

Country Report

SINGAPORE

1. “e-Learning” Policies/Measures

e-Learning Early Adopters Programme (eLEAP)

Name of policy/measure	E-Learning Early Adopters Programme (eLEAP)
Start year	Late 2002 and early 2003
Period	Ongoing
Summary of the policy or the measure	<p>eLEAP encourages companies to embrace e-learning for continual and effective employee training. This will not only enhance the company's competitiveness, but also the employees' employability.</p> <p>What can eLEAP do for my company? eLEAP will provide a jumpstart fund to Singapore-registered companies to support the implementation of e-learning. The funding may cover the following activities:</p> <ul style="list-style-type: none"> • Implementation consultancy • Acquisition of hardware (e.g. servers, video conferencing card/camera) and/or software (e.g. learning management system, courseware development tools, live collaborative tools, simulation tools) • Customisation/development of courseware and e-learning applications • Subscription to an e-learning Application Service Provider (ASP) services <p>Training providers planning to convert their courses to an e-learning platform are also eligible to apply for eLEAP funding.</p> <p>What is the level of funding? eLEAP provides funding of up to 50% of the implementation costs capped at S\$100,000 per company's application.</p> <p>Qualifying Criteria To qualify for eLEAP, a company must be a Singapore-registered company.</p> <p>Points To Note In applying for eLEAP funding, the company's proposal should demonstrate conformance to one or more of the following guiding principles:</p> <ul style="list-style-type: none"> • Encourage Adoption of e-Learning as part of the company's training culture • Foster development of Capabilities among employees in skills related to e-Learning • Present a Best Practices approach to support the company's e-Learning strategy and plans <p>Goal & Target: Not available. However, the intention is to get as many Singapore-registered companies to use eLearning, either for corporate staff training or in their business.</p> <p>Progress so far: About 14 companies have participated in this eLEAP since it was first introduced last year.</p>
Referential Materials (URLs or documents)	http://www.elearninghouse.com http://www.nicc.org.sg http://www.ecc.org.sg http://www.ida.gov.sg

Enhanced CITREP

Name of policy/measure	Enhanced CITREP
Start year	Feb 2003
Period	Ongoing
Summary of the policy or the measure	<p>CITREP stands for Critical Infocomm Technology Resource Programme. CITREP is a training incentive programme established by IDA with the objective to accelerate the development of emerging, critical and specialised Infocomm skills urgently required by both the Infocomm industry and user organisations.</p> <p>Relevant training courses, which impart knowledge and skills in the identified technologies, will be evaluated and endorsed under CITREP. Self-sponsored trainees and organisations that fully sponsor their employees for training in these endorsed courses can apply for CITREP support, which includes the course and exam fees (if any) of the training course.</p> <p>CITREP is being administered by the National Infocomm Competency Centre (NICC) on IDA's behalf.</p> <p>The Enhanced CITREP was introduced early this year. Some of the objectives of this Enhanced CITREP are:</p> <ul style="list-style-type: none"> Flexible delivery of courses (e.g. using eLearning) Creation of additional jobs (e.g. content creation, eLearning support personnel) <p>The level of funding is similar to the eLEAP.</p> <p>Results so far: Since it was introduced in early 2003, we have 5 companies applying for this support.</p>
Referential Materials (URLs or documents)	<p>http://www.elearninghouse.com</p> <p>http://www.nicc.org.sg</p> <p>http://www.ecc.org.sg</p> <p>http://www.ida.gov.sg</p>

Course Management System

Name of policy/measure	Course Management System
Start year	2000
Period	On-going
Summary of the policy or the measure	To build a course management systems (quiz, forum and async tools) where faculty members can upload their resources that enable students to access any time and any where with the internet connection.
Referential Materials (URLs or documents)	http://www.smuconnect.edu.sg

edveNTUre

Name of policy/measure	EdveNTUre
Start year	July 2000
Period	On-going
Summary of the policy or the measure	<p>edveNTUre is an e-learning eco-system in Nanyang Technological University. Within three years of its implementation, about 90% of courses in the university have an active online presence.</p> <p>Through the NTU e-learning eco-system, the University hopes to achieve the following business goals:</p> <ul style="list-style-type: none"> (a) To create an eco-system of life-long learning in our students and graduates towards the pursuits of a national knowledge economy; (b) To facilitate, equip and enable professors (who represents the beginning of the e-learning food chain) to create and enhance content, develop competence and capability to deliver effective learner-centric and pedagogical approaches and methods for the training and development of our students and graduates; (c) To “humanize” e-learning and develop quality interactive and engaging content that will facilitate and enable self-paced learning for students anywhere, anytime on any device; (d) To enhance face-to-face tutorial sessions and enable collaborative learning in such environments through the provision of effective audio-visual tools; (e) To provide robust and reliable e-learning services to a progressive community in content delivery, knowledge management and synchronous & asynchronous modes of teaching and learning. This would include fault tolerance systems, disaster recovery-high availability-business continuity systems, content creation and editing tools, online assessment tools, student tracking and progress tools.
Referential Materials (URLs or documents)	http://edventure.ntu.edu.sg

2. “e-Learning” Promoting Organizations

e-Learning Competency Centre

Name of the organization	E-learning Competency Centre
URL	http://www.ecc.org.sg
Tel	65-6790-3684
Fax	65-6861-7374
Year established	2001
Name of the representative (With his/her organizational affiliation)	Mr. Lim Kin Chew
Mission	To make Singapore the eLearning standards hub in the Asia Pacific region
Financial base	Ministry of Education (MOE) Infocomm Development Authority of Singapore (IDA)
Budget	
Scale of the organization	No. Of employees: 8 <ol style="list-style-type: none"> 1. Executive Manager 2. Senior Officer (Business / Administration) 3. Senior Officer (Business / Administration) 4. Technical Consultant 5. Technical Consultant 6. Technical Consultant 7. Technical Consultant 8. Technical Consultant
Activities/projects	Organise and conduct seminars, workshops and forums on eLearning Review, define and refine international eLearning Specifications for use in Singapore Collaborate with local Singapore-registered eLearning companies and regional countries on eLearning projects Assist the IDA in their eLEAP and other eLearning programmes Raise the quality of eLearning courseware Participate in regional eLearning activities
Output (Software/Documents)	4 Singapore Standards on eLearning: <ol style="list-style-type: none"> 1. Singapore eLearning Framework 2. Learning Resource Identification 3. Learning Content Packaging 4. Assessment & Performance Tracking Open Source Software based LMS (ECCEL) Guideline for Online Tutoring Support Quality Criteria for E-learning Courseware Recommended Processes for E-learning Courseware Development
Related e-learning policies/measures (if any)	
Liaison organizations	Ministry of Education Infocomm Development of Singapore

Singapore Management University

Name of the organization	Singapore Management University
URL	http://www.smu.edu.sg
Tel	+ 65 6822 0100
Fax	+ 65 6822 0101
Year established	Jan 2000
Name of the representative (With his/her organizational affiliation)	Dr Eric Cheung Senior Manager Office of Communications & IT
Mission	To create and disseminate knowledge. SMU aspires to generate leading edge research with global impact as well as to produce broad-based, creative and entrepreneurial leaders for the knowledge-based economy. SMU is committed to an interactive, participative and technologically enabled learning experience. Towards this end, it will provide a rewarding and challenging environment for faculty, staff and students to kindle and sustain a passion for excellence.
Financial base	Funded by Government
Budget	
Scale of the organization	2,200 Students, 120 faculty (2003) it will be in full force in 2005
Activities/projects	Institute of Higher Learning
Output (Software/Documents)	Educational Institute
Related e-learning policies/measures (if any)	Course Management System (SMUconnect) http://www.smuconnect.edu.sg
Liaison organizations	Wharton School of the University of Pennsylvania Carnegie Mellon University.

Nanyang Technological University

Name of the organization	Nanyang Technological University
URL	http://www.ntu.edu.sg
Tel	+65-6790-5222
Fax	+65-6791-1846
Year established	8 August 1981
Name of the representative (With his/her organizational affiliation)	Associate Professor Daniel Tan Director, Centre for Educational Development Nanyang Technological University
Mission	NTU aims to be a world-class university. Its mission is to nurture high level manpower and leaders for the professions, industry and business, and to advance research and development in the academic and professional disciplines.
Financial base	The University receives its funds mainly from the Government through the Ministry of Education. A portion of the annual budget comes from the tuition fees and other sources of income. For development projects, the Government provides separate funding.
Budget	

Scale of the organization	(i) Total Staff Strength: 2840	
	Breakdown	Number of staff
	Academic staff (Including visiting appointments)	984
	Research staff	486
	Administrative & Library/IT Professional Staff	260
	Technical Support Staff	533
	Other Non-Academic Staff	577
	Total	2,840
	(ii) Total Student Strength: 23,015	
	Breakdown	Number of Students
Undergraduate	16,214	
Postgraduate	6,801	
Total	23,015	
Activities/projects	Institute of Higher Learning	
Output (Software/Documents)	Educational Institute	
Related e-learning policies/measures (if any)	EdveNTUre (http://edventure.ntu.edu.sg)	
Liaison organizations	<p>NTU encourages close co-operation with the business, industrial and academic community and promotes a culture of enterprise. Collaborations range from student placements to joint research projects.</p> <p>ITTO The University is a major player in the intellectual capital market and works closely with the business and industrial sectors to develop technologies.</p> <p>The <u>Innovation & Technology Transfer Office (ITTO)</u> brings technological breakthroughs and innovations created in the University to the industry. <u>ITTO</u> manages the <u>Innovation Centre</u> that houses <u>tenants</u> conducting R&D in leading-edge technologies. Innovation Centre also provide NTU students with technology incubation units at the <u>TechnoGarage</u></p> <p>INSTEP The University has established international links with over 160 tertiary institutions through the <u>International Student Exchange Programme (INSTEP)</u> administered by International Relations Office (IRO). INSTEP broadens NTU students' learning experience and provides opportunities for them to develop global perspectives in the disciplines they are pursuing.</p>	

3. Case Studies of Advanced Implementation and Utilization of “e-Learning”

E-Learning at Ngee Ann Polytechnic

Title	E-Learning at Ngee Ann Polytechnic
Summary	Ngee Ann Polytechnic today stands as an example of how e-Learning can be successfully integrated into a blended learning academic training programme for students and staff. In 1999, a pilot programme was rolled out for Ngee Ann students in the School of Business & Accountancy Department and School of Information & Communications Technology. The hybrid programme combined traditional classroom curriculum with NETg's e-Learning modules as supplementary web-based learning. Ngee Ann successfully rolled out over 6,000 course modules for approximately 500 students each semester. The feedback from course coordinators and students was extremely positive. Currently, Ngee Ann is expanding the course offerings to over 300 module titles, including IT, Business and Personal Skills, all of which are relevant to the students for the Student Enhancement Programme. New areas in NETg courses are Time Management, Project Management, Quality and Productivity modules, and Business Etiquette.
Keywords	Higher education
Referential Materials (URLs or documents)	http://www.elearninghouse.com/clearinghouse/overview/overview-publicationsNETg1.html

E-Learning at Citibank

Title	E-Learning at Citibank
Summary	Citigroup's human resource director for global banking, Singapore, Mr. Aditya Mittal, said that with the launch of e-learning in 2001, 8 per cent of Citibank's training places in Singapore were taken by e-learning last year. By the end of this year, more than 17 per cent of training places will be online. "With online training, people feel in control of their training - they can do it when they like," he added. "We have very good feedback that the staff find it flexible and interactive. We are hoping that each employee will go through about 40 hours of e-learning in a year." Among other benefits, learning online brings significant cost savings, especially for a regional training programme like Management Citification. For example, if traditional classroom training costs \$500,000, e-learning costs only 6 per cent of that. In all, about 350 online courses are being offered and the staffs are nominated by superiors based on the management's assessment of their needs. Management Citification will have up to 14 countries participating in it by year-end. This programme incorporates a 360-degree assessment tool to help Citibank managers develop their core managerial skills.
Keywords	Corporate education
Referential Materials (URLs or documents)	http://careers.asia1.com.sg/st_recruit/r20031108b.html

E-Learning at National University of Singapore

Title	E-Learning at National University of Singapore
Summary	At NUS, e-learning activities have been burgeoning in the last few years, and today, e-learning facilities are available to the entire NUS community, namely students, staff and alumni. E-learning facilities for more than 28,000 NUS students are provided by IVLE (Interactive Virtual Learning Environment), homegrown NUS courseware management software, which bagged the first prize at Singapore's E-nnovator Awards 2000. A survey on NUS student preferences in 2002 showed that more than 60% of the students expected online course modules, and wanted online quizzes and discussion forums. The IVLE met these needs. To-date, NUS has found that the IVLE discussion forum is a very popular collaborative tool, with over 700 active forums created in just one semester! The IVLE discussion forum is an avenue for lecturers and students to communicate by posting questions and seeking answers. It promotes peer-to-peer learning among students with the lecturers facilitating this learning process. This discussion forum is 'threaded', that is, every reply to a question is kept together in sequence. This forum also provides an important information database for future students taking the same subject. In addition, the NUS has implemented an electronic portfolio for their students. They called this system the "Student Electronic Learning Folio" and its website is at http://self.nus.edu.sg/ .
Keywords	Higher education
Referential Materials (URLs or documents)	http://www.elearninghouse.com/clearinghouse/overview/overview-publicationsNUS1.html

E-Learning at Fuji Xerox

Title	E-Learning at Fuji Xerox
Summary	Fuji Xerox Singapore (FXS), leading document and knowledge management solutions provider, launched its inaugural e-learning programme today, announcing a projected resultant cost savings of close to S\$700 000 in the first year. The programme, Video Interface for E-learning (VITEL e-learning), targets at its team of Customer Service Engineers (CSE) responsible for machine and service maintenance, as well as Customer Relations Officers (CRO) responsible for customer product training. Training materials in product familiarization, usage, service and maintenance in the form of rich-media are deployed on the unique Vidtools' Media-management Suite (VMS). These are made available to the CSEs and CROs on the FXS intranet and to its customers on the Internet, allowing learning to take place on demand. Upon receiving a grant from IDA under the e-Learning Early Adopters Programme (eLeap), FXS kick started the VITEL e-learning project in November 2002. Phase 1, which comprised training videos for its two latest multi-functions, DC 285, and DCC400/320, was completed in March 2003. Plans for phase 2 will start in April 2003. By 2005, the third year after VITEL's launch, the projected cost savings is estimated at close to S\$900 000.
Keywords	Corporate education
Referential Materials (URLs or documents)	http://www.fujixerox.com.sg/news_135.asp

4. Publication of “e-Learning” Related Sources

www.elearninghouse.com

Title	www.elearninghouse.com
Item that is/will be publicized	General information on e-learning
Status	We have publicized the item specified above.
Targeted countries	All countries
Description	<p>E-Learning House is a first stop to comprehensive information on e-learning in Singapore. Regular sections include:</p> <ol style="list-style-type: none"> 1. E-Learning in Singapore: Lists the e-learning players, national programmes, government agencies and happenings in Singapore 2. Company and Products: Lists the e-learning providers and products available in Singapore. 3. News and Events: Reports the latest Singapore and international e-learning happenings. 4. E-Learning Resources: Contains a vast amount of resources on various e-learning topics 5. Notice board: For user to look for solutions, business partners, talents and jobs. 6. Forum: For practitioners to discuss various topics and issues.
Involved Organization	<p>Name: E-Learning Competency Centre Contact person: Mr. Lim Kin Chew Address/Phone/Fax/e-mail: National Institute of Education 1 Nanyang Walk Singapore 637616 Tel: 67903740 Fax: 68617374 Email: ecc@nie.edu.sg</p>
Referential Materials (URLs or documents)	www.elearninghouse.com

5. Localization of “e-Learning” Related Resources

Learning Resource Identification

Title	Learning Resource Identification
Description	This is a customization of the IMS Meta-data Specification Version 1.2 for use in Singapore. Whilst the IMS Meta-data Specification Version 1.2 is very generic, the Singapore’s version, called SingCORE, has its own local vocabulary and taxonomy. The local vocabulary and taxonomy has been developed by the Singapore’s Learning Standards Technical Committee and published as a Singapore Standard in January 2001.
Item that is/will be localized	e-Learning standards
Status	We have localized the item specified above.
Source countries	International, mainly USA (IMS Global Learning Consortium, Inc)
Description	<p>The Singapore e-Learning Framework (SeLF) was developed by the Learning Standards Technical Committee. This framework provides a comprehensive approach to developing courseware that are able to interoperate in different learning environments, be reusable and provide adequate mechanism to safeguard the intellectual property of the content providers.</p> <p>SeLF comprises of the following parts, namely:</p> <p>Part 1: An overview, Feb 2002 Part 2: Learning resource identification, Feb 2002 Part 3: Learning content packaging, Jan 2003 Part 4: Assessment and progress tracking, Jan 2003 Part 5: Ebook, to be released in Oct 2003 Part 6: Enterprise integration, to be released in Oct 2003 Part 7: Digital rights management, to be released in 2004 Part 8: Competency definitions, to be released in 2004 Part 9: Learner profile, to be released in 2004</p>
Involved Organization	<p>Name: E-Learning Competency Centre Contact person: Mr. Lim Kin Chew Address/Phone/Fax/e-mail: National Institute of Education 1 Nanyang Walk Singapore 637616 Tel: 67903740 Fax: 68617374 Email: ecc@nie.edu.sg</p>
Referential Materials (URLs or documents)	http://www.ecc.org.sg/cocoon/ecc/website/standards/releases.standards

6. Joint Activities of “e-Learning”

Creating Standards-based eLearning Content

Title	Creating Standards-based eLearning Content
Period	16 - 18 September 2003
Partner countries	W. Malaysia and Singapore.
Summary	This is a 3-day Seminar-cum-Workshop on Learning Objects. Participants came mainly from various Malaysian states. The ECC provided three instructors. The Multimedia University in CyberJaya provided all the computing facilities. We had about 50 participants. Participants now have a better grasp of what learning objects are and how they can go about creating these learning objects.
Keywords	Others
Involved Organization	Name: Multimedia University Contact person: Tengku Norishah, Head/Internet Based Degree Programme Address/Phone/Fax/e-mail: Multimedia University, Jalan Multimedia, 63100 Cyberjaya, Selangor Darul Ehsan, Malaysia. / Tel: +603-8312-5533 / Fax: +603-8312-5535
Referential Materials (URLs or documents)	

Asia-Pacific SCORM Certification Centre

Title	Asia-Pacific SCORM Certification Centre
Period	Beginning 2004 onwards
Partner countries	Singapore, Chinese Taipei, China
Summary	We plan to set up an Asia-Pacific SCORM Certification Centre jointly with the ADL Co-Lab of the US. The ECC is currently discussing this matter with the Institute for Information Industry in Chinese Taipei.
Keywords	e-learning Certification
Involved Organization	Name: Institute for Information Industry Contact person: Dr. Lichieh Lin, Senior Director, e-Learning Technology Center, Institute for Information Industry / Tel: +886-2-2708-9215 Ext 229 / Fax: +886-2-2706-4778
Referential Materials (URLs or documents)	

International Conformance Programme

Title	International Conformance Programme
Period	September 2002 onwards
Partner countries	USA, UK, Canada, Australia, Japan, Singapore
Summary	This programme aims to set up an international conformance programme, which aims to provide conformance tests on e-Learning content and systems. It is led by the IMS Global Learning Consortium, Inc. Other active organizations are the Canadian Defence Force, UK's UFI.COM and Singapore's ECC.
Keywords	e-learning conformance and certification
Involved Organization	Name: IMS Global Learning Consortium, Inc. Contact person: Mr. Kevin Riley
Referential Materials (URLs or documents)	