

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

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Name of training manager:(Optional)	
LMS used:	<i>Ingenium 6.1 (= Aspen LMS today)</i>
URL of LMS:	<i>http://home.click2learn.com/en/aspen/aspen_lms.asp</i>
Language of LMS:	<i>English and Czech</i>
Number of years in use:	<i>2</i>
Other LMSs used:	<i>no</i>
Number of students in the system:	<i>15,000</i>
Number of courses available:	<i>20</i>
Typical duration:	<i>3 days (FTF equivalent)</i>
Number of tutors in the system:	<i>more than 10</i>

CESKY TELECOM (CT) is a leading telecommunications company in the Czech Republic (with nearly four million telephone lines in operation) and one of the largest publicly-quoted corporations in Central and Eastern Europe. Through its mobile phone subsidiary Eurotel, it also has a significant representation in the Czech mobile services market.

CESKY TELECOM employs over 15,000 people.

With a market capitalisation of CZK 163.4 billion at 31 December 2000, CESKY TELECOM's shareholders in 2000 included: The National Property Fund of the Czech Republic (51.1% shareholding), TelSource (27%), KPN Royal Dutch Telecom (6.5%) and investment funds and smaller shareholders (15.4%).

The corporation uses a product called Aspen LMS (Learning Management Server) by the firm click2learn.

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?

LMS has NO built in course development tools. It is "open" LMS. [CT]

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. Limits are in multi level course structure – not available. [CT]

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

Teachers has no special tools. Developers do not need contact with LMS (see 1.1.). [CT]

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?

LMS is AICC compatible. Graphical materials, moving images, audio and video is supported. [CT]

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, assignments must be included in course. LMS stores results only. [CT]

2 *Student support tools*

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

- Forums are available.
- Results review is available. [CT]

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?

- Forums are available.
- Synchronous features are not available and required. [CT]

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?

- Forums are available.
- Synchronous features are not available and required. [CT]

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?

Resources are included into courses. LMS has no special tools for resources library management. [CT]

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

On-line result reports (self tests) are available for students. [CT]

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?

LMS allows to follow start date, end date, total time spend in course and self test results review. [CT]

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

Forum and mail only. [CT]

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?

Tests and questions have to be designed in courses. LMS is able to save and summarize results get from course. [CT]

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?

LMS allows to follow start date, end date, total time spend in course and self test results review. [CT]

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

No tools. [CT]

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?

All needed processes and tools. (Course selection, enrollment, approving, fee calculation, fee allocation). [CT]

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?

Log name and password is used for security. [CT]

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

LMS is built on large and stabile database structure. No problems with database during two years in use. [CT]

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

Data structure for result storing and certification evidence is well done. Students + skill + position description + by course delivered competencies data structures are well done. [CT]

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

On-line and FTF course can be managed by LMS. Courses and curricula tools are available. [CT]

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?

LMS is available for Microsoft NT/SQL or Unix/Oracle platform. [CT]

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

LMS has no special requirements for client station. WEB browser is required only. [CT]

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?

LMS and didactic structure is not in any relation. [CT]

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?

LMS has no logical size limit. [CT]

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?

No problem with LMS speed. Speed is done by communication infrastructure. [CT]

6 *Price*

I am sorry these information are internal only. [CT]

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

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

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?

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?

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:

LMS is well done for internal education of large company where asynchronous and self-study methods are preferred. LMS well integrates on-line and FTF courses with skills management requirements. [CT]

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

Tools for vertical structured courses management (courses with more levels of modules, chapters and sections). [CT]