

COMPREHENSIVE ANALYSIS OF EXISTING LEARNING MANAGEMENT SYSTEMS (LMSs)

| | |
|---|--|
| Name of institution | National Institute for Distance Education, Norrköping Statens skolor för vuxna |
| Type of institution: | Distance Education Institution that primarily offers secondary education courses to adults |
| Address: | Statens Skola för Vuxna, Box 2024, 600 02 NORRKÖPING, Sweden |
| Telephone | +46 11-24 04 00 |
| Fax | |
| Email | |
| URL | http://www.norrk.ssv.se |
| Name of training manager:(Optional) | Allan Westerdahl allan.westerdahl@norrk.ssv.se +46 11 240448 |
| LMS used | We have developed a LMS system, which we call SSVN2000. |
| URL of LMS | |
| Language of LMS | Everything is in Swedish |
| Number of years in use | We introduced online education in the fall of 2000. |
| Other LMSs used | We use FirstClass for internal communication among tutors. We did use a system called LEKTOR from LECANDO. It was suitable for the distance education model we apply. Our focus is on individual learning in which the students choose their individual start-up date and progress plan. |
| Number of students in the system | Altogether we have about 15,000 distance education students. I would characterize between 500 and 1000 of them as online students |
| Number of courses available | All our 50 courses have some use of the web. |
| Typical duration | The duration of our courses vary from a few weeks to several years. Our policy is that the students may start a course whenever they want to and follow their individual progression plan. |
| Number of tutors in the system | Altogether we have 30 teachers. About 20 to 25 of them teach online. All our teachers are full-time employees. |

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?

We use Dreamweaver, PhotoShop and a number of other programs for course creation. We are satisfied with these tools and they meet our needs. Our teachers use these tools, because they also work in project teams that design the courses. A team typically comprises a project manager, a tutor and a web-technician. [SSVN]

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?

We use various media in our distance education courses. We have experiences with a number of alternatives, but now we basically use three models. These are:

a) The course is based on printed textbooks and printed study guides. In addition, the course has a web site that includes additional resources such as forms, FAQs, e-mail addresses, and discussion forums. The tutor could also publish a personal presentation, an introduction to the course, links to external resources, progress plan etc.

b) In the second model, the study guide is also available on line.

c) In the third model, all course components are web-based. This could include interactive course content, multimedia elements etc. [SSVN]

We have developed a standard template for the course content. [SSVN]

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

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?

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

We include both multiple choice and tutor assessed assignments. [SSVN]

2 Student support tools

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

We use a shareware conferencing system. (Which one?). We also use FirstClass for internal communication among tutors. We also have discussion forums for students, but most of the communication is conducted via e-mail between a tutor and an individual student. Our

students are reluctant to work in groups because of our focus on individual progression. [SSVN]

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?

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?

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?

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

Our tutors give students written feedback on their assignments, but they do not grade their work. Our students register for the national high school exams and receive their official grades and course diplomas from the national exams.

[SSVN]

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?

A tutor has typically somewhere between 50 and 200 students, and we have developed an internal LMS system (SSVN200) for student tracking etc. It is developed in collaboration with an external consultancy company. I will estimate that we spent 3-4 man-years of development work. We have no current plans to develop SSVN2000 so that it could be accessed via the Internet. As soon as a student is registered in a course, the information is available to the tutor. The tutors see a list of all students registered in their courses. A color code distinguishes between students who only have registered in the course, students that are on schedule according to their progress plan, and students who lags behind their progress plan. Each student has an individual progress plan that is entered into SSVN2000 by the tutor as a result of a telephone or e-mail discussion with the student. [SSVN]

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

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?

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?

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

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?

There are no economy functions integrated in SSVN2000. The students only pay for the course material, they do not pay any tuition fees. The tuition is financed by the Swedish state and paid by the local school authorities. The Swedish authorities are discussing a reform that will provide all employees with a personal account for further and continuing education. According to the discussion, the employees will accumulate some money that they are entitled to use on further and continuing education. [SSVN]

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?

All students in a course share one common password. [SSVN]

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

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

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

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?

All our server systems are hosted and managed in-house. We experience few operational problems. We have no technical support services available during weekends or in the evenings. [SSVN]

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

The students are required to use up-to-date web browsers with cookies activated. We have no special requirements on bandwidth. The students may use ordinary modem lines. [SSVN]

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?

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 have no technical limitations with regard to the number of courses and students we can support. [SSVN]

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?

6 Price

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

Altogether we have 75 full-time employees. Three of them are web-technicians and three others are working in the ICT-department. [SSVN]

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

We have developed the LMS system in-house, so we do not pay any annual fee. [SSVN]

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, and 10000 students? Is online invoicing available?

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?

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

Conclusion: Overall evaluation:

We focus on distance education, which is not necessarily the same as web-based education. [SSVN]

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