps to represent data. PowerPoint has been used to create clocks with moving hands, to present research

on Maths topics, fraction projects and to enrich computation activities.

Web publishing has been an important project for the whole school in recent years with students taking part in a global Internet project. This has resulted in an impressive and informative web site about Warrandyte, national landmarks, Australian animals and community groups. Groups of children have researched a particular area in a number of ways and then published their web page as part of the whole school project. This has been an integral part of the integrated topics for Term One each year we have participated. The children have used and learnt many publishing skills; they have scanned drawings, modified digital photos, captured video and sound, hyperlinked pages and created simple animations. It has been integrated with English with many reading, writing, speaking and listening outcomes being addressed. Students have launched their web site to the wider community, preparing and delivering short speeches about their web pages.

Collaborative Internet Projects are an exciting curriculum initiative in which many students have been involved. Children and teachers together share and create resources for everyone around the world to see, listen to and read. One of the greatest educational benefits of these projects is that children become providers as well as accessors or recipients. When choosing a collaborative project we are always aware that the project should integrate into the topic for a particular term. These projects must be relevant and often cover more than one KLA and many CSF11 outcomes. These projects motivate interaction, experimentation and cooperative learning. They facilitate student-centered learning rather than teacher-directed learning.

Our student portfolios have been extended to include an electronic student learning diary that is set up as a web with links to digital presentations. Grades 5 and 6 students have accessed their written work from Prep -Grade 4 and have included scanned images of written work in their webs. Grade 6 buddies have worked with the Prep students to begin their webs. Samples will be added each year and when Grade 6 students leave they will have their web burnt onto a CD ROM.

ICT is very much a routine for students and staff at Anderson's Creek Primary School, and we are now aiming to broaden its uses to our parent community. Staff regularly use the network for administrative purposes, the Internet as a resource, email for communication, the Intranet for policies and planning; they publish student resources on the intranet, store files on the network and use our database reporting system. We would like to strengthen the electronic links between home and school. We have offered computer classes to parents, presented to the wider community and have offered professional development to other schools on many occasions. Students have their own email accounts and parents have newsletters emailed to them. The school website also seeks to keep parents informed about events and initiatives offered at Anderson's Creek Primary School.