

## COMPREHENSIVE ANALYSIS OF EXISTING LEARNING MANAGEMENT SYSTEMS (LMSs)

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Type of institution: UK FE

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LMS used: WebCT

URL of LMS: www.webct.com

Language of LMS: English, but has lots of international alternatives

Number of years in use: 1.5

Other LMSs used: none

Number of students in the system: 17000

Number of courses available: c50 Typical duration: various, not possible to say; ranges 1 hour to 50 hours

Number of tutors in the system 400

*this analysis is divided into six parts.*

**1 Course development tools**

**2 Student support tools**

**3 Tutor support tools**

**4 Administration (student database and records)**

**5 Technology (quality of software)**

**6 Price**

**1 Course development tools**

1.1 *Course creation.* How satisfactory was the LMS for course creation?

1.2 *Structure and didactic flexibility - openness.* In the creation of course materials did the LMS permit didactic flexibility? Was the structure open to differing didactic possibilities?

**Yes to both. The structure provides a framework which does not impose a particular pedagogy.**

1.3 *Teacher userfriendliness.* How easy was the LMS to use by teachers and course developers?

**The system requires a certain level of IT skill, mainly to do with file management and windows-type operations. I reckon initial training takes about two days = .**

1.4 *Support for graphics, audio and video, moving image.* Did the LMS support the provision of graphical materials, moving images, audio and video in the course content?

**Yes. It is fully multi-media compatible**

1.5 *Questioning, assessment, assignments.* What provision was made by the LMS for student questioning and assessment and the design of student assignments?

**Five question formats supported. Lay-outs are fairly wooden but tracking is effective. Can be supplemented with use of Hot Potatoes or Quia, which integrate well (but not currently to tracking database). Calculated questions are a particularly useful feature, using simple algebraic expressions to generate up to 100 different questions from one input. Assignments-setting function completely integrated, but not very easy for lower ability students to use.**

## **2 Student support tools**

2.1 *Interactivity possibilities.* What provision does the LMS make for student interaction?

**Shared presentations; student homepages; whiteboard**

2.2 *Online student to student communication (synchronous and asynchronous).* What facilities does the LMS provide for student communication to other students and how successful is it? Is both synchronous and asynchronous communication between students supported?

**E-mail; Discussions; Chat: synchronous and asynchronous**

2.3 *Online student to tutor/institution communication (synchronous and asynchronous).* What facilities does the LMS provide for student communication to the tutor ion to the institution's administration and how successful is it? Is both synchronous and asynchronous communication supported? Are these support services available 24 hours a day?

**E-mail; Discussions; Chat: all these communications work at course level and involve communication with the tutor as part of their management.**

2.4 *Resources, library, references.* What facilities does the LMS provide for student acquisition of resources required by the course, especially library resources and references to required readings?

**You can set up bibliographies/references etc in the course. You can also hyperlink to electronic resources and library resources. There is a glossary function.**

2.5 *Feedback on work and assignments.* What is the quality of provision of feedback to students on their work and assignments?

**The system allows mark and textual feedback through testing and assignments functions but also allows release of any student marks/textual assessments kept in 'gradebook' function. Studnets can see all released feedback, and also stats on their performance in relation to others.**

### **3 Tutor Support tools**

3.1 *Tracking students - database questions.* How user friendly is the LMS for tutors wishing to track their group(s) of students and retrieve data from the student database?

**We don't currently use this globally (thinking of soon). It is easy for tutors to use. Data can be retrieved by simple export (csv).**

**Can also export mid and end-year grades to MIS.**

3.2 *Group management tools.* What facilities are provided by the LMS to the tutors for managing their group(s) of students?

**Usual array of communications tools mentioned above, plus gradebook for progress, plus tracking of every student visit to course pages.**

3.3 *Preparation of questions and assignments by tutor.* How successful is the LMS in providing tutors with user friendly and didactically successful tools for the design of student questions and assignments?

**This is very much in the hands of the tutor rather than the system, which is flexible.**

**Much depends on the tutor's IT skills: many start with Word and move on to more multi-media and interactive methods, but it takes time.**

3.4 *Course planning for students (monitoring pace).* What tools are provided by the LMS to tutors to enable them to monitor and plan student progress?

**Already mentioned: gradebook; tracking of visits; automatic column-creation for tests and assignments; feedback mechanisms**

3.5 *User-friendly administrative systems between tutor and institution.* What provision does the LMS make for successful tutor to institution communication?

**I wouldn't say there is much of this. We would do this outside the VLE.**

#### **4 Administration (student database and records)**

4.1 *Enrolment procedures and fee paying.* What facilities does the LMS provide for student enrolments, course allocations and payment of fees?

**None. It is not this kind of system.**

4.2 *Passwords and security.* How successfully does the LMS handle student access to the system and the security of all student interactions with the system?

**Seems to be very effective. Passwords and access work OK.**

4.3 *Student records database.* How successful is the system's student database, especially for data storage and data retrieval.

**We can link it to our MIS and download data. (csv or xml methods). The API is advanced in the VLE world and conforms to IMS. Data is stored at course level: ie I can easily get data into courses and the global database; it is not**

as easy to get information from courses, though you can export csvs into global spreadsheets.

*4.4 Examination and certification records.* What structures are provided for recording of data and results leading to examination and certification?

**We would not do this. We use our MIS as single data source. Most Boards will not accept electronic source evidence.**

*4.5 Course, class and tutors database.* What facilities are provided for administration of courses, classes and tutors?

**Comprehensive, through the global database admin function. IMS compliant API.**

## **5 Technology (quality of software)**

*5.1 Server - hardware and software options.* What is the quality of server hardware and software options? How is the system integrated with existing software?

**Software has been robust and is subject to continual development and improvement. Servers depend on the institution (locally installed rather than hosted).**

*5.2 Client - hardware and software options.* What is the quality of client hardware and software options? Does the system permit metatagging?

**WebCT lives on the server: only client issues are browser settings, which often need altering from normal defaults.**

**To my knowledge there is no metatagging, though the next versions of webct allow resource sharing of learning objects at supra course level, so I think the repository and metatagging is to come.**

*5.3 Flexibility of didactic structure; updating, adaptability.* Is the didactic structure flexible or is it determined by the technology? How adaptable is the technology to updates and to new technology that becomes available to the market?

**As WebCT is a leading member of IMS, they are absolutely committed to this development. The Vista range (next generation) is aimed at interoperability and allowing third-party software to interface.**

5.4 *Limitation of size (number of students, courses, tutors..)* How satisfactory is the LMS for handling varying numbers of students, courses, tutors? How does it cope with 100, 1000, or 10000 students and large course databases?

**We are not large enough to stretch it. I believe large user databases have 60,000 students. There is the facility for load balancing across servers and multi-institutional use.**

5.5 *Speed of system.* How is the speed of the system and student satisfaction? How does it cope with downloading courses and high bandwidth materials?

**OK on our network, but this has been upgraded. We have not used a lot of multimedia materials, so cannot say. We tend to advise tutors to keep file-sizes small and think of 56k modems.**

## **6 Price**

6.1 *Cost of the LMS (Learning Management System).* What is the cost of the LMS to the institution?

**This year's unlimited user license for WebCT Campus is \$29500**

6.2 *Annual fee.* What fees have to be paid annually for the system by the institution?

**As above. There are perpetual license deals.**

6.3 *Student Enrolment fee (100 students, 1000 students, 10000 students.)* How do fees to use the LMS vary when the student base is 100 students, 1000 students, 10000 students? Is online invoicing available?

**We do not do it this way. We just went for an unlimited user license.**

6.4 *Maintenance costs: staff involved in management, IT specialists, trainers, etc* What is the maintenance course to the institution of the LMS and what staff resources are need to maintain it and keep it functioning?

**Difficult to say. I work fairly full-time on it, but train, administer and support as part of this, as well as developing some materials. We devolve e-learning within the system to tutors within our Schools**

6.5 *Training of teachers and learners and system users.* What costs are involved in staff and student training to use the LMS system?

**Much of this is absorbed, but we allow the = of £20000pa.**

**Conclusion: Overall evaluation:**

**Excellent for us, although we recognise it is not perfect.**

**What features would you like to see included in this LMS in the future?**

**Improvement of question and testing formats.**