



smartWB

E-Learning modules for serious games

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Introduction

Due to the COVID-19 challenge, education leaders must swiftly design responses with specific contexts in mind transforming traditional learning into online using e-modules.

It is needed to establish effective forms of online education that will free up institutional capacities and resources in order to redirect their focus on delivering alternative (online) learning methods for students and LLL practitioners.

Online learners should be motivated to take the course, to complete the course or to come back and attempt to do better.

Adding game mechanics in course designing and behavior-based solutions can be solutions to immerse learners wisely.

E-learning

E-learning or electronic learning represents the way in which learning is carried out electronically and is based on the use of modern computer and communication technology, where **special emphasis is placed on interactivity and adaptation of learning to individual needs.**

Teaching materials processed through electronic learning require a **transformation** in relation to teaching materials used in traditional teaching. Distance education does not necessarily imply the use of modern information and communication technologies (ICT), while this is the case with electronic education.

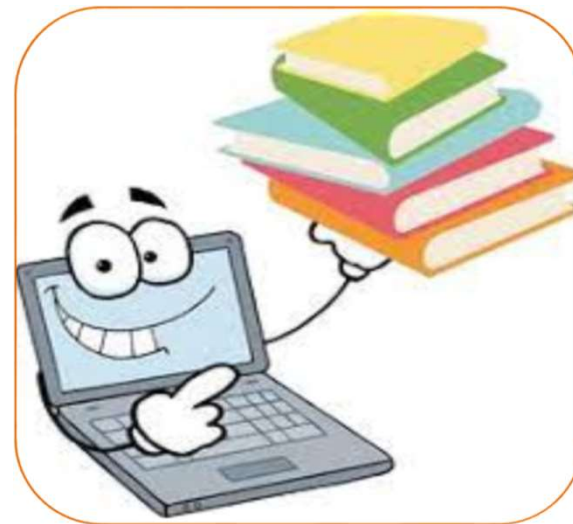
Electronic education refers to the use of computers, the Internet, and mobile devices for the exchange of information. Electronic education is a suitable and most commonly used method for the implementation of distance education, and it can be used as a supplement to classical education.

What does electronic education enable?

- Easier access to learning materials (scripts, multimedia presentations and other educational materials via the Internet) with continuous testing, knowledge verification at all levels, constant electronic communication with professors and other participants
- Use of information and communication technology for the purpose of learning
- Acquiring knowledge and skills through information delivered to the student through various information and communication technologies and other forms of distance learning
- Provision of learning conditions from more distant places in multimedia form or through their combination with traditional methods of knowledge transfer

Tools for e-learning

- Learning Management System (LMS)
- Video conferencing
- Moodle



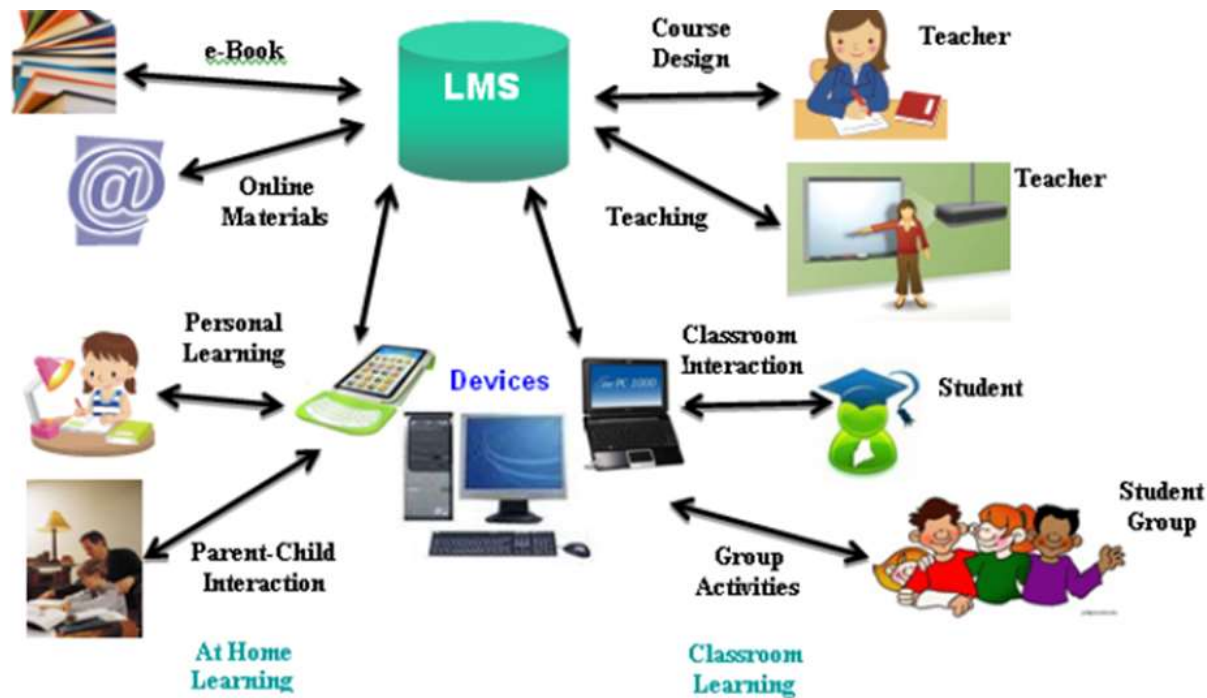
Learning Management System (LMS)

An LMS is a set of standardized learning components designed to connect learning to an existing IT system within an organization or via a web learning portal.

The goal is to provide the institution (organization) with a centralized computer-based learning environment in a short period of time, which does not depend on the geographical location of the individual, their prior knowledge, roles in the observed institution.

The software that forms the basis of the LMS manages all elements of teaching and records all the parameters needed to monitor the process.

Learning Management System (LMS)



Video conferencing

Video conferencing is another of the most common and reliable forms of knowledge and information transfer.

Through this system, communication can be achieved between multiple spatially distant users, who can see and hear each other in real time.

Video conference in teaching includes: lectures, courses, mentoring; projects which involve several educational institutions; professional activities; social events.

The advantages of this type of knowledge transfer in the education process can be defined as the **interactive skill of leading the teaching process**, where good teaching and managerial skills are expected from the lecturer, which really requires practice and planning for the successful use of video conferencing.

Moodle

The Moodle platform is an open source project, which means that users have access to the source code, with the possibility of changing the application and adapting it to their own needs.

The name Moodle has two meanings:

- the first is an acronym for a modular object-oriented learning development environment,
- the second meaning is related to the word moodle itself, which in Australian slang means "turning an idea over in your head until you see it from different aspects".

Advantages of e-learning

- **Time and space flexibility** - students learn independently of time and space, which makes education accessible to those who would not be able to come to the classroom (due to geographical distance or, for example, health problems).
- **Better interaction between students and professors** - communication that takes place with the help of computers (for example, e-mails, forums, etc.) is often more immediate and intense, questions are asked more freely, without fear of the authority of the professor.
- **Team work of students on joint projects**, which develops social and communication skills, thus improving the constructive principles of learning.
- **Use of interactive learning content and different media** (text, images, animation, simulation, video, etc.) for content presentation, as well as availability of content 24 hours online.

Advantages of e-learning

- **Practical work with different technologies** - not only information about what is being taught is acquired, but also additional knowledge and skills about the use of different technologies.
- **Learning contents can be adapted to individual students** - for example, contents can be added for those with a lower level of prior knowledge, as well as for advanced students who want to learn more.

Disadvantages of e-learning

- The biggest drawback of e-education is the **too long duration of creating learning and testing materials**.
- **Lack of a social aspect of learning** - during the education, the student meets only the computer.
- **Problems of a technical nature**, among which the biggest problem is authorization - how to determine that the person on the other side of the "wire" is the person who should be questioned?
- **Many e-learning programs fail**, because a large number of participants drop out and never finish the program. At the beginning of the development of e-education, the percentage of students dropping out was even more than 60%. The reason for this withdrawal is the nature of electronic education or online learning.

Due to all these shortcomings, it is necessary to pay special attention to student motivation and hire professors to, as mentors, monitor the work of an individual or a group of students, provide them with support and help in learning and solving tasks.

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