

E-Learning Initiatives in Malaysia

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- Introduction
- Development of e-learning in Malaysia
- E-Learning Survey Report
- Case Study: Multimedia Learning System at Multimedia University

Global E-Learning Market

2002	2006	2011
US\$10.3 b	US\$83.1 b	US\$212 b

Source: <http://www.brandon-hall.com>, Nov. 2003

Corporate E-Learning

	2001	2004
Percent of e-learning	10.5%	25%

Source: American Society for Training and Development (<http://www.astd.org>), Nov. 2003

Internet users in Asia

Table: Internet Users in Asia (2002)

Country	2000	2002
Hong Kong	3,460,000	4,350,000
Indonesia	400,000	4,400,000
China	17,000,000	45,800,000
India	4,500,000	7,000,000
Japan	38,000,000	56,000,000
Malaysia	1,500,000	5,700,000
Philippines	500,000	4,500,000
Singapore	1,850,000	2,300,000
South Korea	16,000,000	25,600,000
Taiwan	6,400,000	6,400,000
Thailand	1,000,000	4,600,000
Vietnam	100,000	400,000

Source: CIA's World Factbook / <http://cyberadsls.internet.com>



Education Market

A big growth is expected in the education market

Student population in US colleges increase from 232,000 at the turn of the century to 13 million today

In Malaysia, with one university in 1957 to over 37 public and private universities today

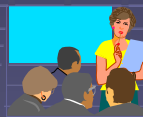
** Malaysia targets to have 40% of those finishing secondary school to enter tertiary education by 2020 (currently the figure stands at about 17%)*

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National ICT Agenda



PEOPLE
- Work Culture
- ICT Skills
- Knowledge worker
- Learning Society
- United, moral & ethical

INFRASTRUCTURE
- Communication
- Fibre-Optic Cabling
- Gigabit ATM
- Satellite
- Transport/Logistic
- etc



KNOWLEDGE-BASED ECONOMY

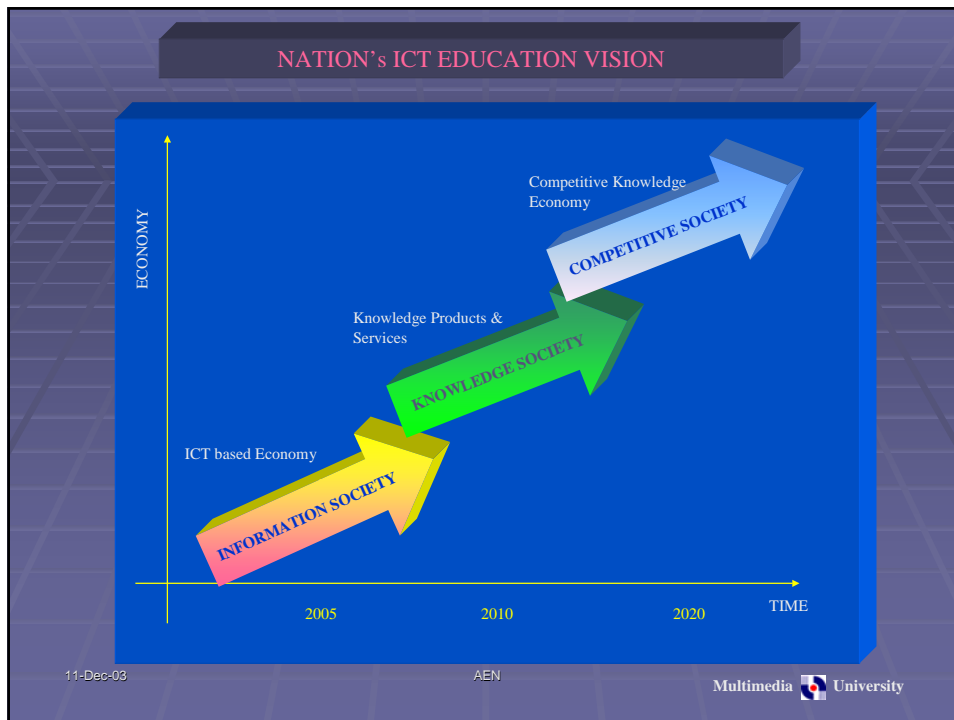


APPLICATION & CONTENT
- Smart Schools
- e-govt.
- Smartcard
- Tele-medicine
- Others

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Education: Challenges for Malaysia

- Growing number of students
- Increasing cost of education
- Demand for quality education
- Shortage of academic (ICT) staff
- Limited facilities/tools
- Re-introduction of English for Science and Maths

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E-Learning Developments in Malaysia

- First National E-Learning Conference in 2000. (more than 700 participants each year)
- KTKM, METI, ALIC and MMU organised the e-learning workshop, early 2003.
- KTKM organised the “E-Learning Initiatives in Malaysia” seminar on Oct. 2003.
- Many e-learning seminars were conducted each year by various institutions
- Many educational institutions have established their own e-learning centre
- Establishment of virtual universities such as UNITAR (1998) and Open University Malaysia (2000)
- Establishment of the National E-learning Steering Committee in 2000.
- National E-Learning Centre to be established early 2004
- In the process of establishing the ASEAN Centre of Excellence for E-Learning by KTKM/MMU.
- Smart School Project by MOE
- National Digital Library Project (UNESCO)
- Formation of Malaysian Grid for Learning (MyGfL) Working Group in 1999 This is under the National Information Technology Council (NITC) chaired by the PM

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E-learning Standards (SCORM) Workshop

- Organised by Ministry of Energy, Telecommunication and Multimedia (KTKM) with the help of METI, ALIC and MMU early 2003.
- First SCORM workshop in the country
- About 160 participants
- Presenters from Japan, Singapore and Malaysia
- Beamed to five different location using the Networked Multimedia Education System (NMES)

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“E-Learning Initiatives in Malaysia” Seminar

- Organised by KTKM (Ministry of Telecommunication, Communication and Multimedia) on 16-17 Oct. 2003 at Pan Pacific Hotel, Kuala Lumpur.
- About 300 participants from local government and private institutions
- Agreed to establish the National E-Learning Centre by early 2004
- This centre will report to the National E-learning Steering Committee established in 2000 under KTKM

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DESTEC 2003

- Co-organizers: Multimedia University and e-Learning Competency Center, Singapore.
- Title of Workshop: Developing Standards-based e-Learning Content
- Date: 16 – 18 September 2003
- Topics: Implementation of SCORM specification for content development
- No. of participants: 48 from various institutions, government and corporate sector.
- Feedback: A majority of participants found the workshop very useful in increasing their knowledge in Standards-based eLearning Objects.
- Trainers and Speakers:
 - Mr Lim Kin Chew – e-learning Competency Center, Singapore
 - Dr. Tengku Shahrom – Executive Director and e-Learning Consultant, Impian Teknik Integration Systems

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Malaysian Grid for Learning (MyGfL)

Roadmap

- **March 1999**
NITC E-Learning Working Group - Proposed National Learning Grid as one of the project under E-Learning Working Group
- **June 6, 2002**
NITC-SITC Meeting - Meeting endorsed the conceptual framework of Malaysian Grid for Learning (MyGfL)
- **August 15, 2002**
Strategic Thrust Implementation Committee (STIC) Meeting
MyGfL will be used as the integrating platform for the 16 Bridging Digital Divide (BDD) pilot projects
- **September 2002**
Soft launch of MyGfL by MoHR
- **March, 2003**
Collaboration with New Zealand CWA on technical framework
Collaboration with National Library on content for MyGfL
- **May, 2003**
Formulation of Content, Instructional Design, & Technical Guidelines
- **October, 2003**
Development of Metadata Management Systems (MMS) by MIMOS Berhad
Development of MyGfL technical architecture and framework by MIMOS Berhad

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Malaysian Institute of Microelectronics (MIMOS)

- Have developed E-learning Standards and Guidelines (Draft) for Malaysia.
- Three Working Groups were formed to discuss and review the guidelines:
 - Content Guidelines
 - Instructional Design Guidelines
 - Technical Guidelines
- Final Draft will be submitted to SIRIM (National Standard Body) to be endorsed as standards/guidelines for E-learning in Malaysia
- Final Draft will be submitted in March, 2004
- Have established a Metadata Centre for Malaysia
 - Testing will be done until end of this year
 - Implementation by early next year
 - Creates metadata for Learning Objects, web pages, etc
 - One Stop Search point for Malaysia.

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University Tun Abdul Razak (UNITAR)

- First virtual university
- Sept. 1998: 162 students
- Aug. 2002: **8,000 students**
- Use Virtual Online Instructional Support System (VOISS)
 - E-learning (Internet)
 - Courseware on CD
 - Courseware Management
 - Tutorial meetings
 - E-mail, online forum, assignments, group communication, etc
 - Online Seminars
- Programmes offered in China, Cambodia, Thailand, Indonesia and Middle East

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Open University Malaysia (OUM)

- Established in August, 2000
- 2001: 900 students
- 2003: **15,000 students**
- Delivery mode:
 - VOD
 - Virtual Classroom
 - E-learning
 - Face-to-face meeting
 - Digital Library

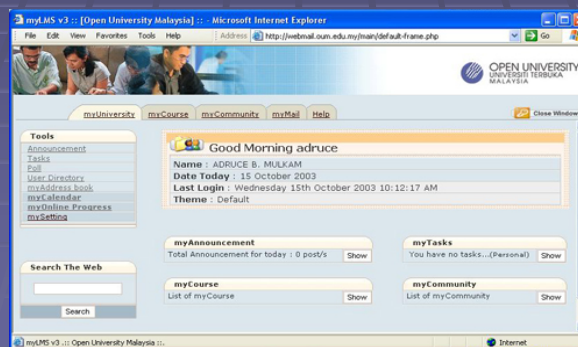
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OUM

- Use MyLMS
- 15,000 users
- 60 courses
- 28 learning centres
- <http://www.oum.edu.my>



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National Library, Malaysia (NLM)

- Developed an e-learning package for library user education programme
- Funded by UNESCO
- Phase I: To be used by all libraries in Malaysia
- Phase II: To be made available to all libraries in Asia Pacific
- Users can login from home
- Hits: 2333 (from April-Oct. 2003). Many users are not aware.
- In English and Bahasa Malaysia
- Online database is available for users
- Moving towards a virtual library
- Issues:
 - Technical requirements e.g. servers, administration, etc
 - Infrastructure for rural areas
 - Underdeveloped network of libraries in rural areas.
- Ref: <http://www.elib.gov.my> and <http://www.pnm.my>

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Survey Report

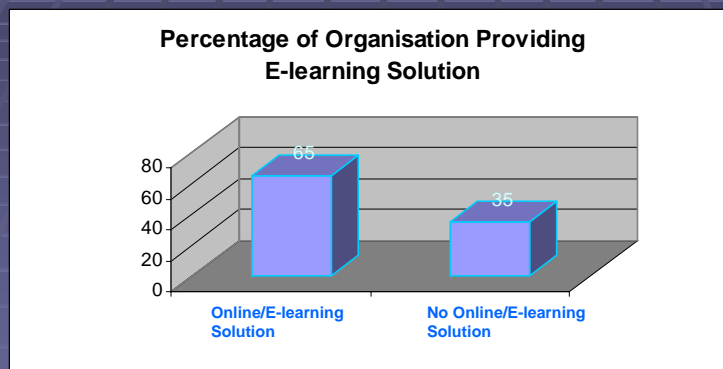
- A survey was conducted on 120 govt. and private institutions.
- Oct. 2003

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Percentage of institutions providing Online/E-learning Solution



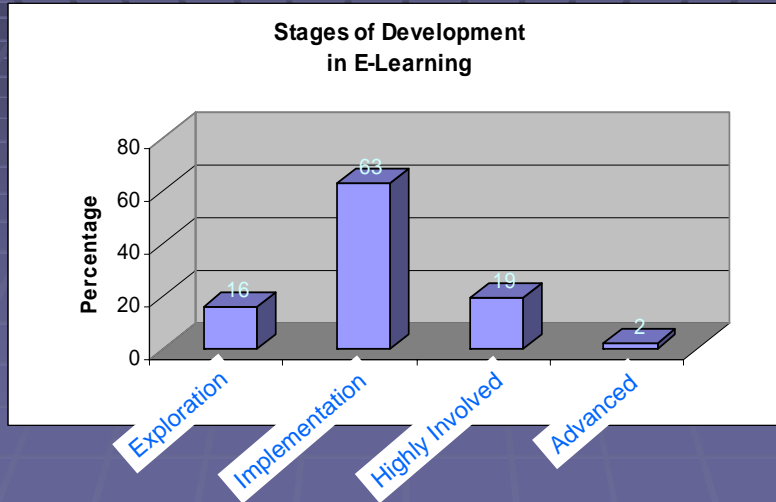
- 65% of the institutions provide online/e-learning training
- 100% agree that e-learning will be become important

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Stage of Development in E-Learning in Institutions

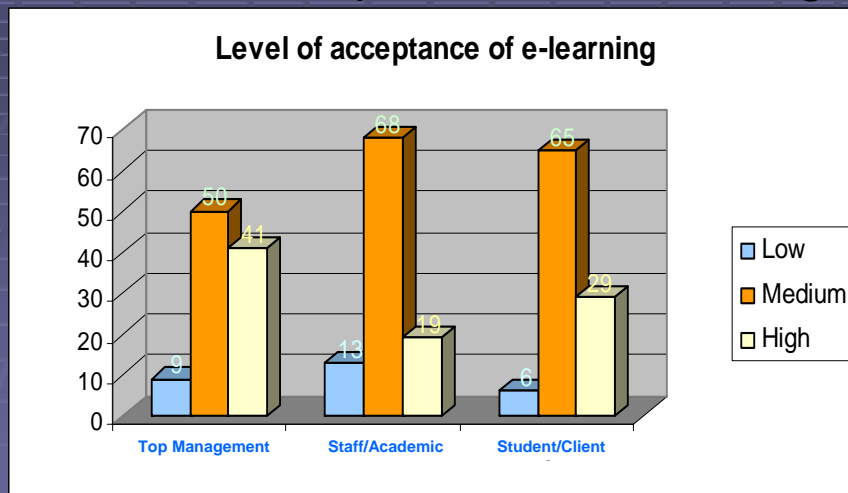


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Level of acceptance of e-learning

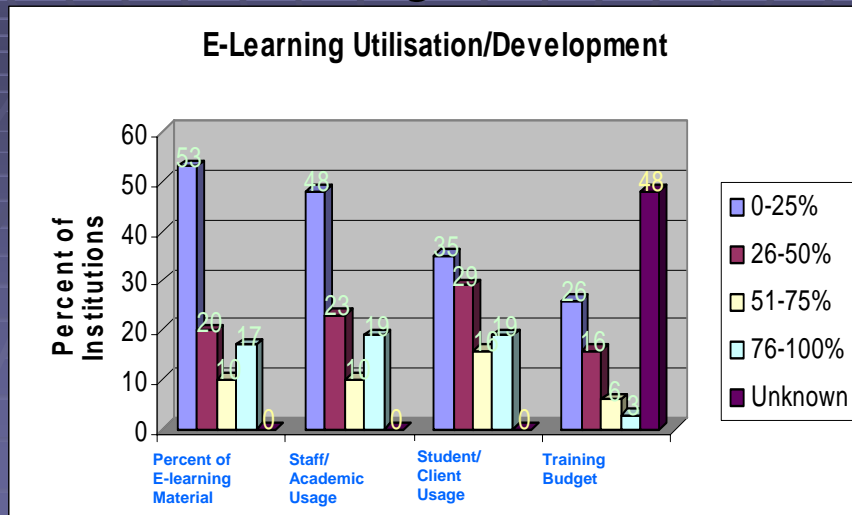


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E-Learning Utilisation

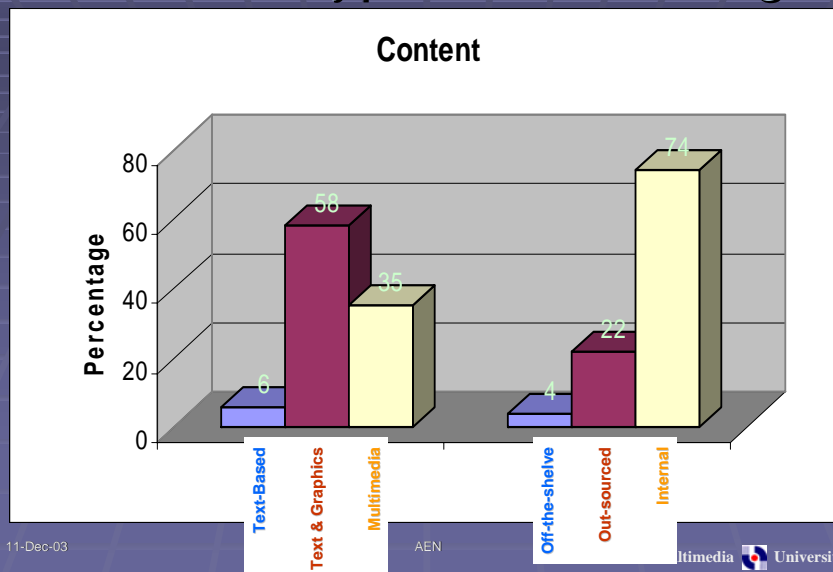


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Content Type and Sourcing

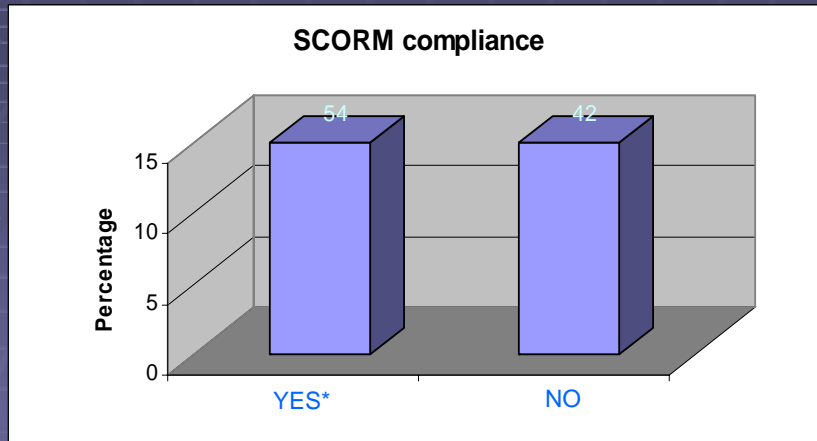


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Content: SCORM compliance



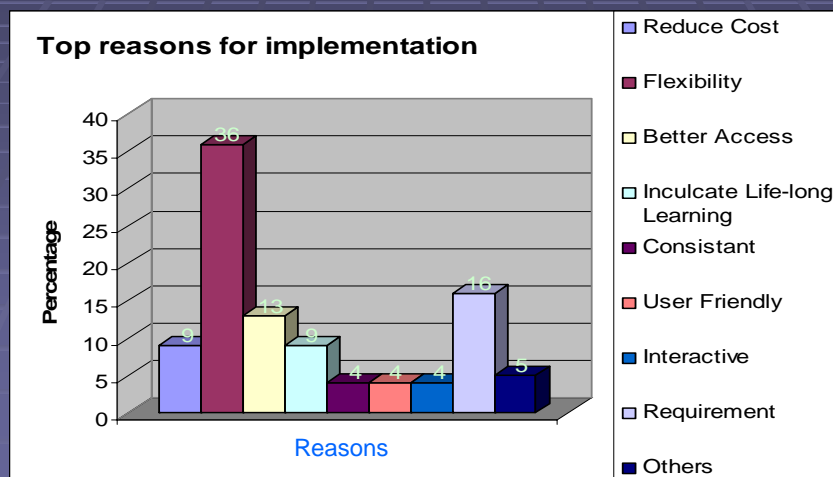
* Believe many are in the processing of converting to SCORM

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Top reasons for implementation

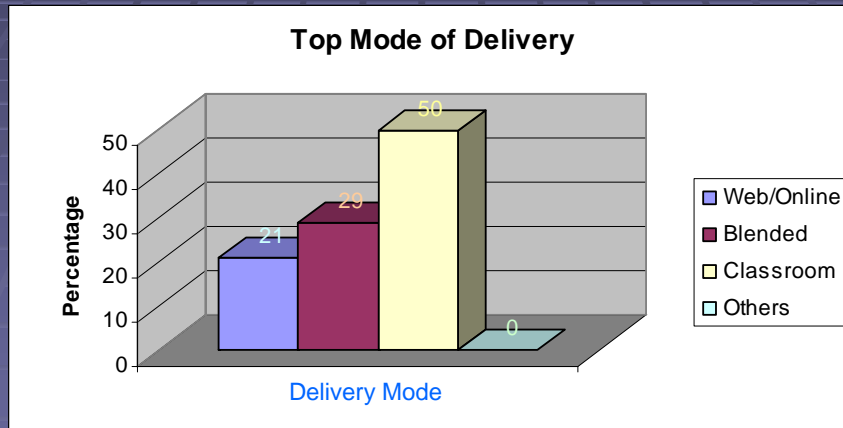


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Main Delivery Mode

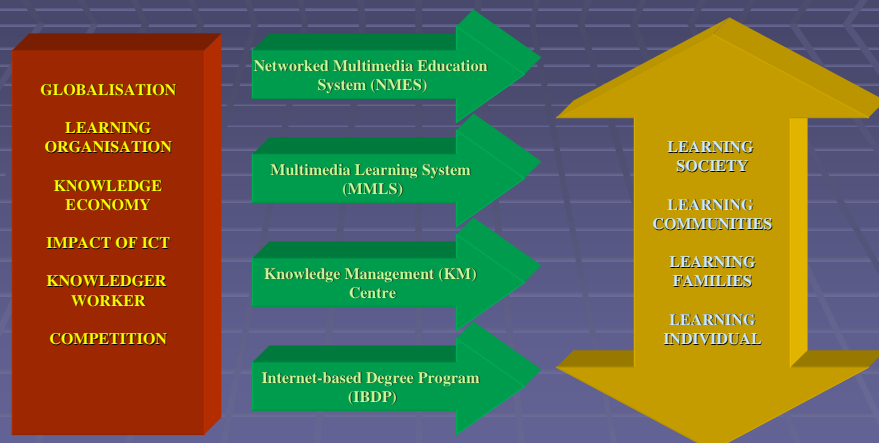


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Multimedia University's Initiatives in e-learning



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Knowledge Management Centre

- Established in 2000 with collaboration between Motorola University and Multimedia University
- Objective:
 - Postgraduate research, development and publication
 - The development and implementation of :
 - (a) Knowledge Management taught courses at various levels
 - (b) Online multimedia learning content, software, hardware, firmware & systems
 - The creation of a presence in the field of virtual learning environment
 - The sourcing and application of funding via consultancy & research

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Knowledge Management Centre

- Current Research:
 - Audio Cognition
 - Personalised Learning Objects
 - Digital and Animated Storytelling
 - Conversion of Classroom Program Into Online Learning
 - E-Learning in Corporate Knowledge Management
 - E-Learning Portal Design
 - Educating on I-TV: Broadcast Communication Style/ Voice Mgt.
 - Iconographic Design: Enhancing Comprehension and Usability in Teaching and Learning
 - Design Methodologies for Humanoid Learning Environment
 - A Virtual Talk-Agent For E-Education
 - Hybrid CD Rom Case Studies
 - Meaningful meanings in E-Dictionaries
 - Arabic Calligraphy Transformations
 - E- Archiving Data Mining

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Knowledge Management Centre

▪ Post Graduate Programmes

- Master in Multimedia (e-Learning Technologies)
- Master in Knowledge Management with Multimedia
- PhD and Master by Research

▪ Short Courses and Certificate Programmes

- Knowledge Management Awareness
- Human Communication & Management
- E-Knowledge Management
- K-Project Management
- Organizational Learning
- Principles of Multimedia in Education Technology
- Learning Theories and Strategies
- Human Performance Technology
- Educational Psychology
- Evaluation Methodology for e-Learning
- Strategic Knowledge Management
- E-Learning in Organization
- Research Methodology
- Multimedia and IT
- Interactive Multimedia Development
- Database System and System Analysis / Design
- Multimedia Programming
- Web Programming

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Networked Multimedia Education System (NMES)

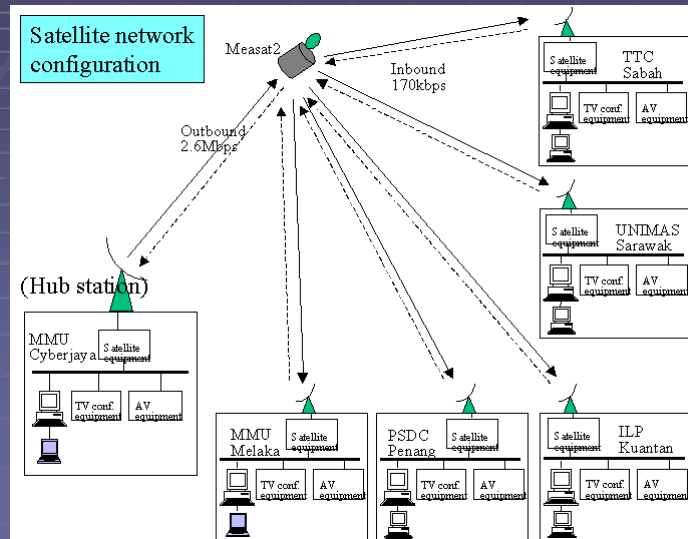
- In collaboration between [Ministry of Energy, Communications and Multimedia \(KTKM\)](#) and the [Japan International Cooperation Agency \(JICA\)](#)
- Satellite-based Education System
- 5 remote sites within Malaysia
- Conduct Live lectures
- Programmes:
 - Bachelor in Information Technology (Sept. 2002)
 - Diploma in Information Technology (May 2003)
 - Masters of Engineering in Microelectronics (Oct 2002)
 - Others: Seminars, Workshop, etc

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NMES



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MMU e-Learning Campus

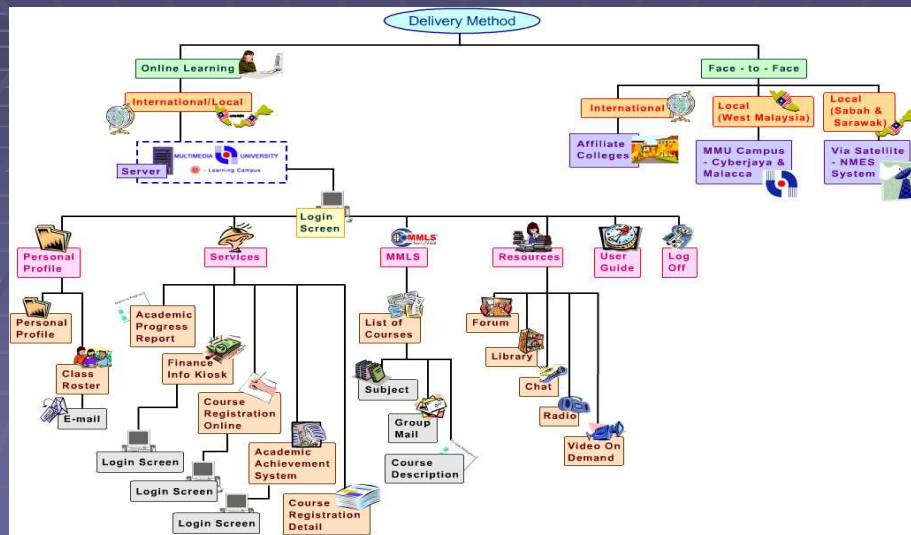
- Programmes are delivered via Internet
- Supported by
 - on-line administration (payment, registration, etc.)
 - on-line student technical and academic counselling centre
 - digital library
 - Online support (e-mail, SMS, chat, etc)
 - Face-to-face tutorials
 - Online monitoring system

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MMU e-learning Campus Learning Model

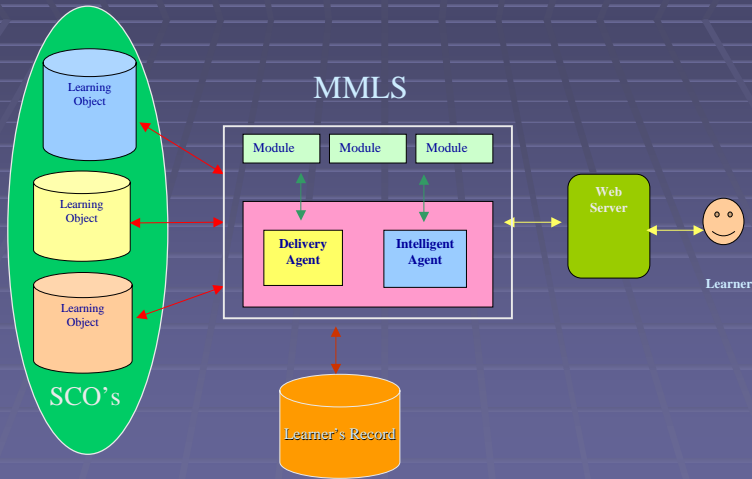


Multimedia Learning System (MMLS)

- ▣ Concept: Virtual Teacher within a virtual classroom environment
- ▣ Intelligent Learning Management System (iLMS)
- ▣ Won three International Awards



MMLS Architecture



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MMLS: Open Technology

Operating system :	Supports Linux, Sun Solaris, Unix and Windows
Web server :	Apache
Database :	MySQL Supports other databases and ODBC
Server side script :	PHP version 4.0.4 (powered by Zend engine)
Client side script :	JavaScript



MMLS Key Features

- * Platform independent (Linux, Windows or Unix)
- * Integration with existing Database
- * Fully web enabled including the Admin.
- * Intelligent student monitoring/tracking
- * Courses can be managed by instructor/teacher
- * Auto-administration (e.g. registration, grouping, etc)
- * Communication Tools: Bulletin board, Chat, Forum, E-mail, SMS
- * On-line Test Tools (Test creation, auto-grading & distribution of grades)
- * Calendar/scheduling
- Customisable
- SCORM compliance

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Users/Collaborations

- MMU
 - 15,000 students
 - All lecture notes for all subjects are available online
 - Multimedia content (more than 100 subjects)
 - 250,000 hits within 6 weeks on 2 servers
 - <http://mmlscyber.mmu.edu.my>
 - <http://mmlsmelaka.mmu.edu.my>

Other Collaborations in MMLS:

Malaysia: APN, CIAST, and Schools

France: La Rochelle University

Others: S. Africa and India

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Collaboration with Japanese Universities on SCORM

- A project was carried out with Kyoto University, Waseda University, Multimedia University and NTT-X.
- Develop SCORM-based content and test on different platforms
- Testing was done at each university
- Interoperability test was successful

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Demo....

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