

online curriculum content investment agreement 2006-08

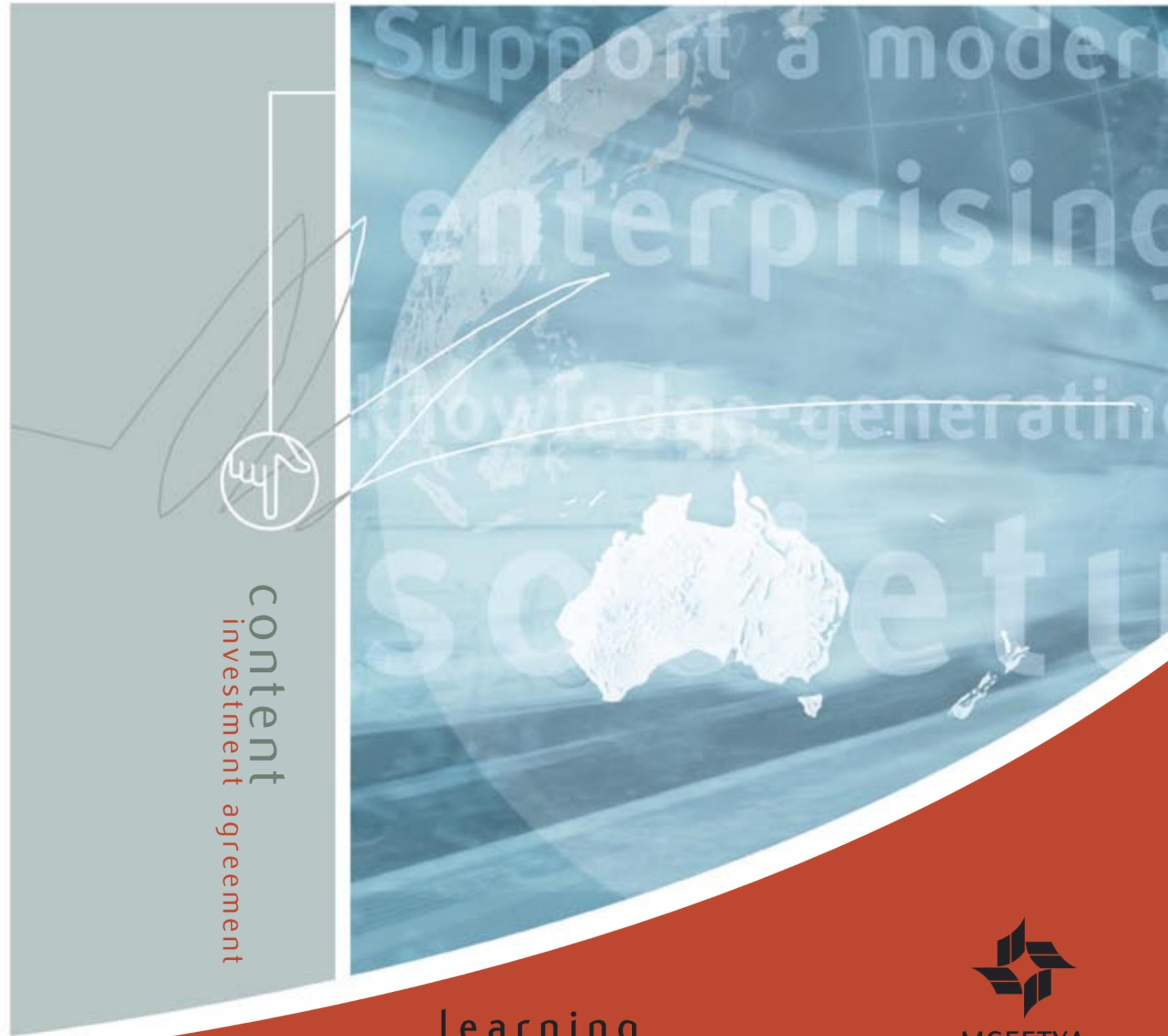
online curriculum content targets

2006-2008

- A further 4000 items of high quality, globally-recognised, online content for all Australian and New Zealand schools.
- A workable framework, standards and structure for the sharing of online curriculum content between jurisdictions within Australia/New Zealand and with other countries.
- An interoperable framework and support for the sharing and peer-reviewing of teacher-developed online resources.
- Brokered arrangements with vendors to support distribution and use of educational content in schools.
- Consolidated schooling sector support for a local education content industry.

2001-2005

- Produce a pool of online material in areas of high priority.
- Produce the online material within a framework for distributed access to state and territory gateways.
- Develop online materials that represent the best education available or conceivable in the twenty-first century and will engage teachers and students in the construction of learning and in creative and critical thinking.
- Encourage a marketplace for high quality public and private online curriculum content.
- Support the growing innovations, enterprise and knowledge economy priorities of state, territory and Commonwealth governments in Australia.



MCEETYA

Australia - New Zealand



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Australia - New Zealand

learning
in an ONLINE world



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Part A

introduction

1. Purpose of this Document

This document presents Ministers of Education in Australia and New Zealand with the information and rationale for a further three year investment (2006-2008) in online curriculum content for Australian and New Zealand schools.

2. Investment Objective 2006-08

MCEETYA's goal is that online curriculum content be used in all schools in Australia and New Zealand to increase learning effectiveness and to support a modern, enterprising, knowledge-generating society¹.

This online curriculum content investment proposal will support the MCEETYA goal by producing, in the period 2006-2008:

2006-2008 Targets

- a further 4000 items of high quality, globally recognized, online content for all Australian and New Zealand schools
- a workable framework, standards and structure for the sharing of online curriculum content between jurisdictions within Australia/New Zealand and with other countries
- an interoperable framework and support for the sharing and peer-reviewing of teacher-developed online resources
- brokered arrangements with vendors to support distribution and use of educational content in schools
- consolidated schooling sector support for the local education content industry.

3. Assumptions

The MCEETYA content goal expresses a vision of students equipped to embrace and excel in a 'new economy'. A number of key assumptions underpin this goal and consequently underpin this proposal.

- Schooling is an essential foundation for a 'new economy' future.
- Effective, quality online curriculum content is a cornerstone for schooling in such a future.
- Australian and New Zealand schooling must remain at least as globally competitive and advanced as it is currently.
- Technological proficiency and technology application in all schools for all students is essential.



¹ *Learning in an online world: content strategy* (the Content Strategy)

Part B

current position

4. Results of Past Investment

The Le@rning Federation is in the fourth year of its five-year term. Content has begun flowing to schools. In January 2005 over 5000 schools in government and non-government sectors have access to The Le@rning Federation content developed to date and the response of teachers and students from trials is very positive. At this stage there is every reason to expect that, by June 2006, The Le@rning Federation will have met the objectives for which it was established.

Current projections indicate that at the end of the period July 2001 - June 2006 the Initiative will have produced 4 500 items of content for use in schools in Australia and New Zealand. These will be held in a central repository and also downloaded into repositories in all states and territories and New Zealand for use in both government and non-government schools.

4.1 Companies' Report

The joint venture companies report that after three and a half years of operation and with eighteen months of the project remaining The Le@rning Federation is on target to meet its five terms of reference.

2000-2005
Term of Reference 1

Produce a pool of online material in areas of high priority, namely:	
Innovation, Enterprise and Creativity	All year levels
Languages Other Than English (Chinese, Japanese)	All year levels
Literacy	Years 5-9
Numeracy and Mathematics	Years P-9
Science	Years P-6 and 9-10
Studies of Australia	All year levels

The Le@rning Federation is publishing two types of content, learning objects and digital resources. The digital resource collection comprises still and moving images and sound files derived from Australian and New Zealand cultural and public institutions such as museums, galleries and archives. In February 2005 the Initiative is on its production target with five hundred learning objects and one hundred digital resources published and available for use in schools and teacher education. By June 2005 this figure will grow to a total of 1500 items and 4500 by June 2006.

Online content is in production in all priority areas. To date material has been released for general use in Literacy, Numeracy and Mathematics, Studies of Australia, Innovation, Enterprise and Creativity and Science.

2000-2005
Term of Reference 2

Produce the online material within a framework for distributed access to state and territory gateways

The Le@rning Federation has produced a sophisticated content repository within which content can be developed, managed and distributed to education systems and sectors. The repository is based on international-standard architecture and specifications with associated metadata and digital rights information. It represents a valuable asset for use in both the current and any future education sector content production initiatives.

2000-2005
Term of Reference 3

The development of the repository has required significant national collaboration on interoperability standards within an international framework, resulting in the adoption of agreed standards and widespread understanding of their significance within the schooling sector. It is linked to work in both VET and Higher Education nationally and internationally.

Develop online materials that:

- represent the best education available or conceivable in the twenty-first century
- will engage teachers and students in the construction of learning and in creative and critical thinking

The initial joint venture work established processes and networks to determine the scope, focus, standards and delivery of the online content. As a result The Le@rning Federation ensures high quality, accessible, published content. Efficient Curriculum Area Reference Groups and Expert Focus Groups engage the profession in the debates and challenges of creating content combining subject rigour with the capacity for creative and critical thinking. The joint venture has recruited the best expertise in Australia in key fields.

This strategy has resulted in consistently positive responses from a broad range² of teacher and student participants in hundreds of in-school trials conducted across Australia and New Zealand. Its success is reinforced by The Le@rning Federation's internationally-acknowledged position as a producer of superior quality content, and the growing interest from players in key international education markets (such as the UK, France, Thailand, Mexico and Canada) in using The Le@rning Federation's content in off-shore schools.

The structures and goodwill developed to achieve this outcome represent a national asset.

2000-2005
Term of Reference 4

Encourage a marketplace for high quality public and private online curriculum content

By commissioning content rather than producing it in-house and by a rigorous program of support for developers and industry members, The Le@rning Federation underpins growth, skills and knowledge amongst private sector producers of educational digital content. Regular industry forums, seminars and communications continue to provide a channel for schooling sector links to the online content industry. A closer connection between the education sector and multimedia producers (who are generally more informed, skilled and capable of meeting the education sector's needs than they were prior to the Initiative) is of long-term value to the marketplace.



² In-school trials include indigenous, "at risk", non-English speaking and physically and mentally impaired students.

2000-2005
Term of Reference 5

Support the growing innovations, enterprise and knowledge economy priorities of state, territory and Commonwealth governments in Australia

Intellectual property sharing, digital copyright and interoperability standards are areas where The Le@rning Federation is making a contribution to the creative industries' priorities of contributing governments. Progress in these difficult issues underpins the education export industry as well as multi-media industries. Although licensing arrangements are still taking a long time to negotiate with ten governments, the fact that progress is being made and will transfer outside this Initiative, is itself a significant achievement.

While The Le@rning Federation is focused on the schools sector, the knowledge and skills gained are being shared with other segments of the education sector, especially VET. This leverages the benefit.

Additionally, the knowledge developed by The Le@rning Federation in content reuse and distribution, as well as some of the content itself, is applicable to both on and off-shore industry development work of contributing governments.

4.2 External expert reviews & evaluations

Targeted studies have been regularly commissioned by the AESOC Le@rning Federation Steering Group throughout the Initiative.

4.2.1 Infrastructure development

Quarterly Expert Reviews of the Exchange development have been undertaken three times a year.³

4.2.2 Cost-effectiveness

Modelling in *Cost-effectiveness of shared development of online curriculum content beyond 2005*⁴ demonstrated that it is more cost-effective for all jurisdictions if the base-line provision of online content is managed nationally, particularly if the Australian government contributes at the current MCEETYA-agreed level. This study concluded that there was merit in diversifying the procurement model, which had necessarily focused on development of new content through tendering processes. Such diversification over time is a key part of cost-effectiveness. The future model makes use of many public and private assets. It builds the capacity of teachers to effectively use, propagate and contribute online content. It will help schooling systems manage the risks associated with widespread online content use and aggregation by teachers and students. The Initiative is already moving in these directions.

A follow-up study, *Cost-effective options for online curriculum content beyond June 2006*⁵ provided costings of various model combinations and the basis of costings for this proposal.



³ See minutes of Steering Group meetings of February, May and November each year.

⁴ Murray C and Taylor G. Presented to AESOC in February 2004.

⁵ Murray C. Presented to AESOC in November 2004

4.2.3 Content and its use.

External experts have now made two annual reports on the Content⁶ at the request of the AESOC Steering Group. In addition Professor Peter Freebody is currently contracted to analyse and report on the responses of teachers and students as they begin to implement the material in classrooms. The latter study is using data collected in the early implementation stage from all states and territories and will be finalised in May 2005.

In January 2005, Canadian researchers, Drs Muirhead and Haughey made the following assessments.

- The Le@rning Federation progress and thinking is in line with comparable international best practice.
- The Le@rning Federation products are of global standard “both technically and pedagogically”.
- In line with international direction over the last 18 months issues of pedagogy, scaffolding, design, reusability and accessibility are being addressed.
- Product management is flexible and adaptive, seeking and using feedback and continuously improving design, navigation and assistance. It was the reviewers’ assessment that these processes are building capacity in schooling across Australia and New Zealand.
- Procuring content with high levels of educational quality control continues to be a priority. This is essential for capacity building and to enable the education sector to reap the transformative benefits of ICT.

Their one area of criticism is the failure of The Le@rning Federation to establish ‘communities of practice’ around the use of its content. The reviewers acknowledge that this falls outside the current scope of The Le@rning Federation but argue that a community of practice across Australia and New Zealand will be critical to successful future implementation.

A community of practice mechanism can be built into the collaborative content work 2006-2008 to support professional learning of teachers. Alternatively this issue can continue to be the exclusive responsibility of jurisdictions.

Muirhead and Haughey summarise:

The findings underscore the significant progress The Le@rning Federation continues to make in achieving the goal of enhancing learning through providing educators with digital learning materials. The international leadership position of The Le@rning Federation remains intact. No similar project has emerged and The Le@rning Federation continues to pioneer content development and the expansion of interoperability throughout Australia and between New Zealand and Australia. (2005 p7)

The Le@rning Federation Steering Group has also commissioned two annual



⁶ Muirhead W and Haughey M *Review of Content Phase One* September 2003, *Review of Content Phase Two* January 2005 www.thelearningfederation.edu.au.

4.2.4 Market linkages

reports on Market Linkages⁷. In January 2005, Convergent Consulting (Sydney) identified three key global trends and developments that they expected to impact future strategies in the development of curriculum content and its distribution and usage in the schools system, namely:

- teachers and students will actively gain access to digital curriculum content from a number of potential sources (both inside and outside the school systems);
- the barriers restricting the global development and exchange of curriculum content are eroding; and
- there continues to be little direct investment in K-12 digital curriculum materials.

Australian and New Zealand cultural relevance also becomes an issue if we wish to remain a net exporter of education. Overseas students purchase a particular 'brand' of education based in quality and cultural expectation. Educational quality, therefore, remains an imperative and reinforces the Muirhead/Haughey conclusion that instructional design focus within a significant government investment in The Le@rning Federation is giving Australia and New Zealand a leading edge in digital content integration in schooling at the moment.

Also, Convergent predicts these trends will create the need for local and regional repositories that are consistent with international standards. Consistent standards and intellectual property regimes across Australia and New Zealand are therefore of high priority.

The report raises the issue of teachers beginning to develop their own content, sharing at local or regional level and needing guidance and assistance to do that effectively. This is taken up in the investment proposal.

Convergent found that The Le@rning Federation has adapted to shifts in the market in a number of ways, including:

- assisting content developers become globally competitive and
- broadening the potential sources of content available to schools.

In terms of future market linkages work, Convergent recommended:

- developing an applied research program into the fundamentals of e-learning
- developing a program for integrating digital curriculum content into the schooling system
- facilitating the bundling of The Le@rning Federation content with other learning system components.



⁷ Flavel G, Convergent Consulting *Review of Market Linkages Phase One* September 2003, *Review of Market Linkages Phase Two* February 2005. www.thelearningfederation.edu.au

- 4.2.5 Cross-sectoral Links** Strategic links have been made between the Content Strategy and the Australian Flexible Learning Framework for the National Vocational Education and Training System 2005-2007.⁸
- 4.2.6 Evaluation against Terms of Reference** A full-scale evaluation of the joint venture's delivery against its terms of reference is being undertaken in the final year of the five year project (2005-2006). It will commence in July 2005 and be available in 2006.
- 5. Recognition of Intangibles** The current Initiative will deliver 4500 items of content by June 2006, representing value for money on product. Ministers, however, also derive a number of other, less tangible benefits from their investments. Some of these are outlined below.
- 5.1 Progress in IP and copyright sharing** Although, for over a decade, Ministers have collaborated in some measure to share intellectual property in specific instances and to negotiate with copyright agencies, there has been no concerted attempt to systematise approaches or licensing arrangements for sharing or managing intellectual property within the sector. The digital environment has created new challenges, removed any advantage in competition between jurisdictions while exacerbating dilemmas and cost factors.
- Copyright will continue to be an issue unless specifically addressed. The licensing regime of The Le@rning Federation provides an incentive, a pressure, a forum and a practical, high profile example to drive national solutions with reduced risk to individual participating jurisdictions. Advances are steadily being made in periods of 18 months to two years, frustratingly slow for a content project, but which would otherwise take decades. The need for solutions and advancement in this area will accelerate in 2006-2008 as digital content use expands in both schools and communities and as free trade agreements kick in. There is no way forward except for relentless negotiation using specific proposals.
- 5.2 Standards** In the four years of The Le@rning Federation, the Australian/New Zealand schooling sector has become more internationally interoperable, more consistent across jurisdictions and more internally consistent within each jurisdiction. While most of the collaboration and analysis that has led to this situation has occurred through the ICT in Schools Taskforce and AICTEC, The Le@rning Federation has been both a driver and a laboratory in which the advances have been proved. Such rapid progress has only been possible with a high profile, focussed, collaborative project. Ministers will continue to reap benefits in this area through 2006-2008. In a federation, even with goodwill, this result is unlikely to be achieved without either coercion or the driver of a jointly-owned high stakes initiative.
- 5.3 Research and Development: shared learning, shared risks** Online curriculum content largely constitutes a green-field development at a time when education departments cannot sustain R&D branches and when the Australian and New Zealand markets are not large or lucrative enough for the nascent educational content industry to invest significantly in R&D. At the same time, future curriculum issues require that governments benefit from the ideas and advancement that comes from staying ahead in this field. This collaborative initiative provides a way of managing the risk of R&D to any one government while staying well-informed.



⁸ Relationship between The Le@rning Federation and VET Interoperability Specifications February 2005.

5.4 The leveraging effect of a high profile initiative

A large initiative, with so many significant shareholders and with strong industry links, attracts a range of other opportunities and initiatives. This includes applications in VET and Higher Education, interest in content sharing from other countries (currently the UK, France, Mexico, Thailand and Canada) and applications in other educational areas (for example specific subject areas, assessment and professional development). These have a higher chance of developing into viable projects because they build on the significant base of The Le@rning Federation and can be placed in a context by teachers, parents and developers. Thus the Initiative opens up further growth in the intellectual and educational capital of the countries and jurisdictions involved.

6. Community and School Change

The schooling sector, like the rest of society, is undergoing significant change as the world economy shifts from manufacturing to service dominance, as sustainability is challenged by greenhouse gas emissions as well as shortages of non-renewable resources and as technology reduces communication barriers while unlocking information to millions. Schooling contributes to human capital growth, social capital growth and the development of cultural capital. Schooling systems are embedded in local communities. At the same time, systems (and parents) monitor trends in other countries and continents and compare data on student performance and pathways across the globe. The export of educational services is a significant contributor to the Australian and New Zealand economies.

Technology plays a pivotal role in this change. It supports data collection, comparisons and analysis, enables responsive redeployment of resources, and provides ways of simulating, explaining, instructing, informing, interacting, demonstrating, provoking, questioning, tracking and providing feedback.

Online curriculum content is only one part of this change. It is, however, a part that can be effectively and efficiently shared and reused at local and national levels, indeed at an international level, to support, in a tangible and measurable way, the task of systems, principals and teachers to drive change at the rate most beneficial to the community. While the content itself is an essential product, the research, rethinking and revision of educational delivery created by a large flagship initiative is equally valuable and useful. Participating jurisdictions can use this initiative to push local changes beyond what is possible alone.

7. Tension of Conservatism and Innovation

There are many reasons why schooling systems might be innately conservative. Schools are now among a few institutions (if not the singular institution) in Western society providing, for all citizens, a sense of familiarity and common experience from generation to generation. They are necessarily protective of children and carry responsibility for instilling common foundational community values. Workers in the sector are employed in large numbers for long periods of time after years of education themselves and focus on local groups of students in an industry that works to the same cycles year by year where protection and continuity are rightly valued highly. The weight of tradition and experience reproduces rather than changes patterns of behaviour.

The resulting culture needs to be challenged and opened to innovation if we are to make the shift to the social and economic future predicted for our countries and the globe. The Le@rning Federation has proved a vehicle for challenging content structures, pedagogical assumptions and delivery methods. The 2006-2008 investment will continue this, building online content that can take users from where they are to more innovation-focused options. A collaborative venture is one step removed from the many local pressures for the present to resemble the past and can therefore be used more easily to leverage local change. While demonstrating what is possible through collaboration, it builds on technologies familiar to quite young children and supports teachers to work with the skills of the present student cohort.

8. Strength of National Collaboration

An initiative such as The Le@rning Federation is difficult to establish and undertake. While there are examples of smaller national collaborations succeeding in Australia, the scale of this one, the number of areas in which it required and achieved agreement, the extent of research and development required, along with the number of its delivered products, has broken new ground and make it unique and important. It's results are transferable into other areas where jurisdictions may choose to collaborate. It is also timely, occurring when Australia and New Zealand are amongst the leading nations in education and when education is a major export for all jurisdictions. Maintenance of this position is a driver for future collaboration.

Part C

future investment

9. Strategic Goals

The goals for 2006-2008 build on the success of the last four years and support the declared policies of the Ministers of Education.

Goal One

Meet raised expectations of students, parents and teachers

The Le@rning Federation Initiative is a tool to move quality online curriculum content use from an elite, early adopter activity towards an “every teacher, every school” activity. As spread is achieved, the expectations of teachers, students, parents and industry rise, prompting governments to ensure demand is met and no students are left behind.

Only the most pressing priorities, topics and year levels have been covered in 2001-2005. As use of the current content spreads so does demand for broader curriculum coverage both within current priority areas and in untouched areas. This is especially true in the context of nationally consistent curriculum. It is now possible to use a broader range of procurement models to widen curriculum coverage, tapping into and improving extant content.

Goal Two

Support and accelerate the transformation of schooling

The collaborative nature of The Le@rning Federation is building capacity in schools, individuals and participating jurisdictions. This will be further realised in 2006-2008. High quality online curriculum content is pivotal in the successful transition of schools and schooling. Designed with the best available pedagogies, online curriculum content enables interactive, conceptual learning. The Le@rning Federation content is focused on constructing and creating knowledge, making both teaching and learning more effective. It has proved highly motivating, uses the skills and experience of contemporary students, encourages innovation and supports modernisation.

Educational transformation to meet the needs of a ‘new economy’ requires the effective integration of ICT with 21st century curriculum and delivery. Of itself, online curriculum content is not sufficient to achieve ICT integration, but it is necessary and without it other elements are wasted. It provides leverage for innovation and productivity. It can be customised, individualised and applied to ‘just-in-time’ learning.

Goal Three

Realise the value of current assets

There is significant value in the intellectual assets built up by The Le@rning Federation, the agreements, the content and the brand name. It makes good business sense to capitalise rather than let these lapse. Such assets are only made possible through a collectively owned ‘flagship’ initiative capable of research and development.

The Le@rning Federation is developing partnerships with cultural organisations and moving to procurement models that will unlock public resources for use by both teachers and students while stimulating interest in the collections of cultural organisations.

This schooling sector Initiative not only generates a core of activities and assets but acts as a stimulus and feeder for the vocational and higher education sectors. The Vocational Education and Training sector Flexible Learning Advisory Group has been able to build on much of The Le@rning Federation intellectual property and experience. Two-way learning between the sectors will increase over the next years with online delivery gaining momentum as a critical component of VET services, online content improving in the schooling sector and teacher capability emerging as critical to both. There is synergy in the issues and goals of the schools, VET and Higher Education sectors in relation to intellectual property and standards, as well as an overlapping cohort for content use in the post-compulsory years. Although the three sectors have their own culture and requirements, maximising this synergy improves education, is cost-effective and contributes to the information economy.

Schooling and VET sector assets rise in value if they are used to drive both sectors towards greater achievement. While direct links to Higher Education are more difficult to achieve, there are niche overlaps, the approach to online learning assets is cross-sectoral and synergies will be pursued. Links to teacher education are also critical.

Goal Four

Ensure ongoing usability

The current Initiative already presents an asset to be protected and realised well beyond the current completion date of June 2006. At a minimum, arrangements need to be put in place for the existing assets of content, repository, software, intellectual property, standards and brand name to be maintained so that teachers and students can continue to use and benefit from the content developed in 2001-2005. Unlike its print-based equivalent that circulates in original form for its lifespan, digital content has transactional potential and capacity to adapt to new applications adopted by schools and homes. Support for teachers as they learn to use content will also be required for some time.

Related to this is the maintenance of technical standards and interoperability across all education sectors in Australia and New Zealand. The breadth and depth of our interoperability efforts have kept our countries within the ambit of global standards, supporting our education industry, making possible an export market in educational products and services while unlocking a range of publicly funded assets.

Goal Five

Reinvest our learning

Through the current Initiative we have gained considerable experience and learned from the research and development components of the work undertaken. The Le@rning Federation joint venture is also building up a considerable database of evidence from students and teachers who are already using The Le@rning Federation online content enthusiastically. We are in a position to improve on what we have achieved and to further adapt the current procurement models. The data can also be widely used for professional learning.

The capability of the educational multimedia industry has also been developed through evidence consistently gathered from teachers and educational experts.

Goal Six

Support industry collaboration

The Le@rning Federation has developed industry relationships and provided a point of presence for industry in relation to schooling sector content and information system decisions. It is in the interest of all Australian governments to consolidate these gains and nurture these relationships, in terms of:

- continuity of quality content for schools
- Australian/New Zealand cultural content
- support for the growing educational export industry
- support for an Australian/New Zealand multi-media and IT systems industry.

Goal Seven

Further the MCEETYA Agenda

The Le@rning Federation is a major collaborative achievement for all Ministers of Education and has substantially progressed the online agenda for Australia and New Zealand at a price of less than one cent per item, per student, which compares very favourably to traditional text books. It is a good news story and a strong foundation for the future. Through *Learning in an online world: content strategy* Ministers have agreed to continue collaboration in a range of areas to support online curriculum content beyond 2005-6. The 2006-2008 investment will resource this collaboration.

There are schools in the USA abandoning text books and channelling all savings into laptops and online content⁹. Nicolas Negroponte is seeking partnership with a number of companies to develop a US \$180 laptop robust enough to replace schoolbooks in developing countries¹⁰. There are promising trials of hand-held devices for school use that would further support content access¹¹. While these directions may not be immediately attractive to New Zealand, or any Australian jurisdiction, our success with online content improves teacher, school and jurisdictional flexibility and gives us many such options. The Ministers' success in relation to national curriculum consistency is logically supported by online curriculum content collaboratively procured.

Goal Eight

Maintain global competitiveness

Over the last few years Australia and New Zealand have made substantial gains in the use of ICT in schools, particularly in the development of online curriculum content. Students with skills, attitudes and experience derived from ICT application in schooling are raising demands and expectations in vocational and higher education.

While this raised expectation and demand boosts the productive capability of the Australian and New Zealand economies, in a global education environment a one-off investment in schooling content is not sufficient to sustain this capacity. Already other countries in the Asia-Pacific region have bandwidth and educational plans that will challenge the position of Australia and New Zealand as countries with technologically advanced education systems. We must continue to invest and to push technological



⁹ See Murray, Corey, "Textbooks dumped in favour of laptops", *e-School News Online* 20 September 2004, www.eschoolnews.com/news/showStoryts.cfm?ArticleID=5270

¹⁰ Mr. Negroponte said that he had found initial backing for his laptop plan from Advanced Micro Devices and said that he was in discussions with Google, Motorola, the News Corporation and Samsung for support. <http://www.nytimes.com/2005/01/31/technology/31newcon.html>

¹¹ For example, *Handheld computers in schools*, <http://www.becta.org.uk/research/research.cfm?section=1&id=541>

boundaries as we have done with The Learning Federation if we wish to remain globally competitive.

Given the importance of overseas students to our economies, both the pedagogy used and the curriculum offered in Australian and New Zealand schools must continue to internationalise and modernise, particularly through the application of ICT.

10. Principal Business Strategies

Strategy One

Capacity to share

Further develop our capacity to share content and data across Australia, New Zealand and the rest of the world. This contributes to the economic sustainability of ICT in schools.

Strategy Two

Cost-effective procurement

Cost-effectively procure new content for use in Australian and New Zealand schools using pooled funding, existing MCEETYA support structures and a mixture of procurement models. This contributes to the financial sustainability of ICT and change in schools.

Strategy Three

Continuous improvement and quality assurance

Retain a commitment to continuous improvement and a focus on quality assurance for all core content while assisting and facilitating the sharing of work of teacher-developers under peer-reviewing conditions. This contributes to the professional sustainability of ICT in schools and to the capability and reputation of the education and content industries.

Strategy Four

Core systems

Provide and maintain core systems to support content management and distribution to jurisdictions. This contributes to the technical and financial sustainability of ICT in schools.

Strategy Five

Community integration

Integrate online curriculum content adaptation and use into the repertoire of communities whose educational outcomes are below the national average. This contributes to sustainable democratic and economic growth.

Strategy Six

Skilled teachers

Continue support for teachers' use of online curriculum content. Develop alliances and structures to support a teaching community skilled in the use of online curriculum content. This contributes to the professional sustainability of ICT in schools.

Strategy Seven

Industry collaboration

Further develop industry collaboration, supporting the flow of information and understanding between the multi-media and electronic systems development industries and the schooling sector. This contributes to economic sustainability.

11. Principal Risks

Any investment in a future online curriculum content initiative contains some level of risk, whether strategic, operational or market-related. This section describes the principal risks and provides a brief description of envisaged risk amelioration strategies.

11.1 Strategic risks

Risk One

Underinvestment in other technology areas

Content is only one component underpinning the successful use of educational technology in Australian and New Zealand schools. Investment is also required in policy, change management, infrastructure (hardware, software and connectivity), professional learning, and support systems in schools (technical and administrative). Investment in content could decrease investment in other areas.

While an acknowledged risk, focusing a further investment in content is not considered a substantial one as:

- there has already been significant investment in infrastructure (in the hundreds of millions of dollars) but comparatively little in content (in the tens of millions of dollars)
- the 2001-2005 investment was a 'kick start' that is creating further demand in a small, underdeveloped market
- all components need to progress in concert over the next 5-10 years; without further content development a shortage will quickly emerge, reducing the value of the other part of the investment.

Risk Two

Entrenched narrowness or inflexibility

The Le@rning Federation has principally produced discrete interactive materials intended to deliver a specific learning outcome. They are modular and reusable in many contexts. In 2001 adoption of this approach was pioneering in the schooling sector. In 2005 it is well-accepted globally and The Le@rning Federation products are trialling in a number of overseas countries. They are, however, often sophisticated and require significant investment to produce. They will not meet every schooling need and as use of online content spreads innovation must continue. There is a risk that the initial model will constrict development.

The proposed future content initiative offers significant diversity and flexibility in the type of content it will produce (i.e. not just learning objects). This diversification is already underway. This record of responsiveness when taken with the networked collaborative processes, user feedback, global interest and industry links mitigates the risk.

Risk Three

Failure of content suppliers

The Le@rning Federation has commissioned content from a small pool of local suppliers, some of whom have not remained in business for the duration of the Initiative. This has been managed without loss to The Le@rning Federation. By diversifying content procurement to include teacher-developers, cultural institutions, the private sector and international providers (as appropriate), the proposed future initiative disperses risks associated with limiting the pool of potential content producers to a single source.

11.2 Operational risks

Risk Four

Collaborative breakdown

Collaboration is essential to success, and timely investment by shareholders is required for smooth operations and maintenance of a venture capable of meeting its financial commitments to staff, contractors and suppliers. A Secretariat or similar intermediary to manage governance and co-ordinate investment flows can help to diminish this risk as does ministerially-owned project management. A three-year commitment mitigates the risk of breakdown from personnel turnover and competing jurisdictional demands for funds at key points in the budget cycle.

Risk Five

Duplication of effort/inefficiencies

A core assumption of the future initiative is that responsibility for project management be assumed by an entity controlled by MCEETYA. This ameliorates the risks of duplication of effort and other inefficiencies that are inherent in an alternative scenario, i.e. one that is project-managed by multiple, distributed parties.

Risk Six

Failure to deliver on time, on budget or to expectations

A continuation of the established shareholder reporting mechanisms and an appropriate, articulated and monitored governance structure reduces the risk of delivery failures. More effective funding collection processes, formal agreements by Ministers and CEOs and a reserve 'buffer' will mitigate the risk of cash flow failure.

11.3 Market risks

Market risks principally relate to supply and demand side issues, that is, to content producers (such as teacher-developers or private sector producers), and to content consumers (such as departments, schools, teachers and students). The principal market risks are outlined below.

Risk Seven

Supplier inability to meet requirements

Experience accumulated as a result of The Le@rning Federation initiative suggests that local private sector producers are sufficiently skilled in the production of content, and sufficiently competitive amongst themselves, to ensure that demand side requirements for high quality content at reasonable cost should be maintained in a future initiative. This assumes some continuation of support for suppliers along the current lines of seminars, forums and information exchange and employment of educational experts to work with developers as needed.

Risk Eight

School and system failure to maximise benefits of content

The readiness of schools and the teaching profession to take up and successfully use content is influenced by factors beyond the scope of a content production initiative – principally by the ICT infrastructure, resources and skills predominant in education systems and sectors. This remains a high risk. While a continued supply of content can stimulate demand and act as a readiness “trigger” by signalling the need for suitable infrastructure and teacher skills, there is no doubt that such non-content activity needs to continue at State and Territory level in order to maximise benefits from the content investment. Inconsistencies across the country

and competing local priorities, including failure of one or more jurisdictions to adequately support teachers or to drive change in schools, will pose a risk to success only mitigated by (1) the support for teachers' use of online curriculum content built into the proposal (2) local commitment and (3) educational and policy leadership.

Risk Nine

Introduction of cheaper substitutes

The future initiative could be threatened by the introduction of cheaper content into the marketplace. Such a scenario is considered highly unlikely based on observations of the rational behaviour of private sector suppliers, who are unlikely to either seek to enter the relatively small (in international terms) Australian and New Zealand educational market without government incentives, or be able to reduce prices (and thus lift supply) while remaining profitable. It is possible, however, that Free Trade Agreements will impact on this situation.

At this stage, importation of cheap, mass-market overseas content is resisted by Australian and New Zealand schools on the basis of both cultural and educational inappropriateness.

This risk will be monitored and should this scenario change there is sufficient flexibility to adjust. Presumably such cheap content, if of high quality, would be incorporated into the Initiative or Ministers would exercise their capacity to redirect funds to more needy areas.

12. Meeting Diverse Needs

The proposal takes into account a number of imperatives for meeting diverse needs.

Imperative One

Flexibility and adaptability

Content must be sufficiently flexible and adaptable to meet the needs of a very diverse range of students, including those with a range of physical and mental impairments.

- This is built into content specifications as a requirement and will continue to be negotiated through the Curriculum Area Reference, Contact Liaison Officer and Expert Advisory Groups, influencing not only the work of The Le@rning Federation but the work of all jurisdictions.

Imperative Two

Cater for diverse delivery environments

The delivery of content from The Le@rning Federation to jurisdictions must cater for diversity of technology and delivery environments.

- Interoperability standards have enabled progress in this area, supported by the work of the ICT in Schools Taskforce and AICTEC. These networks and relationships are the basis of continuing interoperability work.

Imperative Three

Reflect our community's diversity

The body of content must reflect, respect and celebrate the diversity of the Australian and New Zealand communities and their differing needs.

- This is also built into content specifications as a requirement and will continue to be negotiated through the Curriculum Area Reference Groups, Contact Liaison Officers, Exchange Consultative Committee and Expert Advisory Groups. The industry members who have worked with the Initiative to date have an understanding of the ways in which this can be accomplished.

Imperative Four

Usable by communities

A wide range of diverse communities, including those remote and isolated, on urban fringes and indigenous and ethnically based, need to be able to use the content, not just in schools, but within their communities in order to support the holistic education of their children.

- The processes for content development ensure input at all stages from diverse groups to help shape and test the content. It should be possible, however, in the next phase of the Initiative, as a critical mass of content is rolled out, to do more work with whole communities, encouraging and supporting them to use online content in homes, in community activity and to adapt it to local need. This is an important development for which the Initiative will be seeking partnerships.

Imperative Five

Adaptable to jurisdiction needs

From time to time individual participating governments will have specific needs, for example, the need for content to be used in off-shore schooling commitments or content that can support specific cross-sectoral work.

- While a collaborative investment must seek the common and agreed, contributing governments will sometimes benefit from adapting the research findings and solutions developed by the Initiative to assist them in local ventures. Intellectual property licences, for instance, are being structured to allow further development of derivatives and technologies (for example, to substitute a language other than English in items of content). All governments have responsibilities which could benefit from the intelligence developed by the Initiative. These demands are expected to be more readily accommodated throughout the period 2006-2008.

13. Expenditure Projections

The three-year budget forecast for the future initiative is \$55 473 495. Based on cost estimates derived from previous forecasts, a commitment of this amount would be sufficient to ensure a further 4000 items of additional, quality-assured content are procured for the Australian and New Zealand school education sector over the next three years. In addition it would also finance:

- industry standard user support (including tutorials, examples, sharing, online forums, FAQs)
- the continued development and updating of standards
- activities associated with ensuring the future initiative maintains and extends the “foundations for sharing” (such including agreement on priority areas, setting intellectual property arrangements, establishing policies for equitable development, conducting industry development and research and development activities)
- modest development of existing systems such as the content repository
- maintenance of existing systems and services (versioning, continued hosting, licence renewal and the provision of technical information related to systems and services), and
- costs associated with governance and administration.

Table 1 Indicative Annual and total 3-year cost of specific activities (\$)

	2006-07	2007-08	2008-09	TOTAL
Foundations for sharing	951 083	951 083	951 083	2 853 249
Specifications	93 002	93 002	93 002	279 006
Content procurement, QA & user support	15 937 453	15 937 453	15 937 453	47 812 359
Further development of existing systems (eg. repository)	700 000	700 000	700 000	2 100 000
Maintenance of existing systems and services	409 627	409 627	409 627	1 228 881
Governance and administration	400 000	400 000	400 000	1 200 000
TOTAL	18 491 165	18 491 165	18 491 165	55 473 495

Table 1 is indicative and breaks forecast cost into key areas. The calculation is based on a total contribution of \$52 000 000 within Australia + an additional proportion for New Zealand 2006-2008.

14. Cost of Investment

The investment has been costed using similar arrangements to 2001-2005, but adjusting the formula in line with recent MCEETYA agreements. Costs therefore have been developed using the MCEETYA project formula (Table 2 below) rather than the ACER formula used in 2000-2005. New Zealand contributions are based on student numbers being 90% of Victorian numbers and the proportion of content relevant to the New Zealand curriculum being 66% of the whole. The proportion presented here for New Zealand is identical to the proportion required in Phase Two and would need to be re-negotiated and recalculated.*

Table 2 MCEETYA Project Formula

GOVERNMENT	PERCENTAGE	GOVERNMENT	PERCENTAGE
Australian	50	WA	4.89
NSW	16.96	Tas	1.22
Vic	12.37	NT	0.51
Qld	9.33	ACT	0.83
SA	3.89		

Using the formula in Table 2 the cost of investment of each jurisdiction is outlined in Table 3.

Table 3 Cost of Investment 2006-2010 (\$)

COST OF INVESTMENT 2006-2008 COMPARED TO CURRENT COSTS					
	CURRENT INITIATIVE		FUTURE INITIATIVE 2006-2008		TOTAL
	2005-2006	2006-2007	2007-2008	2008-2009	
Comm	7 700 000	8 666 667	8 666 666	8 666 667	26 000 000
NSW	2 625 700	2 939 733	2 939 734	2 939 733	8 819 200
Vic	1 958 880	2 144 134	2 144 133	2 144 133	6 432 400
Qld	1 333 640	1 617 200	1 617 200	1 617 200	4 851 600
SA	640 640	674 266	674 267	674 266	2 022 799
WA	729 960	847 600	847 600	847 600	2 542 800
Tas	206 360	211 466	211 467	211 467	634 400
NT	73 920	88 400	88 400	88 400	265 200
ACT	130 900	143 867	143 866	143 867	431 600
NZ ¹²	1 252 833	1 157 832*	1 157 832*	1 157 832*	3 473 496*
TOTAL	16 652 833	18 491 165	18 491 165	18 491 165	55 473 495

¹² The New Zealand annual contribution for 2006-2008 is lower than their contribution for 2005-2006. This is because New Zealand is paying a five year 2001-2005 contribution over four years.

15. Governance

Governance structures for the 2006-2008 investment will use existing MCEETYA structures as determined by AESOC in its consideration of strategic priorities. Governance processes will be as simple as possible while taking into account the need for checks and balances, probity, value for money, public accountability and the building of capacity in the schooling sector in Australia and New Zealand.

16. Proposal

It is proposed that MCEETYA continue to invest in the procurement of online curriculum content for all schools in Australia and New Zealand from 2006-2008 to a total of \$55 473 495 in line with the MCEETYA project formula with a target of producing, in the same period:

- a further 4000 items of high quality, globally recognized, online content for all Australian and New Zealand schools
- a workable framework, standards and structure for the sharing of online curriculum content between jurisdictions within Australia/New Zealand and with other countries
- an interoperable framework and support for the sharing and peer-reviewing of teacher-developed online resources
- brokered arrangements with vendors to support distribution and use of educational content in schools
- consolidated schooling sector support for the local education content industry.

