

DIGITAL EDUCATION REVOLUTION
IMPLEMENTATION PLAN
DEPARTMENT OF EDUCATION AND
CHILDREN'S SERVICES (DECS) SOUTH AUSTRALIA

State: SA

Date: September 2009

What processes will be implemented to deploy computers to reach the computer to student ratio of 1:1 by 31 December 2011?

Readiness Assessments

The Department of Education and Children's Services (DECS) will undertake a program to assess the readiness of each school to ensure successful implementation of the Digital Education Revolution.

Readiness at each school is being assessed in three strands:

- Infrastructure - network audits have been conducted at every school participating in the Digital Education Revolution Program. These audits have identified the scope of work and investment required at each school in order to achieve an infrastructure that is based around a robust, secure and scaleable wireless network that will support the target 1:1 ratio.
- Teaching & Learning and School Leadership - Each South Australian government school participating in the Digital Education Revolution will review their ICT Strategic Plan to achieve a student ratio of 1:1. These planning processes will be supported by the DECS *eStrategy Framework* which provides a resource for sites to review and assess their use of ICT in their teaching and learning programs.
- Policy Support - a set of policies and guidelines have been provided to schools to support their participation in the Digital Education Revolution.

Procurement processes

DECS will conduct two procurement rounds each year for computers (desktops, laptops, netbooks, and thin clients) in February and June. Schools can participate in the procurement rounds when they are ready, but can arrange for delivery of the computers at a time that is suitable for them, as outlined in their ICT Strategic Plan.

How will your sector ensure that every secondary school in Australia has provisions for each student in Years 9-12 to have access to ICT to enable students to engage with educational tools of the 21st Century and provide equity of access?

The network audits previously described will identify the scope of work and investment required at each school. This investment will be based on need in terms of achieving the 1:1 target ratio and not on a per capita basis. The upgrading of infrastructure which is based around a robust, secure and scaleable wireless network will ensure equity of access and be supported through on costs funding.

A portion of the department's existing professional development programs will be focussed on ensuring that each school is supported according to the requirements detailed in their ICT Strategic Plan.

How will your sector address the four strands of change identified in the Strategic Plan to guide the implementation of the DER?

Strand: Leadership – that ensures schools have a coordinated plan for the provision of infrastructure, learning resources and teacher capability to address the educational challenges of the 21st Century.

The Department of Education and Children Services (DECS) is addressing the DER *Leadership, Learning Resources and Teacher Capability* strands of change collectively through a Teaching and Learning Readiness dialogue with school leaders.

School readiness

The Department of Education and Children's Services (DECS) has developed resources to assist schools in their readiness to move to a full DER implementation. These resources promote school readiness through processes that are flexible, collaborative, coordinated and consultative. Development of these resources has occurred in consultation with the South Australian Secondary Principals' Association and tested with several schools to ensure that they are suitable for effective school use.

The DECS has provided schools with a set of criteria in order to be 'Teaching and Learning ready for a 1:1 computing environment'. In particular, schools will have:

- reviewed the school's progress in achieving the Priorities listed in the original ICT Strategic Plan.
- updated the school's ICT Strategic Plan with Priorities which are consistent with relevant school improvement frameworks, and other government initiatives and programs.
- conducted a further self-review with the eStrategy Framework of the school's use of ICT.
- collected current information about the ICT capabilities and professional learning goals as self-assessed by the teaching staff using the EdCap survey.
- mapped budget milestone expenses against the Priorities in the updated ICT Strategic Plan.
- developed a deployment and installation schedule for the computers available under DER which is aligned to the Priorities described in the updated ICT Strategic Plan.

In conjunction with DECS strategies for Infrastructure readiness and Policy readiness, schools can be more confident that they are prepared for the opportunities and challenges enabled

through the DER.

School ICT Strategic Plans and ICT Strategic Plan Reviews

South Australian government schools are provided with ICT Strategic Plan and the ICT Strategic Plan Review documents so they can describe and review their priorities using several categories to prepare of ICT improvement, including DER implementation. These categories are:

- Vision and Leadership
- Teaching and Learning
- Professional Learning
- Administration
- Resources.

An online survey conducted at the end of term 2 provided schools with an opportunity to indicate their level of readiness. Schools are prioritised for contact using these and other responses. Assistance is given to schools using:

- Online resources
- School visits
- Regional and professional organisation meetings
- Centra online sessions
- Phone and email liaison

As Round 2 schools deploy their computers, they will begin the review and planning process necessary for them to be able to deploy the devices necessary to improve their ratios to the 1:1 target set for the end of 2011.

These processes will be coordinated with any necessary infrastructure upgrades that will occur as the result of the On Costs funding.

Master classes

Master classes are evening sessions focussed with leading edge speakers around the power and potential of ICT in teaching and learning.

Cyber safety

Information is provided to leaders in the area of cyber safety through the development of a range of recent publications including

- *Keeping Safe: Child Protection Curriculum*
- the brochure for parents and caregivers, *Cyber bullying, e-crime and the protection of children*
- *Cyber-safety – Keeping Children Safe in a Connected World – Guidelines for Schools and Preschools.*

Strand: Infrastructure – access to digital teaching and learning resources and tools for processing information, building knowledge and for communication and collaboration.

The Department of Education and Children's Services (DECS) is supporting access to digital teaching and learning resources and tools for processing information through:

- Moving all secondary schools to a standard model for ICT that incorporates a secure, robust, scalable wireless network that is capable of supporting the target 1:1 ratio. The On Costs funding is supporting this direction.
- The current provision of a Wide Area Network capability for all South Australian government schools and preschools that supports their access to digital teaching and learning resources. The network provides a symmetric, quality of service to all secondary schools to support interactive teaching and learning environments and systems.
- The utilisation of the *Scoutle* environment as a repository for over 9,900 digital learning resources, in combination with *Moodle*.
- Supporting schools to develop creative computing environments by enabling them to choose from a compact range of computers covering form (desktop, laptop, net book), performance and platform. A competitive procurement process has enabled appropriate compatibility with existing equipment. Schools have given positive feedback about the procurement options available to them.

Strand: Learning Resources – that stimulate, challenge and assist students in achieving desired learning outcomes. These include collaborative and interactive activities as well as instructional and reference materials.

The Department of Education and Children's Services (DECS) has a range of ways of providing learning resources and the services required for their management and delivery. These include:

- Digital Content (Scoutle)
- Online Teaching and Learning Environments (created in Moodle)
- Collaboration Service Environments (video and web-based conferencing)

They collectively overlap and interconnect to provide educators and learners with new ways to present information and illustrate concepts, adapt learning content, delivery, pace, and structure to cater for individual needs and preferences, and to improve learner participation, achievement, and satisfaction with the learning process.

Digital content (Scoutle)

Scoutle is a web-based environment which hosts quality digital learning content that is being used by the wider DECS community 24x7. It contains content from The Learning Federation, DECS Business Units and verified external providers such as Intel Skool™ mathematics and science resources for secondary students. Educators log-in through a personal account to discover and retrieve the digital content then deliver it into their classrooms to provide new stimulating learning environment for students. About 6 500 teachers are registered Scoutle users. There are over 9 000 quality assured items of digital content in Scoutle.

Online teaching and learning environments (created in Moodle)

Moodle is a secure, dynamic, collaborative online learning environment where staff and students can engage in online learning at their own pace, anytime and anywhere. Teachers include different activities and resources in their online learning platform. Content from Scootle, locally developed and published content from the site, links to web pages, quizzes, surveys, audio and video files, blogs, wikis and forums and chat for real time discussions is available in a moderated, secure environment. Links to virtual classroom and/or video conferencing events are also included. Two hundred and forty sites have a DECS hosted Moodle environment offering teaching and learning and professional learning services both locally and state wide.

Collaboration service environments (video and web-based conferencing)

Video conferencing allows two or more locations to interact together via two-way video and audio transmissions delivering equity of access to teaching and learning opportunities for staff and students. It is best suited for face to face meetings, curriculum delivery, professional learning and sessions where video and audio quality is important. Equipment ranges from a room system which is ideal for small to large groups to desktop systems which are ideal for 1:1 meetings or smaller classes. Two hundred sites have video conferencing capabilities.

Web conferencing offers real-time, web-based conferencing software, including Centra, delivering equity of access to teaching and learning opportunities for staff and students. It incorporates tools for collaborative lesson delivery, professional development and meetings. It is best used where a rich, live online learning environment with the ability for interaction amongst all participants and presenters is required and where demand on high quality 'live' video input is low. Events are recordable and can be viewed by anyone without any specific software. DECS has over eight thousand users and has delivered almost four million minutes of online activity in the past 12 months.

Web 2.0 technologies and social media technologies (eg Ning, Twitter, Delicious, Teacher Tube, ePortfolios [Mahara], Wikis, Blogs, iTunes, Google Apps) are being evaluated for their educational potential, including professional and life-long learning opportunities for the DECS teaching community.

Strand: Teacher Capability – *teachers have the skills and tools to design and deliver programs that meet students' needs and harness the benefits and resources of the digital revolution.*

The Department of Education and Children's Services (DECS) is working with schools to improve teacher capabilities with ICT using a variety of strategies and frameworks. These include:

- *The Teacher Educational ICT Capabilities Survey, EdCap*, asks teachers from preschool to year 12 who have a major teaching component to their role to consider their vision and attitudes, professional contribution and learning, and current integration of ICT into teaching and learning and plots their responses using a four-phase developmental continuum. EdCap
 - Enables teachers to self-assess their ICT capabilities and set professional learning goals
 - Identifies factors (enablers and impediments) that effect ICT capabilities
 - Maps trends in ICT capabilities across the State
 - Provides input into the development of strategies to develop ICT capabilities at a preschool/ school and State level (e.g. professional development, hardware, software, teaching and learning resources).

- The DECS *eStrategy Framework* assists schools in reviewing, planning and advancing their use of technologies in strategic and manageable ways. The *eStrategy Framework* also considers the role of school Administration in discussing the system level connections with the school community, including their sustainability, security and safety, and the effectiveness of the processing and recording of data. The final aspect of the *eStrategy Framework* looks at the learning environments in the school and examines the provision, management and support of ICT resources.
- The *Intel Teach program* helps teachers improve the effective use of technology in classrooms to promote 21st century learning. In addition, the Essentials Online course assists with the use of ICT to effectively support and assess student learning. These programs are a joint initiative between DECS and Intel Australia Pty Ltd.
- *ICT Coaches* are a core component of the DECS Professional Learning in ICT Strategy. ICT Coaches provide professional development courses for other teachers across the state. These highly popular courses consist of after hours workshops delivered to groups of 8 – 12 teachers from schools and preschools.
- The *Learning Technologies Research Project* extends over 3 years and involves South Australian Universities. Research focuses on delivering learning using contemporary learning environments.
- The *DECS e-Learning Scholarships* are offered to increase the number of educators with awareness and understanding of online learning and a commitment to using it in teaching and learning. The scholarships and the outcomes for teachers range from skill and capacity building through to intellectual and conceptual mastery.
- The *DECS Leading Learning in Motion project* involves teams of educators working together to use ICT standards as the lens for critiquing student learning evidence, and uses this critique to design higher quality classroom practices. Teachers regularly examine samples of student learning and consider evidence against a selection of standard or best practice indicators. This critique includes the quality of student learning, the quality of ICT use, and curriculum, pedagogy, assessment design and outcomes for a 1:1 environment.
- The *DECS eTeacher program* enables teachers from across the state to design and implement online learning experiences for students. These learning experiences provide models for teachers that can be replicated at the school level. An emphasis is placed on mathematics, science, Vocational Education and Training (VET) and student well-being.
- The *New Media project*, including the New Media Awards, also supports teachers in incorporating digital media into learning programs.

How will your sector contribute to promoting access to educational tools of the 21st Century to enable the effective delivery of an online nationally consistent curriculum as well as providing stimulating and challenging learning resources for students?

A range of 21st century tools for curriculum delivery are described on page 4-5, e.g. Moodle, Scootle, videoconferencing, web conferencing and Web.2 technologies.

What plans does your sector have for collaboration with other States and Territories and the Commonwealth Government to support teacher development in ICT, the development of ICT curriculum tools and developing support mechanisms for schools?

The Department of Education and Children's Services (DECS) is collaborating with the Victorian and Queensland departments of education and the Microsoft Partners in Learning Program. This partnership will produce a suite of resources that support teachers who are working in 1:1 classroom environment.

All K-12 Education Chief Information Officers meet regularly to discuss programs of mutual interest, including the Digital Education Revolution.

The DECS is represented on the Teaching for the Digital Age Advisory Group (TDAAG) by the Assistant Director, Learning Technologies. The DECS has contributed to the development of the frameworks for the National Mapping of ICT-based Teacher Professional Learning and ICT Strategic Planning and intends to make use of the completed frameworks.

How will your sector contribute to engaging the teacher workforce through equipping teachers, through pre-service and in-service training, with the skills needed to effectively utilise ICT in the classroom.

See details on p6.

There is an increased emphasis on online delivery of professional learning activities, e.g. Master classes and the recent *learningspaces09* conference which used the social networking tool Ning to communicate with almost 450 participants.

How does your sector seek to facilitate the implementation of the other National Partnerships, particularly the Low Socio-Economic Status School Communities National Partnership, and how they will meet needs of schools in areas of growth and regional areas?

The following are key examples of how DECS is facilitating the implementation of the other National Partnerships, particular the *Low Socio-Economic Status School Communities National Partnership*.

- The Independent, Catholic and government education sectors in South Australia have entered into a collaborative partnership that has seen the establishment of a cross sector council. This council is overseeing the implementation plans for the three education sectors.
- A roll out schedule has been developed to expand the Innovative Community Action Networks (ICAN) to more regions of the state as part of the Low SES School Communities National partnership. The ICANs will provide alternative learning pathways, mentoring and case management support for students at risk of disengaging.
- DECS is currently working with the University of South Australia on a University Aspirations project (funded by the Australian Government) in northern Adelaide to raise educational aspirations, tertiary participation and social inclusion. Uni SA students will undertake experiential learning as mentor and ICT facilitators to develop student skills through early exposure to university and alternative career pathways.
- In the site visits being conducted for the review of site planning for ICT, site leaders are being asked to consider special cohorts of students in their school and the relevant opportunities that may be presented by the DER program.

All partnerships have a focus on professional learning programs for teachers, the use of ICTs to facilitate the delivery and learning of these programs will be a key aspect. The DECS Low SES School Communities NP is focussed on reengaging young people with learning and supporting them to transition to further learning and/or employment. The use of ICTs in this reengagement and acquiring of ICT skills/qualifications by disadvantaged young people will empower and support them achieve greater outcomes at and beyond school

How will you work with non-government schools, systems and BGAs to facilitate the participation of the non-government school sector in all elements of DER.

Regular meetings are held at the senior executive level of the three schooling sectors in South Australia, and discussions regarding the DER are included, as well as specific South Australian programs.

How will your sector cater for students with disability?

The DER visits to special schools were undertaken by DECS staff with expertise and experience in working in the area. Extensive work was undertaken to validate the ICT needs of special schools, and students in special education centres and centres for the hearing and visually impaired. Subsequently DECS initiated feedback to DEEWR about the needs of special schools for redirection of DER funding for equipment other than basic computers.