

COMPREHENSIVE ANALYSIS OF EXISTING LEARNING MANAGEMENT SYSTEMS (LMSs)

Name of institution: IFOA – Istituto Formazione Operatori Aziendali – Centro di Formazione e Servizi delle Camere di Commercio

Type of institution: Training Provider – (non profit organisation)

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LMS used: Platform IFOA “*l'aula virtuale*” (virtual classroom)

URL of LMS: <http://fad.ifoa.it/>

Language of LMS: Html; Css; Javascript; VbScript per la realizzazione delle pagine Asp

Number of years in use: 6 years, starting from 1996v

Other LMSs used: no other used

Number of students in the system: 2.200 (up to 30 May 2002)

Number of courses available: 85

Typical duration: variable: master 2 years, training courses adult teaching 40h.

Number of tutors in the system: 50

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?

Course creation through the system was designed to meet the needs of those who develop the course (we call him/her: **mastertutor**).

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?

Courses available on the IFOA system do not foresee any customisation which has not explicitly to do with ODL. In other words: all alumni have the same course material and support structure (called *utilities*) at their disposal. All users can define their learning path and the subject they want to go into more in depth.

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

The implementation of courses is done by the mastertutor. Every course has a mastertutor. It is up to them to provide access via password and update course editions. Every step in course development is guided and there is a dedicated team for any technical need.

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?

At the moment the LMS does not support audio, video or moving images but IFOA is analysing some existing products to be eventually integrated into the existing system.

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

Questioning, assessment, and assignments are carried out by the tutor under the supervision of the teacher responsible for the specific subject. Occasionally this teacher can be the mastertutor him/herself.

2. Student support tools.

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

The IFOA platform provides the following interactivity possibilities meant to guarantee and support exchange between students, students and tutors, students and teachers:

- e-mail;
- chat on line;
- forum

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? Forum and email are asynchronous communication modes used for student-student communication which do not require the on-line presence of at least two users as does the on-line chat. IFOA mostly uses the asynchronous mode.

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?

For communication between students and tutors we use the same tools listed above:

email, on-line chat and forum. Since the system does not foresee any automatic reply, questioning is always filtered through the tutor. Tutors can involve the teacher when necessary. In our case this service is not available on a 24 h basis. Students can make questions whenever they want but the reply will not be immediate. Generally it needs one day according to the availability of the tutor. **Fast** feedback is a fundamental aspect of our ODL methodology.

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?

The IFOA platform does not foresee any facilities for the acquisition of resources.

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

Tutors provide feed-back on build-in exercises. Assignments are checked directly by the teacher responsible for the course or the unit; tutors can revise only automated test batteries. In case of learning deficits, teachers will suggest corrective measures to be discussed with the concerned student. Discussion will be with the tutors.

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?

Tutors can track students via the LMS. Monitoring is mostly done through computer based assessment linked to specific databases. Personal data, test results and other forms of assessment get stored and are retrievable at any time.

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

Monitoring is handled in the above mentioned way: asynchronous- and synchronous communication, formative as well as summative assessment. Furthermore allows tutors to measure the login time of students connected with the LMs. Nevertheless this information is considered less relevant since all the content can be printed out.

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?

Questions can not be prepared automatically via some LMS specific publisher but are developed separately by the teacher. These test can be then downloaded by the student. The transfer of these files is done by the tutors via the tools provided by the platform (FTP).

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?

Learning progress is established through formative and summative assessment. Summative assessment is self-testing. Students are provided with a model answer. In this case tutors and/or teachers intervene only on request. Summative assessment produces pass-or-fail results. Summative assessment is always done in presence of the teacher in our premise (off-

line). The score achieved will be summed up with the other results at the end of the course.

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

There is no specific part of the platform that makes tutors communicate with the: administration. Any communication of this kind is done “out-side” the platform.

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?

Fee paying and enrolment procedure are still handled in a traditional way.

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?

Login procedures and password are provided when students are recorded in the system.

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

The student record database is easily managed and up-dated by the tutor. Data retrieval is limited to tutors and mastertutors.

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

Formative assessment and summative assessment results are stored by the tutor and are visible to students in the “Evaluation area”. Comments coming from the tutor can be added in this space.

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

All three of them.

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?

The IFOA LDS platform is implemented on a server Windows 2000 and a SQL Server 2000.

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

Minimum user requirements are: PC with an Internet connection, Browser: at least Internet Explorer version 5.0, operative system Windows 95, e-mail account and a printer. Some courses require a CD-player.

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?

The degree of flexibility and technology use depends on the methodological approach we chose for course design. All our courses are build on the conviction that technology must be functional to the users' needs. For this reason our platform must facilitate online learning activities. (technology use as much as possible and as few as necessary).

5.4 Standards.

What is your opinion about the standards for e-Learning?

In absence of clearly defined interoperability standards for LMSs, the e-learning sector within IFOA has not yet faced the decision of applying standards in the development of the course material. The individualized nature (modular courses) of the programme, that are designed to offer a maximum opportunity to every possible learner, is our first step in this direction.

5.5 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?

There is no limitation of size

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

The speed of systems depends on the size of the bandwidth at the disposal of the user and the available bandwidth within IFOA (at present the bandwidth we use is CDN with 512 Kbit.)

6 Price

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

Our LMS belongs to IFOA since it was developed expressly for our ODL course delivery. We do not have to pay any royalties or fees but dedicate resources to maintenance, implementation and up-dating.

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

See 6.1

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?

ODL courses delivered by IFOA are nearly all funded by local authorities (region, province) or national authorities (ministries). In all these cases participation is free. Other courses (business masters, preparatory courses etc.) are not delivered via the LMS.

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

See 6.1

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

All the e-learning staff is in charge with tutor, teacher and student training. Training concerns management and use of the platform. Students get trained at the beginning of every course. Tutor and Teacher training focuses tutoring facilities. Training is backed-up through step-by-step guides for all figures involved.

Conclusion: Overall evaluation:

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