

An Academic Learning Portal: Implementation and Usage

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Abstract

Three years ago, the College of Management ICT (Information and communication technology) steering committee decided to replace its learning content management system (LCMS) due to its inability to support a large number of users and newer technologies. It had been in use for seven years. After comprehensive assessment of several alternatives, the College chose HighLearn as its academic learning portal (ALP). HighLearn is a Web-based LCMS providing a complete solution for managing and delivering courses and course content, supporting a wide variety of online learning methodologies and integrating all types of digital resources required for teaching courses. During the first semester of use, a small group of students and staff members assessed this ALP. Within the academic year, all academic staff members and students were free to use the system and the usage rate exceeded 60%. Since then, the college's decision to regard the ALP as a mandatory element in each course in the curriculum has resulted in a usage rate of over 80%.

Introduction

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decided to replace its learning content management system (LCMS) due to its inability to support a large number of users and newer technologies. It had been in use for seven years. After comprehensive assessment of several alternatives, the College chose HighLearn as its academic learning portal (ALP). HighLearn is a Web-based LCMS developed by Britannica Knowledge Systems, Inc. (BKS), to address a broad range of educational institution needs. It provides a complete set of solutions for managing and delivering course materials as well as forms of communication. With HighLearn, educational institutions can set up and maintain a central learning hub that helps faculty members rapidly create on-line courses. With the capability of supporting various learning methodologies, HighLearn enables instructors to implement a variety of online learning methodologies and to integrate all types of digital resources in their courses. Courses can be instructor-led or self-paced. The system also supports the establishment of virtual communities for sharing knowledge and collaborative learning. Once the system was introduced into the College, its use was examined for one semester by groups of students and selected faculty members. After receiving their feedback, the steering committee gave the "green light" to implement the full operational process, enabling the entire

teaching staff and all the students to use the system in all teaching units and in all courses.

System applications

- **Repository of learning materials**

The system allows lecturers and students to manage a variety of learning materials including articles, presentations, electronic spread sheets, video clips, pictures etc. A date for presenting the item and completing its display can be set in advance. Both the lecturers and students can manage a file of personal learning materials accessible to themselves alone or available to all participants

- **A communication platform**

The system serves as a communications platform between the teaching staff and students, and between the students themselves. The communications can be one-directional – announcements and various updates; two-directional – between the lecturer and the student or two students; or multi-directional – discussion groups of students amongst themselves or together with the teaching staff. The system makes it possible to determine publication times as well as to track whether the student accessed the item on his computer.

- **Submitting assignments**

Students can use the system to submit assignments directly from their home computer. Online submission, compared to e-mail, provides the advantage of receiving confirmation of submission. The system can also track submission times blocking submission after a specific date. If desired, the system can be fine-tuned for late submission.

- **Online examinations**

The system also offers the possibility of implementing synchronous or non-

synchronous online examinations. The synchronous array is dated and the examination is available only at this time. The non-synchronous array enables the examinee to choose an examination time. This array can be used for examination or alternatively for simulating the examination or enabling the student to solve examination papers without determining a grade as part of the learning process.

- **Student, staff and interaction**

Access to the portal is determined by authorization. In each learning environment (academic course) various modes of communication, including email, ICQ etc., enable teaching staff, students, and groups of students to interact with each directly on a one-to-one basis or indirectly as a group.

- **Grades**

Course grades can be displayed or hidden, and assignments, examinations, presentations etc can be managed.

- **Hierarchy of learning environments**

Many academic courses are studied by several groups at the same time. The system creates a hierarchy for managing learning environments. Learning materials can be administered at the level of the individual group; at the level of all the groups participating in the lecturer's course (father group); or at the level of all the groups in the course (grandfather course). The hierarchy is an efficient mechanism for managing the materials, preventing duplication, and uniformity between learning groups while offering opportunities for emphasizing unique aspects in the group or particular groups.

Scope of Activity

By the end of year 2007, the usage rate exceeded 80%: more than 550 staff

members, over 1,300 courses (out of 1,600), and about 10,000 students.

The Implementation Process

Interdisciplinary team was put together in order to lead the deployment process. Several matters needed to be discussed and decided: implementation pace, previous systems and their status during and after the deployment process, requires support levels for both students and staff, dealing with the consequences of organizational change, and all technological aspects, including infrastructure, hardware and software maintenance, etc.

The decision concerning pace and current systems was clear and simple – HighLearn would be implemented with one year. During the transition period all current application would be accessible, and then would become read-only, thus allowing students and staff to view existing information without being able to modify or add new data.

Other major decision was related to the academic staff: who should be involved first? Teachers were categorized into three groups, based on their technological capabilities and previous experience operating similar applications. Proper training program was initiated. This program included several workshops to meet different needs, starting with basic computer oriented skills, eLearning concepts and general usage, basic HighLearn usage and advanced topics of all mentioned above.

System customization was required in order to comply with the college's specific needs. Those modifications were defined and carried out simultaneously in order to speed the deployment process and HighLearn integration.

Support was divided into three levels:

- Staff Technical support, including authorization errors, basic operation and computer related issues.
- Pedagogic support, including course materials and structure modification, creating virtual course sites, proper management of discussion groups and forums, etc.
- Students support, provided by the college's helpdesk. This helpdesk is accessible by phone all day long. Due to constant increase on calls, the helpdesk extended its services far beyond HighLearn related support, and now handles both students and staff.

Benefits and limitations

- Significant benefits have emerged from the learning portal's operation during recent years:
- Increased efficiency: Distributing materials, assignments, announcements, grades etc. have become easier and the time needed for their execution has been shortened significantly. In fact, in many cases, materials were posted during the lecture or as needed. Access to the materials also shortens the time needed for such administrative steps as waiting for learning materials, library searches, exchanging information with friends etc.
- Improved communications: The use of the portal notably improved communications and contacts between the teaching staff and the students, and among the students themselves. The portal's synchronous communications enhanced the distribution of learning materials, including digital documents and files while non-synchronous communications fostered the growth of discussion groups.
- Creating a virtual learning environment: In addition to the traditional learning

environment centered on lectures, the system created virtual learning environments based on Internet meetings, both synchronous and non-synchronous; shared learning resources; and online means of communications. At present, a large part of the learning process has shifted to the virtual environments and the faculty's traditional teaching is shifting to guiding and mentoring.

- **Sharing knowledge:** The portal provides a variety of tools for sharing knowledge from all types of sources such as documents, presentations, and files etc, held by learning partners. It also enhances the acquisition of "covert" knowledge, whose discovery occurs as the group or individuals examine and analyze data and events.
- **Revitalization and innovation:** Constructing and updating the learning environment, created processes that revitalized content structure and the connections between learning partners and between the learning method and the sources. Indeed, the use of the learning portal altered patterns of teaching and created a constant and ongoing process of invigoration and innovation.

By making it possible to create dynamic presentations using voice, animation and video, the portal fostered the development of a more interesting and richer learning environment than the traditional one. (Is this a sixth point?)

Despite these benefits, several potential difficulties have emerged in using the portal.

- **Technological difficulties:** While most students are young and well-skilled in using computers, some of the teaching staff has difficulty coping with new technologies. The lack of technological

skill creates a burden in using the portal. This is reflected in their limited use of the portal with some not using it at all. A survey conducted among the lecturers found many who expected compensation for the additional burden. One of the solutions for this problem was to transfer the responsibility for dealing with the learning environment of the course to young, skilled teaching assistants.

- **Concentrating on technology:** The use of the portal and its "wonders" can result in an excessive focus on technology rather than on learning objectives and content. A feedback and monitoring setup should be developed that will ensure the correct use of the portal and its integration in the learning array, so that the level of teaching and learning will not be adversely affected but rather improved.
- **Transferring responsibility to the system:** Since its full implementation, users have developed an over-reliance on technology leading them to transferring responsibility for the learning processes to the portal. A comment frequently heard is that "This cannot be done since the system will not allow it". A situation in which the portal will harm the effectiveness and flexibility of the teaching framework should be avoided. Every system limitation should be regarded with suspicion and a support system should be developed that will offer a rapid professional solution to the demands for changes in the system deriving from ongoing activity. Similarly an alternative array of activities should be prepared in case of hitches. Every effort must be made to avoid a situation in which the learning array is paralyzed or partially paralyzed due to an overburdened system overload or snags in it.
- **Increasing expectations and complaints:** With the constant improvement in the learning array, student expectations – and

complaints – increased. While the teaching staff is undergoing change in their work patterns, the students rapidly adapt. Unfamiliar with other systems, they become increasingly demanding and expect immediate gratification from the new technologies. They expect learning materials, grades, solutions to examinations and assignments etc. to be immediately posted on the system. In order to overcome this problem, expectations must be coordinated between all the learning participants and the limitations and threats in the use of the system clarified.

Summary and future plans

The activity data indicate that the system was accepted by the students and lecturers and was well assimilated into the learning system. The transition from limited, experimental use to the general deployment was rapid, indicating that the assimilation process was appropriate and efficiently conducted. Despite the limitations mentioned above, it would seem that the system is an essential part of the learning process. When the system was paralyzed (due to a planned closure for maintenance or because of a hitch) the number of calls to the help line was enormous.

Based on what we have learned from both the assimilation process as well as subsequent operation, we are trying to constantly improve the use of the portal on two levels:

1. Expanding the use of the portal – We are encouraging additional staff members to operate their course site using the portal to improve the quality of teaching, and to foster its use beyond teaching pure academic courses in a learning environment for interest groups and teams in diverse areas.

2. More advanced and intensive use of the portal: The portal has many advanced components which most of the staff have not yet used. We want to encourage the staff to use these features. Among these applications are:

- The use of forums to submit assignments and to enhance cooperative learning, support and exchange knowledge
- Create demo courses of courses from other disciplines
- Convert the portal to a central tool that will serve students and staff by providing access to libraries, articles, information pools, administrative information and so on
- Posting information about good academic sites
- Posting data regarding exceptional courses to encourage and compensate lecturers who have developed good sites
- Opening the sites of selected lecturers to a pool of virtual academic courses on the network.

The goal is to create an all-inclusive learning environment that will meet teaching needs and provide opportunities, while relying on the best innovative technologies. This environment will combine all the various tools and systems being used in both the teaching and administrative framework, resulting in integrative system that offers a wide variety of learning possibilities for diverse groups.

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