Journal of Information Technology Education: **Discussion Cases**



HUAN KHOA LE, NARUMON SRIRATANAVIRIYAKUL, MATHEWS NKHOMA, HUNG XUAN VO

HO CHI MINH CITY OPEN UNIVERSITY: IT GOVERNANCE IN VIETNAMESE HIGHER EDUCATION¹

Change management is generally not pleasant for employees. Nguyen is considering how to make sure that the process of upgrading to the new LMS is as smooth as possible.

Ho Chi Minh City Open University (HCMCOU), a Vietnamese education provider established in 1993, decided to improve its IT areas to facilitate a timely response to the rapid development of technology including the implementation of IT in the governance of the university, whereby the top/middle management levels were able to get involved in the operations of the entire organization. HCMCOU had five satellite campuses providing academic training, and the main campus had the role of providing instructions to the other campuses. This required a system that could provide a website to link all campuses that worked seamlessly. As a result, in 2010, Mr Lam, Rector of HCMCOU, made a decision to develop a new system known as the LMS (Learning Management System) with the key purpose of enhancing the management and the quality of training. The objective was to maintain two competitive advantages – distance learning and high-quality programmes. The new system aimed to not only eliminate the geographic barriers for administrators, students, and instructors, but also to monitor the performance of students and facilitate real time communications between administrators, lecturers, and students.

The Rector assigned Mr. Nguyen, the Deputy Director of Enhancement Training Program of HCMCOU, who had participated directly in the development process, to design particular functions of the new LMS to address weaknesses of the existing system. However, many challenges arose while conducting these changes including the resistance to change during the implementation of the LMS and the considerable upfront cost of investment in ICT hardware compared to the relatively long trial time before being able to assess the benefits the new system could bring to the organisation. In addition, establishing policies to govern the implementation process would be particularly challenging for HCMCOU, and it would be time consuming to translate the user interface of the new learning system into a Vietnamese interface.

Mr. Nguyen had to find a way to make sure that not only the process of upgrading to the new LMS went smoothly, but also that the staff and students realized the benefits and appreciated this new system as well.

¹ Copyright © 2014, *Informing Science Institute*. This case was prepared for the purpose of class discussion, and not to illustrate the effective or ineffective handling of an administrative situation. Names and some information have been disguised. Permission is granted to copy and distribute this case for non-commercial purposes, in both printed and electronic formats.

HCMCOU: Background

Ho Chi Minh City Open University was founded on July 26, 1993 by the government and was directly managed by the Ministry of Education. It was the first university to be operated under semi-public regulations and to be endorsed by the government to offer an open opportunity for training and education to the wide public. The university became a public university in 2006 under the Decree 146/2006/QĐ-TTg signed by the Prime Minister (HCMCOU, 2012a).

By September 2012, HCMCOU had already established five campuses in different regions of Vietnam to provide academic training. HCMCOU's head campus; where all the executives' offices were located and, therefore, where all managerial decisions were made; was located at 97 Vo Van Tan Street, District 3, HCMC (see Exhibit 1).

At the time of the case, HCMCOU had 485 staff members, with a majority being doctoral and master's degree holders. Besides this permanent staff, there were hundreds of part-time and visiting lecturers working for the university.

HCMCOU's Education and Training Service

Open University offered a variety of programmes ranging from full-time to part-time, on-campus classes to distance learning classes at the university's satellite academic learning centres. The central objectives were to (i) meet the various learning needs of the society; (ii) promote a society of learning; and (iii) contribute to the establishment of a qualified workforce for the development of Vietnam.

The specialized majors offered at the university included Accounting, Finance and Banking, Biotechnology, Computer Science, Economics, Business Administration, Engineering and Technology, Foreign Language, Sociology, and Southeast Asia Studies (see Exhibit 2). There were about 20,000 full-time students and more than 40,000 distance learners taking different courses at the university in 2012. The university had granted 44,000 bachelor's degrees (including full-time and distance learning programmes) and more than 1,000 master degrees since it was founded.

With respect to international collaboration, the university was ranked among the leading institutions nationwide. HCMCOU had more than 14 years in collaboration with Solvay Brussels School, Belgium, to offer Master programmes for Business Administration since 1995. At this point there were 12 cohorts that had graduated. Apart from this long-standing partnership, HCMCOU had expanded its international network and diversified its educational portfolio by establishing partnerships with other universities around the world such as Swinburne University of Technology in Australia, Ballarat University in Australia, University of Southern Queensland in Australia, Toulon Euromed Management in France, Oviedo University in Spain, and Berlin School of Economics and Law in Germany.

According to the 2012 report of Webometrics, the only international website providing rankings of universities in Vietnam, HCMCOU was ranked at 13th among 117 Vietnamese universities.

The Strategy of HCMCOU to Create Competitive Advantages

Porter (2011) claimed that internet technology was a facilitator that could enhance competitive advantages in speed, flexibility, and efficiency for a traditional and unique product or service. In order to achieve such advantages, HCMCOU developed a new LMS to outperform its competitors as well as to improve the university's efficiency both in term of management and communication methods and that was the reason for the establishment of a new Learning Management System (LMS). HCMCOU had a legal advantage in becoming the leading provider of distance education programs in Vietnam because only two universities in Vietnam were granted the legal right to provide distance learning as part of their key services: HCMCOU and Hanoi Open Institution. Building a blended learning model—defined as a combination of appropriate delivery techniques and technologies to enhance the ability of the learners to study and to achieve desired outcomes of the learning experience—was a priority for the university in order to build its competitive advantages.

There was an early effort to computerize the administration procedures and course management system at the university. This led to some positive outcomes including:

- A local area network (LAN) and other programmes had been deployed at every department
- Adoption of Edu-soft for full-time course management, including e-management for internal flow of regulations and notices, online timetables, and course registration
- Adaptation of Moodle (an open source LMS) as the university's e-learning system

Most of these systems, however, were not fully developed and were offered to full-time bachelor students and programmes only. In order to put into place the desired blended learning model, many more efforts were needed to innovate and offer appropriate ICT-based systems to other groups of learners in the university, especially in the area of distance education (where 40,000 students were currently enrolled).

Several issues that needed to be considered were the following: the ability of participants, the preparation of the IT infrastructure, targeting trial departments, and the establishment of a system of remuneration to encourage participants. Moreover, the new system was expected to provide significant deliverables with a full set of learning/instructional packages and also to meet the needs of students and staff who were the targeted beneficiaries of the project. The LMS was developed in-house and monitored by a Deputy Director from a targeted department to ensure that the structure as well as the contents met the requirements of the programme.

Provision of the High-Quality Programme

Another strategy of HCMCOU that was used to differentiate its services was providing high-quality programmes. Constrained by government regulations, which imposed a cap on the tuition fees that a public university like HCMCOU could charge, it was difficult to provide high-quality programmes to all students. The university focused on a 'special training programme' for some of its full-time students. This special programme recruited candidates with high scores on the annual national entrance exam and the willingness to pay higher tuition fees. These students enjoyed a number of advantages compared to students in other normal programmes. For example, class size was small, better facilities were provided, only highly qualified teaching staff was selected, convenient locations were reserved, and more funds were provided for other extra-curricular activities. With support from the new LMS, not only the programme's quality, but also the level of supervision between student and lecturer/administrator throughout the courses were enhanced.

At this point, this special programme had been accepted by some Australian and British universities such as Swinburne University, Ballarat University, Southern Queensland University, East London University and University of Worcester, which allows students who enrolled in this programme to transfer to these international institutions should they desire to (HCMCOU, 2012b).

Challenges of the Current Course Management System and Expectations for the New One

According to Nguyen (2012) in an article on Giao Duc & Thoi Dai Online Newspaper, Professor Mai, Rector of the National University of Vietnam, believed that the improvement of education played a vital role in the integration, competitiveness, and sustainable development of Vietnam in the context of globalisation. Therefore, in learning from the global context, the board decided to overcome the disadvantages of the existing LMS by developing a whole new system in order to enhance management's ability to improve the performance of the organisation.

The features of the existing LMS

The existing LMS provided course descriptions, learning materials, lecture notes, announcements, and other activities. In addition, it granted each faculty or department a separate site for their content management. Accordingly, contents or news within a department or faculty group could only be modified or posted by students and/or staff within that division (see Exhibit 3).

Disadvantages of the Current LMS

It has been said that the most important contribution of IT was ensuring the alignment of organisational needs and IT functions (Romero, 2012). Apart from the advantages that the existing system brought to HCMCOU, there were many drawbacks that needed to be taken into account. Firstly, there was still insufficient communication among three important players in the ICT-based (Information Communication Technology) course management: administrator/manager, lecturers, and students. This was mainly because the current course management system did not support real-time communication. For instance, if a lecturer wanted to notify a change of class time or other issues related to class schedule to students, he would have to first inform an intermediate person, such as an administrator/staff person. Although lecturers often used their own emails to keep contact with their classes, this was not an available function in this system.

Some features of the existing system, such as the e-learning, were adapted from the Moodle system, an open source software for creating an educationally purposed website. Operating the current system required certain ICT skills and knowledge about computers and the internet. However, there was a lack of ICT capability (or e-readiness) across many key participants (i.e., operator, lecturer, and learner). In that context, supporting systems for teaching/learning processes remained underdeveloped. There was also a lack of supporting documents such as guidebooks, instructions, and guidelines for technical and teaching/learning processes. Moreover, the necessary professional development and training workshops offered to key participants about managing this system were insufficient.

Another drawback of the existing system was that the link between the head campus and other campuses provided by the system remained insufficient, resulting in a lack of supervision. Geographic barriers had been a consistent constraint of managerial activities.

Regarding the disadvantages of the existing system, implementing a new system was the most widely considered solution because the current system was developed and managed by an external IT company.

The Expectations for the New LMS

As the existing course management system was unable to provide robust support for the governance of the whole organisation, the Board of Management demanded development of a new LMS. The expected system would not only enhance the integration level as required for effective governance, but would also boost internal efficiency in operating and managing staff and students, and serve to improve HCMCOU's

competiveness over other universities. These objectives were consistent with what should be expected from a high-performing IT organization, according to Simonsson, Johnson, and Ekstedt (2010).

The first mandatory feature was aiming to minimise the gap between students and lecturers by creating the virtual classroom, an online setting where students could join without having to be at the campus and, thus, enhance interaction and convenience.

Support for a broad range of features was expected by the university's top managers, including the Rector, Vice Rectors, and Heads of Departments, which would include helpful tools for personal content creation. For instance, chat rooms and discussion forums were two key methods for supporting communication between distance learning students and lecturers or instructors. Online test/quiz capabilities with question banks could improve both quality and quantity of examinations. Under the existing system, most of distance learning examinations required staff to attend as the supervisors. However, the instructor's personal site could simplify the procedure of holding an examination by providing a short test with flexible time and a live monitoring function. (see Exhibit 4)

Implementing the New LMS at HCMCOU

HCMCOU's sizeable workforce of 485 employees, along with its many departments and faculties (involved either directly or indirectly in the operation of the organisation), meant that implementation of a new system could not be done casually. The level of IT capability of the organisation needed to be considered and adjusted before deciding upon an implementation plan. Issues relating to governance practice and the perception of IT were raised by Reinhard (2012) in his article 'IT Governance Integration: Auditor Can Use Their Assessment and Advisory Skills to Help Management Strengthen Alignment between the IT Function and Enterprise Strategy', which was published in Internal Auditor Journal.

Implementation Strategy

Determining the e-readiness of participants

E-learning literature concludes that the three important players whose ICT skills and knowledge determine the success of an e-learning project, consist of learners, instructors, and operators. The future of an e-learning project would be uncertain if there was an absence of data on these key players. It was therefore critically important to determine how these people would use and perceive ICT applications. A large survey, whose main objective was to evaluate the e-readiness of the ICT skills of the key stakeholders, was conducted, which sought to provide important background information for further development of the new LMS.

Investing/upgrading the IT infrastructure and preparing infrastructural learning software

In order to implement the new system effectively, HCMCOU would have to invest in the technology infrastructure to operate the system. The initial strategy was to outsource a server with higher storage capacity. Investment in portable devices, such as tablets for managerial level staff, was also a suggestion of the Board of Management to support the performance of the system. Apart from the ICT hardware, it was important to build all necessary learning/supporting materials for the three participants (learner, instructor and operator). These would include guidebooks on operations of the new LMS, instructions for the implementation process, and FAQs (i.e., frequently asked questions).

Targeting trial department/program

Once the LMS was ready for trial, the chosen department of the HCMCOU would be the "High-Quality Training Programme" because the size of this program was still small in terms of the numbers of instructors, and the students from this program were particularly gifted. Moreover, this program was relatively novel in the educational system, with fewer established practices, making it a particularly appropriate division for implementing the new system.

Operating assistance and promotion campaign to key participants

To ensure the success of the new LMS project, promotion and assistance activities were needed using web-based technologies, such as video conferences and online meetings, short training courses/conferences were organized as well as utilizing existing learning supporting software. The key goal was to help participants to achieve desired outcomes of the new LMS.

Expected Output and Impacts of the New LMS

The new LMS was tailored to suit the participants. A full set of learning/instructional materials were developed including guidebooks, instructions, guidelines, and FAQs.

Over 20,000 full-time on-campus students, 40,000 distance learners, and approximately 500 administrators were the intended direct beneficiaries of the new LMS. The improvements achieved through integrating the new LMS into operating and teaching methods would lead to a higher quality of education. That, in turn, would represent a considerable contribution to the university.

The implementation of the new system also had an influence on transforming the purely instructor-led teaching and examination methods into more flexible methods such as virtual classrooms, online discussions and debates, and online examinations. Furthermore, the classic governance activities were also expanded: from direct face-to-face communications to video conferences, where the geographic barriers were removed.

System Development

In order to avoid the over-reliance on the VT Company, the outsourcing provider, the new system was jointly developed by both in-house and outsourcing personnel, with the structure being directly designed and supervised by a staff within HCMCOU to ensure that the requirements from top management were fully fulfilled. Therefore, although the technical development was mainly done by the outsourcing provider, the right to use this system belonged to HCMCOU.

Moreover, as the system was initially developed to support the "High-Quality Training Programme," the design process required the participation of the staff from this program to ensure that the structure could satisfy the program's overall needs.

As the development process combined in-house and outsourced efforts, the initial budget was affordable, in the range of US 25,000 - US 50,000. The budget included investments in improving the information infrastructure, maintenance, and the purchasing of portable devices such as tablet PCs for middle and upper managers, who also participated in the implementation of this new LMS.

The Future Challenges in Implementing a New System

Although the new LMS was expected to bring about several benefits, many challenges from the implementation were expected. These included:

JITE: DISCUSSION CASES

- The level of ICT skills and knowledge of the key participants differed significantly in a large organization like HCMCOU. Young scholars, having grown up with ICT, had an advantage but it could take time for the older generations to get used to the new LMS. How could HCMCOU manage to engage both generations into the new system smoothly?
- The second issue was the empowerment and functions of the IT department of the university. Currently, the IT department had not yet reached the level where it could drive generic ICT-based reforms by itself. Any changes in management would immediately affect the whole system. Resistance to change was therefore expected. How could HCMCOU's IT department successfully coordinate the implementation process when the inevitable resistance emerged?
- Costs and expectations were also challenging factors. ICT hardware costs were experienced immediately, but the benefits took time to be considerable. Expectations from users for ICT reform were high, while the implementation was a time-consuming process. This put pressure on the people in charge of putting the new LMS into place. What strategies could HCMCOU employ to minimize immediate costs while speeding up the perception and realization of benefits?
- Lack of relevant policy could also be an obstacle. Until the university issued a set of regulations to govern and manage the implementation process, it would be hard to get all key participants involved in this new initiative. In particular, a lack of ICT policy at the university and departmental levels would be an excuse for the participants to hesitate or to avoid engaging in the implementation process. What were the appropriate ICT policies/procedures for governing the implementation process?
- Another hurdle would be the language barrier. In the User Interface (UI) of the system, English was the main language. Given the lack of instructions and guidebooks, and the substantial time required to translate these into Vietnamese, those participants who were not familiar with commands in English would find using the system very challenging.

References

HCMCOU. (2012a). *History*. Retrieved 17 October, 2012, from http://www.ou.edu.vn/english/Pages/History.aspx#

- HCMCOU. (2012b). *Chuong Trinh Dao Tao Dac Biet*. Retrieved 15th October 2012, from http://www.ou.edu.vn/dacbiet/Pages/Gioi-thieu-ve-chuong-trinh-dac-biet.aspx
- Nguyen, H. (2012, 08 February). *Doi moi giao duc DH o Vietnam Thuc trang va Giai phap*. Retrieved from http://www.gdtd.vn/channel/3005/201202/Doi-moi-giao-duc-DH-o-Viet-Nam-thuc-trang-va-giai-phap-1958475/

Porter, M. E. (2011). Strategy and internet. Harvard Business Review, 79(3), 62.

Reinhard, J. (2012). IT Governance INTERGRATION. Internal Auditor, 69(4), 51-54.

Romero, S. (2012). An IT Governance confusion solution. Internal Auditor, 69(1), 67-69.

- Simonsson, M., Johnson, P., & Ekstedt, M. (2010). The effect of IT governance maturity on IT governance performance. *Information Systems Management*, 27(1), 10-24.
- Webometrics. (2012). *Ranking web of universities*. Retrieved 15th October, 2012, from <u>http://www.webometrics.info/en/Asia/Vietnam</u>



Exhibit 1: HCMCOU's Organisational structure

Source from HCMCOU (2012)



Exhibit 2: The growth in number of enrolled students at HCMCOU from 2006 to 2011.

Source from HCMCOU (2011)

Exhibit 3: HCMCOU's current website



Source: HCMCOU (2012)

Exhibition 4: The new Learning Management System Powered by NM Corp



Source: NM Corp (2012)