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Erasmus+ Cooperation Project code 2021 -1-RO01-KA220-VET-
000032924

Using Moodle as a Distance Education Tool

Introduction

COVID-19 has made an overwhelming and unprecedented impact on the world. One of the most affected sectors has been education, which governments, educational authorities and teachers have had to review and revise due to the safety concerns of families, teachers and students. Luckily, educators have been able to benefit from many EdTech tools at their disposal in this period, the most important of which being the Learning Management Systems (LMS).

LMS provides documentation and reporting processes in education management, educator-student, student-student communication, publication of course content and distance assessment and evaluation functions; It is a computer software that usually offers services over the web. LMS is suitable for use in many fields and for many purposes. Although it is used in distance education, it can also be used as an auxiliary tool in the classroom environment. Distance Education is now seen as a different type of education available. However, it has been clearly understood today that it can be used as a means of formal education in times of disasters that may occur. It is also beneficial in today's world where a lot of people appear to have less and less time. For this reason, it can be predicted that even if there are no emergencies, there will be a greater shift to distance learning in the upcoming years.

We will describe the uses of and how to apply Moodle in remote learning in this module. It is one of the most frequently used Learning Management Systems in the world.



1. About Moodle

1.1 What is Moodle?




Moodle (Modular Object Oriented Dynamic Learning Environment); is an open source learning management system (LMS). It has been designed to support both learning and teaching and offers educators, administrators and students personalized learning environments. It is also one of the most common learning platforms with over 213 million users¹ worldwide, designed to provide a secure and integrated system.



1.2 General Features

- Moodle, developed with the guidance of pedagogues, provides a student-centered learning environment.
- Easy to use and learn with drag-and-drop, plain interface and support documentation and ongoing improvements.
- It can be used for commercial or non-commercial projects free of charge under the General Public license.

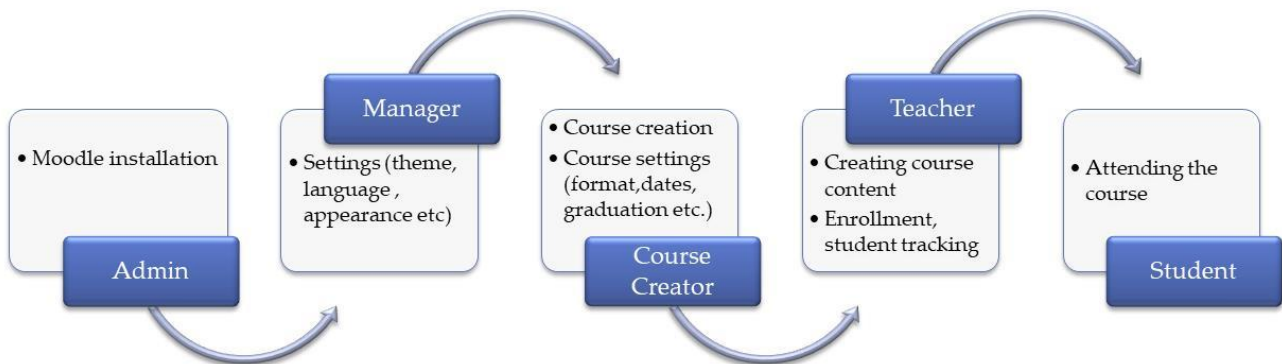
¹ <http://moodle.org>

- Since it is open source, it is constantly improved and is always up-to-date thanks to the add-on software(plugins) of the developers.
- Removes language restrictions in online learning with more than 120 language plugins.
- Provides a flexible and integrated learning environment with collaborative working tools such as forums , wikis, chats  and blogs .
- Configurable according to the needs of small or multiple users.
- Moodle is constantly updated to protect against data loss and abuse and can be easily deployed on secure servers.
- Since it is web-based, it can be accessed from anywhere. Web browsers and devices (tablets, smartphones, etc.) can easily access it.

The latest version of Moodle can be installed free of charge from <https://moodle.org>, on localhost or web server with domain and hosting rights. It can be installed on almost any computer.

2. Manage the Moodle Site

2.1 Roles&Abilities



This flow chart describes the basic steps of creating an education system with moodle.

2.2 Login to Moodle site

During the moodle installation, the administrator user is defined. The user with the administrator role is responsible for the moodle site. The administrator can define a new user with administrator privileges.

Click **Log in** to enter the moodle site (Figure-1). Username and password are entered (Figure-2).

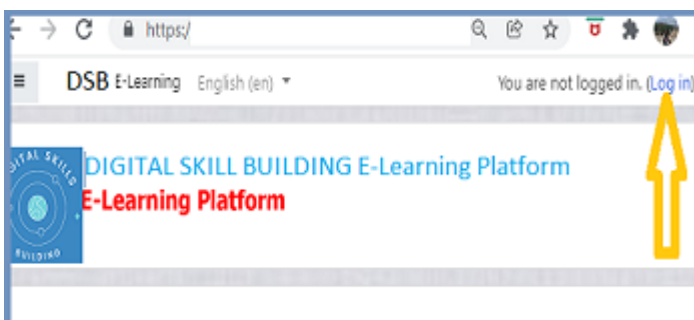


Figure 1

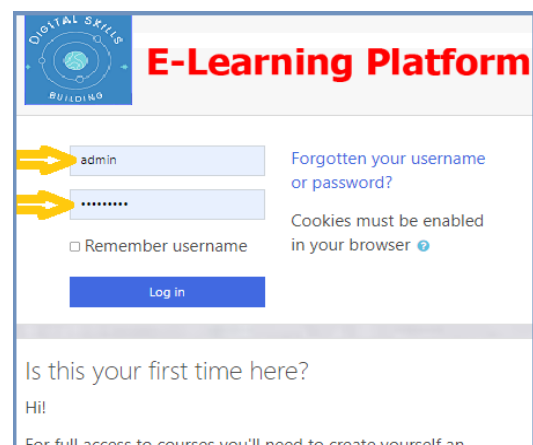


Figure 2

After installation, the user with Administrator authority sets up basic settings which other users cannot access. These are primarily the appearance of the Site -Theme- selection, Front page settings, Language selection-add, Course addition, User addition-authorization processes. Setting up the basic settings is important for students to use the system easily. These operations are done by using the options marked in yellow in figure 3.



Figure 3

2.3 Site appearance-Theme- selection

Standard Moodle has two default themes 'Boost' and 'Classic'. These themes work well on mobile devices and desktops and can be customized from the site *administration>appearance>Themes* area(Figure4).

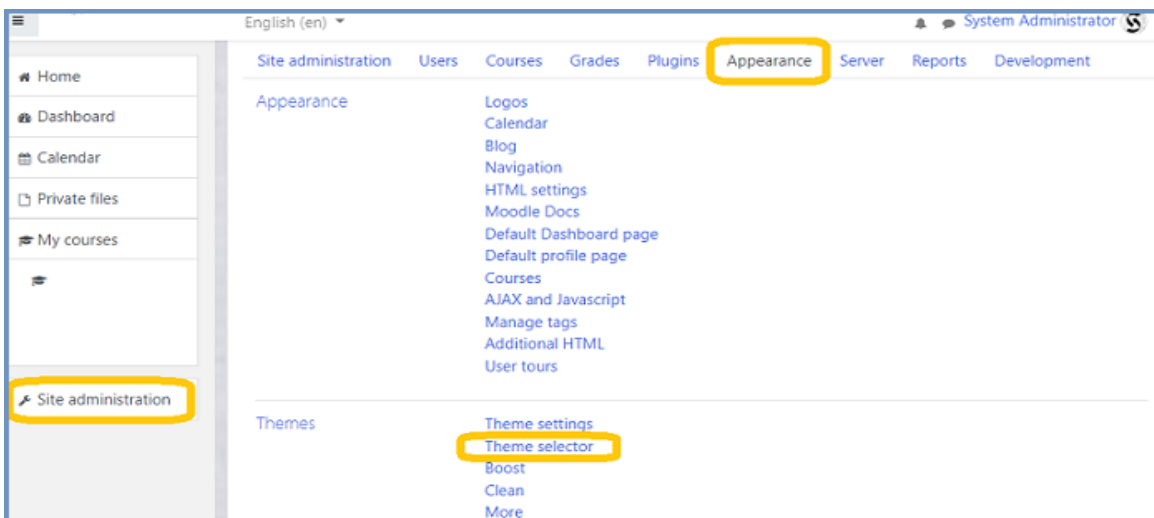


Figure 4

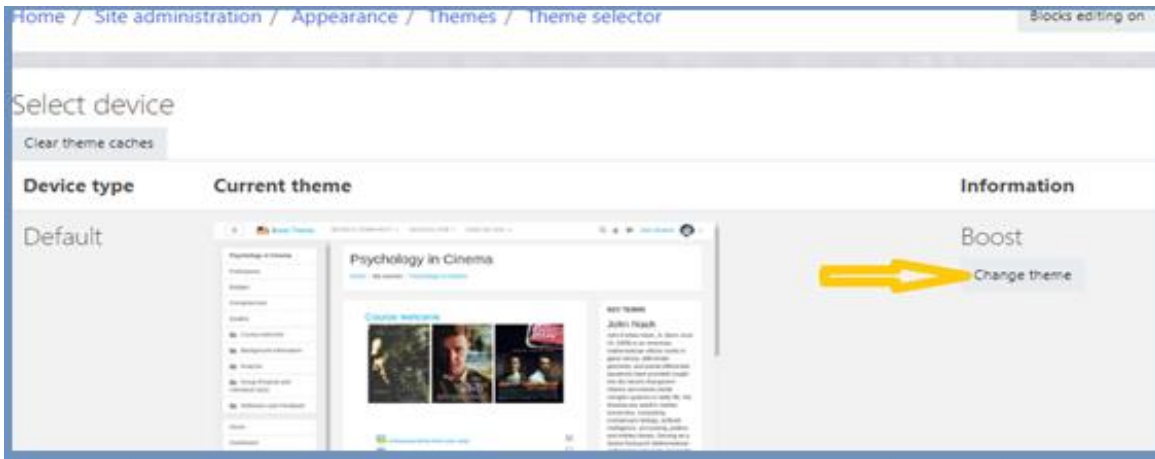


Figure 5

The *change theme* button allows switching between installed themes (Figure 5). In order to add a new theme, it is necessary to install a theme plugin (Plugins are small programs that add particular functions to an existing application). Because Moodle is modular, unwanted features can be removed and needed features can be added as plugins. From the <https://download.moodle.org/> plugins page, a theme can be downloaded as a zip file by selecting a theme with the desired features in the theme category. *Site management > plugins > install plugin* is selected to install the downloaded zip file .

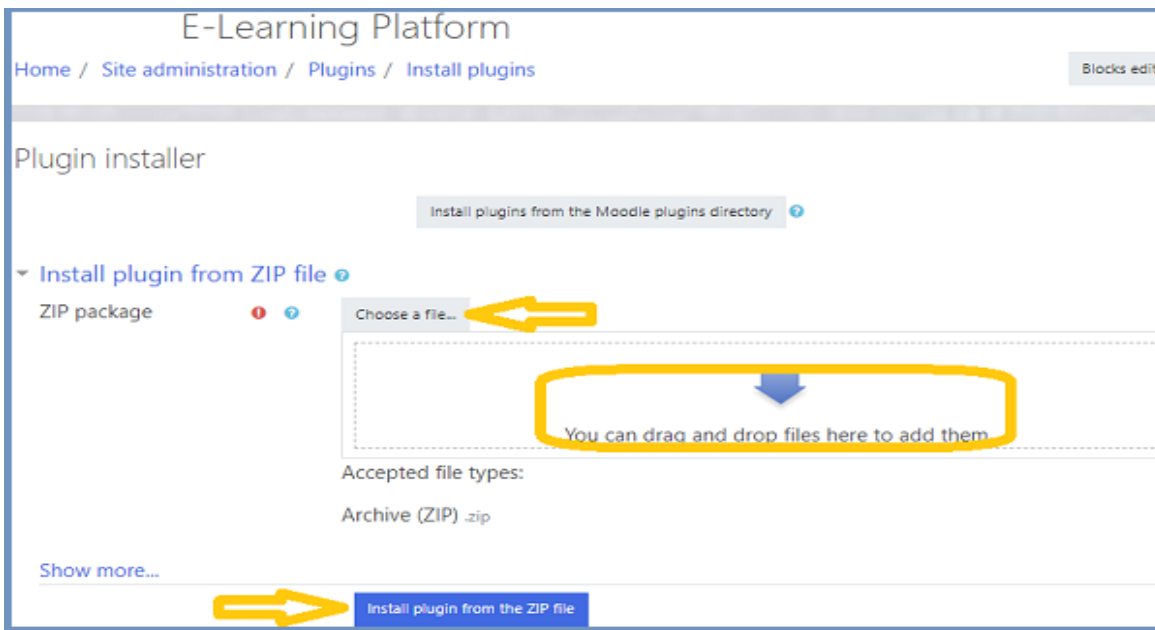


Figure 6

By clicking on *Choose a file*, the zip file is uploaded by selecting it from the saved location. Or it is moved to the area shown in the figure by drag and drop method (Figure 6). When Install is clicked, the plugin is installed and the installed plugin is located in the relevant menu. For example, the theme plugin is located in the themes menu.

Thus, in the *site administration > appearance > themes* section, the new theme is added to the list and can be selected for use.

Note: The process described for the theme plugin also applies to the installation of other plugin files.

2.4 Front page settings

The front page view is about how it will look after logging in and without logging into moodle site. After clicking *Site administration>Front page settings*, view information is entered on the screen (Figure7).

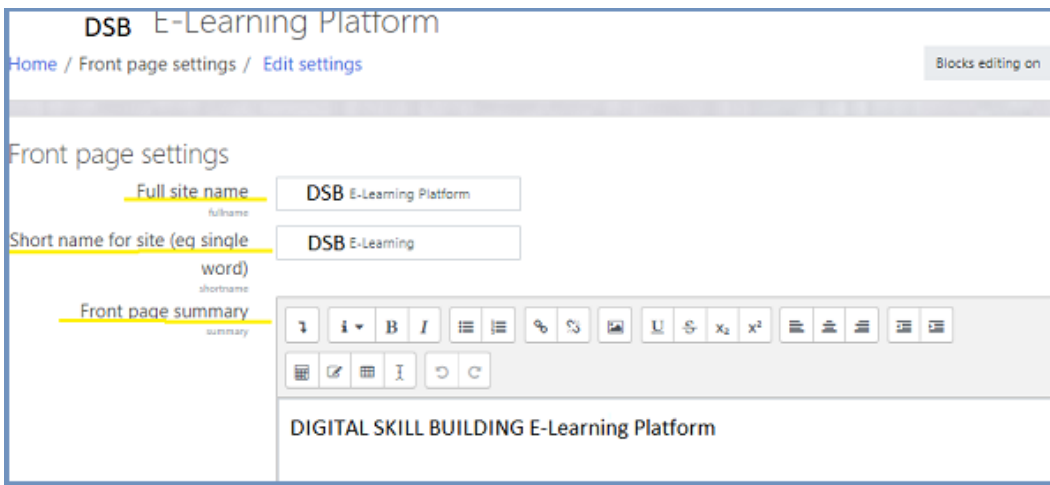
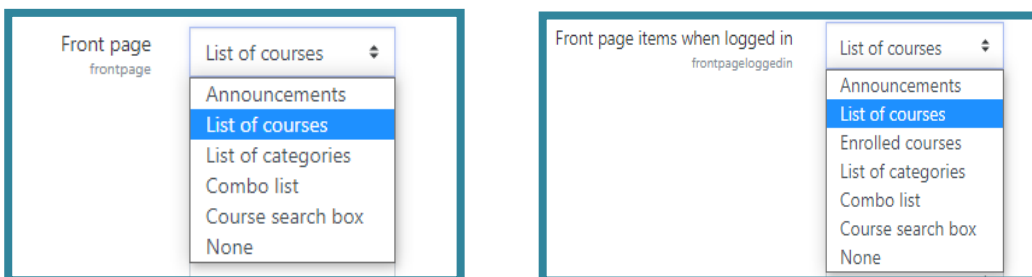


Figure 7

The front page affects users' ease of use and understanding of the site. **The front page is the site home page.** The settings made should provide easy access to the training course that the user wants to take. It is possible to create a setting for everyone who reaches the front page without logging into the Moodle site, and a setting for those who only log into the Moodle site. We can have the following combination appear in the middle of the page -Announcements, course list, registered course list, course category list, category and course list, course search box or none -. This selection should be made according to the type of training and the level of the user who will receive the training. The appearance of the standard front page settings may vary depending on the theme used.



2.5 Language Setting

More than 100 language packs are available for the moodle site as interface language. The desired language packs are installed by clicking on *site administration>language>languagepacks* (Figure 8).

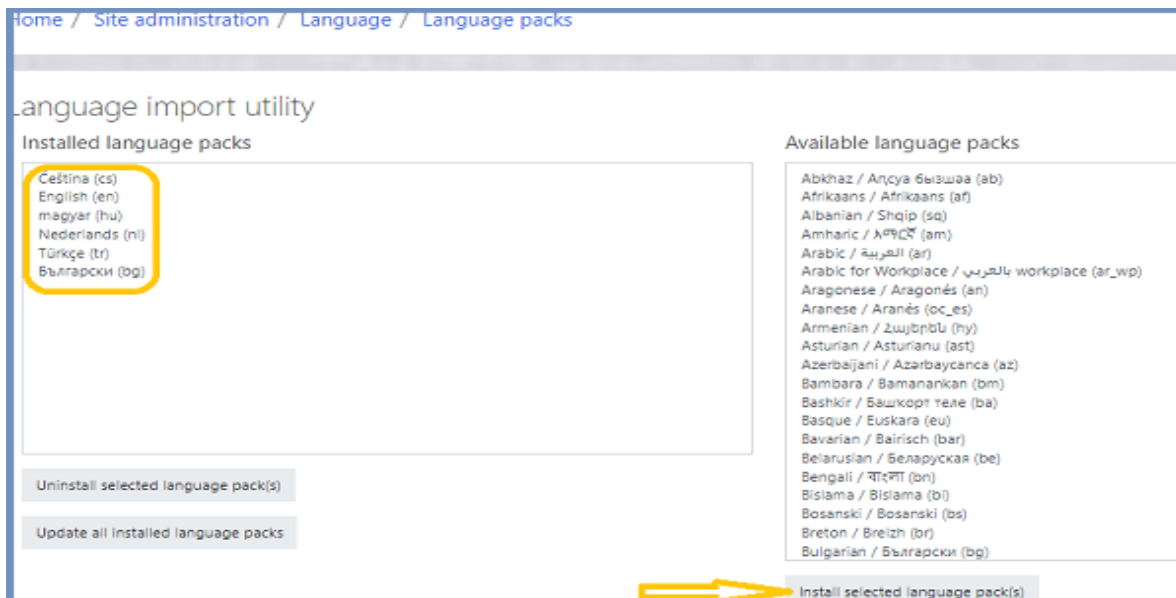


Figure 8

The installed language packs will appear as a drop-down box on the site for the user's selection.

2.6 Adding a course

The Course is area where teachers can add learning materials for their students. A teacher can have more than one course, and a course can have more than one teacher and more than one student group. Students can be allowed to register themselves or manually by the teacher.

Clicking on [site administration](#)>[courses](#)>[add a new course](#) enters the new course information on the screen. (Figure 9)

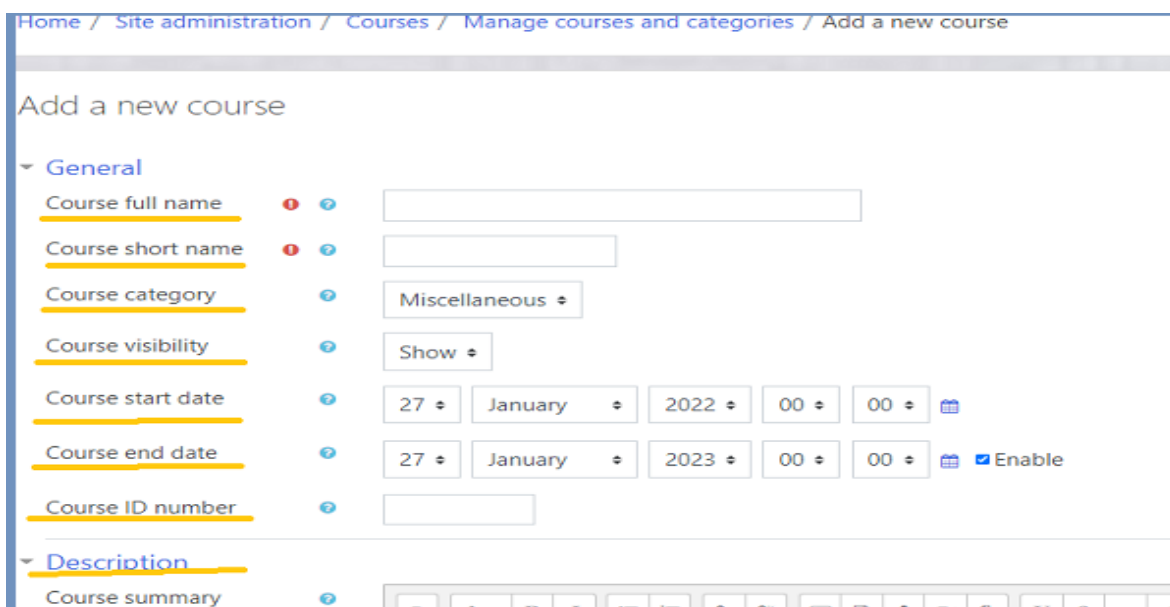


Figure 9

Course full name: The name of this course. It appears as a link in course listings on the front page and in the Dashboard and reports. It is also used in the browser title bar when the course is viewed.

Short name: Many institutions have a short way to refer to a course such as MAT02 or ED101. It is used in many places where a long name is not appropriate, such as in the navigation block.

Course category: It helps teachers and students find their courses easily. The use of categories in education will be beneficial, especially for groups with different levels and characteristics. For example 1. Grades, 2. Grades.

Course start date: This setting affects the display of logs and weekly format topic dates. If you use the "Weekly" course format, the start date will appear in the first part of the course. For example, when 20 May is selected, "20 May - 27 May" is displayed in the first section (when the default screen is selected for that episode).

Course end date: The course end date is used to determine whether the course should be added to the user's course list. Users can also enter the course after the end date; in other words, the date does not restrict access.

Course ID number: ID number is an alphanumeric field. The unique identification provided for the course can be used as the course catalog ID or as a printed field in the certificate module.

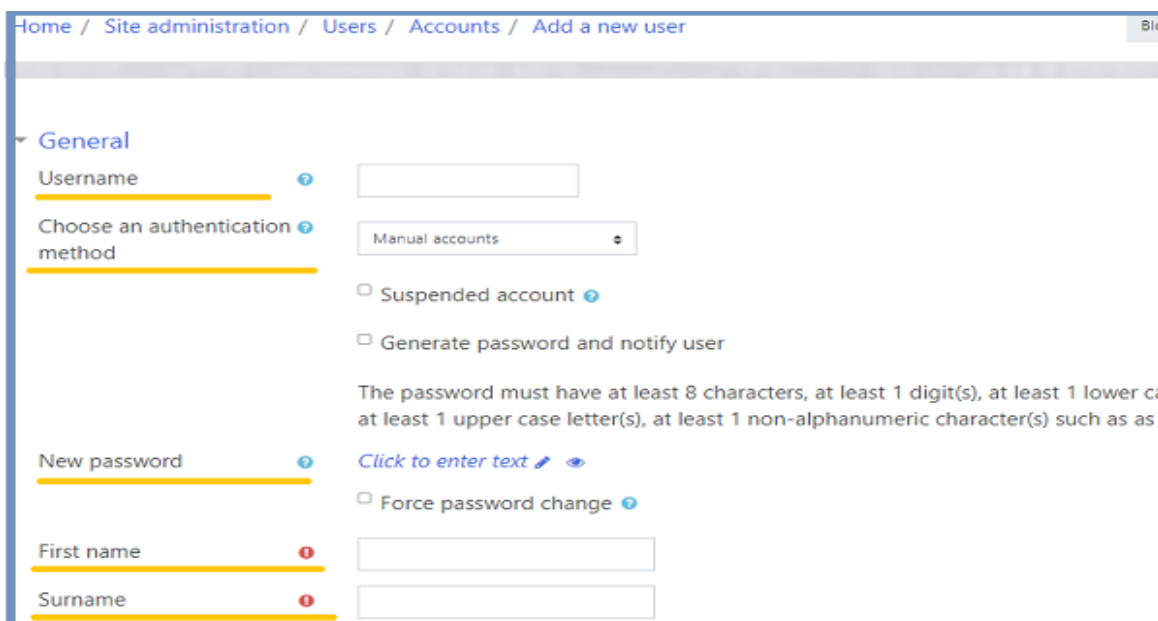
Course summary:The summary appears on the course listings page. This field is searched for when searching for a course and also appears in the Course/Site description block.

Course Format: Refers to the layout of a course.

- **Topics Format:** The course is divided into subject sections that a teacher can give titles. Each topic section consists of activities, resources, and tags. At installation this is the default format.
- **Weekly format:** The course is organized week by week, with each chapter having a date title. Moodle will create a section for each week of your course. For each week, content, forum, quiz, etc. can be added. The current week is highlighted.

2.7 Adding users

An administrator or any other user authorized by the administrator can create new user accounts. *Site administration > Users > Accounts > Add a new user* is selected and the new user information is entered on the screen that appears (Figure10).

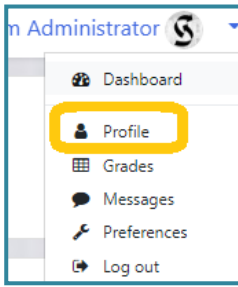


The screenshot shows the 'Add a new user' form in Moodle. The breadcrumb trail at the top reads: Home / Site administration / Users / Accounts / Add a new user. The form is organized into a 'General' section. It includes the following fields and options:

- Username:** A text input field.
- Choose an authentication method:** A dropdown menu currently set to 'Manual accounts'.
- Suspended account:** A checkbox option.
- Generate password and notify user:** A checkbox option.
- New password:** A text input field with a 'Click to enter text' prompt and a visibility toggle (eye icon).
- Force password change:** A checkbox option.
- First name:** A text input field.
- Surname:** A text input field.

Below the 'Choose an authentication method' dropdown, there is a password strength indicator: 'The password must have at least 8 characters, at least 1 digit(s), at least 1 lower case letter(s), at least 1 upper case letter(s), at least 1 non-alphanumeric character(s) such as as'.

Figure 10



Users can also register themselves as a guest user on the *login* screen (Figure2). As long as the administrator does not register for the course, it is limited to the guest. The registered user can change his/her information at any time (with the *profile* option in the user name drop-down box at the top right of the screen). It is especially recommended to change the password.

2.8 Define user role

It is necessary to define the authority limit by defining the roles of registered users on the site. By selecting *Site administration>Users>Assign system roles*, existing roles on moodle site are displayed. The role we want to assign to the user is selected and the user is added to the relevant role list. For example, Figure 11-The users selected from the Potential user list are transferred to the existing user list by clicking -add-. So these users get the TEACHER role.

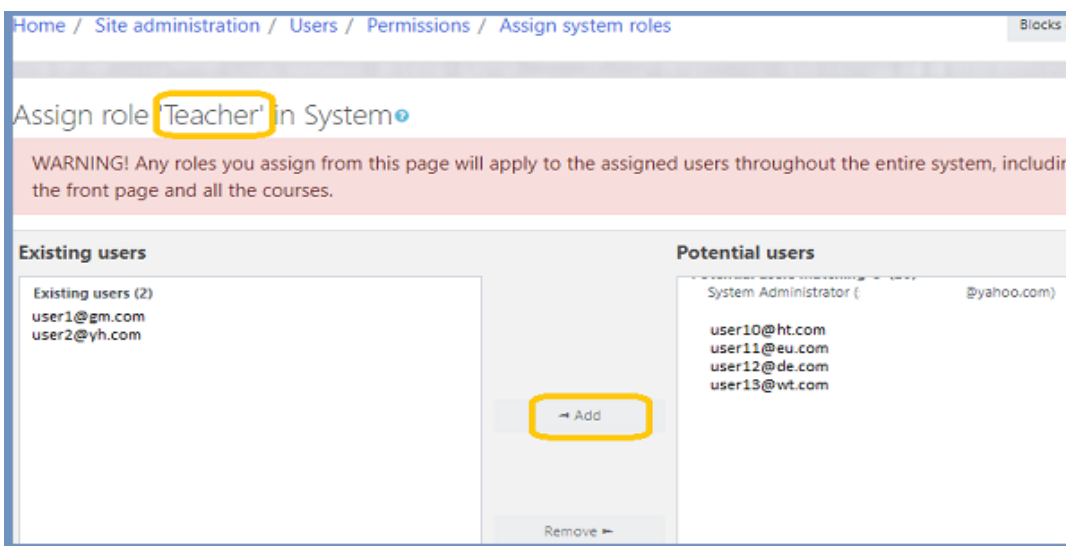


Figure 11

The site administrator must define the teacher and, if applicable, users with the administrator role. The user with the teacher role can log activities into the logged in course, enroll students and monitor the course progress of the students.

3. Moodle course management

3.1 User course registration

The registration of the users to the course is done by the administrator and the person responsible for the course management (teacher). Enrollment of registered users to the course is done by clicking *enroll users* from the course participants page (Figure 12). If the self-enrolment feature is approved in the course settings, users can perform their own enrollment. According to the nature of the training (such as public courses), it is a useful method to allow the guest user to self-register and enroll.

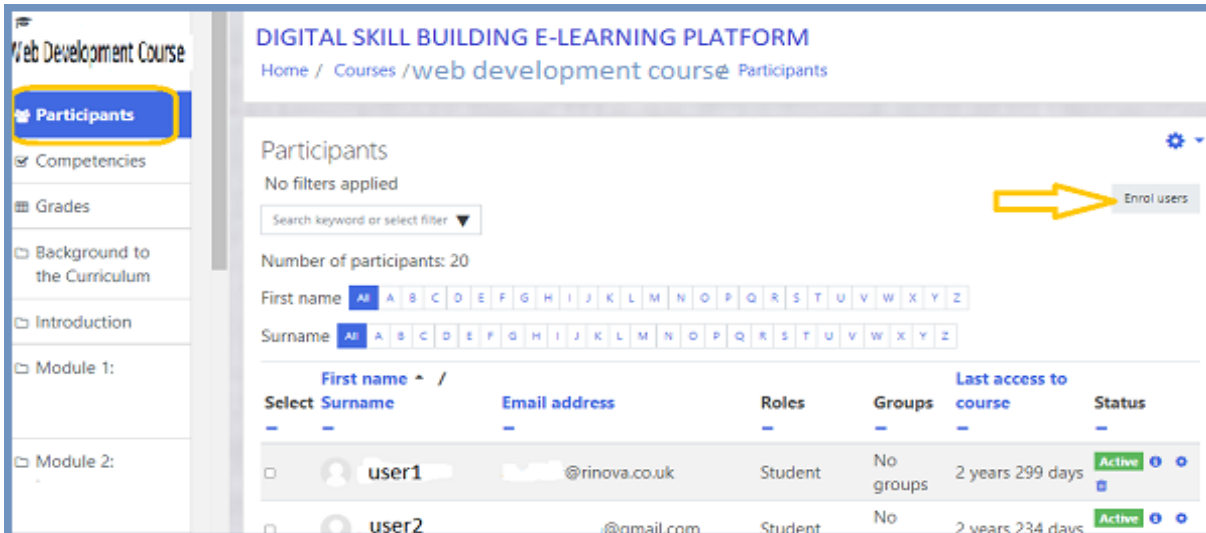


Figure 12

3.2 Adding an activity

Activity means features that allow a student to interact, study and learn with other students and the teacher. In Moodle, an activity such as Forums or Quizzes means that students can contribute directly. There are 15 different types of activities that can be found when the activity picker is open (opens on the wheel) in Moodle (figure13) and the *Add activity or resource* link is clicked (Figure14).

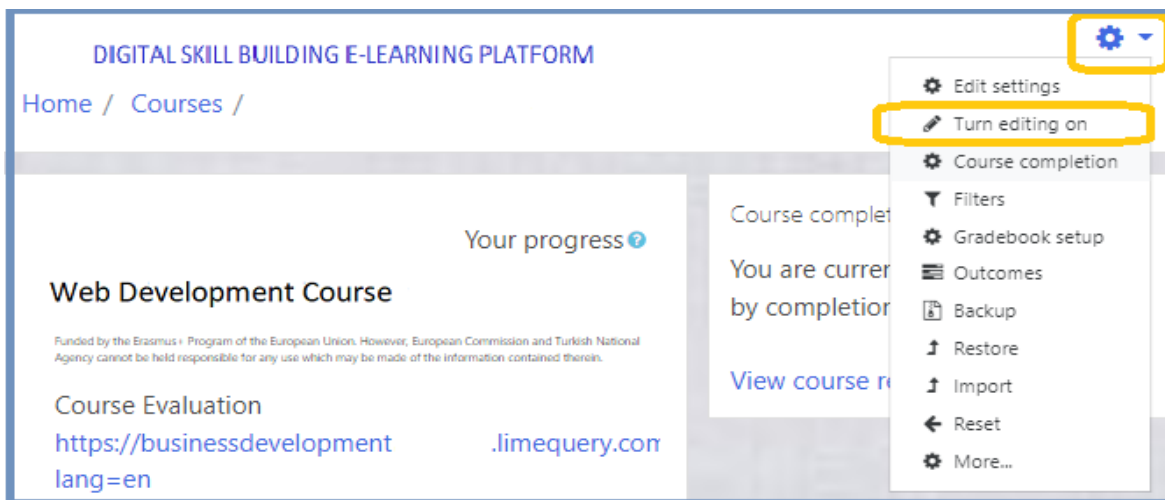


Figure 13

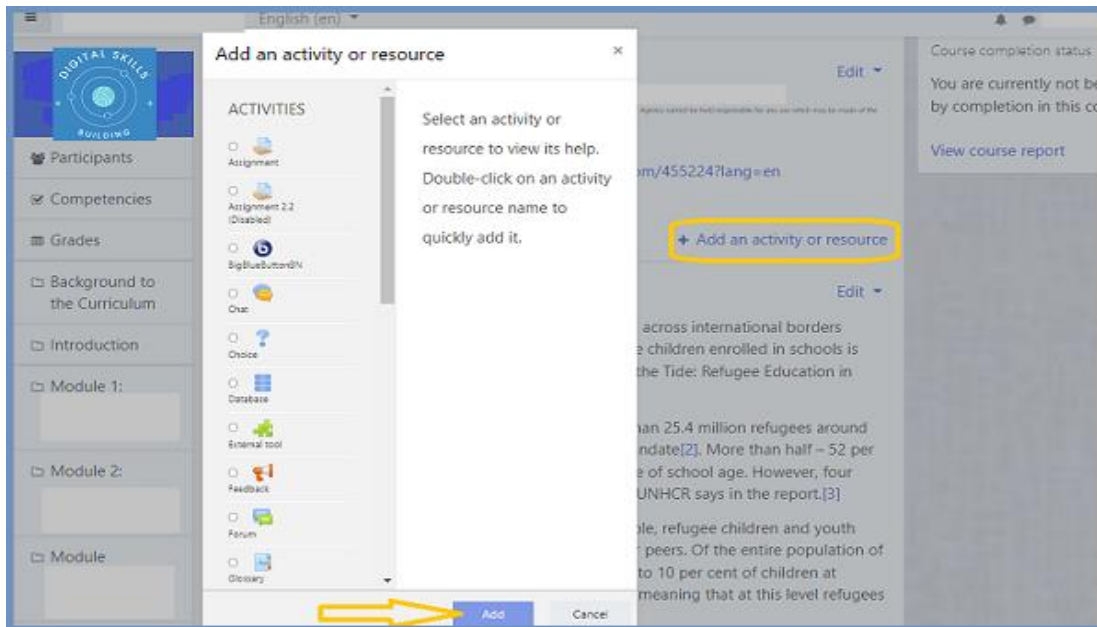


Figure 14

- ❖ **Assignments:** It allows teachers to grade and comment on uploaded files or assignments created online and offline. Students can submit digital content (files) such as word-processed documents, spreadsheets, images, or audio and video clips.
- ❖ **Chat:** Allows participants to have real-time synchronized discussion. Chat can be a one-time event or can be repeated at the same time every day or every week.
- ❖ **Choice:** This module allows a teacher to ask a single question and present a selection of possible answers. Election results can be published after students answer and after a certain date
- ❖ **Database:** Database activity allows teacher and students to create, view, and search a bank of record entries about any topic. The format and structure of these entries can be nearly unlimited, including images, files, URLs, numbers and text, among other things.
- ❖ **Feedback:** The Feedback activity allows creating polls to get feedback. It is ideal for coursework or teacher assessments.
- ❖ **Forum:** The forum activity module allows students to discuss asynchronously. There are several types of forums to choose from.
- ❖ **Glossary:** It allows participants to create a list, collect and organize resources or information like in a regular dictionary. A teacher can allow files to be added to dictionary entries. Attached pictures are displayed at the entrance.
- ❖ **Lesson:** The lesson activity module enables a teacher to present content and practice activities in interesting and flexible ways. A teacher can use the lesson to create a content page or set of teaching activities that offers a variety of options to the student. In either case, teachers can choose to increase engagement and achieve agreement by including a variety of questions such as multiple choice, matching, and short answer. Depending on the student's choice of answer and how the teacher has developed the lesson, students can move to the next page, return to the previous page.

How to design a lesson(Figure 15)

While editing is open, Lesson is selected from the activity selector

Type the name of the course and, if necessary, its description.

Other sections expand to select the desired settings, including whether the course will be practiced or graded.

By clicking Save and View, the first page is added from the Edit tab. This will usually be a Content page (where information can be added) or a Question page (where a question type can be selected).

Course structure is created by adding questions, sets, content and question pages. This structure appears to the student as the course menu on the right side of the course content page.

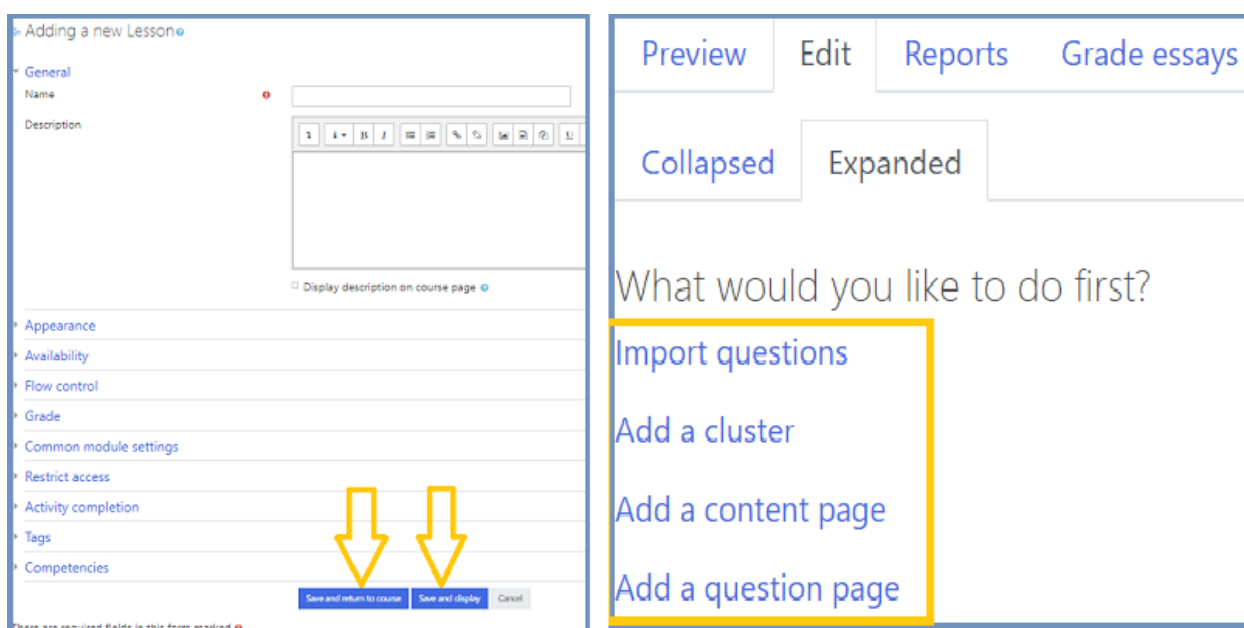


Figure 15

How does it work?

Student view (Figure 16)

Users click on the Lesson icon in the course to access it and, depending on the teacher's settings see a page of information and are prompted to choose an option from a selection of possible responses. The Lesson may be timed, and it may display a progress bar. It may have a table of contents showing all pages, or the navigation may be hidden. According to the course and course creation settings, when the student completes the course, they receive point and course completion approval.

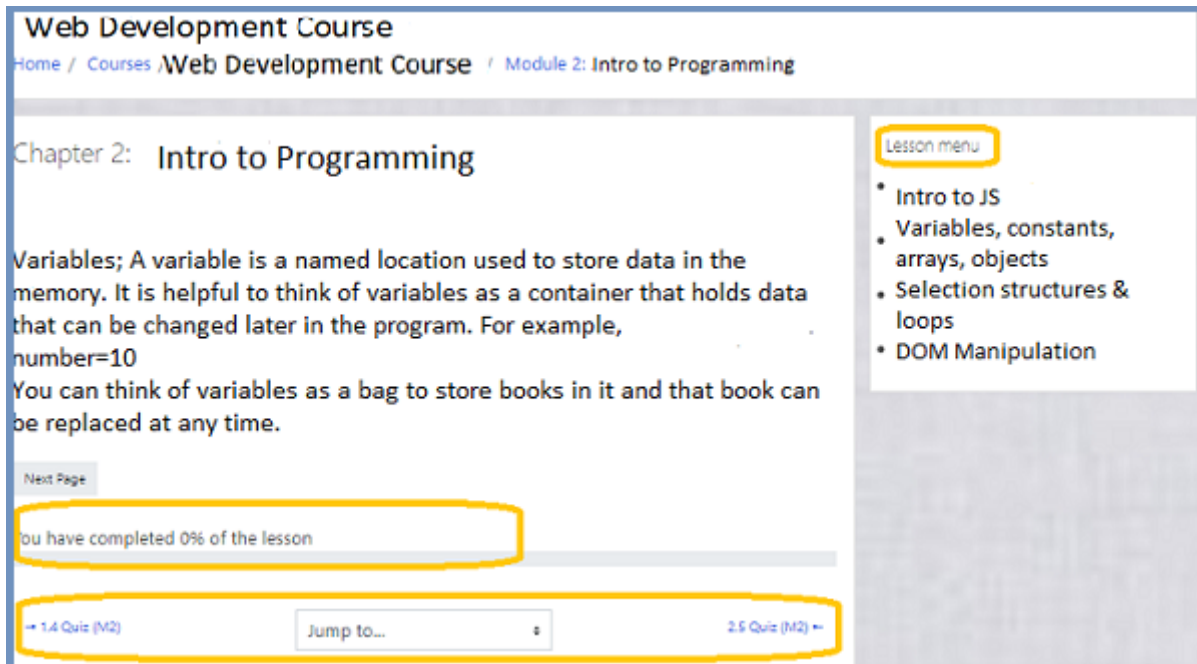


Figure 16

Teacher view (Figure 17)

Teachers see additional tabs that students don't see when they access the Lesson. They can preview the flow, edit pages, view reports, and grade attempts if essay questions have been used.

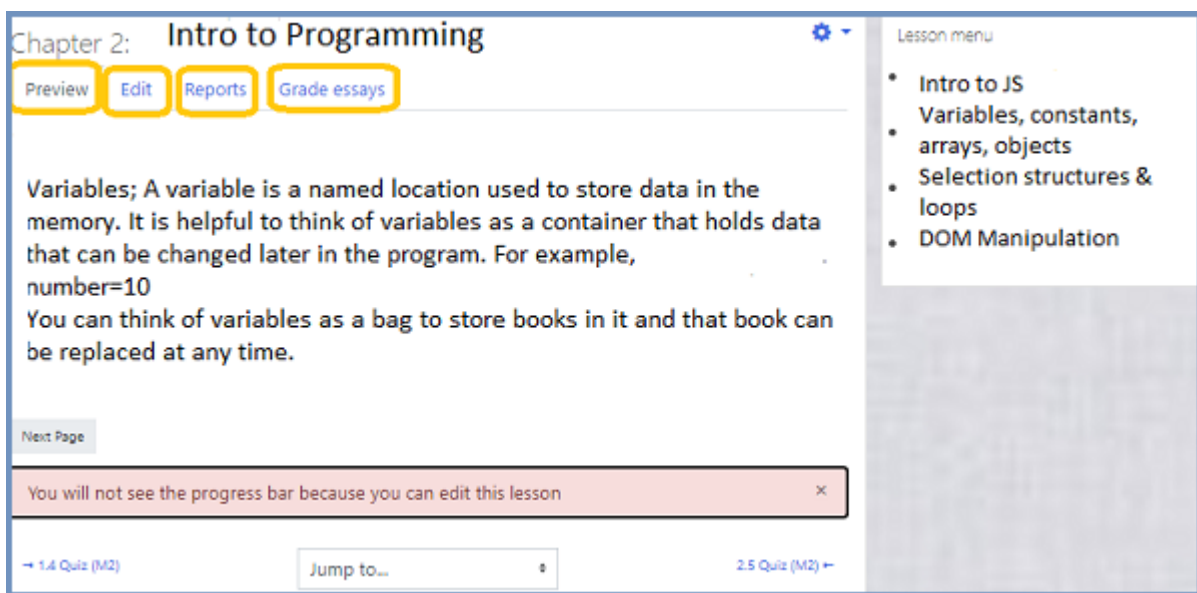
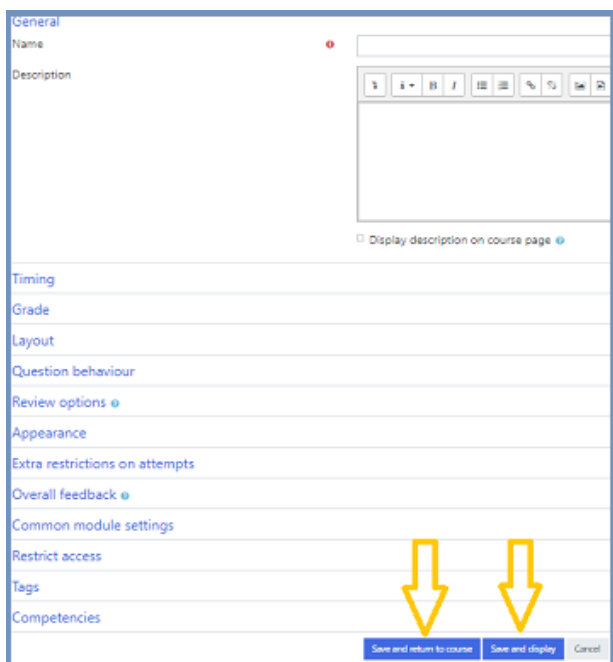


Figure 17

- ❖ **Quiz:** The quiz activity allows a teacher to create quizzes that include a variety of question types, including matching, multiple choice, short answer questions, numerical questions, and yes/no choice. The teacher can have the test attempted multiple times or within a specified period of time. Except for practice questions, every attempt of the student is automatically marked and recorded in the gradebook. The teacher can choose whether to show students hints, feedback, and correct answers.

How is quiz set up?(Figure18)



While editing is open, Quiz is selected from the activity selector

Type the name of the quiz and, if necessary, its description.

Expand the other sections to select the settings you want. With the default settings, students can repeat the test, freely moving between questions, each on a different page. There is no time limit and points and feedback screen after completing the test.

By clicking Save and View. Click Edit quiz.

Click Add and then click '+ new question' type the question content. (If a question bank has been created before, A question is added by clicking + from the question bank.)

Figure 18

Depending on the settings, students may see questions all on one page or on separate pages. There will be a block linking to each question.

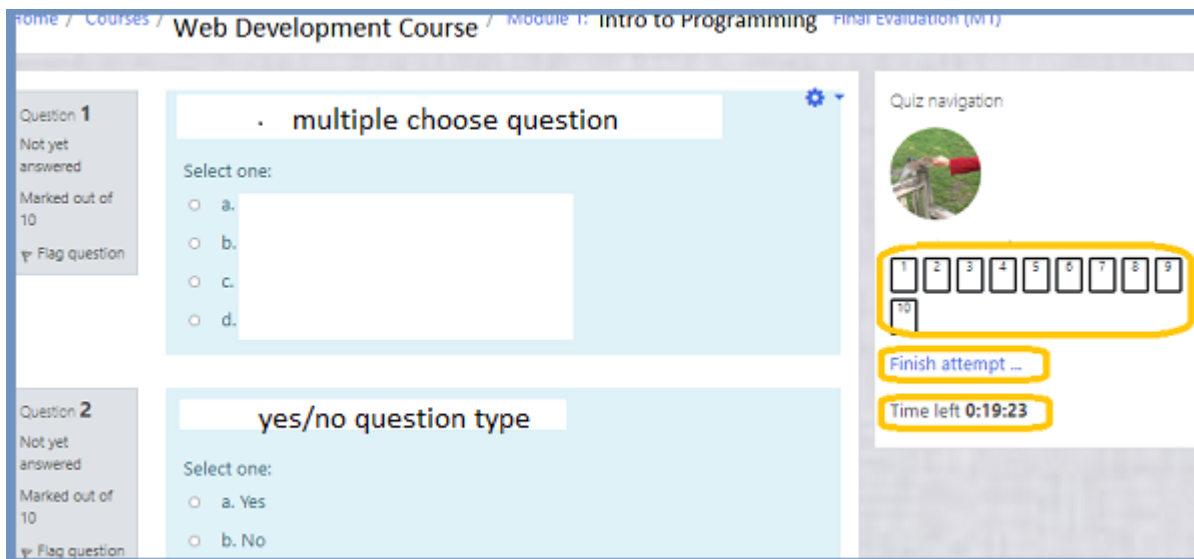


Figure 19

Students can flag questions to alert the teacher to possible queries.

In order to finish the quiz and potentially see their scores (depending on the settings) students must click *Submit all and finish* when they reach the *Summary of attempt* page(Figure 19)

- ❖ **Survey:** The survey activity module provides a set of validated survey tools that have been found useful in assessing and promoting learning in online environments. A teacher can use them to collect data from their students that will help them learn from their classroom and reflect on their own teaching.

- ❖ **Wiki:** The wiki event module allows attendees to add and edit a collection of web pages. A wiki can be used on collaborative topics that anyone can edit.
- ❖ **Workshop:** The workshop activity module provides the collection, review and peer review of students' work. Students can submit any digital content (files), such as word-processed documents or spreadsheets, and type text directly into a field using the text editor.
- ❖ **BigBlueButton:** Activity can be reproduced with *plugin* software. The best example of this is the BigBluebutton software, which provides video live lesson activities. This plugin allows users to watch the live lesson by recording it later.



3.3 Tracking Progress

3.3.1 Activity report

The teacher can follow the course activities of the participants. A checkmark appears in the activity tracking checkbox when attendees complete their activity. The teacher can see the activity completion report of all participants in tabular form (Figure 21) by selecting *view course report* (Figure 20) on the Course page.

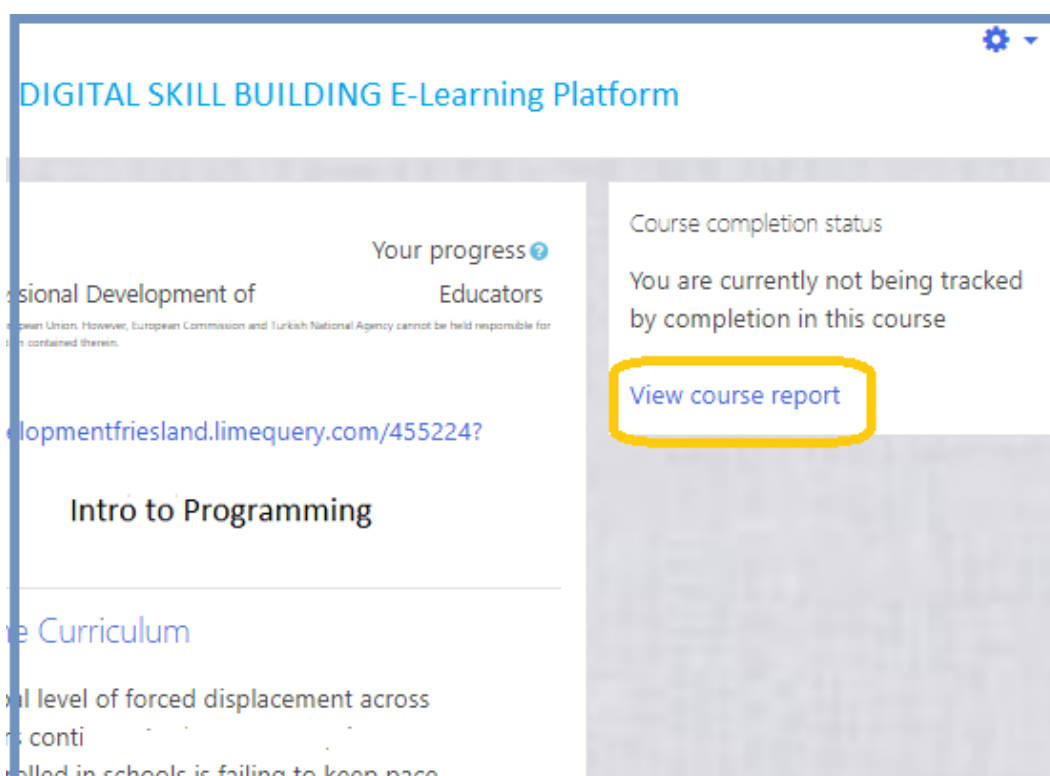


Figure 20



Criteria group		Activities																			
Aggregation method		All																			
Criteria		Chapter 1: The basics of ...	1.3 Quiz (M1)	Chapter 2: Understanding ...	2.4 Quiz (M1)	Chapter 3: International I ...	3.3 Quiz (M1)	Chapter 4: International I ...	4.4 Quiz (M1)	Chapter 5: Human ...	5.4 Quiz (M1)	Final Evaluation (M1)	Chapter 1 : Cult ure and ...	1.4 Quiz (M2)	Chapter 2: intercultural ...	2.5 Quiz (M2)	Chapter 3: intercultural ...	3.4 Quiz (M2)	Final Evaluation (M2)	Chapter 1 : The ...	
First name / Surname	Email address																				
user1	@gmail.com	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
user2	@gmail.com	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
user3	@gmail.com	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Figure 21

3.3.2 Grades report

It is important for the teacher to display all the grades of each student in a course and the activities evaluated by grade (such as homework, quiz) in tabular form. By selecting *Grades* on the main page of the course, the grades of the participants are displayed as a list (Figure22).

First name / Surname	Email address	1.4 Quiz (M2)	2.5 Quiz (M2)	3.4 Quiz (M2)	Final Eval...
user1	@gmail.com	-Q	-Q	6.67Q	
user2	@gmail.com	-Q	-Q	-Q	
user3	@gmail.com	10.00Q	6.00Q	10.00Q	

Figure 22



Quiz

1-What is Moodle ?

- a. Open source Learning Management System
- b. Content management in limited use
- c. Website design software
- d. Database management system

2- Which user is responsible for the moodle site?

- a. Student
- b. Guest
- c. Administrator
- d. Non - editing teacher

3- How does the modularity of the moodle system provide flexibility?

- a. Provides course management
- b. Unwanted features can be removed and needed features can be added as plugins
- c. Allows photo editing
- d. Provides word processing

4- What is plugin?

- a. It is a spreadsheet program
- b. It is an electronic drawing-design program
- c. It is a small program that adds particular functions to an existing application
- d. It is a calendar program

5- What is the area where teachers can add learning materials for their students ?

- a. Course
- b. Dashboard
- c. Theme
- d. Plugin

6- What are the features that allow a student to interact, work, and learn with other students and the teacher?

- a. Blocks
- b. Front page
- c. Activity
- d. Gradebook

Resources

<https://moodle.org>

<https://bitnami.com>