PROMPT_

IT & Security

D.2.1 – Training Course Methodology

R2 – Digitalis Training Course for Informal Female Caregivers

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Introduction

In PR 2, based on the initiative by Prompt, the responsible partner and agreed on by the leading partner Prolepsis, the Consortium concluded that the most suitable methodology for the training course developed would be a **blended course**.

Blended or "hybrid learning," is an educational model for teaching learners in both a traditional way and an online learning environment.

"Blended learning is "the thoughtful integration of classroom face-to-face learning experiences with online learning experiences." (Garrison and Kanuka,2004)

Its main benefits:

- flexibility
- effectiveness
- personalization
- greater reach
- cost effectiveness.

Blended learning will be implemented in the course by applying an e-learning environment for online learning in the first place and organizing additional practical sessions face to face.

Justification of the choice: FICs that are the participants of the training course are usually adult women, employed or burdened by caregiving activities and have only little time to spend for self-education. Being the training course delivered via online they will be able to find free time for learning in their own individual pace. Based on the survey carried out in PR1, FICs prefer practical learning rather than theoretical one, so that practical sessions, workshops will serve this need as contribution to online learning.

Considering the available VLEs, the Consortium has found the open-source **Moodle** the most suitable for the purpose of delivering the online training course for the Greek and Hungarian informal caregivers.

Virtual Learning Environment

The software systems designed to help the administrative and learning management of educational courses for their learners are called virtual learning environment (VLE). The most universities nowadays have VLEs embedded within their usual education activity.

The following levels of virtual learning environments, based on a usual pedagogical approach, are well-known:

- virtual educational site,
- virtual centre for e-learning,
- virtual classroom,

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- virtual library,
- virtual school,
- virtual university or virtual campus.

The virtual learning environments by its functions can be classified into four generation:

- The first generation of VLEs (the early 90's) can be described by static databases of learning materials, tests, discussion forums etc. with the absence of integration and interaction between separate components.
- Second generation VLEs (from the second half of 90's) are software platforms for e-learning with integrated database and organized learning process. The functions of second generation are extended in some areas: planning, administration, function for creating and supporting learning materials, function for testing learners' knowledge and for getting statistics of their results but the use of modern communication and multimedia technologies is scanty.
- Third generation VLEs (nowadays in use) are much more advanced in pedagogical and administrative functions and in communication and multimedia technologies (audio conferences, videoconferences; specialized virtual "centres" and platforms for the development of educational courses, library and administrative functions, interactive environment for asynchronous and synchronous communications and online collaboration).
- The main "leitmotif" of fourth generation (nowadays in use) is intellectualization, personalization and adaptation of learning materials to the needs of each user; orientation to new learning paradigms (connectivism, social constructionism).

Present-day VLEs can be seen as software tools or platforms constructed with different types of applications. Moreover, there is a widespread, "traditional" division into content authoring/content development tools and course/learning management systems. In spite of the fact that there are very popular, sophisticated authoring tools, the most course/learning management systems more and more integrate the functions of the two types of that development tools. Because of the spreading new pedagogical paradigms the division may be unneeded.

The synonyms of VLE make the content of the term more complicated. VLEs are sometimes also called Learning Management System (LMS), Course Management System (CMS), Learning Content Management System (LCMS), Managed Learning Environment (MLE), Learning Support System (LSS) or Learning Platform (LP). A more accurate term may be a virtual environment for learning, rather than virtual learning environment; because it identifies that it is the environment which is virtual and not the learning.

Most LMSs offer the following functions, or in other terms live up to the following expectations:

Tools for educators:

- course development tools - a web platform for uploading, managing, creating, modifying resources (text, multimedia materials, simulation programs, etc.) embracing calendar, course announcements, glossary, and indexing tools,
- course syllabus development tools with the ability to structure learning units,
- quiz or survey development tool for creating tests, course evaluation etc.
- grade book,
- administrative tools to track participants' activity both as individuals and in groups.

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Tools for course participants:

- password protected accounts for access to course materials,
- course content bookmarking and annotation,
- personal webpage publishing,
- accounts for access to the collaborative tools (email, discussion groups, collaborative webpage publishing),
- access to grades and progress reports,
- group work areas for collaborative webpage publishing
- self-assessment tools.

Administrative tools:

- management of learner and instructor accounts and websites,
- monitoring and reporting activity,
- e-commerce tools for sale of courses,
- communication and survey tools.

Compared to the list above, the present learning management systems often offer more sophisticated functions. Moreover, the spread of systems, based on constructivist, social constructionist or recent learning theories, attacks the mentioned functions and expectations usually based on "traditional", behaviourist principles. Learning management systems must also increasingly support common problem search and knowledge construction. The most important requirements against the 21st century e-learning platforms are as follows:

Openness

Learning environments should not create a closed 'isolated system'. They should be open to, and interoperable with, other systems and solutions.

Participation

Teachers and learners should cooperate in the development of the environment. Learners should have the option to integrate external tools used by them. Teachers and learners should work on the same platform with the same tools. Learners should get the opportunity to create and share new lessons. Participants should be able to tag their own contents freely. They should be able to develop their own taxonomy reflecting those parts of lessons which interest them most.

Motivation

Learning environments should support participative activity in a user-friendly manner. Learning environments should support developing communities and should provide options for participants to get to know each other. Tutors (teachers) should be present in the learning environment. In addition

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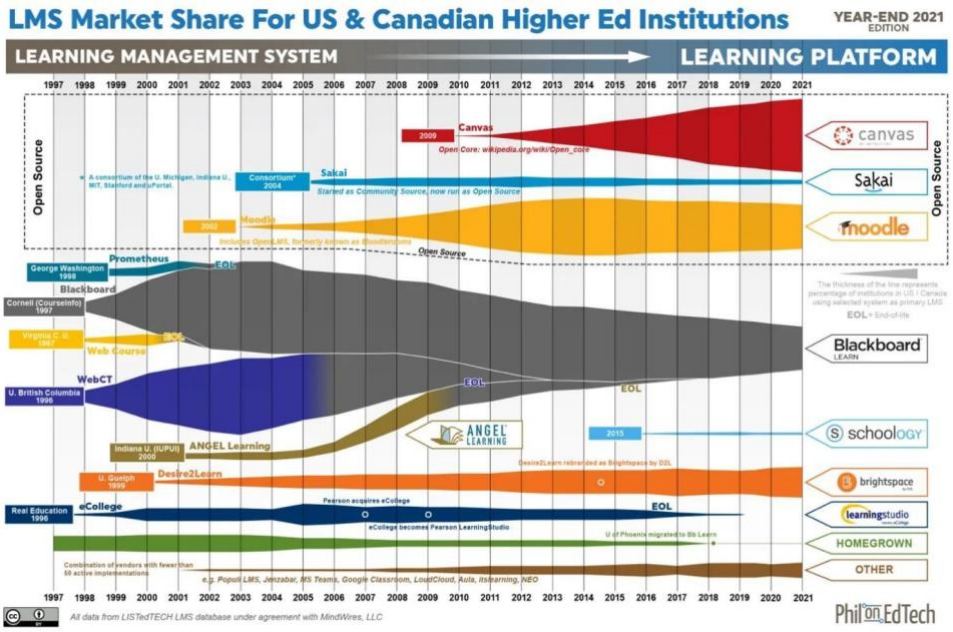
to creating study materials, they should emphasise organising conversations and exchanging experiences.

Tracking, evaluations, feedback

Teachers/Administrators should have the functionality to track the learning of individual participants, they should provide options for feedback. VLE should provide functionality for participants to reflect on their learning. Learners should have the option to express their opinions about the content offered.

There are many frameworks available for virtual learning environments. Multinational IT companies (for example Microsoft, Cisco, IBM, SAP and Oracle) provide such solutions of various complexities. There are also, so called "open-source" platforms developed by a network or community of software engineers across the world.



Source: @PhilOnEdTech, licenced by CreativeCommons

The infographic is the result of a survey in Canadian higher education, and it is in accordance with the trend all over the world: the most popular systems nowadays are now-a-day the open VLEs, Canvas, Shakai and Moodle.

Maybe the popular of these systems, Moodle lives up to not only the traditional expectations but the support for new directions of e-learning.

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Why Moodle?

MOODLE is a multilingual web application for running online learning-teaching activities, which is based on the open-source Moodle (**M**odular **o**bject-**o**riented **d**ynamic **l**earning **e**nvironment). Moodle[1] is widely used in Europe and all over the world – by schools, colleges and universities, it supports the collaborative teaching-learning methods and the integration of external digital resources like videos, animations and even educational web 2.0 applications like the well-known LearningApps[2].

The virtual learning environments are the online representations of the tools and activities of the traditional classrooms, developed for creating and running online courses through the Internet. Among them Moodle is told the most popular all over the world.

The innovator of the system is Martin Dougiamas, an Australian educator and computer scientist. His aim was to develop an open-source application to support a social constructionist model of teaching and learning within Internet-based communities.
At the end of '90s Martin Dougiamas was very unsatisfied with the functions offered by learning management systems (WebCT, First Class, Lotus Learning Space etc.) that were widespread in those days. "I try to present a different perspective, based on developing new tools for trainers and learners to enable richer forms of dialogue combining content and communication through which teaching and learning can occur. The tools allow both trainers and learner to construct environments in their computer within which they can construct representations of their understandings of the subject and share them with others in a variety of ways." (Dougiamas, Martin, 1999)

A declared, primary source of the pedagogical creed of Moodle is Deschooling Society written by Ivan Illich in 1971. In this provoking book, Illich proposes radical and exciting reforms for the education system. In Illich's opinion schools don't answer our individual needs, supporting faked and deceptive notions of progress and development cherished by the belief that increasing production, consumption and profit are real measures for the quality of life. The universities have become recruiting centres for the members of the consumer society, certifying them for service, for the competitive rat race. Illich says the deinstitutionalizing education may be a starting point for a deinstitutionalized society.

Particularly interesting and a theoretical antecedent of Moodle is his call (in 1971!) for the use of advanced technology to support "learning webs". The concrete details of plan proposed by Illich in

1971 reflect the technical level of those days, so seem to be technically out-dated. However, his proposal can be interpretable as important antecedents of constructivist, social constructionist philosophy preferred by the developers of Moodle.

[1] The innovator of the system is Martin Dougiamas, an Australian educator and computer scientist. His aim was to develop an open-source application to support a social constructionist model of teaching and learning within Internet-based communities. Link to the Moodle community: https://moodle.org

[2] Great application – available in almost all European languages for creating quizzes for learners. https://learningapps.org/

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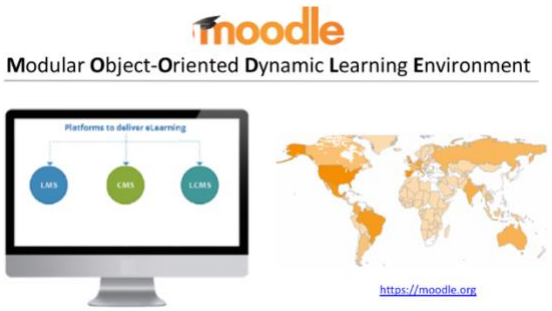
Moodle is a learning management system that lets you provide documents, graded assignments, quizzes, discussion forums, etc. to your learners with an easy to learn and use interface. Moodle is open-source, meaning that the programming code that runs it can be changed to meet the specific needs of users and institutions. Moodle is also free to download and use; there is no licensing fee.

The online system enables educators to create their own private website filled with dynamic courses that extend learning, anytime, anywhere.

The development of framework systems began in the 90s.The first solution was often criticized as it doesn't do anything but preserves the bad practices of traditional teaching within a modern technological environment. **For now, Moodle supports cooperation and collaborative content creation, and it integrates tools for establishing the elements of constructive pedagogy; it is so called web2.0 aware platform.**

The first version of Moodle was released on 20th of August in 2002, and in 2023 there are more than 165 000 registered Moodle sites and one hundred million users in the world.



Link to the Moodle community: https://moodle.org

The main parts of Moodle systems are:

- **Learning Management System (LMS)** for supporting the learning teaching activities enrolment of learners, providing them well-structured learning materials in different multimedia format, e.g. e-books, and tools of collaboration and communication through public forums and/or private communication channels like personal messages. The course participants can submit their assignments, solve quizzes, fill out feedback questionnaires inside the system, the trainers/mentors can use the tools for online evaluation, and the results will be analysed, the statistics will be delivered by the system automatically.
- **Learning Content Management System (LCMS)**: for supporting the trainers/mentors to create new courses, to create, upload, share digital learning content, assignments, quizzes, discussion forums, etc. with an easy to learn user interface.

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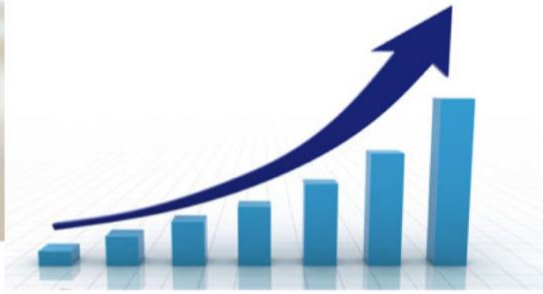
Main Features

Scalable



From a few participants to millions of users, Moodle can be scaled to support the needs of both small groups and large organizations. Because of its flexibility and scalability, Moodle has been adapted for use across education, business, non-profit, government, and community contexts.
Itis web-based and so can be accessed from anywhere in the world. With a default mobile-compatible interface and cross-browser compatibility, content on the Moodle platform is easily accessible and consistent across different web browsers and devices.

Multilingual

Moodle's multilingual capabilities ensure there are no linguistic limitations to learning online. The Moodle community has begun translating Moodle into more than 120 languages so users can easily localize their Moodle site.

Source: https://moodle.org
Image source: https://languages.oberlin.edu

Free as in Freedom

Moodle is provided freely as Open-Source software, under the GNU General Public License. Anyone can adapt, extend or modify Moodle for both commercial and non-commercial projects without any licensing fees and benefit from the cost-efficiencies, flexibility and other advantages of using Moodle

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Authorizing system

Moodle has a complex authorizing system in which the roles are described by the level of rights. The highest-level rights belong to the manager, who is the system-administration of the learning environment even with permission for defining the rights of all other actors of the platform.
Learners can register, enter the course, manage their profile, access to learning materials, submit assignments, create contents, collaborate and communicate by using different tools such as blogs, wikis, forums, inside e-mails and messages.

There are 4 basic roles in Moodle regarding the level of rights inside the system, but the rights can be refined by the developers who implement the VLE:

Learners: can visit the course, they access the learning materials, forums, submit assignments,

Non-editing teachers: they are working as e-learning mentors, they drive the learning process, communicate with the participants, and evaluate assignments, but they can't add new learning contents, or editing the existing ones.

Editing teachers: they can add, edit, delete, or modify learning contents, quizzes, assignments, etc. inside the course.

Course creator teachers: editing teacher enabled to create a new course as well.

Manager: has the highest level of rights inside the VLE, can do everything what the non-editing teachers can, and has the right to modify any kinds of parameters, settings of the platform.

The teachers can follow the learning progress of the participants, evaluate their performance, creating learning materials, such as digital textbooks integrating multimedia contents (videos, pictures, animations), glossaries, games, quizzes, questionnaires for self-assessments, exam tests, and facilitating the online collaboration of the participants through the forums, wikis and group assignments.

Services of Moodle

The services of Moodle can be grouped into the sub-systems as follows:

- Learning Management System (LMS) – supporting the learning activities
- Content Management System (CMS) – supporting a structured content (document) management
- Learning Content Management System (LCMS) – supporting of creating, editing and publishing digital learning content.

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Similarly, to classroom teaching, usually not the teachers are responsible for authoring the textbooks. In Moodle there are different roles of teachers with different level of rights: teacher, course creator, non-editing teacher.
The services of Moodle in details:

- managing accounts, monitoring access, registration of users,
- presentation of lessons and other learning contents,
- managing the assessments of the learners' performance
- scheduling the learners' tasks,
- providing options for practice, publishing online tests, quizzes,
- supporting the tutor's activities (organizing courses, managing enrolments, recording learners' activity and performance, managing the evaluation of the learners' performances, producing records and statistics)
- supporting communication between teachers and learners,
- supporting quality management, for example course evaluation via learners' feedback.

Digital Course Components

- Module description
- Learning outcomes
- Core content
- Self-assessment quiz
- Learning guide, guide for tutors
- Learning instructions (weekly, daily …)
- Tiny Exercises
- Credited assignments
- Forum topics
- Feedback questionnaires from the participants
- Quiz question database
- Glossaries and games based on them
- Repository of video tutorials.

Conclusion

Moodle is the ideal choice of a representative VLE for the Digital training course for FICs for a number of reasons, including:

- It is freely available – as a cloud service or for download.

- It has been tested at scale (e.g. it has been adopted as the VLE for the UK's Open University), but has been downloaded to a myriad of PCs, laptops and servers.

- It integrates the most common authentication and authorisation services (e.g. LDAP, Active Directory), but operates equally as standalone.

- It is very well maintained, with long term release points and regular security updates

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- It is incredibly rich in features and functionality
- It is extremely flexible and customisable.

Moodle is also driven by a very large community of users and developers. It has a highly functional core but is extremely rich in customisations for almost every conceivable use. Rich external contents of different kinds (videos, audios, photos) can be integrated into the content to make it more joyful for the learners and to maintain their motivation. Owing to its forums function it can implement the constant discussion of participants, learners and mentors, learners and learners and supports groupwork as well. P3, Prompt is highly expertized in building Moodle courses in different languages parallelly and has tried its usability by adult learners many times.

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Title of Module

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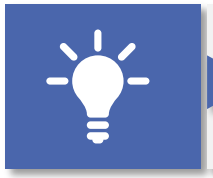
DIGITALIS

Module 1 : Title	
	Units
Unit 1	Title
Unit 2	Title
Unit 3	Title
Unit 4	Title
Unit 5	Title
Unit 6	Title

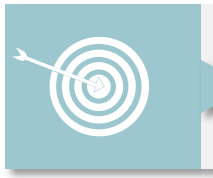
Module 1: Title	
Unit 1	Unit 1 Title
Topic 1	Title
Topic 2	Title
Topic 3	Title
Topic 4	Title
Topic 5	Title
Topic 6	Title

Learning Objectives

Content here



Content here



Content here

Unit 1

Title

Topic 1. Title

- Content here

Topic 1. Title (continuation)

- Content here

Topic 2. Title

- Content here

Topic 2. Title (continuation)

- Content here

Unit 2

Title

Topic 1. Title

- Content here

Topic 1. Title (continuation)

Topic 2. Title

- Content here

Topic 2. Title (continuation)

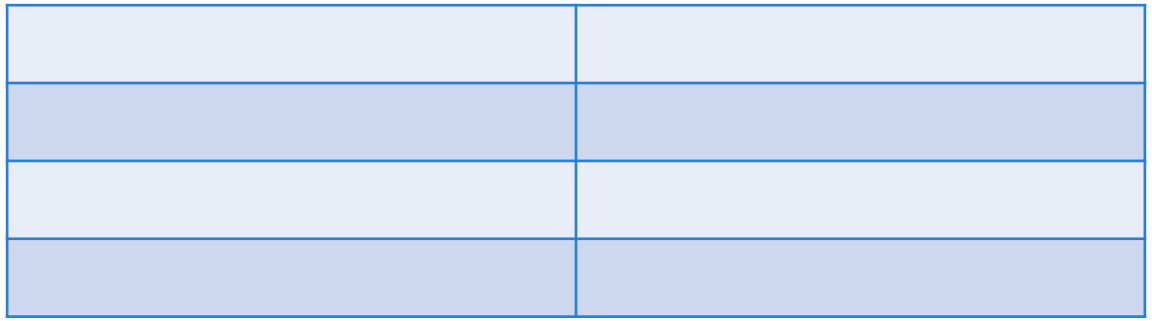
Further Readings

References

Assessment Activities

Activity 1.

Type : e.g. Matrix Sorting



Activity 2

Type : e.g. Multiple choice

Question : e.g. What is the colour of the sun?

a. Blue

b. Yellow

c. Green

d. Purple

Activity 3

Type : e.g. True or False

Question : e.g. Is the earth is round?

a. True

b. False

Activity 4

Type : e.g. True or False

Question : e.g. Is the earth is round?

a. True

b. False

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