

AeL

Teaching/Learning and Multimedia Learning Content Management System

Based on modern education principles, AeL is a complete teaching/learning and content management platform meant for undergraduate and higher education institutions.

Whom does the system address?

AeL is a flexible system, which can be used in several languages, different regions, learning levels and types of education institutions. AeL supports the traditional teaching/learning process providing teachers with a modern tool to complement their teaching activities. AeL offers strong support to the responsible factors in deciding upon, controlling, planning, assisting and making forecasts about the educational process.

Functionalities

The AeL eLearning platform offers support for teaching and learning, for tests and evaluations, for managing and monitoring the entire educational process.

AeL is an optimum solution for:

- ❑ synchronized learning, the teacher being completely in control of the lesson; it is the teacher who creates, coordinates and monitors the educational environment;
- ❑ non-synchronized learning - the pupil/student has his own study pace, collaboration projects; suitable for distance learning.
- ❑ testing and evaluation - to meet the education institutions' needs to measure the impact and efficiency of the of teaching process offering a unitary education to all course participants.

Benefits

The benefits of the AeL platform include:

- ❑ support the teaching/learning process by modern information tools, providing teachers with a complementary, flexible and efficient tool;
- ❑ monitoring the teaching process and the students' and teachers' results, both during the courses and after the completion thereof;
- ❑ efficient resource planning (teachers, classrooms)
- ❑ makes efficient the school resources management,
- ❑ facilitates the learning process, increasing receptiveness and the level of knowledge assimilation:
 - a. multisensorial stimulation when presenting information;
 - b. individual exploration / search for information and information operation;
 - c. information exchange and cooperation in solving certain work tasks;
 - d. variety of information sources;
 - e. stimulation of critical thinking;
 - f. purpose-oriented learning.
- ❑ stimulates creativity and competence, as well as individual and team work;
- ❑ possibility to simulate various actions as substitute teaching materials and tools, which are too expensive or difficult to be provided;

- ❑ transition from learning by memorizing to learning by doing.
- ❑ fast and controlled access to a large information base.

AeL – an integrated and universal eLearning platform

AeL is a universal and integrated eLearning solution, offering facilities for the management and presentation of various types of educational content, such as multimedia interactive materials, interactive guides, exercises, simulations, and tests.

SIVCO Romania's specialists are constantly assisted, in developing the AeL system, by experienced teachers, psychologists and methodologists. University teachers and academicians, undergraduate education teachers, instructors, pupils, students and tutors have been actively involved in creating teaching materials, thus contributing to the AeL platform development.

The integrated AeL platform consists of the following most important elements:

1. Virtual library. Non-synchronized learning.

The system has an electronic library, a genuine information database, aimed to store and organize a high amount of information





and teaching materials, which is adaptable, configurable and indexable. AeL gives the possibility to organize the information in the database, based on hierarchies defined by the system administrator at the level of each education unit.

The library offers its users (even beginners) the following functions:

- ❑ controlled access to educational materials;
- ❑ systematic consulting or search in large volumes with text and multimedia content;
- ❑ content creation by:
 - Editors of incorporated HTML ;
 - Editors of incorporated Mathematics formulae;
 - Editors of tests and tutorials;
 - Editors of glossaries / dictionaries;
- ❑ import and export of educational content from recognized formats: MS PowerPoint, MS Word, HTML, PDF, RTF files and photos



- or films; archives / directories of resources; formats based on standards such as SCORM;
 - ❑ content adaptation or modification;
 - ❑ course content organization;
 - ❑ creation of own lessons from standard content components. The content is structured and adapted depending on the teachers' needs. The content may be supplemented by additional information: Key words, study level, version and author.
- Teaching flows are defined for each course, integrating self-evaluation tests or on-line tests like any other type of content.

Access rights for each user or group of users can be adapted and applied to any level of the application.

AeL has hierarchical navigation functions, filtering or search by various criteria.

2. Virtual Class. Synchronized learning

AeL is an optimum solution for synchronized learning, offering the teacher the possibility:

- ❑ to control the educational content transfer to students;
- ❑ to control the students' level of interaction with AeL;
- ❑ to give and monitor tests;
- ❑ to communicate with students in discussion forums;
- ❑ to supervise students' activity, monitoring, in real time, work screens and on-line reports;
- ❑ to adapt the course development according to each student's rhythm and progress;
- ❑ to obtain various and complex reports regarding the teaching activity





3. Testing

AeL Enterprise offers support for the automatic creation of electronic tests, and evaluation assistance, with the following options:

- testing method: fixed or random
- revision method: with or without revision of already studied issues
- duration: with or without time limit
- creation date and version
- description
- study matters and objectives
- key words

Problems or questions are created based on several predefined models:

- selection of one correct option
- selection of several correct options
- free answers
- answers of true/false type
- options evaluation
- answers of true/partial true/false type
- matching
- elements association

Both questions, and answer options, description, hint allow the use of multimedia elements, with the possibility to edit the content using the HTML editor incorporated in the application.

The teacher has the possibility to set the marking methods, by pointing configuration algorithms.

Also, the system allows the teacher to set: the pass limit and test result presentation method.

4. Administration

The system connection is secured by username and unique passwords, each user having an account defined in the system and a password.

AeL uses the latest security techniques. The application administration is a simple process, modeling the rights/roles per users or groups of users.

AeL allows access to the data available at the level of the entire institution, irrespective of size and geographic area.

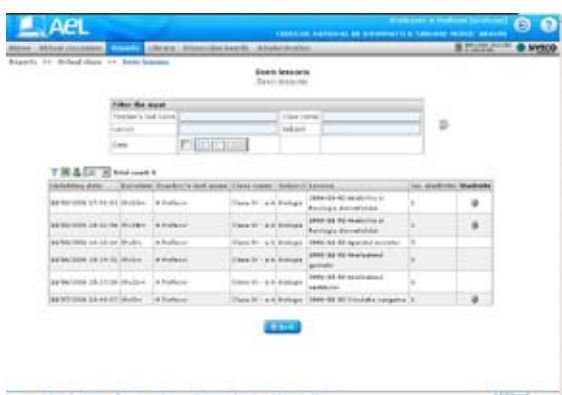




5. Education institutions administration

Using the education institutions administration module, the users have the possibility to manage and monitor information regarding:

- the organization structure (by study levels or groups)
- the courses,
- the teachers,
- the students,
- statistics both related to the teaching process, and to the administrative process facilitating the optimal allocation of internal resources to each institution participating in the educational process.



6. DICTUS – multifunctional dictionary

AeL includes an electronic dictionary integrated with the other modules - DICTUS.

DICTUS module allows quick retrieval of information in huge volume dictionaries, both by exact match search and by approximate (heuristic) search or search by wildcards. DICTUS module offers an easy-to-use dictionary editor, which allows adding or modifying dictionaries, terms or image association.



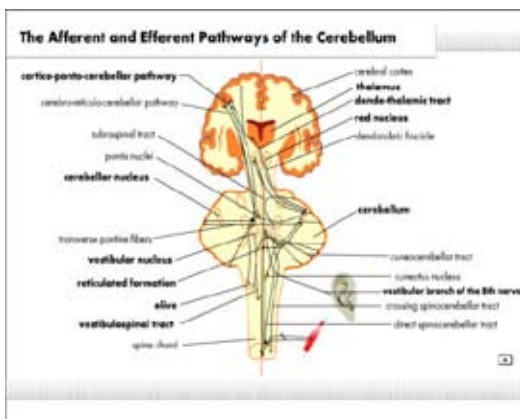
7. Collaborative applications module

The communication suite facilitates team work and collaborative projects, enhancing the e-learning experience. The Collaborative applications module helps students work on common projects, even from a distance.

Due to its advanced communication functions, video conference brings students from remote regions “face to face” with their teacher, being a genuine and efficient support for students who have to take distance classes or for those who study for exams.

In addition to the audio-video conference, the collaborative applications module offers teachers and students:

- ❑ Communication by instant messages (chat), both at the group level and in private

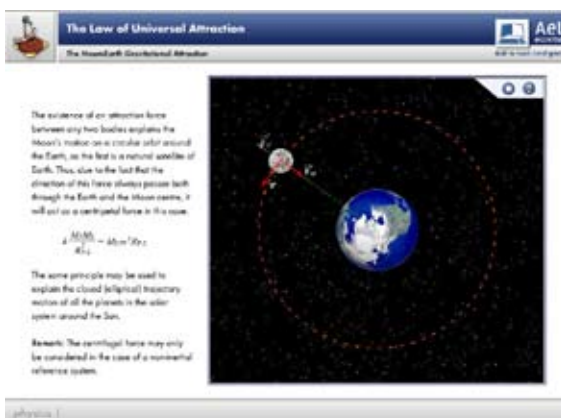


- ❑ Presentation of an application running on the teacher’s computer and even students’ access to such application
- ❑ Work on common projects (schemes, drawings or complex diagrams)

The collaborative applications module allows recording the entire work session and running it whenever necessary.

General features

- ❑ User friendly and adaptable interface, differentiated depending on the type of user, user groups and access rights;



- ❑ The roles, groups, users and associated access rights are easy to manage;
- ❑ Compatible with the standards: AeL is compatible with MathML, SCORM and SVG;
- ❑ Easy to install and manage;
- ❑ Multi-lingual and regional support: AeL can be easily configured for use in any new language;

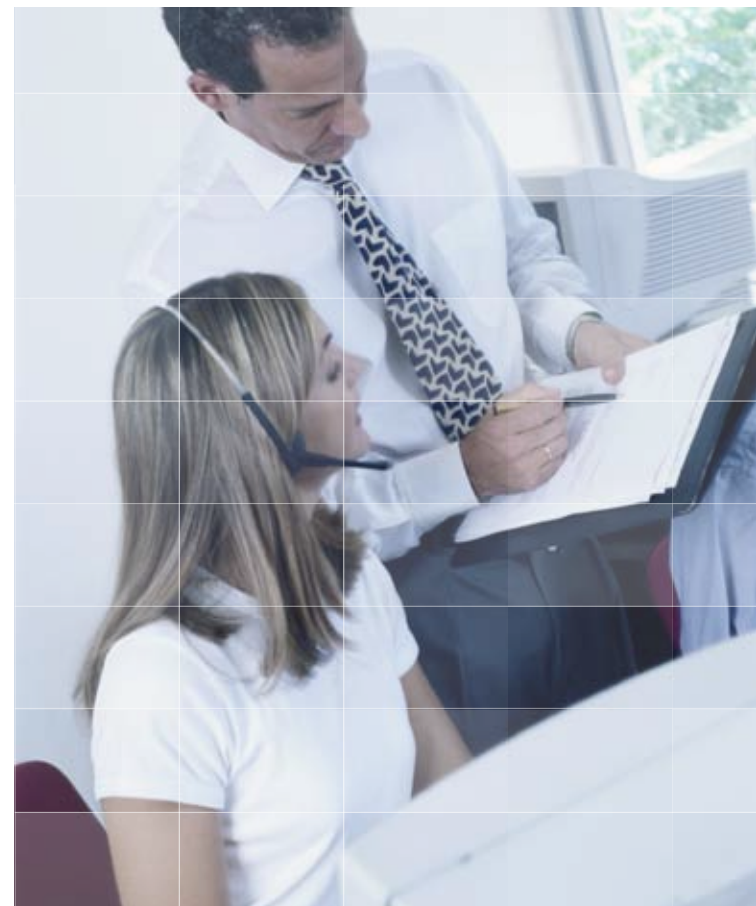
System security is ensured by the fact that access is made at several levels, configurable by the administrator, each of these levels having specific associated rights.

AeL – state-of-the-art technology

For portability and maintenance reasons, SIVCO România designed and executed the AeL platform as a multi-layer system, using a standard, web browser client application connected to a Java-based application server.

SIVCO Romania uses state-of-the-art technologies, specific to Java Enterprise Edition platform and XML.

The content reuse concept is based on XML packaging description formats, with the implementation of the elements necessary for



importing and exporting according to MathML, SCORM and IMS standards.

What do researchers say?

The researchers from the Institute for Educational Sciences, coordinated by Univ. Prof. Dr. Eugen Noveanu, conducted a study on the impact of AeL on the education process. Based on the conclusions of this study, researchers have outlined the following relevant impact levels:

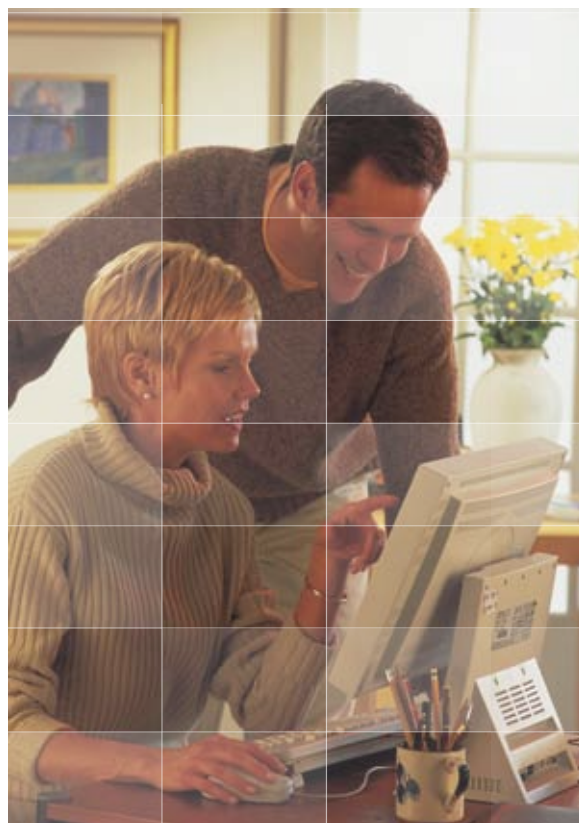
1. at the level of high schools increased responsibility of high school managers towards the teaching-learning process and its actual efficiency. Crystallization of a common nucleus of modern pedagogical culture, which is a very important element of organizational culture, which, due to its capacity to encompass most of the members of an organization, facilitates professional progress, with direct effects upon the quality of the educational process.

2. at the level of teachers, the use of AeL has led, first of all, to rethinking / reconsidering the teacher/student interaction process. The facilities offered by the AeL platform have created a new vision of the students' progress evaluation: the examples of evaluation items offered by AeL, drafted based on the behavior objectives, enable the teacher to have a more accurate image of the students' progress; hence the possibility to adjust the teaching-learning process, and to differentiate teaching. In time, teachers have discovered the existence of new and varied possibilities of professional improvement, integrating the use of AeL to certain activities; starting with the awareness of the possibilities offered by AeL, to involvement in the creation of educational software – all of these contribute to a better understanding of the ways to improve school practice.

3. at the level of students, the use of AeL makes the learning process more efficient.

What do beneficiaries say?

"Last year I assisted the teaching of Chemistry lessons using AeL. I knew that the students in that class were not very good at Chemistry. Still they did pretty well in front of the computer. They asked questions, answered the other students' questions, deduced the phenomena presented ... as if they weren't the same students any more. Useless to say that it was



difficult to get them out of the lab at the end of the class! When they took the next test paper, on that particular lesson, the grades were high. This is why I think AeL is good: it helps you understand ! (Andreea Neagu, Student, Faculty of Chemistry, Bucharest University)

"AeL is remarkable, very attractive; I was able to compare it with other e-learning platforms and I think it is excellent!" (Adrian Mihiotis, teacher)

"AeL course is excellent both for teachers, and for students." (Iliescu Daniela, Physics and Chemistry teacher, Dante Alighieri High-School, Bucharest).

"I like AeL. I think this system is very useful. For the next year, I want to create a set of lessons of this type." (Seceanu Mariana, "Onisifor Ghibu" High-School, Cluj Napoca).

"Geography AeL lessons are excellent because students can finally see representations of phenomena, they can see excellent images supporting theory. It is easier for my students to understand the lesson. Each of them has the possibility to study at his/her own pace, and to review things that may be unclear to them. As if each of them had his/her own Geography lab." (Tinică Bîra, teacher, Vasile Alecsandri National College, Galati).

International recognition

- ❑ August 2005, AeL Lessons (multimedia content developed on the AeL platform) win the World Summit Award, competition organized within WSIS (World Summit for Information Society).
- ❑ August 2005, nominated at eAward for eGovernment.
- ❑ September 2004, AeL is nominated at IST Prize 2005- European Oscar for Informatics (award offered by the European Commission)
- ❑ November 2001, ADLIC receives the "Best practice" label at the eGovernment European Conference "From theory to practice", Brussels

