

DIGITAL EDUCATION REVOLUTION IMPLEMENTATION PLAN

State: New South Wales

Date: 30 September 2009

THE NSW APPROACH TO IMPLEMENTATION

The New South Wales Government has negotiated with the Commonwealth Government to provide a wirelessly enabled, next generation laptop to each senior student as part of the National Secondary Schools Computer Fund.

All Year 9 students in NSW government schools will receive their laptops commencing in Term 3, 2009. These students will take the same laptop with them through their senior years to Year 12. For the remainder of the program, each Year 9 cohort will be issued with their own laptops so that by 2012 all students in Years 9 to 12 will have a laptop for their individual use.

The NSW Department of Education and Training's has established a Digital Education Revolution – NSW (DER-NSW) Program to manage this Commonwealth initiative.

The Five Projects

The DER-NSW Program consists of five interdependent projects:

1. Provision of a wirelessly enabled educational laptop to every NSW public school secondary student from years 9 to 12.
2. Professional learning and curriculum support for school leaders and teachers.
3. Development of school policies and procedures. Evaluation of the impact of DER-NSW on teaching and learning.
4. Wireless connectivity in all secondary and central schools. Connectivity solution for Schools for Special Purposes.
5. Enhanced onsite technical support in secondary schools, central schools and schools for special purposes.

Timelines and Milestones

The following table summarises the steps to be undertaken in each project and the associated timelines.

Project	Milestone	Description	Completion Date
Professional Learning & Content Delivery	Literature Review	Review of 1:1 literature on laptop programs in other jurisdictions.	February 2009
	Draft Overview and Needs Analysis	Publish Draft Needs Analysis and Design Phase	February 2009
	Draft Implementation Plan	Publish Draft Professional Learning & Curriculum Support Implementation Plan – Leaders, Teachers and Regions.	March 2009
	Draft Response	Professional Learning & Curriculum Support Implementation Plan – CLI, CK-12, PLLDD and AGQTP (suppliers).	April 2009
	Workshop Delivery	Ideas and supporting documentation for professional learning for School Development Day	April 2009
	Launch of Professional Learning and Curriculum Support	Forum for Leaders, Teachers and Students engaged in professional learning and curriculum support provision	May 2009
	Following Launch – Draft Summary of Strategies	Overview of Professional Learning and Curriculum Support Strategies – 2009/10	June 2009
	Resource Release	Professional Learning and Curriculum Support Resources live on intranet	July 2009
	Budget Release	Budget release for Professional Learning and Curriculum Support to schools and regions	August 2009
Project	Milestone	Description	Completion Date
Policy	Literature search	Review of literature	February 2009
	Consultation	Identification of issues of concern to inform policy and procedures	March 2009
	Policy Areas Confirmation	Areas for policy and procedures identified including links to existing policies	Mar 2009
	Policy & Procedures Draft Complete	<ul style="list-style-type: none"> • Learning Disabilities Procedures • Management Teacher Laptop • Management of Bank of Laptops • Laptop user charter • Laptop incident report • Parent consent for students with disabilities 	Apr 2009
	Consultation Process	Consultation on the draft documents with stakeholders	May 2009
	Policy & Procedures Final	Policies and procedures finalised and published	May 2009

Project	Milestone	Description	Completion Date
Program Evaluation	Evaluation Process	Development of data collection instruments and procedures	August 2009
	Ongoing Evaluation	Data collection and analysis	November 2010
	Reporting	Interim Report	December 2010
	Ongoing Evaluation	Data collection and analysis	November 2011
	Reporting	Analysis and draft report	March 2012
	Report	Final report	May 2012
Project	Milestone	Description	Completion Date
Wireless Connectivity	Tender Process	Tender for wireless connectivity project	Mar 2009
	Contract Development	Vendor contract signed off	Apr 2009
	Testing	Pilot /user acceptance testing	May 09
	Phase 1a	Initial Connectivity for 293 schools (Library plus 12 learning spaces)	Aug 09
	Phase 1b	Initial connectivity for 170 schools (Library plus 12 learning spaces)	Oct 09
	Phase 2a	Completion of work for 265 schools (all designated learning spaces)	Jan 10
	Phase 2b	Completion of work for remaining schools (all designated learning spaces)	April 10
	End Project Report		April 10
Project	Milestone	Description	Completion Date
Learning Devices	Governance	Model of governance for the project	March 09
	Vendor Contract	Contract with Lenovo	May 09
	Software	Microsoft and Adobe software on the laptops.	
	Student / Teacher Allocation Model	Model for allocation of devices determined	May 09
	S1 Roll Out	Device Procurement and commencement of delivery of student (S1) rollout 2009	Dec 09
	S2 Roll Out 2010	Device Procurement and commencement of delivery of student (S2) rollout 2010	Apr 2010
	S3 Roll Out 2011	Device Procurement and commencement of delivery of student (S3) rollout 2011	Apr 2011
	S4 Roll Out 2012	Device Procurement commencement of delivery of student (S4) rollout 2012	Apr 2012
Project	Milestone	Description	Completion Date
Technical Support Services	Modelling & Budget	Draft model of support with associated budget developed	Apr 2009
	Position Description Finalised	Technical Support Officer Position Description finalised	Apr 2009

Project	Milestone	Description	Completion Date
	Support Model	Technical Support Model accepted	Apr 2009
	Regional positions	Regional positions offered as career development opportunities. Recruitment to fill gaps.	June 09
	Phase 1 TSO selection	Advertising, interviewing and selection of Phase 1 TSOs	July 09
	Operational Support Guide	Operation Support Guide (Version 1) completed	Aug 09
	Phase 1 TSO appointments	Phase 1 TSOs inducted and take up positions. Recruitment to fill gaps	Aug 09
	Phase 2 TSO selection	Advertising, interviewing and selection of Phase 2 TSOs	Sept/Oct 09
	Phase 2 TSO appointments	Phase 2 TSOs inducted and take up positions. Recruitment to fill gaps	Nov/Dec 09

Budget

The NSW Department of Education and Training provides funding for ICT in schools at state, regional and school level. This level of expenditure will be maintained into the future.

Additional staff and funding from the Information Technology Directorate have been allocated to the Digital Education Revolution NSW program in 2008, 2009 and 2010 to ensure that the technical solution is successful. Staff developing professional learning and curriculum support materials have also been re-deployed to ensure there are sufficient resources available for teachers to use in classrooms.

TAB A provides details of the five year budget and proposed budget for 2013/14. It is anticipated that \$100 million will be required to maintain the 1:1 ratio and that NSW Department of Education and Training's 30 per cent contribution would be \$30 million.

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

All Year 9 students in NSW government schools will receive their laptops commencing in Term 3, 2009. These students will take the same laptop with them through their senior years to Year 12. For the remainder of the program, each Year 9 cohort will be issued with their own laptops so that by 2012 all students in Years 9 to 12 will have a laptop for their individual use.

2009 S1 Rollout

All year 9 students will receive a laptop computer before the end of the 2009 school year. National Secondary Schools Computer Fund Round One schools are scheduled for delivery before Round 2.1 schools

2010 S2 Rollout

All year 9 students will receive a laptop computer by the end of March 2010. An additional allocation of pool laptops will be made to every school to ensure that with existing computers the ratio of computers to Years 11 and 12 students is 1:2 or better by 30 June 2010.

2011 S3 Rollout

All year 9 students will receive a laptop computer. By 30 December 2011 the computer to student ratio will be 1:1 in Years 9, 10 and 11 and Year 12 will have left school.

2012 S4 Rollout

All year 9 students will receive a laptop computer. By March 2012, all students from Year 9 to Year 12 will have their own laptop computer.

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?

A new state-wide wireless network to support the one to one laptop program will be developed and access points installed in all learning spaces in 463 schools providing students with wireless internet access for lessons in all key learning areas. Schools in regional and isolated areas will have the same service as city schools.

The network will be centrally managed and provide a standard platform for all students.

The Information Technology Directorate is addressing the need to provide high speed broadband access to schools.

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.

The NSW Department of Education and Training is implementing a state-wide program in a coordinated and phased manner that will ensure the provision of infrastructure, learning resources and teacher capability to address the educational challenges of the 21st Century.

The Information Technology Directorate has developed and is implementing a state-wide plan for the provision of the wireless laptop computers, wireless networks and technical support necessary.

Schools are expected to integrate DER implementation in their annual planning and reporting cycle, consistent with the Office of Schools Plan and Annual Report.

The Department of Education and Training is leading the planning and provision of 21st Century digital learning resources and professional learning resources which are being placed in the Teaching and Learning Exchange and the websites of the Centre for Learning Innovation, the Curriculum K-12 Directorate and the Professional Learning and Leadership Development Directorate.

The state funded program to provide teachers with similar laptops as the students will ensure that teachers can access the internet and Department intranet to support student learning with technology.

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

Access to digital teaching and learning resources

On-cost funding is being utilised extensively to ensure that all high schools and central schools in NSW have the required infrastructure to support the Digital Education Revolution. The provision and coordination of the provision of this infrastructure is being undertaken by the Information Technology Directorate of the NSW Department of Education and Training.

Wireless Network

The new wireless networks in schools run in parallel with the school's existing wired and/or wireless network. The new wireless system is based upon the 802.11n protocol. It leverages existing fibre optic links between buildings.

The contractor, IBM, is installing:

- new Ethernet cabling within buildings to link wireless access points and switches
- new cabinets to house the wireless network components
- an Aruba mobility controller at each school
- a number of Hewlett-Packard PoE network switches to support the solution
- wireless access points(WAPs) in designated learning spaces including the library (2

WAPs) configured to operate in the 5 GHz range

- a DIP box (Distributed Infrastructure Platform) which runs five virtual servers including a Read Only Active Directory (ROAD) environment ensuring authentication and recognition of students and teachers in the secure environment and a file storage area called “My Locker” for every teachers and student

The wireless solution has been successfully tested to provide a minimum throughput of 2Mb/s for 30 laptops simultaneously connected to the one wireless access point.

The wireless networks are being progressively installed in all high and central schools and are due to be fully installed by the end of 2009.

In Phase one of the wireless installation to be completed by November 2009, the school library and up to 12 learning spaces will be connected. In Phase two, the remainder of the learning spaces in the school will be connected.

The wireless network is being managed centrally. This remote management will deliver antivirus updates, software and patches.

Through the powerful wireless networks in schools, the internet and the Department of Education and Training intranet, teachers and students will be able to communicate, collaborate and access the rich information, digital learning tools and learning objects of the Digital Education Revolution.

Digital teaching and learning resources will be further discussed in part 5 of this report.

Teachers will access these digital learning resources developed for the new laptop computers through the Teaching and Learning exchange web site. Teachers can also view the many digital teaching and learning materials already available through the site.

Software on every laptop will include:

- Windows 7 Operating System
- Microsoft Office Enterprise 2007 - Productivity Suite
- Adobe Creativity Suite 4 including Acrobat 9 Professional Extended, Contribute CS4, Dreamweaver CS4, Fireworks CS4, Flash Professional CS4, Captivate 4, Photoshop Elements 7, Premier Elements 7
- Audio Editing - Audacity 1.3
- Microsoft Internet Explorer 8
- Adobe Flash, Adobe Shockwave, Java, Microsoft Silverlight, Apple QuickTime Plugins
- Interactive Whiteboard Applications including Smart Notebook 10, Smart Recorder, Smart Video Player, ActivStudio Viewer
- Encyclopaedia & Dictionary - Microsoft Student with Encarta Premium 2009
- Maths Applications - Microsoft Maths, GeoGebra, WinKMT, Chess
- Science Applications - Periodic Table, Periodic Table Quiz, Earths Core
- Musical Applications - LenMus Phonascus, MuseScore, Notation Player
- Art and Design Applications - Google SketchUp 7, ArtRage 2 Starter Edition
- Other Learning Tools including Freemind, Student Response Network, QuickMark Barcode
- Multimedia - Apple iTunes, Windows Media Player, CCCP Codec pack

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.

Learning resources are being developed by the NSW DET's Centre for Learning Innovation, the Curriculum K-12 Directorate and the Professional Learning and Leadership Development Directorate and are being placed in the Teaching and Learning Exchange where all teachers and leaders can access them through the internet and intranet. Section 3.4 of this report gives greater detail.

This provision of resources has been informed by research and a significant needs analysis document which identified key areas of learning support required by teachers and leaders. The Department responded to the findings and provided their scope of works mapped against key focus areas highlighted in the needs analysis document. AGQTP also responded with a submission to support schools in their research into best practice in teaching and learning with laptops. Submissions from the main resource providers have been reviewed and monitored by a Professional Learning and Curriculum Support Advisory Group chaired by the Project Leader.

Many learning resources that utilise the opportunities afforded by the Digital Education Revolution wireless laptop solution are being developed. Each resource is being developed to support pedagogy and improve student outcomes based around the NSW Quality Teaching Framework. Each is being developed to help students achieve specific NSW Board of Studies syllabus outcomes and to promote 21st Century skills development in learning activities. Each resource seeks to challenge and engage students by the use of software and learning objects that will both stimulate and give students a rich and interactive learning experience.

Approximately 120 *Laptop Wraps* specifically tailored for the Lenovo device will be available to provide a stimulating and rich learning experience.

A large number of already existing digital learning resources can now also be accessed by every teacher and student using their wireless laptop computer through the Teaching and Learning Exchange web site.

The Program's longitudinal evaluation will monitor the effectiveness of the resources.

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 NSW Department of Education and Training has allocated \$10 million in 2009-10 to enhance teacher capability to support the digital revolution. Schools have received \$6 million, regions \$2.4 million and \$1.6 million has been used to develop professional learning opportunities, courses and materials for teachers at a state-wide level.

Schools will be utilising a number of strategies and structures to support teacher and leader professional learning. These include release time for teachers to shadow, mentor, coach, and work in teams within and across key learning areas and schools as well as regions. Regions will be supporting schools in professional learning by building key learning area and technology networks of leaders and teachers. Regions will also utilise strategies such as action learning, the lighthouse school concept and expert teacher/leader collegial groups to develop resources and build collaborative learning processes across regions.

The Program's longitudinal evaluation will monitor the effectiveness of strategies to develop teacher capability.

TAB B details the strategies being developed and implemented.

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?

4.1 Stimulating and Challenging Learning Resources for Students

The provision of stimulating and challenging learning resources was discussed in Part 5 of this report, as was access to these materials via the Teaching and Learning Exchange (TaLE).

4.2 National Curriculum

Once the English, Mathematics, History and Science national curriculum statements are finalised in 2010, NSW proposes to collaborate with other states and contribute on-line curriculum materials mapped to each curriculum statement.

4.3 DER-NSW is promoting access to the educational tools of the 21st Century to enable the effective delivery of online curriculum by:

- providing all students from Year 9 to 12 with their own laptop wireless computer
- providing state-wide wireless access in all secondary and central schools in NSW. The sophisticated wireless networks being installed in schools together with high-speed internet connection and the powerful laptop computers provided to students and teachers will enable the effective delivery of online curriculum
- providing teachers with laptop computers with the same software and wireless connectivity as students. Only by having their own laptops and consistently using them will teachers become comfortable in exploiting the powerful tools available to them.
- professional learning opportunities. All teachers to be issued with laptops will have undergone relevant training in their use and have access to on-line learning to further their skills. Professional learning funds within their schools will enable teachers to continue their learning.
- a communication strategy targeting all stakeholders.

NSW schools will be well prepared for the advent of an on-line curriculum due to the provision of sophisticated wireless networks, student and teacher laptop computers packed with software, professional learning and active promotion of the DER.

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.

DER-NSW plans to collaborate with other States, Territories and the Commonwealth Government through:

- offering to host a National DER Forum in Sydney
- participating in the establishment of technical standards for digital education
- cooperation at the Chief Information Officer level
- providing national and open access to a wide range of DET developed digital learning resources that will be mapped to the National Curriculum
- Education.au

DER National Forum

In order to foster collaboration between states and territories, DER-NSW has put forward the following proposal for a National Forum to be held in Sydney. The objectives of the forum are to share information on the pathway taken by each state to achieve the objectives of the DER, with specific reference to the four strands of change identified in the Digital Education Strategic Plan, share information on the progress of the DER in each state, explore areas for possible collaboration and set up networks to facilitate further collaboration.

Technical Standards for Digital Education

The Australian Information and Communications Technology in Education Committee (AICTEC) has as its goal *“to encourage the development of technology enriched learning environments across all jurisdictions and sectors that enable students to achieve high quality learning outcomes and to productively contribute to Australia’s society and economy”*.

It will act as an authoritative forum for cooperation and collaborative policy advice to MYCEETYA focusing on the DER component of the Education Revolution Agenda.

By actively participating in relevant advisory groups and sub-committees of AICTEC, DER-NSW will collaborate with other sectors and jurisdictions and contribute to the standards being set for the implementation of digital education throughout Australia.

Cooperation at Chief Information Officer (CIO) Level

The Chief Education Officer meets regularly with Chief information Officers from all states and territories and the Commonwealth as members of the Australian Information and Communications Technology in Education Committee (AICTEC). These meetings and the work of AICTEC (see above) play an important role in collaboration between states and territories.

Access to Learning Resources and Professional Learning Resources

The Department of Education and Training has made many of the resources it has developed available over the internet.

Education.au

Education.au is funded by all Australian governments to develop and provide innovative technology solutions to support Australian government priorities in education, training and careers

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?

Professional Learning (in-service training)

Provision of professional learning (in-service training) has been covered extensively in parts 1 and 3 of this report.

Pre-service Training

While pre-service training is the responsibility of the university sector in NSW, the NSW Institute of Teachers sets the standards expected of graduate teachers and accredits teacher training courses. Graduate teachers must demonstrate current knowledge and proficiency of use of information and communication technologies as part of the standards set by the Institute.

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 Low SES School Communities National Partnership

The NSW Department of Education and Training is committed to the goals expressed in this partnership statement. The provision of wireless laptop computers to all students in the state clearly supports these goals.

Improving student learning outcomes and wellbeing

From the literature review conducted to inform the program, it was found that, overwhelmingly, studies of laptop programs indicate many positive effects for students in terms of both their learning and their sense of wellbeing. These findings are particularly important for students in low SES school communities. Findings from the studies indicate that students:

- are more engaged in learning
- focus on improving their performance
- improve problem solving and critical thinking skills
- have greater self confidence and self esteem.

“We all know that ICT engages children and engagement, of course, is the key to successful teaching.” (Holmes P 2008, Teacher, August 2008, *On your bikes!*, Australian Council for Educational Research)

An evaluation of the project will be undertaken over the next four years to measure the expected improvements in student learning.

Giving students a better start for future employment

Studies of laptop programs indicate that they have a range of goals, commonly including:

- enabling the development of computer literacy skills, especially where students are reluctant to use technology or do not have immediate access to a computer
- preparing students to better compete in technology-rich workplaces
- increasing economic competitiveness of local regions in the global marketplace.

The evaluation of the program will provide a measure of the success of the program with respect to these goals.

Reducing disadvantage and improving school participation within Indigenous communities

Every public school student in Years 9 to 12, including Indigenous students, in NSW schools will have their own laptop computer by 2012.

The report on the results of Indigenous students in the Program for International Student Assessment (PISA) for the Year 2000 (De Bortoli and Cresswell , August 2004, *Australia's Indigenous Students in PISA 2000: Results from an International Study*, Australian Council for Education Research) reveals that significantly fewer Indigenous students indicated that they have access to educational software and the internet.

The Australian Bureau of Statistics 2006 Census reveals that only 43% of households with at least one Indigenous resident reported that they had internet connection compared to 62% of other households.

The provision of a laptop to every Indigenous student in Years 9 to 12 will considerably lessen this disadvantage. Even though the program does not address the lack of internet access from home where no connection is available, indigenous students, like their non-indigenous classmates, will have access to the internet throughout school hours and will have their own computer for use at home for educational and other purposes.

The longitudinal evaluation of the Program will determine the effectiveness of the DER-NSW 1:1 laptop program in overcoming indigenous disadvantage in education.

National Partnership on literacy and numeracy

The literature review conducted to inform the program found that 1:1 laptop programs have positive effects on students' learning. An evaluation of the project will be undertaken over the next four years to measure the expected impact on student literacy and numeracy.

National Partnership on quality teaching

The DER-NSW 1:1 laptop program promotes the Australian Government's reform agenda by developing and enhancing the skills and knowledge of teachers and school leaders through their careers. Three sub-projects of the DER-NSW program will facilitate this reform.

1. Professional Learning

Through the extensive professional learning opportunities available to all teachers the skills and knowledge of the use of laptop computers in pedagogy of teachers will be considerably enhanced.

2. Teacher Laptops

The decision taken by NSW DET to supply all secondary teachers with their own wireless laptop computer will contribute in a major way to this goal. Teachers will have access to a wide range of software to use in their lessons and through the wireless network teachers will have access to a wide range of curriculum and professional learning materials.

3. Learning Materials

Many learning resources which use the opportunities afforded by the Digital Education Revolution wireless laptop solution have been developed to challenge and engage students by giving students a rich and interactive learning experience.

By supplying teachers with professional learning opportunities, their own laptops and with quality learning materials tailored for use on the laptops, DER-NSW will play a significant role in developing and enhancing the skills and knowledge of teachers and school leaders.

How the DER-NSW will meet the needs of schools in areas of growth and regional areas.

The roll out of the laptop computers and wireless networks is occurring in every public high school and central school in NSW, including regional, isolated and growth areas. Irrespective of geographical location, schools will receive wireless network connectivity and support from a school-based Technology Support Officer.

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?

Procurement

In early 2008 the NSW Department of Commerce held meetings with Catholic Education, the Independent Schools and the Block Grant Authority to discuss the participation of non-government schools in the DET NSW procurement program. This idea was not pursued by the non-government sector.

Learning Resources and Professional Learning Resources

The Department of Education and Training has made many of the resources it has developed available to the non-government school sector to ensure that students, teachers and leaders in that sector are able to fully participate in the DER. These resources are available through:

The Teaching and Learning exchange (TaLe)

www.tale.edu.au

The Curriculum CK-12 Directorate:

<http://www.curriculumsupport.education.nsw.gov.au/>

The Professional Leadership and Learning Directorate:

www.det.nsw.edu.au/proflearn/index.htm

DER National Forum

Catholic Education and the Association of Independent Schools will be invited to send representatives to the proposed DER National Forum.

Further Cooperation

Contact has been made with Catholic Education and the Association of Independent Schools to further collaboration in the area of professional learning and learning resources.

How will your sector cater for students with disability?

The Department developed a DER-NSW policy statement for students with disabilities.

Students with Disabilities in Secondary and Central Schools and in Schools for Specific Purposes (SSP) Procedures

1. For the majority of Years 9 to 12 students with a disability in regular and special schools a laptop suits their needs. These students will be allocated a laptop according to processes for other students.
2. However, for some students with a disability other types of technology may be more appropriate to support the student to access and participate in the curriculum.
3. The technology they require may be of greater benefit within a group setting rather than attempting to achieve a particular computer to student ratio.

4. Other types of technology

4.1 Alternate technology may include touch screens, interactive whiteboards, data projectors, software programs, tablets/slates or note takers (DANA, NEO). Advice can be provided by Disability Programs Directorate. Software may be a suitable purchase for schools with only one student not benefitting from a laptop.

4.2 Other access technology is available through different funding programs and should already be in place for students Years 9 – 12. It is not intended that funds from the Digital Education Revolution - NSW Program be used to replace these resources.

5. 2009 model

5.1 An interim model for identification of flexible funding needs was developed for 2009.

5.2 Where a student is temporarily placed in an SSP or accessing a specialist educational setting prior to laptop allocations, the laptop will be allocated to the home school. SSP principals may request the home school principal to transfer the laptop for the student to use while at the SSP or specialist educational setting.

6. Model for 2010 and thereafter

6.1 Starting in 2009, the year 8 Annual Student Review meeting should include consultation with parents/carers regarding the suitability of a laptop allocation in year 9. Parents/Carers will be required to sign the Students with Disabilities Parent/Carer Consent Form if alternate technology is considered to be more suitable.

6.2 Schools will be required to report which students (if any) require alternate technology. The proforma will require:

- a) Name of student
- b) Confirmation that consultation has taken place with parents/carers and that consent has been given for the provision of information and communications technology other than a standard laptop computer using the Parent Carer Consent Form. These forms are to be retained in the school.
- c) Nature of alternate technology.

6.3 This data will be supplied as a component of Digital Education Revolution - NSW flexible funding requests to Disability Programs Directorate. Disability Programs Directorate will, following liaison with the Digital Education Revolution - NSW Program, facilitate the allocation of funding to schools for alternate technology.

6.5 Information will be distributed annually regarding this process.

7. Enrolments in Years 9, 10, 11 or 12

7.1 Students who enrol after their year cohort has been allocated a laptop are entitled to be allocated a laptop or alternate technology.

7.2 Enrolment interviews will include consultation regarding the suitability of a laptop allocation or alternate technology (see 6.2).

7.3 This data will be supplied as a Digital Education Revolution - NSW flexible funding requests to Disability Programs Directorate. Disability Programs Directorate will, following liaison with the Digital Education Revolution - NSW Program, facilitate the allocation of funding for alternate information and communications technology.

7.4 Information will be distributed annually regarding this process.

8. Students who move schools

8.1 There will be a small number of cases where students move from a school where their funding was used flexibly to another school where laptops are in use. While a second allocation of funds is not possible, the school principal may allocate a laptop from school reserves for educational purposes. Alternatively the student may access the alternative information and communications technology already in place at that school. Special cases will be considered for an additional allocation of flexible funding where a laptop is deemed not appropriate. School principals should contact Disability Programs Directorate.

8.2 Students who move to an SSP or specialist educational setting will take their laptops with them as a general rule. The principals may agree to leave the laptop at the home school depending on the circumstances.

TAB A

NSW Implementation Plan for Digital Education Revolution - Expenditure Projections

Category	2008-09	2009-10	2010-11	2011-12	2012-13	5 year TOTAL	Ongoing
	Actual	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Laptops & Flexible Funding	682	73,100	30,100	30,100	30,100	164,082	30,000
Wireless & Other Technology	18,529	74,050	20,050	20,050	20,050	152,729	22,000
Infrastructure	6,874	34,409	4,020	4,740	4,740	54,783	
Software	8,086	2,000	2,000	2,000	2,000	16,086	2,000
Capital	34,171	183,559	56,170	56,890	56,890	387,680	54,000
School Based Support	68	42,500	43,500	46,500	48,500	181,068	40,000
Technical Grants to Schools	-	7,600	7,600	7,600	7,600	30,400	
Professional Development and Curriculum Support	233	10,000	9,000	6,000	1,500	26,733	2,000
PMO Admin	724	3,500	2,000	1,000	-	7,224	4,000
Recurrent	1,025	63,600	62,100	61,100	57,600	245,425	46,000
Total*	35,196	247,159	118,270	117,990	114,490	633,105	100,000
<p>* Funded from the Commonwealth contribution and existing resources of the Department of Education and Training. The projected ongoing expenditure requirement to sustain the 1:1 computer to student ratio beyond 2012-13 is indicative only, as the future of the NSSCF is still uncertain.</p>							

TAB B

TARGET	PROFESSIONAL LEARNING RESOURCE	PURPOSE AND OUTLINE
Leaders: School Education Directors Principals Deputy Principals	<i>Leading the DER NSW in your school.</i> This includes the School Development Day workshops and online on-time digital resources.	This suite of professional learning resources is designed to increase the leadership capabilities of teachers and school leaders in the NSW Department of Education and Training. Each item has been developed to support leaders with the implementation of the Digital Education Revolution. These resources are designed for use by school leaders on school development days or other professional learning opportunities to build strategies for the effective implementation of the Digital Education Revolution across their schools. The modules are designed to be used collaboratively with teachers.
	<i>Facilitative Questions</i>	This resource consists of general guidelines for professional conversations to explore issues such as background, planning, school structures and Risk management in the implementation of the <i>Digital Education Revolution NSW</i> in a school.
	<i>A Guide to Shadowing for DER NSW</i>	Shadowing is an excellent professional learning strategy to assist in the implementation of the Digital Education Revolution NSW for use by staff in a range of roles and situations in our schools. Uses might include: <ul style="list-style-type: none"> • a school leader shadowing a colleague who is further down the track in implementing technology in their faculty or school • a Technical Support Officer (TSO) shadowing a colleague to look at alternative ways of undertaking their role
	<i>Action Research for DER NSW</i>	Action research provides an ideal framework to document, challenge and review changes inherent in the <i>Digital Education Revolution</i> . With such a major initiative there will be a great deal of activity and discussion as teachers explore new processes, programs and pedagogy. Any change in classroom practice will be greatly strengthened through a more formalised approach to discussion, observation and critical appraisal leading to lessons and practices that are tailored to the needs

		of students and the potential of laptops.
	Teachers Talk Laptops	These video resources contain advice and reflections from teachers in leading and managing classroom laptop implementation. The resources will support teachers and leaders as they develop their understandings of how to integrate laptop use into teaching programs
	Students Talk Laptops	These video resources contain stories, advice and reflections from students about how the laptops are influencing their approach to learning. The resources will support teachers and leaders as they develop their understandings of how to integrate laptop use into their teaching programs
	Leaders Talk Laptops	This video resource contains stories, advice and reflections from leaders about how the laptops are being integrated into teaching and learning programs in their schools. The resources will assist school leaders as they develop strategies and amend policies to support laptop use in their schools
	Denison Test Drive	This video resource explores issues involved in the implementation of the DER NSW in schools through interviews with principals, teachers and students talking about planning for and using the laptops during the two week Digital Education Revolution NSW laptop trial at the Denison Secondary Education Campus in Bathurst.
Head Teachers	<i>Leading my faculty</i>	These online modules are designed to support head teachers in introducing and implementing effective practices for teaching with laptop computers. Activities and discussion starters are designed to assist teachers to reflect on their current practice and plan for change.
	<i>Head teachers, teams and laptops.</i> This includes: <ul style="list-style-type: none"> • Collaborative Teams • Leading learning • Remodelling for Laptops • Vision • Way of Thinking • Where do You Fit? 	This professional learning resource is designed to increase the leadership capabilities of head teachers in the NSW Department of Education and Training. Each module has been developed to support head teachers in leading the implementation of the Digital Education Revolution with their faculty and/or team and support them in developing the capacity of their staff. These six modules provide a range of

		resources to assist in both understanding and developing the new capacities needed for teaching in the DER.
Teachers	Getting Started with Laptops	These video resources explore KLA specific strategies for using laptops for teaching and learning. It consists of a collection of videos and podcasts captured during the Digital Education Revolution NSW Teachers' Forum, hosted by the Centre for Learning Innovation, on 6 and 7 May 2009. The forum was initiated by Curriculum K-12 and attended by DET officers, principal, teacher and student representatives.
	DER NSW Festival of Laptop Learning	Digital Education Revolution in NSW and Macquarie ICT Innovations Centre coordinated a Festival of Laptop Learning. A variety of sessions from discussions, debates, and hands on workshops through to formal presentations took place. The festival offered sessions that are just for teachers and sessions that teachers and students can join together. This online conference highlighted the exciting learning opportunities offered to teachers and students through the provision of laptops and associated technology.
	Regional Workshops	Participant in these workshops will explore an extensive suite of resources developed by a group of teachers and head teachers. They will learn how to expand programs beyond the classroom and how to capture that learning to improve student outcomes. The workshops will be converted into on-line self-paced learning modules at the conclusion of the face to face sessions.
	Tools4U and Tools+	The Tools4U series of resources provides support for the various software applications distributed on the wireless laptops. Each Tools4U includes user guides, tutorials, examples of how the applications are being used in an educational context and a range of activities to develop teachers' skills.

The ten educational regions in NSW are also putting forward extensive plans to assist their schools achieve the goals of the Digital Education Revolution.

