UNIT 1. LEARNING MANAGEMENT SYSTEMS KEY BENEFITS

IMONED

IMPROVEMENT OF THE KNOWLEDGE, SKILLS AND COMPETENCE OF THE TEACHERS IN ON-LINE AND DISTANCE EDUCATION
PROJECT NO 2020-1-ES01-KA201-082730

Unit 1. Learning management systems key benefits

Learning outcome. Learners will be able to identify the required key benefits of LMS's.

1.1. What are Learning Management Systems?

A Learning Management System (LMS) also known as e-Learning Platform or Virtual Learning Environment (VLE), is an online (normally, web) application for the hosting of educational content and communication and the administration, documentation, tracking, reporting, and delivery of educational processes. Through an LMS, teachers can structure a course according to learning goals, create and integrate course materials, align content and assessments, organize learning timelines, track and assess students' progress. Learners can access materials anytime, from everywhere, see their progress in real time and communicate with other learners and teachers. Current LMSs include learning analytics to make automated recommendations for users based on their skill profile and their course behaviour and also to recommend actions to teachers in relation to students at risk of failing.

Materials and activities can be reused by students and teachers every time they need them.

LMSs support content in various formats like text, graphics, video, audio, different communication forms, synchronous and asynchronous, and different activities like quizzes, surveys, assignments, etc. LMSs also support different standards for the integration of that content and activities like AICC, xAPI (also called 'Tin Can'), SCORM (Sharable Content Object Reference Model) and LTI (Learning Tools Interoperability) which allows to easily transfer courses between different LMSs.

Most LMSs require a server, in-house or in the cloud, to host the courses but nowadays some LMSs are already offered as SaaS (software as a service), with hosting provided by the vendors, therefore freeing the institutions to manage those details. Nevertheless, as many institutions require a connection to the educational management portal this might be interesting or not for them.

Due to the flexibility of Learning Management Systems, even if originally designed for online learning delivery they actually support a range of uses, like acting as a repository for online content, project management, virtual community support, etc.

1.2. Types of online learning environments:

Before any online learning activity is planned, it is important to understand the broader implications of using different types of technologies. Technologies can be roughly divided into two categories: institutionally supported and open access. There are many different types of online learning environments available to teachers, yet there is often controversy surrounding which system is better suited to a learning and teaching context. This module does not recommend one over the other but rather aims to highlight some of the benefits and considerations to bear in mind when using them. A teacher's choice of online learning environment depends largely on a combination of the following:
1) What their institution's policy is regarding online learning and what systems it prescribes or supports.
2) What the learning outcomes are for the individual class and what type of interaction and functionality best facilitate this to provide an optimum learning and teaching environment for both teachers and students.

Open technologies
Often referred to as Web 2.0 or social media, open access technologies are usually designed around specific functions or tasks. They can be set up or used by anyone. They are usually free or can be used for free in a limited capacity, with a paid option offering more features or online storage space. Examples of open technologies are numerous, and include, but are not limited to:

1) Facebook facebook.com
2) Twitter twitter.com
3) YouTube youtube.com
4) Flickr flickr.com
5) WordPress wordpress.com
6) etc.

Institutionally supported technologies - Learning Management System (LMS)
An LMS is a centralised, closed system that is secured behind authentication and can only be accessed by an institution's staff and students. An LMS is sometimes also referred to as a Virtual Learning Environment (VLE) in some countries. They cater for both educational and administrative requirements and in some cases, institutions pay a licensing fee to use these systems. Often these systems include an integrated range of technologies including discussion forums, blogs, wikis, and assignment submission. They can also incorporate grading and administration tools. They may even include some open systems that the institution decides to adopt.

List of learning management systems:
- a-Tutor atutor.github.io
- e-Front www.efrontlearning.com
- Moodle www.moodle.com
- Google classroom https://classroom.google.com
- Microsoft Teams https://teams.microsoft.com
- LAMS www.lamsfoundation.org
- Sakai www.sakailms.org
- Desire2Learn www.d2l.com
- Edmodo new.edmodo.com

1.3. Key benefits

Table 1. key benefits of open technologies and LMS

Open technologies	LMS
● **Familiarity:** Most students are already familiar with these environments so it is sometimes easier to implement and engage them with each other and content ● **Easy to use:** Many teachers can set up these learning environments themselves without having to go through a more complex institutional administrative process	● **Centralised:** All online components of a class are accessed and archived on institutional secure servers ● **Authentication:** Access to an online class is protected by password and is restricted to an institution's staff and students only, making it a secure, private and controlled environment

- **Constant upgrades:** Teachers are always using the most up-to-date version of open technologies, as they are used through a web browser (not locally installed a computer), and changes are automatically implemented for all users
- **Free:** Most open technologies are free to use at the introductory level or for general purpose use
- **Inclusion of external guests:** Teachers are able to invite external guest speakers, lecturers, experts, researches or visitors to contribute to a class, because users may be added manually by the teacher without going through institutional procedures
- **Collaboration:** It is easy to share information and collaborate with other institutions, organisations and industries on projects, as there is no issue surrounding compatibility between platforms, operating systems and versions of software
- **Privacy settings:** Most open technologies have some level of authentication, and many have a range of privacy settings that can be easily controlled by teachers and/or students
- **Technical support:** There is usually an abundance of support available in online forums and help sections of the various websites.

- **Tracking and Collating:** LMS usually have features that enable tracking of assignments and statistical analysis of participation, along with the ability to synchronise marks and grades with an institution's administration systems
- **Technical support and training:** An institution will usually provide a certain level of LMS technical support and training for staff. If you need to reuse your online content in another class, your IT department should be able to help you transfer it, ensuring none of your content is lost
- **Secure archiving:** Institutions are usually required to hold student-related data for several years, and usually have measures in place to manage this effectively on their own systems
- **Copyright:** Institutional copyright privileges for 'educational use only' are usually used as online classes and content are within the authenticated 'walls' of the institution. Otherwise, staff and students must follow general public copyright and creative commons requirements which are usually more limiting. Teachers should always seek copyright advice from their own institution.

1.4. Key restrictions, limitations, or considerations

Table 2. Open technologies and LMS key restrictions

Open technologies	LMS
● **Not integrated:** These environments are not integrated into existing institutional administration systems. This has implications such as not being able to populate a learning environment automatically with students from enrolment systems, and grades have to be recorded and entered into institutional administration systems manually; ● **No formal record:** The record of students' interaction and communication is recorded on a system external to the institution. Difficulties can arise when independent access is required by the institution. For example: in the case of a dispute; if the teacher leaves an institution and does not	● **Training:** Staff usually require training to use an LMS, and due to the complexity that can often be inherent in these large systems, many staff can initially find setting up and teaching a class daunting; ● **Not necessarily fit for purpose:** Large systems may not be able to facilitate certain activities or functions as well as some more specific open systems; ● **Exclusion of external guests:** Because access is usually strictly limited to an institution's staff and students, teachers are often unable to invite external guest speakers, lecturers, experts, researchers or visitors to contribute to a class

pass on access information; the company hosting the service may terminate user accounts; or the service may change its structure or range of services resulting in the loss of data, etc.

- **Potential hidden costs:** While many open technologies are usually free to access and use, there may be hidden costs such as staff investing extra time to set up without direct support; limited features, data storage or upload speeds which can be remedied by paying for improved service or privileges
- **No on-site technical support:** In many instances, an institution may not offer technical support for open access environments if an LMS is already in place
- **Unprotected walls:** Teachers are responsible for privacy settings and access, and staff may not be as thorough, knowledgeable or rigorous in providing the necessary protection and privacy required for their students or colleagues
- **Copyright:** Institutional copyright privileges for 'educational use only' may not be applicable and staff and students may need to follow general public copyright and creative commons requirements. Teachers should always seek copyright advice from their own institution.

without undergoing lengthy administrative procedures to obtain access;
- **Choice:** Some staff prefer the autonomy of delivering the course content in a manner or environment they feel is appropriate rather than using a prescribed one;
- **Cost:** Many LMS attract a licensing fee, or where there is no licensing fee, an institution needs to employ support staff to customise and integrate the LMS into the institution's administration systems.

References

[1] Chen, D. (2003). Uncovering the Provisos behind Flexible Learning. Educational Technology & Society, 6(2), 25-30, (ISSN 1436-4522)
[2] Glossary - empower (eadtu.eu)