

COMPREHENSIVE ANALYSIS OF EXISTING LEARNING MANAGEMENT SYSTEMS (LMSs)

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LMS used: LC Profiler

URL of LMS: <http://www.lcprof.com/ktkprof>

Language of LMS: Finnish / English

Number of years in use: Five (early version was called "ProTo")

Other LMSs used:

Number of students in the system: (Spring 00 – Autumn 01, 2500 users

Number of courses available: 41 Typical duration: Several weeks or months

Number of tutors in the system: ?

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?

Profiler has "built in" structure for a course and if teacher's/ course's approach fits in, course creation is easy.

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?

- One “virtual space” of Profiler is “Library” and teacher/tutor can put materials (like core readings) to there. Material can consist text, pictures (html) and multimedia elements as well as links to outside. There is automatic material comment/discussions - tool for students.
- One or more instructor / tutor can get modify access to the “Library material” and teacher can give access to material from other Profiler courses.
- More than just through materials Profiler supports different pedagogic approaches / uses of environment. Teacher can choose a profile for the course: Project based, Material based, Communication based. These profiles hide “unnecessary tools” from student.

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

- Technically it does not require special IT skills and starting a course is easy.
- If and when teacher understands basic idea of the environment, use is quite natural. –Of course normal IT technology creates problematic situations with several Web-browser versions etc.

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?

Material can be any “web-browser capable” media. Complex-pages is better to open to a new browser window. Profiler itself does not contain any “plugins” or viewers. One example of Profiler with multimedia elements is described on:

<http://imej.wfu.edu/articles/2000/2/01/index.asp>

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

Profiler’s idea is based on project based learning and students’ active production (like study project plan, study products/documents, discussion comments) and student’s progress should visible through this. There is no test tools or assessments tools.

2 Student support tools

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

Interactivity with environment:

- Students can produce study products, (template for project plan...)
- Students can form a student team (for common study product...)
- Students can make "internal links" to course pages
- Students can search from course documents

Interactivity with other students :

- Material comment tool on materials section. Commenting starts automatically comment discussion.
- Discussion areas for whole course or sub groups.
- Students' can form teams and team (members) can have modify access to team's own study products (documents).
- "Chat type" On.line café discussion area for socialising.
- On discussion text messages and study product documents student can see who has read his/her text.

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?

Communication / interactivity with other students :

- Material comment tool on materials section. Commenting starts automatically comment discussion.
- Discussion areas for whole course or sub groups.
- Students' can form teams and team (members) can have modify access to team's own study products (documents).
- "Chat type" On.line café discussion area for socialising.

2.3 Online student to tutor/institution communication (synchronous and asynchronous). What facilities does the LMS provide for student communication to the tutor or 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?

- On Profiler there is no one-to-one communication to student. Teacher can form discussion area without student access.
- Recently e.g. University's faculty of education has "rent" course space for two courses from LC Prof-company. There is e-mail support and advice available, however no 24 hour/day duty.

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?

- No direct integration to any university's system. Teacher can "build" some level integration, because Profiler is closed environment (personal UI and password) it is possible to link non public (web) sources outside.

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

- No automatic "feedback tools". Cause of the pedagogical idea, feedback comes from peers, tutors and teacher(s). Minimum level is that one can see that who has read ones input to the environment.

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?

- There is a activity log for each student and teacher/tutor can "track back" when and what student has done and when.

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

- Teacher can form sub-groups with their own (local) tutors. Sub-groups may have their own discussion areas and info-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?

- Cause of the pedagogical idea, there is no special tools for e.g. questions, but whole structure is built to support solid web-studying.

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?

- Tutors (and students also) can see other students' products (reflection) and they can see average (usage) activity.

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

- No specific communication tools for that, but Profiler can import student lists (user account lists) from administration's systems.

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?

- Look 3.5.. There is user account (licence) counter etc.

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?

- SSL encrypted HTTPS connection and personal user ID + password, firewall, no direct access to database...

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

- When course ends it is possible to export user's products (texts) from Profiler e.g. archiving purposes on HTML-format. (e.g. to burn to CD-R)

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

- No such tools. Assumption is that there is always some kind of face to face parts and other activity involved.

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

- Profilers basic structure supports certain web-based study model. (sub-groups, milestones for project work...)

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?

- LC Profiler is (now) offered as service. User (student/tutor/teacher) needs just www-browser. No specific integration or restrictions, use of file formats etc. depends on a course.
- There is always some bugs on systems, but Profiler as been on use several years now and it is working quite good and smoothly.

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

- LC Profiler is (now) offered as service. User (student/tutor/teacher) needs just www-browser. No specific integration or restrictions, use of file formats etc. depends on a course.
- Currently no meta tags on use.(No need for those yet. Tecnically it is possible to build and utilize meta tags (Profiler is based on SQL-database system).

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?

- Profiler has certain pedagogical approach and idea. Company's other product LC Team is "modular based" and it is more like "neutral tool".
- Profiler is typical web-based service and there is (minor) updates regularly (net connection improvements etc.).

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?

- There is thousands of users accounts on a (same organisations) database with no problem.
- Courses pedagogical idea (usually) limits sensible number of students, not technology.
- Server system is clustered with load balancing and response time on many simultaneous users is good.

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?

- Usually the bottleneck is “on the way” and if course uses high bandwidth material or special multimedia it is good to store this to local server (near students) and make “internal” links to Profiler. – So, Profiler is the place to study, comment etc. and one can e.g. watch net video from local server.
- In my opinion same thing in use of any linternet environment.

6 *Price*

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

Rough estimate (average prices):

NOTE: Prices are for Profiler service. No extra costs to user for own servers and maintain. It is good to remember TCO in this area also.

Pricing is “progressive”. More you use cheaper it is / user.

- *User account:* 30 EUR / year
- *Start course space:* 400 EUR
- *Tech. and pedagogical on-line support for a course teacher* 800 EUR / year

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

- Look above.

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?

- Look above.

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?

- Look above.

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

- Look above.
Company can offer training e.g. via partners.

Conclusion: Overall evaluation:

As a user (teacher/tutor) I think that Profiler is good for longer “academic style” studies for adult learners. ‘Cause of it’s pedagogical idea. (open and flexible learning/ project pase learning”)

Teacher must know (and accept) what is the basic idea for the course structure and after that Profiler supports work very good.

- If one uses Profiler very differently, there is some “unnecessary “ functions what may confuse users.

As it is offered as service starting a course is easy. As well as “building” own course to a system.

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

Actually, I would like to make some things more simple to use logically and technically.

As I belong to group what is developing Profiler and it’s new versions, there is direct way to development.

To inform you right, I’d like to say that I am related to the company LC Prof, but I wrote my evaluation based on my experiences as user of the system.