

E-Learning Campus in Malaysia: A Case Study on Multimedia University

Seminar Sub Themes: Accelerating Access to Education through ICT

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ABSTRACT

This paper aims to discuss the development of e-learning in Malaysia, with Multimedia University (MMU) as the focal point. MMU, the first private university in Malaysia that has emphasized on the usage of Information Communication Technology (ICT) has made some revolutions in Malaysia's education frontier. Using the state-of-the-art internet-based technologies and instructional facilities, the Internet Based Degree Programme (IBDP) provides flexibility to students to meet their education goals at their own pace and time. All the students need to do is access to a computer and the Internet to take advantage of the high quality, convenient, and cost-effective education and training provided by the MMU e-learning campus. In unison, e-management is widely employed via the in-house developed Integrated Computerized Education Management System (ICEMS) that promotes a paperless-administration environment and dissemination of information electronically between communities in both Cyberjaya campus and Malacca campus. The methodology of this paper will be a qualitative research, which will be based mostly on secondary data.

KEY WORDS

Multimedia learning system, e-learning, and distance education

1.0 Introduction

E-learning refers to the use of Internet technologies to deliver a broad array of solutions that enhance knowledge and performance [1]. Inline with the advanced of technology and the broad usage of the

Internet, e-learning is getting more and more popular among the people across the world. Many companies have adopted e-learning or e-training in the effort of building up their workers skills and knowledge, as to remain and create competitive edge. Via the adoption of e-learning, the companies can not only increase the workers training time but at the same time trim down the training cost and employee downtime. According to David [2], Sony reduces its training cost by two-third by introducing e-learning, whereby Cisco saves US\$1 million per quarter on training cost and reduces training time by 80% yet improves learner satisfaction. Also, David points out that Ford Motor Company has taken significant learning initiative on the web, that is, its dealership certification program is now online that replaces twelve instructor-led courses.

Apart from being adopted by organizations, e-learning portal also plays an important role in promoting life long learning. Its high level of accessibility and flexibility has no doubt make it favoured by the learners, especially those working adults who pursue their study out of their busy schedule. Through e-learning, the learners can access to the learning materials at their own pace and time, with minimum disruption to their working and private life. Thus, it has the potential to make a momentous difference to individual and organizational performance.

2.0 Literature Review

Foresee the great potential of the Internet in delivery information rapidly all over the world, it is no surprise that e-learning is gaining its place in the education industry. According to the North America based research organization IDC, the worldwide market for instructor-led training in 1998 was \$5bn, while only some \$1bn was spent on e-learning. However, by 2004, the IDC predicts that, while instruction-led training market will have grown to some \$6bn, whereby the e-learning market will have expanded to some \$11bn [3]. Whilst, David [2] points that student population for online education is expected to increase from 240,000 to 5 million over the next decade. In US, the online student population will increase from 600,000 in 2000 to 2.23 million by 2004 (IDC).

In Malaysia, distance learning started in the 1980s, where external degree programs were offered by established universities from the United Kingdom. This is followed by the off campus programs offered in University of Science Malaysia (USM). Today, more and more universities from overseas, for instance University of Nottingham, Monash University and Curtin University have set up their campus in Malaysia. Hence, it is crucial for the local universities to put in their efforts to attract more students, as to remain competitive. One of the measures is to introduce distance learning programs or e-learning programs, which enable the delivery of the course materials rapidly to a large number of widely geographical dispersed people, at their convenience, with just a few clicks of mouse. In conjunction, the adoption of promising multimedia technologies in education will create a major shift in the educational paradigm that assures major advantages over the traditional analogue distance learning and face-to-face systems [4,5]. According to Alhabshi [6], a web-based learning environment should integrate both synchronous and asynchronous communications to support various elements such as text, graphics, audio and video messages.

Multimedia University (MMU) is among the frontier that introduces e-learning using Multimedia Learning System (MMLS), a web-based intelligent learning system that supports various media elements. University Tun Abdul Razak (UNITAR) is another university (virtual university to be exact) in Malaysia that embeds e-learning in its learning environment. It adapts both face-to-face meetings and the internet- based learning system, where the Virtual Online Instructional Support System (VOISS) provides a variety of functions, such as email, forum, online tutorial, bulletin board, virtual library and announcement. Apart from universities and higher institutions, initiatives have been taken to incorporate

e-learning into secondary school education. The pilot phase of e-Learning for Life (ELFL), a joint e-learning project that involve Asia-Pacific Development Information Programme (APDIP), Coca-Cola Corp and the Ministry of Education has been launched in March 2003.

3.0 MMU e-learning campus

MMU is among the pioneer universities that embed e-learning technologies to disseminate knowledge beyond borders and time zones. Internet Based Degree Programme (IBDP) department was started in the university in June 2001 to run the operations of the university e-learning campus, which provides learners with the flexibility to attain academic goals at their convenience. The MMU e-learning campus also aims to uphold the human touch of attentiveness found in traditional classrooms, and hence boosting the virtual learning experience. Currently, MMU has introduced two IBDP, namely Diploma in Information Technology and Bachelor of e-Business (Hons) through its e-learning campus.

3.1 E-Learning Campus Interactive System

The E-Learning Campus Interactive System (ELCIS) facilitates students' learning process and experience by providing exclusive features that are available online.

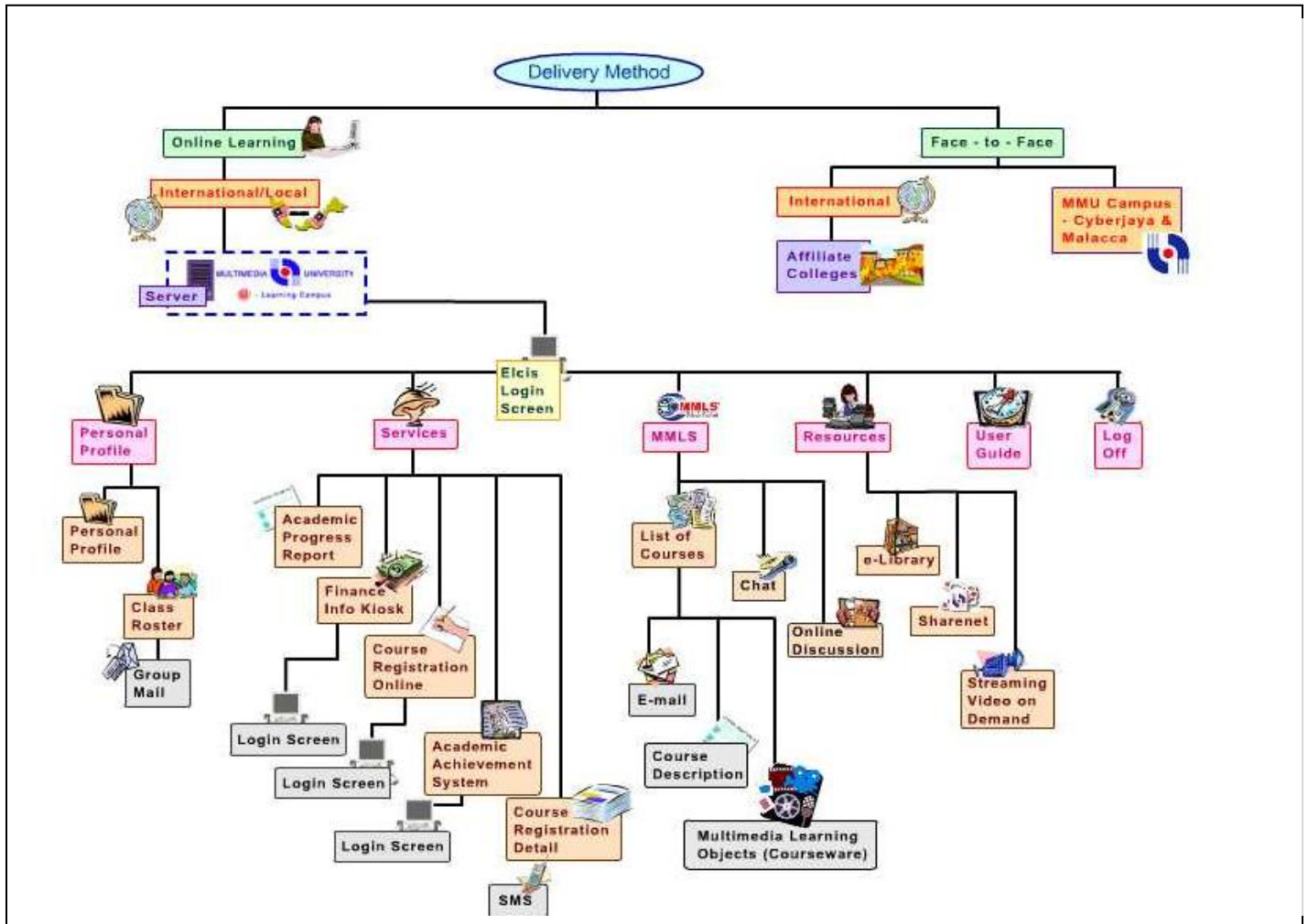


Figure 1: Overall Architecture of MMU e-learning campus. (Source: MMU e-learning campus)

Student and Class Profile

By access to student and class profile, students can view their profile, amend the personal information and change their password.

Course Registration

With course registration online, students can register and withdraw from taking the subjects offered from remote venues. This eliminates the trouble of traditional way of course registration where students need to queue up and do their registration manually. Besides, students can check the timetable of the subjects offered, or their personal timetable through this system.

Finance Information Kiosk

Through this online finance information kiosk, students can trace their financial statements and invoices at anytime, anywhere.

Academic Progress Report and Achievement

Academic progress report and achievement is an online system where the students can check their academic result, student activities performance result and MUET result.

e-Library

e-Library is catered for those who have signed up for the MMU e-learning courses. It serves as a gateway to the university Online Library Catalogue (GeoWeb/MMU Library), Electronic Journal Databases, Digitised Theses, examination papers, previews of Final Year Project and access to an array of online resources. Also, students will be given access to conduct their research online.

Sharenet

MMU Sharenet is a knowledge-sharing network for the university community (academicians, administrators and students) for collaborative learning. Via this sharenet, the university community can access to all relevant information and knowledge regardless of where they are.

Webmail

Just like other email hosts such as Google Mail, Hotmail and Yahoo Mail, Webmail is MMU official email host which facilitates the communication among the university community and also the outside world.

3.2 Multimedia Learning System (MMLS)

MMLS is a web-based courseware delivery engine that acts as an interactive educational tool for the course content. As the name itself implies, MMLS that is developed with the underlying concept of ‘a virtual teacher within a virtual classroom’ utilizes multimedia to enhance the teaching and learning process. Apart from the use of multimedia, MMLS is also an intelligent learning system where it has the capability to customize the learning materials according to the students’ aptitude. This enables the students to learn more effectively. Currently, MMLS is not only a courseware delivery tool for IBDP, but also as a supplement to on campus degree programmes.

Key Features of MMLS

- Extensive learners’ monitoring and tracking
- Intelligent delivery system
- SCORM based compliant engine and content (portability of content)
- Auto sequencing slides

- XML based question bank / templates
- Online self test (with auto marking features)
- Short notes, course outline, past year exam paper
- Lecturer notes, References
- E-mail, Chat, Discussion board
- On-line forum by course for asynchronous interactions
- Mobile learning (e.g. SMS – coming soon)
- Report on students progress in table and chart format
- Course management by instructor
- Assessment, Calendar, Web polling

These unique features have make MMLS appears to be an outstanding learning system that not only restricted to the access of learning materials. The extensive learners' monitoring and tracking system is employed to keep record of the students' progress and activities in the database. This information is vital for the assessment of the effectiveness and return-on-investment (ROI) of the web-based training. Besides, MMLS is very flexible and customizable. In other words, it can be customized and employed by any organizations that are allied to learning and training activities. Apart from this, the distance between the academicians and the students can be minimize, as communication can take place through various manners, such as email, chat, discussion board and also online forum by course that promotes asynchronous interactions. Additionally, efforts have been taken in order to incorporate mobile learning elements to MMLS, whereby the short messaging service (SMS) will be made available soon.

The effectiveness of MMLS as a learning tool in the new age is ascertained when it won the Asia Pacific Multimedia Super Corridor Information Technology and Telecommunications Awards (APMITTA) in year 2000. The value of this learning system is further established when it was granted with the Asia Pacific Information Technology and Communications Awards (APICTA) 2001 for "Best of Education Applications" and Merit Award in Application in Asia Pacific Information and Communication Technology (APICTA) Award 2003 for "Best of Education and Training Applications".

3.3 Integrated Computerized Education Management System (ICEMS)

Inline with the government effort in promoting paperless administration environment, e-management is widely used in MMU. The in house developed Integrated Computerized Education Management System (ICEMS) is used to endorse paperless administration environment and disseminate information to MMU community in both Cyberjaya and Malacca campuses. A broad array of administrative functionalities is made available to the staff and students through this web-based system. This enables the university community to perform administrative tasks more efficiently and at ease.

By accessing to this system, students can trace their result and financial statement at anytime, anyplace. Moreover, students can submit their activities proposal and trace the proposal's application status with just a few click of mouse. In conjunction with this, they can also send in room booking application through ICEMS. This will definitely save a lot of work and time, as the students do not need to go to various department, queue up and wait for the officer to process their applications. On the other hand, the online academic evaluation module acts as a platform where the students can evaluate the teaching quality of the academicians, as well as the condition of the facilities and teaching aids. Also, the students can provide their constructive comments to the university management without having to worry of leak identity. Despite this, the online events facilitate the course registration process, where the students can check the pre-course registration schedule and do their pre-course registration online. Additionally, they can check the examination schedule and print their examination slip online.

As for the staff, they can apply, query or cancel their leave through the online leave application module. They can also check the timetable of their course or other courses and make their traveling and advance claims through this online system. In addition, they can make use of the Event Management System to organize their busy schedule. The academic evaluation report on the other hand enables the academicians to view the feedback from the students and hence recognizes their strength and improves their lacks. Similar as the students, staff can send in room application online, whereby the management team will process those applications through the room booking management module.

Student	Staff
<ul style="list-style-type: none"> ○ Student Information Center ○ Student Financial Kiosk ○ Room Booking Application ○ Progress Monitoring Report Online ○ Student Directory ○ Student Activities Proposal ○ Student Activities Proposal (Approval) ○ Online Academic Evaluation ○ Graduation Online ○ Pre-course Registration Schedule ○ Pre-course Registration ○ Examination Schedule ○ Examination Slip Online 	<ul style="list-style-type: none"> ○ Web Diary ○ Leave Application ○ Travelling Requisition Online ○ Change of Staff Particulars ○ ICEMS User Authorization ○ Event Management System ○ Timetable for Academicians ○ Academic Evaluation Reports ○ Room Booking Application ○ Room Booking Management ○ Staff Directory ○ Travelling Claim ○ Advance Claim ○ Student Activities Proposal (Approval)

Table 1: Summary - Administrative tasks that can be performed via ICEMS.

ICEMS does not only play a role in promoting paperless environment, but also ease the life of the university community. With this, all the administrative tasks can be done in a very convenient and rapid manner.

4.0 Conclusion

Today, e-learning has gained a reputable position in Malaysia education frontier as it provides a platform to address the learning and training needs of many working adults. Malaysia's universities have started to adopt a more flexible approach to the traditional teaching methods by offering e-learning programmes, which reflects the creativity and innovation of Malaysia's academicians. Multimedia University (MMU) continues to become the leader in the field of multimedia by introducing e-learning programmes and adopts e-management system in its daily operation. MMU's e-learning campus concept is inline with Government's aspiration to transform Malaysia into a knowledge-based society fuelled with lifelong education and training.

References:

- [1] Rosenberg, M.J. (2001). E-learning: strategies for delivering knowledge in the digital age. [Online] Available: <http://reach.ucf.edu/~eme6457/main.html> [2002, December 22].
- [2] David Asirvatham (2003). Borderless Education through E-Learning. [Online] available: <http://mmlscyber/>
- [3] Bob Little (2001). Achieving high performance through e-learning. *Industrial and Commercial Training*, 33(6), pp. 203-207.
- [4] Carver Jr., C.A., Howard, R.A., and Lane, W.D. (1999). Enhancing student learning through hypermedia courseware and incorporation of student learning styles. *IEEE Transactions on Education*, 42(1), February, 33-38.

[5] Lee, P.M., & Sullivan, W.G. (1996). Developing and implementing interactive multimedia in education. *IEEE Transactions on Education*, 39(3), August, 430-435.

[6] Alhabshi, A.O. (2002, March). E-learning - a Malaysia case study. Paper presented at the *Africa-Asia Workshop on Promoting Co-operation in Information and Communication Technologies Development*, National Institute of Public Administration (INTAN), Bukit Kiara Main Campus, Kuala Lumpur, Malaysia.