

THE READINESS IS ALL: IMPLEMENTING THE LE@RNING FEDERATION

A Discussion Paper prepared by the Le@rning Federation Steering Group

I. PURPOSE

1. This paper reviews progress against the purposes for which Ministers established The Le@rning Federation (the Initiative) within a context of international comparison. It identifies actions that can be taken by jurisdictions, AESOC, individual MCEETYA taskforces and the Initiative to maximise the investment in online content and help realise the considerable benefits of ICT to teaching and learning. The paper has not been developed in consultation with New Zealand and refers specifically to the Australian context.

II. THE LE@RNING FEDERATION IN CONTEXT

2. The Le@rning Federation is an initiative to prepare students for participation in a knowledge society. It addresses one of the three key areas - content - identified in *Learning in an Online World*, the document in which Ministers outlined the requirements for schools to contribute to and benefit from Australia's information economy agenda. The other key areas are infrastructure, professional development, and policy and regulation. These areas were agreed by all education sectors.

International Context

3. Many countries are attempting to transform education systems to prepare students for a knowledge economy and have comprehensive funding programs to support the different elements of this agenda. The shift to a greater use of ICT in schooling is seen as a key contributor to this transformation.
4. Internationally it is not difficult to find countries, regions and agencies with comprehensive policy documents that provide blueprints and establish resourced programs to gear schools to a knowledge-based economy. Examples can be found in the **United Kingdom** (*Connecting the Learning Society* 1997, *Transforming the Way We Learn* 2001) the **USA** (*Visions 2020: Transforming Education and Training through Advanced Technologies*, CEO Forum 2001; *Any Time, Any Place, Any Path, Any Pace: Taking the Lead on e-learning Policy*, National Association of State Boards of Education: Alexandria, VA 2001); **New York** (*Smart Cities New York, Electronic Education for a New Millennium*, New York City Board 2000), **South Korea** (*Adapting Education to the Information Age* 2001), **Finland** (*Education, Training and Research in the Information Society: a National Strategy 2000-2004* Ministry of Education 1999), the **OECD** (*Cities and Regions in the New Learning Economy* 2001) and the **European Union** (*E-Learning Action Plan*, Brussels 2001).
5. These documents contribute to a growing awareness of the implications and potential of a changing learning environment for all students as governments, industry and communities place increasing value on intellectual and social capital and the outcomes of schooling. This context will be reflected in the current update of *Learning in an Online World*.

Australian Context

6. On the basis of other countries' documents, The Le@rning Federation compares well with online content initiatives around the world. However, online content is only one part of the requirement for Australian schooling to prepare future generations to be part of and benefit from an online world, or an information economy. States' and territories' investments in

computers and networks for schools have created a demand for online content. The 1990s saw investment in EdNA Online as a shared resource. Ministers have leveraged off these investments through their collaboration in the development of online content.

7. Other countries have now taken steps well beyond infrastructure and content development. Many have developed comprehensive, coordinated programs to transform their schools. Unless action is taken in Australia to construct a similar knowledge society orientation for schools, we run the risk that the benefits of the Initiative in delivering online content to states and territories will not be fully realised.
8. The states and territories will do much of the work needed to ensure that change occurs in the areas of infrastructure and professional development. States and territories put in the computers and local area networks that created the need for the content and ran the professional development programs that prepared the ground for teacher demand. However, in an increasingly globalised world, Australia's economic survival and future standard of living depends on all jurisdictions achieving at the level of our economic peer group – our OECD partners.
9. At the moment, we do not know with any accuracy how we are placed in terms of infrastructure and professional development in relation to the use of ICTs in schools, let alone knowledge society readiness. Vigorous work is being done by the MCEETYA ICT in Schools Taskforce to gather the data that would give us part of this picture, but we cannot, for example, present a picture of Australia's position in the way the South Korean Government has presented its achievements and shortfalls, nor do we have the longitudinal data and data-gathering capability of the federated United States. In a knowledge economy, where some of our students compete globally for jobs while others compete locally, but with globally comparable skills, these comparisons matter, as does research into the effectiveness of our policy and practice.
10. While sharing of states' and territories' data and ensuring consistency of policies across jurisdictions will greatly assist, there are some areas where additional action is required in the national interest. Bandwidth, digital copyright and interoperability are three such issues.
11. Bandwidth continues to be of concern in the Australian community generally and the education community in particular. Online activity in Australian schools is severely limited by bandwidth capability at a time when countries such as Finland, USA, Singapore, South Korea and Canada are able to develop and deliver content relatively free of bandwidth challenge. The importance of this issue to education is, of course, wider than schooling.
12. If legislation and resultant copyright agency brokerage for digital copyright treats digital copy in the same way as print, with no allowance for transient electronic copy or the technologies of caching, we will see copyright charges blow out beyond affordability and serious barriers erected to technology use in schools. We need a culture that encourages use and reuse of digital material, not one that discourages it.
13. Australian education has been very portable. To retain this quality in the future will require interoperability in the technical, curriculum, assessment, administration, research and social support areas. These will need to be achieved within jurisdictions, between jurisdictions, vertically with Higher Education, childcare and VET and internationally. Uniformity is not required, but interoperability must be achieved.

III. LE@RNING FEDERATION PROGRESS

Terms of Reference

14. Ministers have charged AESOC with three things in relation to online content.
 - 14.1 Coordination and collaboration between jurisdictions.
 - 14.2 The development of digital curriculum resources that are:
 - high quality and online
 - delivered to Australian school systems
 - addressing agreed national priorities
 - supporting Australia's cultural identity
 - linked to essential skills and knowledge for the twenty first century
 - nurturing innovative skills.
 - 14.3 The generation of competition and attracting new developers by stimulating the development of a competitive educational online content market domestically. *Backing Australia's Ability* anticipates this will support Australian curriculum content developers to exploit market advantage globally.
15. To October 2002 the Steering Group focused particularly on matters in 14.1 and 14.2 above. More recently it has given attention to the issues of 14.3. The result of this attention is outlined in paragraphs 28-43 below. The Phase Two Plan and annual deliverables, both agreed by AESOC, are the baseline of monitoring.

Collaboration

16. Collaboration is a significant overhead for the Initiative yet at the same time it is a significant strength and the Steering Group has monitored it closely. All states, territories and the Commonwealth are participating in a coordinated and collaborative manner. New Zealand is now a full collaborating partner.
17. The current collaboration will lead to content that can be used in all jurisdictions. This has been achieved before in Australia, but not on this scale. The difference in this instance, in addition to cost-effectiveness in developing very expensive resources, is the extension of the collaboration into the area of standards, interoperability, accessibility and the capability of the sector to act in a way that lays the groundwork for a future of international educational exchange. The Steering Group will investigate ways in which this value can be captured from the Initiative and built upon for future tangible products and services.
18. In order to maximise the flexibility of use in collaborating jurisdictions, the Initiative chose a model of learning objects within a repository. At the beginning of the Initiative this was a leading edge model, largely untried in the K-12 sector. The model has subsequently gained support in Europe, Canada, the USA, Thailand and South Korea. There is now an international community of schooling, Higher Education and Vocational Education providers using the model. This is important not only as a benchmark of our achievement but to position Australia in an emerging international education community of interest. This will inevitably impact on the internationalisation of some aspects of curriculum as well as trade in both students and workers.
19. The model commits us to work on standards and interoperability. This commitment will have spin-off benefits in relation to learning architectures and the capacity of systems, sectors and schools to integrate a range of information and data to improve educational delivery.
20. Systems and sectors will need to build repositories to receive and distribute learning objects. Although the learning objects model demands a high level of commitment by all Australian jurisdictions it maximises the flexibility of teachers, regions and jurisdictions in the long term.

It lends itself to the growth of ‘communities of practice’ to support teachers in the use of online content. The learning objects model anticipates teachers’ creativity and supports a range of innovative teacher behaviours and flexible roles. At the same time, it can be made to work even if teachers decide they do not want to develop their own units of work or courses. A jurisdiction, agency or regional curriculum developer can take the objects and develop units or courses for use by others. Little is wasted.

21. The Steering Group is confident that the collaboration requirement of the Initiative, as elaborated in the Phase Two Plan, is being met.

Digital Curriculum Resources

22. The model is flexible, adapting readily to a range of technologies such as PDAs, Learning Management Systems, web-based technologies and local storage. The model could be adapted to hosted services or the traditional licence-and-implement approach. As the trickle of content grows to a steady stream the integration of learning objects with other digital and non-digital materials can be tested. There are similar models developing in Higher Education and VET.
23. In the basic e-learning tool set (BELTS), The Le@rning Federation is utilising open source coding, making the code freely available for systems, sectors or developers to use for the benefit of all. This fits with international interest in open source coding. It provides an opportunity for states and territories to test out a promising development and analyse its risks before making a decision about widespread adoption.
24. A strength of the content development model adopted is its user focus and the involvement of significant numbers of teachers and students in trialing and testing at all stages of the development process. This is yielding market information not previously available to the sector or the industry.
25. There are rigorous quality assurance processes in place with stakeholder participation. The Steering Group has sought external governance advice and also receives verification of technical processes from an external expert panel. Priorities have been agreed. Digital resources are starting to flow for trialing purposes and within six months small amounts will be available for more distributed use. The quality and the extent to which the materials support Australia’s cultural identity will be measured as content flows to schools. There are processes in place that gather feedback from users to ensure this part of the brief is met.
26. Essential skills and knowledge for the twenty-first century and the nurturing of innovative skills have been a focus of the development, especially the “Innovation, Enterprise and Creativity” content area. This must also be linked to and measured through the work of MCEETYA taskforces, notably the Performance Measurement and Reporting Taskforce, the Teacher Quality and Educational Leadership Taskforce and the Student Learning and Support Services Taskforce. Related issues have also been taken up with the Review of Teaching and Teacher Education chaired by Professor Kwong Lee Dow. Success in this area will need to be measured as the materials become widespread in schools and are used by students over several years. The Le@rning Federation is not resourced to measure long-term effects.
27. The Initiative is on track in relation to meeting the requirements of the Phase Two Plan in relation to the “development of digital resources” term of reference.

The Business Model

Stimulating a competitive market

28. Chief Executives in the schooling sector are responsible for ensuring schools have appropriate content. This is a priority of the Initiative. The MCEETYA brief, however, is to do this in a way that also stimulates a competitive domestic market for online content.

29. The issue of market stimulation continues to be researched and developed by the joint venture and monitored by the Steering Group. In particular, the Steering Group continues to monitor the business model and make comparisons with other countries.
30. The model adopted is one of expenditure of pooled funds on a range of agreed content in a limited number of curriculum areas. The work is tendered in the market place, project-managed by a joint venture of Curriculum Corporation and *education.au limited* with significant collaboration and involvement of shareholder representatives and stakeholders in a framework of transparent standards and open architectures. Delivery is to system or sector level repositories in states and territories. Intellectual property rights are held by the Ministerial companies on behalf of Ministers and exploited on behalf of the owners for the public good. Content developed with the pooled money is free to Australian schools. Developers benefit by: (1) access to tenders; (2) access to agreed specifications and standards, expectations, quality information and the learning emerging from the initiative; (3) having an identified place to find out what is needed by the schooling sector in relation to digital content; and (4) the development of a user base and improved demand.

Funding for Schooling Sector Content

31. An examination of the documentation from other countries suggests that stimulating a competitive domestic market for online content is a common expectation of schooling sector online content initiatives. Finland, for example, hopes to develop its multi-media content capacity. The European Union acknowledges the lack of quality European online curriculum content and identifies the development of a sustainable e-learning content market as a key challenge. In Europe, as in the USA, there is an emphasis on partnerships between the private and public sector. Europe, like Australia and a number of Asian countries, sees local content as important from both a cultural and a business point of view. The UK plans to build an export industry in online content for schools.
32. Countries that identify online content as a priority area for their knowledge society-driven school change, acknowledge that most school content will be publicly funded. Europe is concerned to get value out of reuse of cultural materials and to ensure quality. Vietnam, Korea, Canada and Singapore want quality and sustainability.
33. No published model includes a shift of cost from the public to the private sectors. Whether paid for by a central agency, a local authority or a school, funding for digital school resources in most OECD countries comes from the public purse. Parents may contribute, or supplement government funding, but this is not a growth market (see "*Digital Learning Resources for Schools: Market Effects of BBC Entry*" British Educational Suppliers Association: London 2002). Capacity to shift school funding into content from other areas, such as staffing or maintenance, is limited. There is certainly capacity to shift spending from print to online resources. However, there appears to be little capacity for attracting new money from outside government. High quality online curriculum content will continue to be generated largely by government spending, whether at the national, state, local government or school level.
34. The Initiative is also ensuring that materials from cultural organisations along with those developed by teachers and commercial companies can be integrated with The Le@rning Federation materials. It is likely that the Le@rning Federation will obtain some content by purchasing or licensing extant material.
35. Many countries are aware of the resources in cultural organisations that can be unlocked for schools. Joint venture staff continue to meet with the National Library, Museums and organizations such as the Australian Children's Television Foundation to share standards and negotiate interoperabilities.

Market Development

36. The model of market development being pursued by The Le@rning Federation is on a par with a number of other countries and has avoided the controversy generated in the United Kingdom by government engagement of the BBC as a principal developer outside tender processes. The Initiative's major injection of public funds is focused on quality content through publicly tendered contracts. We appear to have placed greater emphasis on transparency, standards and provision of open information than many countries.
37. We have not pursued public-private partnerships to the extent of the USA or the declared intention of Europe. Education authorities in the USA in particular have greater experience and confidence than the Australian education community in dealing with big corporations.
38. Active encouragement of teachers to develop and integrate their own materials is prominent in South Korean policy and a central plank of the Oklahoma VISION project. The Le@rning Federation standards are designed to enable this to happen at a local level in Australia.

Profitable Markets

39. As indicated above, schooling sector content, both online and print, is funded from the public purse. The market for schooling sector content in Australia is small. The strongest profitable market for digital content is in entertainment, especially the gaming industry. Within education, profit is strongest in the corporate education sector where there is a growing market for online training in the IT sector, the finance sector and areas where accreditation and regulation mandate training.
40. The schooling sector content market can be extended into the edutainment area or the tutoring/coaching market. Affluent societies have generated a market for educational product outside the hours of prescribed attendance and instruction. This market has capacity to expand. Some content can be extended into the tertiary sector or corporate training sector. Australian developers can use knowledge and experience gained developing content for the schooling sector as the basis for work in more profitable areas or to compete for schooling sector work overseas.
41. As yet we have no Australian analysis of the distance education or home schooling markets either on or off shore. Canada has done work in this area for their home market. In Canada the link between home schooling and online education has led to a substantial 'virtual' schooling market utilising repositories of learning objects. Online learning has potential to reduce the 'digital divide' for the most educationally disadvantaged groups in remote and rural Australia and this is an under-explored market.
42. The Le@rning Federation strategy of trading off some intellectual property for use outside the formal schooling sector market will maximise the opportunities for developers to leverage from the experience and product they develop for The Le@rning Federation while retaining the IP for free use in Australian and New Zealand schools. However, Australia's low bandwidth will continue to hamper Australian companies. The Le@rning Federation product must work within Australian bandwidth at a time when other countries are utilising high bandwidth materials. Download and distribution times are major inhibitors of online content uptake in Australia.
43. We have no information about the displacement effect of online content. Hong Kong and Singapore have targets for curriculum time to be spent using ICT. This amounts to a policy position on the displacement of other forms of instruction, supported by a shift of resources from print to online products.

IV. WHAT WE HAVE LEARNT

The Importance of Research and development

44. An 'added value' from this Initiative is research and development. Benefit should accrue from its inescapable R&D components. Almost every aspect of the Initiative involves some form of research to underpin development.
45. The national nature of the Initiative means R&D can be undertaken and captured efficiently and professionally on behalf of all jurisdictions. Information on learning objects, standards, user-testing, pedagogy, creativity, the manufacturing process, distribution and technical solutions can be made available to shareholders, stakeholders and the market.
46. Research and development is a key component of the information economy agenda, and this Initiative is part-funded from that agenda. If we can capture and exploit this by-product of the work it can be made available to the shareholders as a return on investment. Schooling systems are very short on investment in R&D – a position that jeopardises capacity to deliver into the future. This may be one way in which jurisdictions can drive their dollar investment in the Initiative further.

The Need for Copyright Reform

47. The key issue of copyright payment for digital copy must be resolved in a way that enables schools to cache and manipulate a substantial amount of quality electronic material if the benefits of the digital revolution are to be utilised by the sector for Australian society and its economy. Existing models of licensing for per-copy use are unsuited to the digital environment and will result in increasing proportions of education budgets being allocated to copyright licences. While The Le@rning Federation materials will be free to Australian schools, current digital copyright payment models do not support the goal of teachers assembling online content from a variety of sources.

The Need for Affordable Bandwidth

48. The bandwidth available to Australian schools is now markedly inferior to the USA, Canada, Singapore, South Korea and the United Kingdom. Unless Australia is in this league we will not realise the full benefit of technological change in schooling. Recent government reports on bandwidth acknowledge the demands of education. It is imperative that the schooling sector continues to be vocal and explicit about the urgency of this issue, particularly in relation to rural and remote students and teachers.

Jurisdictional Readiness is Critical

49. The greatest risk to the success of the Initiative relates to delivery readiness within jurisdictions. The Le@rning Federation content will be delivered to jurisdictions. Both government and non-government sectors will need to ensure delivery to schools within a state or territory and this is raising many issues for systems and sectors about the delivery of any online content, some within the control of individual jurisdictions and some requiring a national approach.
50. Jurisdictional issues include the building of repositories, developing expertise and interest in online and blended learning amongst teachers and academics, changing the culture of schools and addressing pedagogy and methodology. Without the Initiative, systems would still need to address these issues. The Le@rning Federation content provides the catalyst because it requires system or sector infrastructure in order to be usable by schools. The Joint Venture Office is working with jurisdictions in relation to repositories and learning management systems but the commitment and programs for achieving readiness lie with individual jurisdictions.

51. The availability of teachers and other school staff willing, confident and able to use digital curriculum content and school leaders committed to supporting such use for the benefit of students will be essential components of success.

The Need for Collaborative National Policy

52. These issues are substantial and will put pressure on individual jurisdictions to match, from a modest funding base, the achievements of other countries. It is likely that even larger states with broad funding bases will find it difficult to manage the changes required on their own.
53. Countries (such as South Korea, Thailand, Singapore, UK, Finland, Sweden, USA) with an articulated plan for knowledge-economy driven changes in schools have an advantage over the more distributed and piecemeal approach of Australia. Not only do we lack a comprehensive framework of policies to support the change we are undertaking, but also we have no strategic funding programs to support that change, other than content. Collaborative national work can support jurisdictions by doing once, work that would otherwise be replicated in each jurisdiction. It also, however, needs to deliver sufficient national consistency to fully support an information economy.
54. Considerable related work is being done by the MCEETYA ICT in Schools Taskforce, much of which will be captured in the successor document to *Learning in an Online World*. A significant part of the work of this taskforce (in areas such as learning architectures, bandwidth and research) relates to the change agenda for a knowledge economy, particularly to the infrastructure components.
55. There are components in the work plans of other MCEETYA Taskforces that will help to support Australia's information economy agenda. The Teacher Quality and Educational Leadership Taskforce, for example, has the task of investigating and reporting on the implementation of a *National Standards Framework for the Teaching Profession* by 2005. Such a framework is likely to include recommendations about ICT-related standards.
56. The Performance Management and Reporting Taskforce has tasks relating to the collection of school statistics and for developing assessment instruments and key performance measures for reporting on student skills and knowledge in relation to ICT. The Schools Resourcing Taskforce has the continuing task of influencing the operation and review of the Copyright Amendment (Digital Agenda) Act 2000.
57. The Student Learning and Support Services Taskforce is working with the ICT in Schools Taskforce to prepare a pedagogy strategy that will be a key part of *Learning in an Online World*.
58. DEST has done and is doing some work in some of these areas (*Information Communication Technology Policies for Education and Training* Department of Education, Science and Training, Canberra and *Raising the Standard*, Department of Education, Science and Training Canberra 2002) and the Review of Teaching and Teacher Education.

V AREAS LIKELY TO IMPACT IN THE FUTURE

59. There are a number of areas related but tangential to The Le@rning Federation work that jurisdictions will need to consider over the coming years. Each will impact on schooling services and affords opportunities for strategically directed collaborative work.

Schooling Models

60. Teachers who are successful in using online curriculum content and able to tailor delivery to the needs of individuals and particular groups of students will need different support structures in their schools. They will need technological support such as learning management systems, ready access to student and community data, flexible, secure and supportive assessment tools and systems, diagnostic services, wireless technology and good communication systems to name a few. These may be configured as a suite of services.
61. Teachers will also need well-designed, flexible spaces, the capacity to specialise, to work in teams of professionals and paraprofessionals and new professional structures. These adaptations will challenge the basic geographic and peer-group organisation of schools.
62. Thus, widely available online content will not only affect the market but may also alter more profoundly our model of schooling. Changes of this nature require a rethinking of models of schooling sector resourcing and could result in different funding allocations and arrangements to those we currently accept. At least one jurisdiction, for example, has moved from the traditional capital expenditure model for ICT funding to a more future-oriented and sustainable recurrent expenditure model. Canada's experience of technology-supported home schooling is another example of a changed model.
63. The online content being developed by The Le@rning Federation is well suited to delivery based around the needs of individuals or small groups. It is also well suited to the 'new basics'. Most schools, however, are not currently organised to deliver to individuals or small groups and conventional teaching has not modelled the 'new basics'. The Le@rning Federation can play an important part in this change, but it will not, of itself, achieve that change. Online curriculum content must be viewed as one component in these larger reforms. Educational leaders must understand how to use online content to advantage to complement other changes taking place in schools.

Online Assessment

64. Although some assessment authorities in Australia have pursued this issue it has not received the same attention that it has in the USA or even more particularly, in the UK. Australia shares neither the culture of examinations in the UK nor the culture of testing of the USA. Online assessment is a priority in cultures that are exam-oriented, content prescriptive and which spend significant funds on marking exam papers. We spend less on marking examinations than the UK in both absolute and per-capita terms and therefore have less capacity to save money by machine-marked assessment.
65. Online assessment does not necessarily mean multiple choice. Universities in both the USA and the UK are producing tools that can decode at least sentences. High stakes assessment brings high risk of litigation if technology fails. There is a large and less risky market for low stakes and formative assessment which is attracting companies that pioneered online content because there is so much money to be redirected from off-line to online marking. While this area is unlikely to play out quite so directly in Australia, successful online content will inevitably attract interest in related online assessment. Online technologies can provide teachers with well-constructed, secure assessment items to be used when the learning dictates, supporting individual progress and outcomes based curriculum.

Excluded Groups

66. The 'digital divide' has produced international interest and research. Emerging from this is a strong argument for the tailoring of content and the need for at-risk groups to be involved in the development and evaluation of materials for their own communities. The literature around this discussion now strongly suggests that local content and information is the key to engaging excluded communities. The Le@rning Federation user-testing program can engage at-risk communities and could produce some evidence of the suitability of learning objects to

adapt to local use and integrate with local interests and issues. This has particular importance in meeting the needs of indigenous communities. The joint venture needs to have reliable and ongoing advice from aboriginal educators and aboriginal communities, disability experts and students with disabilities, rural schools and other communities at risk.

Supply Chain Analysis

67. Reform in supply-chain and transaction applications has transformed industries and realised significant efficiencies. Some consideration of this issue for education is implicit in the learning architectures work of the ICT in Schools Taskforce. It is also raised in *E-Business In Education* (National Office for the Information Economy, Canberra 2002). If we are successful in producing online content that schools use with enthusiasm, schools will want to incorporate content into the whole student lifecycle and reap the benefits of supply chain transaction applications. While this is not within the brief of The Le@rning Federation it is likely to be an unintended consequence that could have very significant impact on schooling.

Research

68. To innovate and to produce innovative students requires schools to be research orientated. Teaching increasingly relies on and contributes to research. Educational policy is dependent on a sound research understanding. Information and communications technologies make it feasible to provide teachers with ready access to current research as well as the capability of communication with researchers to develop an engagement of researcher and practitioner. The possibility of establishing such a facility, comparable to those available in law and medicine, are being explored by the ICT in Schools Taskforce. This need is matched in Higher Education and VET.

VI. JURISDICTIONAL READINESS

69. Readiness is a critical issue for jurisdictions in 2003-2004. It includes repositories, infrastructure and plans for delivering learning objects to schools as well as preparing teachers to use them.
70. In order to distribute to schools in 2004 or thereafter jurisdictions will need:
- a standards-compliant repository able to receive Le@rning Federation content
 - a tested and reliable means of all schools accessing the repository or receiving the content
 - a plan to introduce or recommend a learning management system or equivalent
 - all schools aware of the Initiative and prepared to incorporate online content into teaching programs
 - a strategy to influence the culture of schools to ensure online content is welcomed
 - an interoperability strategy to ensure schools can integrate online content with student information, assessment, financial and human resources data
 - principals ready and able to provide leadership in online learning
 - a strategy for teacher readiness.

VII NATIONAL COLLABORATION TO SUPPORT READINESS

71. Achieving the level of coordination necessary for our students to be amongst the best in a global knowledge society is a major challenge for the K-12 sector. In order to deliver, jurisdictions will need support from MCEETYA and its taskforces. In the current competitive global environment, national policy frameworks and programs are required. National frameworks and programs ensure consistency, promote best practice, and cut costs while speeding up adaptation to new learning environments.
72. The current MCEETYA taskforce structure should ensure coordination and consistency in collaborative effort. ICT pervades the strategic priority areas of all taskforces. The following paragraphs give an indication of the work of the individual taskforces that will be vital for maximising the benefit of The Le@rning Federation.

School Resourcing Taskforce

73. The impacts of various approaches to copyright payments for digital resources need urgent consideration. This will require modelling the impacts, devising new approaches, forming alliances with other bodies with common issues to the schooling sector and influencing the Review of the Copyright Amendment Act (Digital Agenda) 2000. This needs to be approached separately from and with different expertise to any legal analysis of our current compliance obligations.
74. The recurrent nature of ICT-related expenditure in modern schooling systems needs to be modelled and analysed in conjunction with the ICT in Schools Taskforce. If linked to an analysis of the potential benefits of information communications technologies to supply chains in the schooling sector, analysis could identify models that impact on funding formulae and the efficiency of service delivery. It is likely that new business models for schooling will emerge from this analysis.

Teacher Quality and Educational Leadership Taskforce

75. The changes required to integrate online content into schools in a way that will achieve a re-orientation to a knowledge society requires new skills, orientation and organization of teachers. These changes need to be integral to teacher training programs and the culture of schools. Consideration might be given to policies of other countries such as Finland in this area. The Review of Teaching and Teacher Education also provides an opportunity in this regard.
76. Leadership is particularly important if we are to bring communities with us. School leaders are in a position to develop community understanding and expectations, shaping what education might look like in the future and local capacity to exploit information communication technologies.

Student Learning and Support Services Taskforce

77. Appropriate and research-based pedagogies to support teaching and learning into the future, to sustain life time learning habits and encourage enterprise and innovation are required if The Le@rning Federation resources are to realise their potential. This taskforce is working with the ICT in Schools Taskforce to achieve this outcome in the context of *Learning in an Online World*.

Performance Measurement and Reporting Taskforce

78. This group is charged with developing and overseeing implementation of contextually appropriate high quality national key performance measures in, amongst other areas, ICT.
79. Enabling the collection, production, storage, dissemination, quality assurance and reporting of national data in relation to ICT in schooling is critical if we are to take a change agenda forward.

Taskforce on the Transition from Schools

80. Work in areas such as attitudes, skills and dispositions for lifelong learning, enterprise education initiatives, the increasing range of pathways, participation measures and responsiveness to labour market and industry changes all directly relate to the reshaping of schooling to support a knowledge society. It is important to make explicit the value and relationship of this work to the standards and interoperability work triggered by The Le@rning Federation.

Taskforces on Targeted Initiatives of National Significance and Indigenous Education, Employment, Training and Youth

81. Although The Le@rning Federation joint venture seeks to ensure consultation and trialing of materials with targeted groups, including indigenous communities, there is need for proactive measures to ensure that knowledge society driven changes reduce rather than expand divisions and disadvantages experienced by particular groups in Australia. These two taskforces may be able to link to and leverage from Le@rning Federation work.

ICT in Schools Taskforce

82. The issue of bandwidth cost and availability to all Australian schools is a critical one if Australia is to be able to successfully benchmark itself against OECD countries. Unless this issue is addressed as a matter of urgency Australia can expect to fall further behind other countries and to lose the advantage it had as a result of early action in relation to online content.
83. Of equal importance to bandwidth is a coordinated and integrated national policy on schooling for a knowledge society with programs and resources to match. Such policies and programs need to cover requirements to impact on society as well as economy. Programs are needed to target key change areas and link to the work of other taskforces.

VIII. SUSTAINABILITY

84. The Le@rning Federation is a five-year project. Consideration needs to be given now to the sustainability of its products beyond June 2006. Ministers may also wish to consider proposals that enable Australia to maintain the strategic edge derived from The Le@rning Federation R&D. Given that internationally content for schools is government funded, we need to ensure the impetus for shared online materials continues beyond 2006.
85. Quality control and market stimulation are continuing foci. There is no room for complacency about standards, nor about the continuing development of technologies and markets. The Steering Group and the boards of the joint venture companies must continue to monitor these areas, engaging expertise outside the sector where necessary.
86. Collaboration, while time and resource intensive, is the cornerstone of the Initiative. Efficient means of achieving involvement of jurisdictions will continue to be pursued by the Joint Venture Office and reported to the Steering Group.
87. The work of taskforces needs to be linked to achieve coordinated change. No one taskforce can achieve the coordination, which by its very nature, requires that the agenda be embedded and embodied in all areas.
88. The Le@rning Federation will, in the medium term, provide a substantial proportion of content hosted and delivered to schools. It will make a significant contribution to the life of a school. It will also stimulate demand for further online content development. The online

content is by no means the only benefit to derive from The Le@rning Federation funding. R&D emerging from the Initiative is a valuable asset for AESOC and participating systems.

89. While many other countries indicate concern about the sustainability of online content provision, we have a greater risk to the extent that we do not have a coherent, planned and resourced national framework for schooling for a knowledge society. It raises the chances that delivery readiness will not be consistent across the country and reduces the chances that the content will achieve the hoped for change.