

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

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Type of institution:	<i>Educational e-learning centre</i>
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LMS used:	<i>Intralearn (IL)</i>
URL of LMS:	<i>http://teledom.ibcnet.hu/</i>
Language of LMS:	
Number of years in use:	
Other LMSs used:	<i>BlackBoard</i>
Number of students in the system:	<i>150</i>
Number of courses available:	<i>30</i>
Typical duration:	<i>20 hours</i>
Number of tutors in the system:	<i>30</i>

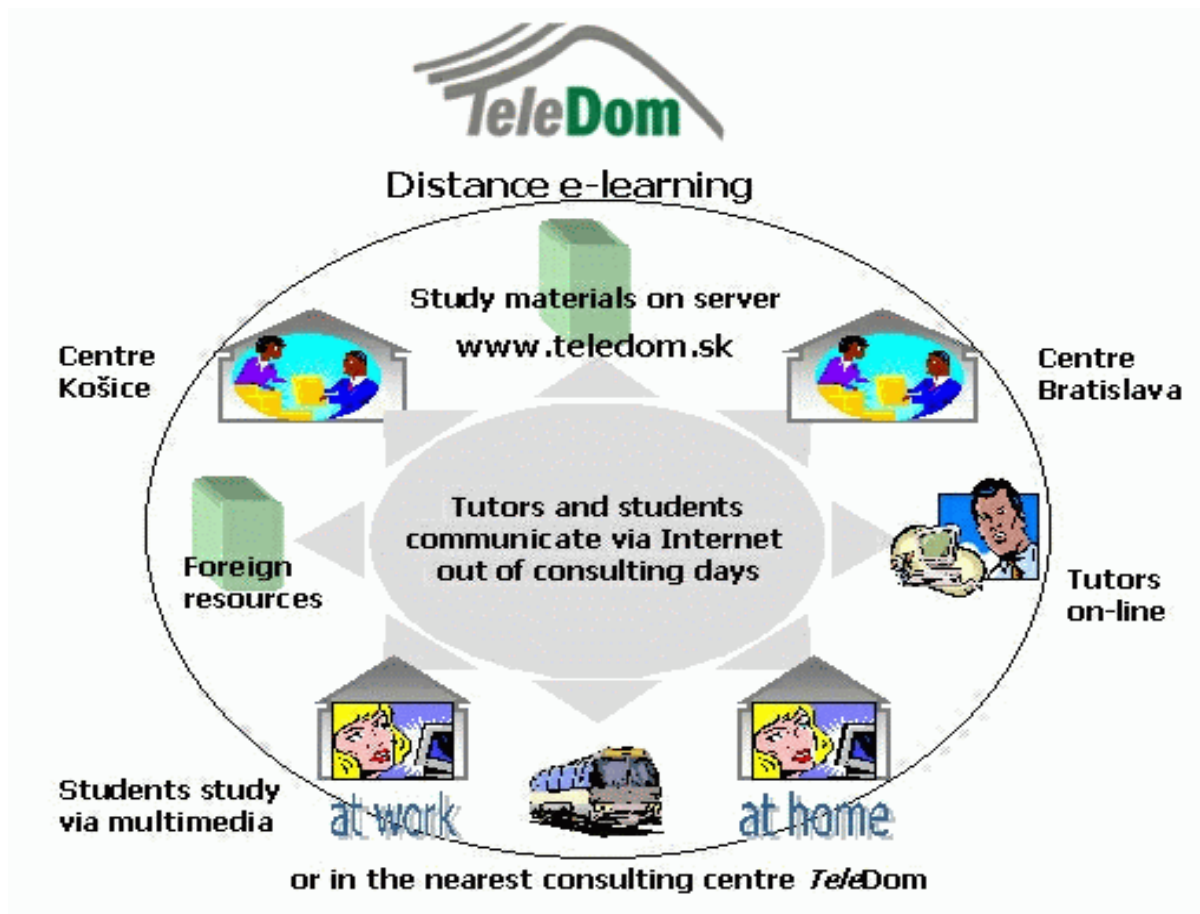
TeleDom is a system being developed by Novitech Partner s.r.o. for facilitating common activities of remote groups. Such a common activities may include: project work, education teleworking, etc. The members of group can communicate with each other.

The main features of system include:

- The group activity is facilitated and controlled by so called Moderator, who can also initiate and terminate memberships of in the group, as well as their access rights
- Members are using Internet-based communication standards and tools.
- The common workplace of the group is the TeleDom server

The TeleDom systems principles in the first phase of the development are used for distance learning communities in Slovakia and in Hungary.

The scheme on the next page demonstrates the main structure and components of the TeleDom system customized for distance e-learning.



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?

Intralearn is advanced but easily usable Internet platform developed for creation of dynamic, interactive, measurable educational Internet products. [TeleDom]

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?

LMS Intralearn enables to add course materials very flexibly. IL enables to incorporate / join files in various audio – video formats, flash presentations, to use multimedia, web hyperlinks, chat, discussions. [TeleDom]

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

From the point of view of a teacher – instructor for the work with IL there is training needed – in TeleDom we provide training for 4 hours, plus there is a hotline in case of need. For creation of multimedia items and presentations there is the knowledge to work with the specific software required – this is not directly linked with the operation of the IL. [TeleDom]

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 supports – file formats e.g. .wmv, .wav, .swf, .rm, .rpm, .asf ...[TeleDom]

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

IL enables to create self-assessment tests as well as tests, which assessment is done by the instructor. The self-assessment tests can be created from three different types of questions, a choice of one option from more possibilities, answer yes or no, true or false, or answers in the form of essays. By taking the exams / tests it is possible to set a minimal exam requirement in percentage for passing the exam. For those who do not fulfil this requirement cannot continue in the course. The results from every exam are registered in a personal assessment book of a student. In the same way also the instructor can give assignments in the form of group or all covering / universal assignments. [TeleDom]

2 *Student support tools*

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

The interactive connection among the students operates either by e-mail, or by chat, or by adding their remarks into the discussion group. [TeleDom]

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?

Yes, see the point 2.1[TeleDom]

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?

The communication between the instructor and the students runs in the same way as the communication among the students, each student has his / her own registered e-mail account in his / her profile and where he / she receives e-mails. The synchronous communication – chat – runs only during the time of consultations, that means not 24 hours a day. The asynchronous communication is available without any limitations 24 hours a day. [TeleDom]

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 IL platform enables the instructor to give further additional information to students in the form of recommended literature, web links, references etc. [TeleDom]

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

The instructor can look up the student results after taking the tests in the overall overview of the results. In the case of solvable assignments the students must send their results of the assignment to the instructor in the form of attachment. The instructor can define and put the submission deadline for the assignments into the students' calendar. [TeleDom]

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?

From the position of the instructor the IL enables to work with the groups, to communicate as a group, to select tasks and assignments, to control the student's procedure and progress in the course. [TeleDom]

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

Tools for management of the groups – group tasks, chat, discussion forum...[TeleDom]

- 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?

Advanced system for creation of the self-assessment tests, patterns for working out of the assignments. [TeleDom]

- 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?

By student enrolment into the course it is possible to limit his / her access for a specific time, it is possible to follow his / her progress and advancement in the course for that specific time period, the instructor can define the dates for the tasks in the student's calendar...[TeleDom]

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

We can say that system provides the communication between the organisation and the tutors in the form of e-mail, face to face meetings and discussions...[TeleDom]

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?

Each course has its stated price and the students can sign in / register themselves into the courses. The payment of the fees is still done in the classical way – either issue an invoice or receipt / cash voucher. [TeleDom]

- 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?

Each student receives his / her unique log in name and the password according to the code after the payment. This information is sent by e – mail and the owner can then modify this data. [TeleDom]

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

Student database and all data related to the database can be exported / imported and of course archived. [TeleDom]

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

The records of studying results contain which courses is the student attending at this moment, how many tests and exams and with what results the student took and the number of reached certificates. [TeleDom]

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

The course administration is the responsibility of the system manager, he defines the teachers / instructors, allocates the courses and classes, defines a hierarchy within the platform, that means he has the dominant position in the administration and course management. [TeleDom]

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?

For the IL platform installation there is server needed with similar hardware parameters – processor 1GHz, 512 MB RAM, 40 GB Hard disk, software – Server NT 2000, MS SQL database. [TeleDom]

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

The technical requirements for client's workstation – MS Windows 95 and more, Macintosh, IE 5.0 and more, NC 4.75 and more. The system permits meta tagging. [TeleDom]

- 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 system allows updating, it enables to download for the clients necessary software, is being created by modern technologies coming to the market – MS SQL databases and technologies. [TeleDom]

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?

Our firm uses IL platform in a probation version – therefore there are 150 students, as well as the number of courses is not high. But the references show, that the system can deal also with higher number of students and courses. [TeleDom]

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?

Our firm was looking for a platform that could be allocated on our home server because in the past we had used BlackBoard, by which it was impossible from financial reasons. In that case our accessibility and the speed of connection into the courses were limited. Now it is more efficient and faster. The connection server / client is obviously dependent on the speed of the Internet link of the students. [TeleDom]

6 *Price*

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

Financial costs are not yet closed by a chapter, therefore I do not know the information about concrete figures. [TeleDom]

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

The same as above. [TeleDom]

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?

The registration is possible on-line, but the one, who had already to do with the Slovak bureaucracy, knows that this form of submission of the documents is not yet allowed. Again we can rely only on foreign references. [TeleDom]

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?

Our educational centre has a number of internal as well as external workers, who work with the platform either from the position of a technical support, management, or as instructors. Obviously the maintenance costs are high approx. 50.000 – 60.000 SKK / 1177 €* - 1413 €* + costs for instructors as we are just in the first phase of introduction. [TeleDom]

*counted with the Slovak National Bank exchange rate from the 10th May, 2002; 1€= 42.469 SKK
(<http://www.nbs.sk/INDEXA.HTM>)

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

We have to divide here the training of instructors, where the work with the systems is more complicated than by a student. For the instructors there is a personal training needed, students normally receive a guidebook about the system operation in electronic form and there is the hotline at their disposal. [TeleDom]

Conclusion: Overall evaluation:

The Intralearn platform is modern, constantly improving according to the requests of middle (firms and educational centres) and commercial users (clients, students). By course creation the system allows to accept also older, earlier developed materials in different formats. There is no special courseware, which would pay a lot of money and also from the user's point of view it is very practical.

It is not limited by any special requirements on hardware and software from final users.

Administration and the management have not yet been completely tested in our conditions, but we can base on references of foreign firms (as well as universities), which use the system.
[TeleDom]

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

More advanced assessment system of the reports linked to the statistics etc.

Functional improvement of the dictionary of terms...[TeleDom]