Digital Education Revolution National Partnership

Implementation Plan
Tasmania

Department of Education
Information and Technology Services

Tasmania
Explore the possibilities

Contents

1. OVERVIEW

1.1 ICT Environment in Department of Education Tasmania (DoE Tas)

Over the past 10 years DoE Tas has developed a mature ICT in schools model and provides a mixture of centrally funded ICT systems and services, as well as local school based IT infrastructure, systems and support. There are many services provided centrally from the main DoE Tas data centre including, email service for teachers and students, school internet / intranet site hosting, wide area network connection including the internet gateway, web filtering of all internet use, central digital depositories, on-line learning, electronic student assessment and reporting systems, school based ICT support staff, school based ICT consultants, school based staff to support teacher professional development and integration of ICT into the curricula delivery, plus the standard set of administrative systems – student management, finance, human resources, records, security and authentication systems, etc. Costs for these are met by the central IT Services budget.

In addition to these systems and services, annual ICT grants are made to schools based upon a formula that includes student and teacher numbers and the school sector they are in, as well as socio-economic factors. Where early in its implementation, the grant program focussed predominantly on the acquisition of hardware, over time, with the decline in PC unit costs, the funding has been maintained freeing up resources to be used more flexibly. The intent of the funding now is to support schools in establishing and maintaining a satisfactory technological infrastructure and staff ICT skills, in order that schools are able to successfully utilise ICT in teaching and learning. So, not only can the grant cover the capital purchasing of equipment, it is also used to address the running costs such as software licences and maintenance, cabling, network equipment (wired and wireless), as well as professional learning and the integration of ICT into the curriculum.

Due to the decentralised funding model used by DoE Tas as part of the School / College Resourcing Package, there are a large proportion of ICT funds expenditure not captured centrally and there is no central visibility over them. Examples include teacher professional development, any additional ICT support staff above the centrally provided support, software licences that are not part of the Microsoft suite, etc.

1.2 Funding of ICT Expenditure in DoE Tas

The central IT Services budget funds a large proportion of the DoE Tas IT expenditure. A major component (almost 50% of non-salaries budget) of the central IT Services budget is the wide area network connection including the internet gateway and internet download costs.

Another large central cost is the school based IT support staff. The school based IT support staff carry out all the functions of IT support, from setting up / installing core school infrastructure (servers, printers, switches, etc), deploying and supporting PCs and laptops, installing and supporting the various school based software applications used by teachers and students (eg Kidspix, MS Student, Artrage, etc – there are hundreds of these and they differ for each school), provide normal helpdesk support, assist with supporting corporate applications - Student Management System, Finance, HR, eLearning systems, etc on the PCs within the school environment. They escalate as required to the central helpdesk for level 2 or level 3 support. School based IT support staff are kept at the level determined by the Grimes Review in 2008 of 1 support staff per 450 computers. This is reviewed on an annual basis.

Teacher professional development for ICT and school based staff to support teacher professional development and integration of ICT into the curricula delivery is funded directly by the schools or via the learning service (district) areas. There is no direct central funding of this.

Major software licences for Microsoft, Symantec (anti virus), WebWasher (internet filtering) are all managed centrally and funded by contributions from school on a per student or per computer basis.

1.3 Centralised Purchasing

In 2006 DoE Tas undertook its first central purchasing of PCs and laptops for schools. This was via the State Government C150 contract and enabled schools to purchase a preconfigured entry level desktop and entry level laptop at reduced pricing from previous purchases based upon DoE Tas acquiring 2,000 devices. During 2007 these purchases were increased to over 3,000 devices and the range of equipment was expanded from PCs and laptops to also include other PC peripherals (monitors, printers, scanners, etc).

In mid 2008 a policy change was made that all ICT equipment purchases by schools needed to be acquired from a central DoE Tas panel. This central panel includes three vendors / resellers (Acer, Lenovo and Apple) from the State Government C150 contract and covers Entry and Multimedia level desktops, Entry and Small format laptops, Ultra Mobile Netbook devices and Apple equipment. PC Peripherals also form part of the panel as does IT networking equipment like switches and wireless access points.

The central panel provides all schools with access to the lowest price computers. The schools order the equipment via a central web based shopping cart and then central IT Services reviews and coordinates the delivery, etc. Schools are invoiced directly by the supplier. Schools need to acquire their NSSCF computers via the central web based shopping cart and then at the end of each month they are reimbursed $1,000 for each computer that has been ordered and delivered. Schools are only reimbursed after purchasing the computers.

To assist schools in making their selections a web based shopping cart is being used and terminology is moving away from traditional IT specifications (ie CPU power, HDD size, Memory size, etc) to business terminology

eg an Entry level desktops offer only basic features, and should be able to: -

- run standard office applications (word processing, spreadsheets, etc.);
- browse the internet ;
- view video and run basic video conferencing ;
- support pod casting and basic audio manipulation, etc, etc

The learning environments most suited to these computers are:

- classrooms used for general purposes by different years;
- common access areas, such as libraries;
- laboratories for learning basic computer skills.

The DoE Tas computer supplier panels have also been offered to the Tasmanian Catholic and Independent school sectors, which enables them to benefit from the DoE Tas purchasing power.

1.4 IT Infrastructure direction

Since 2007 there has been a focus to work with schools in moving the IT infrastructure at their school from a SOHO (small office / home office) setup, that also had a low cost and low reliability and performance associated with it, towards one that is built around business enterprise level with an increased reliability and performance level. Key infrastructure in schools that has had this focus have been school based servers (file and print and web application servers), and networking and wireless equipment.

In 2006 schools started deploying SOHO style wireless networking equipment that provided wireless access points in their schools but failed to deliver reliability, availability or scalability. In 2007 DoE Tas undertook a public tender for wired and wireless networking equipment. Cisco was the selected vendor. In the fourth quarter 2007 testing of the Cisco solution was undertaken and central infrastructure (wireless access point controllers) to support deployment into schools was acquired and deployed. Also work was undertaken on the number of wireless access points to support laptops in the classroom. It was found that one wireless access point was required for every 6 devices.

In term 2, 2008 two schools (1 x Primary and 1 x High) were selected to pilot the new networking infrastructure. Before the infrastructure was deployed to these schools, detailed reviews of the sites including the cabling infrastructure were undertaken. This resulted in a substantial amount of new fibre and UTP cabling being installed to overcome issues and support the new enterprise class. Additional power outlets were also required for some of the switches. A lot of the wireless access points were powered by the UTP cable from the central core switch in the school without the need for additional ceiling mounted power points.

In 2009 the High school involved in the 2008 network trial extended their school wireless network access to student owned devices (laptops, netbooks, iPods, mobile phones, etc), to enable students access to a greater range of technologies as part of their curricula. This has been a success and will be deployed to other schools in 2010.

1.5 ICT Plans

All schools now need to complete their annual school ICT plan which uses the MCEEYTA "Digital Education : making change happen" document as a reference for developing the ICT Plan, which is updated on an annual basis and is a sub plan of the school improvement plan. The ICT plan asks them to focus actions across the 10 elements, of which only 1 relates to IT infrastructure, with the other 9 having a focus on leadership, integration of ICT into the school curricula including assessment, etc, teacher professional development and external access by teachers and students.

Element 10 of the school ICT Plan covers IT Infrastructure, and schools are required to map out a four year procurement and replacement cycle for all their IT Infrastructure, including showing funding sources. All schools will achieve a 1:1 ratio by 31 December 2011 as per their own school ICT Plan.

1.6 Reaching a 1:1 ratio

DoE IT Services will assist schools via the School IT Consultant in the development of the school ICT Plan to achieve the 1:1 ratio by the 31 December 2011, with each school using a mix of devices (computers, laptops and netbooks) to achieve the ratio. IT support will continue to be provided to schools to support the computers including their deployment. Central purchasing panels, etc will also continue to be provided.

1.7 Key actions to assist with delivering the Digital Education Revolution

- All schools need to develop and update at least on an annual basis their school ICT Plan. In 2010 this will include a requirement for schools to list key performance indicators (KPIs) against actions identified across the 10 elements that can be linked to the DER Strategic Plan four strands of change to enable easier measurement of ICT improvements in schools.
- All schools as part of their school ICT Plan will create an Element 10 – IT Infrastructure Plan that maps out their purchasing cycles to achieve a 1:1 ratio by 31 December 2011.
- All schools are required to undertake a detailed Wireless survey (by an external preferred supplier of DoE Tas) to enable them to allow greater use of wireless devices (laptops, netbooks, iPods, etc) throughout their schools. This is funded by DER On-cost funds.
- DoE Tas is finalising an eStrategy that will focus the support for schools on ICT around those systems, processes and actions that will best allow the schools to met the State and Federal education requirements.
- ICT actions are identified as part of the DoE Tas "Learner at the Centre" strategy covering life long learning including years 9 to 12.
- Build upon the partnership with UTas to increase the effectiveness of pre-service training and expand the Teacher Training Centre model into other Learning Service areas.

2 Digital Education Revolution actions

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

Action	Timeline	Output
Schools purchase and deploy NSSCF computers. Rounds 1 (schools with a ratio of 1 computer to 8 or more students to achieve a ratio of 1:2), Round 2 (all schools to achieve a ratio of 1:2) and Round 3 all schools to achieve a ratio of 1:1.	Round 1 – by 30 June 2010 Round 2 – by 31 March 2011 Round 3 – by 31 December 2011	Schools participate in NSSCF Rounds and acquire and deploy computers to meet ratios at the agreed timeframes as per their school ICT Plan.
Schools utilise the MCEEYTA "Digital Education : making change happen" document as a reference for developing a school ICT Plan covering all 10 elements, that is updated on an annual basis and is a sub plan of the School Improvement Plan. Against each of the 10 Elements, schools identify actions, resources required, timelines, funding and KPIs.	All schools completed their initial ICT Plan by 30 September 2009 and then undertake updates on an annual basis.	School undertakes an annual update of the ICT Plan.
Element 10 of the school ICT Plan covers IT Infrastructure (including computers), and schools are required to map out a four year procurement and replacement cycle for all their IT Infrastructure (including the computers to meet the DER 1:1 ratio), including funding sources.	All schools completed their initial ICT Plan by 30 September 2009 and then undertake updates on an annual basis.	School undertakes an annual update of the IT infrastructure plan and acquire IT infrastructure as per their plan.
ITS provide assistance via web purchasing portal, School IT Consultants, and IT support to assist schools in reaching their 1:1 ratio target by 31 December 2011.	2009 and until end of NP agreement	Assistance by ITS to schools re their ICT Plans and IT Infrastructure Plan to enable them to meet the 1:1 ratio.

2.2 How will your sector ensure that every Tasmanian state secondary school 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.

Action	Timeline	Output
School ICT Plan's as detailed in 2.1 has actions across	All schools completed	School undertakes

the whole school to lead to greater integration of ICT within the school's teaching and learning.	their initial ICT Plan by 30 September 2009 and then undertake updates on an annual basis.	an annual update of the plan including actions.

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

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.

Action	Timeline	Output
Provide leadership advice to school principals and IT leaders to assist them to develop and update on annual basis ICT vision for their school, to engage staff and plan for becoming 'leading schools' as described by the MCEEYTA Digital Education: Making Change Happen framework.	2009 and until end of NP agreement	Assist Principals and school IT leaders in regular reviews and updating of their ICT Plan broadening the actions across the 10 Elements with a focus of using ICT to improve learning outcomes.
Use the ICT Planning process to mentor Principals on whole school planning for ICT including how it can best be used as an important tool to support the School Improvement Plan.	2011 and until end of NP agreement	Production and regular review of school ICT plan, broadening the actions across the 10 Elements with a focus of using ICT to improve learning outcomes.
Refine school accountability arrangements so that schools report on their progress in ICT planning and adoption as part of their School Improvement Plan reporting.	2011 and until end of NP agreement	Managers Learning discuss ICT progress with principals as part of School Improvement planning.
Continue to provide DoE leadership Professional Learning that is inclusive of ICT leadership eg Microsoft professional development via a workshop for Principals in how to develop and support a 1:1 program	2009 and until end of NP agreement	After running the initial course in late 2009, utilise feedback from attending Principals to improve and make course more

		relevant in 2010. Develop new sub-courses to focus on areas of interest as identified by Principals.

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

Action	Timeline	Output
As per the DoE Tas eStrategy review the various eLearning toolsets in use and scope an integrated Virtual Learning Environment that provides schools with a core and contemporary tool set to support flexible learning e.g. Learning Management System, digital portfolios, client management systems, school, teacher, student and parent portals.	2010 and until end of NP agreement	Review and scope via a working party the requirements of a Virtual Learning Environment. Leverage from any actions that flow in this area from the eStrategy in 2010 onwards.
Determine infrastructure requirements of individual schools by educational and curriculum objectives. Infrastructure will continue to be provided that supports school's learning, teaching and administration needs	2010 and until end of NP agreement	Production by September 2009 of the school IT infrastructure plan and then annual reviews of same. 2010 onwards, schools purchase and implement IT infrastructure as per updated plan including the outcomes of the wireless survey. IT Services review school ICT Plans and incorporate any central hosted services or infrastructure it the IT Services IT infrastructure planning processes.

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.

Action	Timeline	Output
Ongoing support for a digital repository of on-line and e-learning resources that supports the Tasmanian Curriculum Framework and the new National Curriculum Framework. The digital repository will be an essential curriculum support tool for all Tasmanian schools.	2009 and until end of NP agreement	Continue to support schools and teachers in the use of the learning resource digital depository.
Continue to support teachers with resources to maximise the use of ICT in teaching and learning through the eCentre teacher web portal	2009 and until end of NP agreement	The eCentre web portal is promoted in Professional Learning at all schools in Tasmania increasing its usage.
Continue to implement the ICT Cross Curricular Framework	2009 and until end of NP agreement	Increase in the number of teachers using ICT across their learning areas. An increasing number of students, K-10, are assessed as being competent against the Tasmanian Curriculum ICT Checklist skills.

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.

Action	Timeline	Output
Principals action the items listed in their ICT Plan for professional learning to improve teacher capability with ICT.	2010 and until end of NP agreement	Teachers undertake actions identified in the annual ICT Plan to assist with addressing the teachers professional learning goals.
Tasmania is committed to participation in the Smarter Schools National Partnerships: Low SES School Communities, Literacy and Numeracy and Teacher	2010 and until end of NP agreement	Refer Teacher Quality part of the Smarter Schools NP

Quality. Participation in the National Partnerships will complement Tasmania's progress towards its *Learner at the Centre* goals.		
Formed a partnership with UTas (Tasmania's University) to develop a new model of pre-service teacher training that includes more on the job (at schools) practicum's including extensive training in using e-learning pedagogies and toolsets.	2009 and until end of NP agreement	Automatically create usernames and passwords for Utas pre-service students based upon data exchange from Utas administrative system to provide them with access to DoE resources.

2.4 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

Action	Timeline	Output
Provide ongoing support for a digital repository of on-line and e-learning resources that supports the Tasmanian Curriculum Framework and National Curriculum Framework and simple tools e.g. Scootle that enable teachers to easily search, customise and assemble learning paths for students using exemplary online resources.	2009 and until end of NP agreement	All teachers are supported with a wealth of online resources that link clearly to state and national curriculum priorities.

2.5 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.

Action	Timeline	Output
Participate in national committees, forums and teleconferences eg DER workshops and forums, AICTEC, national working groups, eg Schools Interoperability Framework (SIF), and ongoing engagement and collaboration with national networks e.g. EdNA, education.au, Flexible Learning Framework	2009 and until end of NP agreement	Participate, provide input and feedback as required

2.6 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.

Action	Timeline	Output

Provide an online tool with a rich set of resources to build teacher capability. An ICT Professional Learning Guide has been developed within a SharePoint site. It provides resources to support teachers in developing the knowledge, competence and confidence to exercise their professional judgement in applying ICT in ways which support every child succeeding. It includes information about software, a range of technologies, curriculum, pedagogy, copyright and ethics, assessment and learning online and student work samples.	2009 and until end of NP agreement	Provision of an ICT Professional Learning Guide on the SharePoint site to allow teachers to access resources to support their integration of ICT into their pedagogy.
Provide access to pre-service teachers, even when they are still at a Utas campus to DoE Tas systems and resources to enable them to prepare for their coming practicum at schools	2009 and until end of NP agreement	Automatically create usernames and passwords for Utas pre-service students based upon data exchange from Utas administrative system

2.7 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

Action	Timeline	Output
Tasmania is committed to participation in the three Smarter Schools National Partnerships: Low SES School Communities, Literacy and Numeracy and Teacher Quality. Participation in the National Partnerships will complement Tasmania's progress towards its *Learner at the Centre* goals.	2010 and until end of NP agreement	Refer Smarter Schools NP
Use Low SES National Partnership as a vehicle to drive secondary renewal and alignment of provision of all DoE flexible and eLearning programs and services	2010 and until end of NP agreement	Refer Smarter Schools NP

2.8 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

Action	Timeline	Output

Facilitate ICT projects that require collaboration between government and non government schools eg Digital Regions Initiative project	until end of NP agreement	Increased collaboration between government and non government schools is apparent.
Regular meetings by senior staff to discuss areas of mutual interest in ICT eg NBN, DER and teacher / learning areas eg improving teacher quality NP	Once a term or earlier as required	Production of coordinated responses, or applications from the Tasmanian education sectors.
Provide access to DoE hardware and software purchasing panels to enable non-government schools access to lower acquisition costs	2010 and until end of NP agreement	Regular updates of IT equipment on the panel and expand as new technologies emerge

2.9 How will your sector cater for students with disability?

Action	Timeline	Output
Make decisions as guided by the Disability Action Plan for Education	2010 and until end of NP agreement	Incorporate into actions as part of the annual school ICT Plan. Disability standards will be applied to all Tasmanian classroom environments.
Use technology to create achievement avenues for students with disabilities. Provision is provided by a Coordinator of Physical Impairment who works with Teacher Learning Support leaders to offer support including professional learning and advice on differentiated hardware and software to support a range of disabilities. Support teachers in every school reflect this provision in the Individual Education Plans that they write in collaboration with teachers of students with disabilities. This enables every student	2010 and until end of NP agreement	Students with additional needs regularly access hardware and software, designed to support their need and extend their learning opportunities.

to access appropriate technology to achieve their learning potential		Build actions into the annual ICT Plan to cover different IT infrastructure requirements.

3 Budget NSSCF

3.1 Budget National Secondary Schools Computer Fund 2007-08 to 2012-13

National Secondary Schools Computers Fund NSSCF								
	Millions	$100	$1,200	$300	$200	$200	$200	$2,200
	Payment type	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	Total
Source Funding to State Treasury		*$ million*	*$ million*	*$ million*	*$ million*	*$ million*	*$ million*	*$ million*
Digital Education Revolution (On-costs)	facilitation		12.1	0.0	0.0	0.0	0.0	12.1
Digital Education Revolution (Original)	project	0.6	7.1	3.3	1.7	3.4	3.4	19.5
							Total	31.6
Cashflow of Available Funding								
Digital Education Revolution (On-costs)	facilitation		0.0	4.8	2.4	2.4	2.5	12.1
Digital Education Revolution (Original)	project	0.6	1.0	9.4	1.7	3.4	3.4	19.5
							Total	31.6

In addition to the above, central IT Services also fund annually ICT Grants to schools, WAN, IT Support in schools, provision of central data centre services (systems and infrastructure). Schools also provide additional funding on top of their annual ICT Grant allocation.