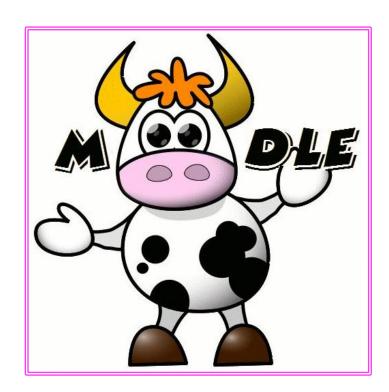




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# **Active Use of an E-environment**



(http://moodle.oakland.k12.mi.us/birmingham/)

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## 1 Introduction to the digital didactics of an E-environment

The approach of the digital didactics differs fundamentally from the conventional instructor-centered didactic model, based on a process of knowledge transmission. In fact, e-learning fits well with the contemporary theory about learning, based on the notion that learning is an active process of constructing knowledge and that instruction is the process by which this knowledge construction is supported.

A suite of digital tools has been developed to materialize this approach demanding a new educational practice. One of these tools is a digital learning environment or E-environment, having the advantage to support the new forms of E-learning and E-teaching. This E-environment is a web application, running on a server and being accessed by using a web browser. The teacher as well as his students can access the system from any place with an Internet connection.

The E-environment offers the teacher a wide variety of tools to create his own course website having access control because only enrolled students can view it. More specifically, it provides an easy way to upload and share course materials, hold online discussions and chats, give quizzes and surveys, gather and review assignments and record grades. The E-environment combines all these features in one integrated package. Once the teacher has learned how to use it, he will be free to concentrate on teaching and learning instead of writing and maintaining his own software.

A short summary of the most important tools of the E-environment is given below:

#### Uploading and sharing materials

An E-environment provides tools to easily publish content. The instructor uses a web form to store his syllabus on the server. Subsequently, he can upload this syllabus as well as lecture notes, reading assignments and articles for students to access whenever they want.

#### Organizing forums and chats

Online forums and chats provide a means of communication outside the classroom. Forums give the students more time to generate their responses and can lead to more thoughtful discussions. Chats, on the other hand, give the teacher a way to quickly and easily communicate with remote students. They can be used for project discussions between groups of students of for last-minute questions the day before an examination.

#### Using quizzes

Online quizzes can be graded instantaneously. It is a great tool to give rapid feedback on the performance of the students. Many publishers now provide banks of test questions tied to book chapters. For example, a teacher can use weekly mini-tests to keep his students engaged with his lectures. At the end, he uses a proctored online testing as the final examination using the same question banks.

#### Gathering and reviewing assignments

Online assignment submissions are an easy way to track and grade the assignments of the students. In addition, research indicates that using an online environment for student peer reviews increases student motivation and performance.

#### Recording grades

An online Gradebook can give the students up-to-date information about their performances in the course of their teacher. Online grades can also help to comply with privacy rules that prohibit posting grades with personal identifiers in public places. After all, the Gradebooks allow students to see only their own grades, never another student's. The grades can be downloaded into an Excel file for statistical calculations.

While traditional face-to-face meetings are still effective, applying the tools listed above opens up new possibilities for learning. In the 'blended learning' methodology, online learning and face-to-face meetings effectively combine the best of both worlds. Moving most of his content delivery to an online environment, the teacher can save his time for discussion, questions and problem solving. Allowing the students to study the online content outside of the classroom, gives the teacher the opportunity to use face-to-face time for troubleshooting. If the teacher uses an online forum, he can bring the best ideas and questions from the forum into his classroom.

Many students, being reluctant because of shyness, uncertainty or language issues, can express themselves during online discussions in a way they cannot do it in a regular class. It is a boon to many students having the ability to take their time to compose questions and answers in an online discussion. Moreover, having grown up with instant messaging and other Internet communication tools, many students find that online communication is second nature. They want to get many of their course materials online, accessing the latest information at any time and making as many copies of the materials as they need.

## 2 Examples of E-environments

#### 2.1 Blackboard Learn

Blackboard Learn (previously the Blackboard Learning Management System), is a virtual learning environment and course management system developed by Blackboard Inc. It is Web-based server software which features course management, customizable open architecture, and scalable design that allows integration with student information systems and authentication protocols. It may be installed on local servers or hosted by Blackboard ASP Solutions. Its main purposes are to add online elements to courses traditionally delivered face-to-face and to develop completely online courses with few or no face-to-face meetings.

#### 2.2 Moodle

The Moodle system is a 'free' and 'open source' software program. It is built on a sound educational philosophy and has a huge community that supports and develops it. It can compete with the big commercial systems in terms of features sets and is easy to extend.

An open source software program, like the Moodle system, means that users have access to the source code of the software. They can look under the hood, see how the software works, tinker with it, share it with others or use parts of it in their own product. Therefore, the Moodle system is aligned with the academic community's values of freedom, peer review and knowledge sharing. Just as anyone can download and use Moodle for free, users can write new features, fix bugs, improve performance or simply learn by seeing how other people solved a programming problem.

Furthermore, the Moodle system costs nothing to download. The users can install it on as many servers as they want. No one can take it away from them, increase the license cost or make them pay for upgrades. No one can force the users to upgrade, adopt features they don't want or take the source code back from them.

Whereas most commercial E-environment systems have been built around tool sets, the Moodle system is based on the social constructionism as the core educational theory and is thus learning-centered. Social constructionism is based on the idea that people learn best when they are engaged in a social process of constructing knowledge. Learning is something we do in groups.

While tool-centered E-environments give a list of tools as the interface, Moodle builds the tools into an interface that makes the learning task central. Additionally, while tool-centered E-environments support a content model that encourages instructors to upload a lot of static content, Moodle focuses on tools for discussion and sharing knowledge. The focus isn't on delivering information; it's sharing ideas and engaging in the construction of knowledge.

Moodle's design philosophy makes the system a uniquely teacher-friendly package that represents the first generation of educational tools that are truly useful.

Moodle has a very large, active community of people (http://moodle.org/) who are using the system and developing new features and enhancements. This community has also translated Moodle into over 70 languages.

The Moodle community has been indispensable to the success of the system. With so many global users, there is always someone who can answer a question or give advice. At the same time, the Moodle developers and users work together to ensure quality, add new modules and features, and suggest new ideas for development. This dedicated community of developers will keep the project going.

In the next section, you can learn how to use Moodle's many features to enhance your teaching and provide your students with a powerful learning environment. Some basic practical exercises will initiate you into the world of the Moodle system.

Good luck!

## 3 Basic practical exercises

## 3.1 Managing Your Class

#### 3.1.1 Assigning Roles in Your Course

Most of the time, students will enroll themselves or be added automatically by your university's enrollment system. So, there shouldn't be much need for you to manually enroll students. However, if you need to add a teaching assistant or an outside guest, you must manually enroll them, i.e. assign them a role in your Moodle course.

Users must have an account on your Moodle site before you can assign them a role in your course. If they don't appear in either the existing or potential users list (see below), they will need to create an account before they can be assigned a role.

There are 3 enrolment methods, as shown in *Figure 3.1.1*:

- Guest access: you can allow access to guest users.
- Manual enrolments: you enroll manually users and assign them a role.
- Self-enrolments: users enroll themselves, receiving the role of viewer.

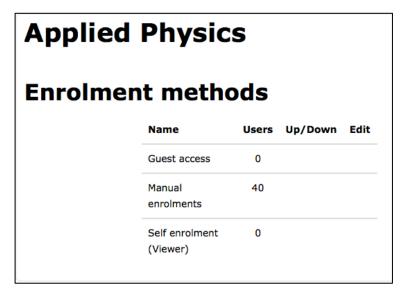


Figure 3.1.1: Enrolment methods page

To allow guest access, you follow the steps below:

- 1. Click successively on "Users" and "Enrolment methods" in the Administration block.
- 2. Click on the "Edit" button of "Guest access".
- 3. Select for "Yes" to allow guest access.
- 4. Choose a "Password" which allows guest access to be restricted to only those who know the password. Guests will be required to supply the password each time they access the course.
- 5. Click, finally, on "Save changes".

To enroll manually a user and to assign him/her a role, you follow the steps below:

- 1. Click successively on "Users" and "Enrolment methods" in the Administration block.
- 2. Click on the "Enrol users" button of "Manual enrolments".
- 3. On the Manual enrolments page, there are 2 columns, as shown in *Figure 3.1.2*. The left column lists the users who currently are enrolled; the right column lists the users who don't.

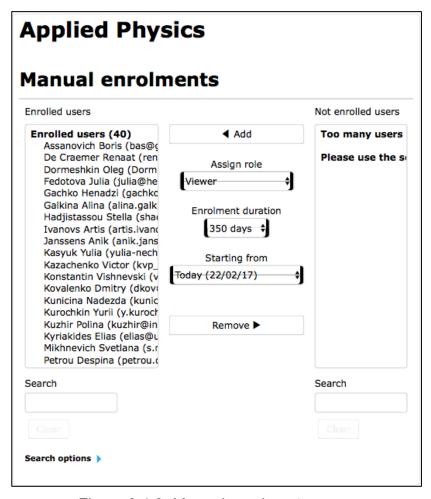


Figure 3.1.2: Manual enrolments page

- 4. Search the not enrolled user by typing his/her name in the "Search" box below the right column.
- 5. Select the name of the user from the not enrolled users list and use the left-facing arrow "Add" button to add the user to the list in the left column.
- 6. Assign a role by choosing one of the following possibilities:
  - None: the user gets no role at all;
  - Editor: the user can edit your Moodle course;
  - Non-editing teacher: the user is a teacher who cannot edit your Moodle course;
  - Viewer: the user is a student who cannot edit your Moodle course.
- 7. If a student drops your class, you can remove him/her from your Moodle course. Removing students is easy. Simply reverse the above procedure, using the right-facing arrow "Remove" button.

#### 3.1.2 Setting Group Mode

You can define groups at the course level. The group mode you choose may also determine the behavior of the module. There are 3 group mode options:

- No groups: everyone participates as part of the class. Groups are not used;
- <u>Separate groups</u>: each group can see only their own work. They can't see the work of other groups;
- <u>Visible groups</u>: each group sees their own work, but they can see the work of the other groups as well.

To set the group mode, you follow the steps below, as shown in *Figure 3.1.3*:

- 1. Click successively on "Edit settings" in the Administration block and on "Groups".
- 2. Select for the group mode option "separate groups" in the group mode.
- 3. Don't force the group mode. So, you can set it for each activity (see below).
- 4. Click, finally, on "Save and display" at the bottom of the page.

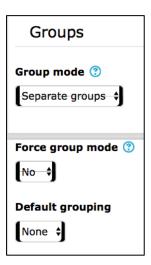


Figure 3.1.3: Group mode page

#### 3.1.3 Creating Student Groups

To utilize the group mode, you first need to create the student groups:

- 1. Click successively on "Users" and on "Groups" in the Administration block.
- 2. On the Groups page, there are 2 columns, as shown in *Figure 3.1.4*. The left column lists the groups you have created. Initially, this list is empty, as there are no groups created by default.

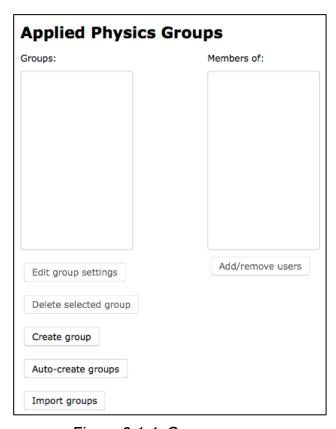


Figure 3.1.4: Groups page

- 3. To create a new group, click on the "Create group" button and set the options for your group on the Create group page, as shown in *Figure 3.1.5*:
  - Group name: displayed in various places throughout your course;
  - <u>Group description</u>: a brief description of the group and its purpose, displayed above the list of group members on the participants page;
  - <u>Hide picture</u>: hiding the picture for the group prevents the group picture from being displayed in various activities throughout your course;
  - <u>New picture</u>: you can upload a profile picture for the group or replace an old picture with a new one.

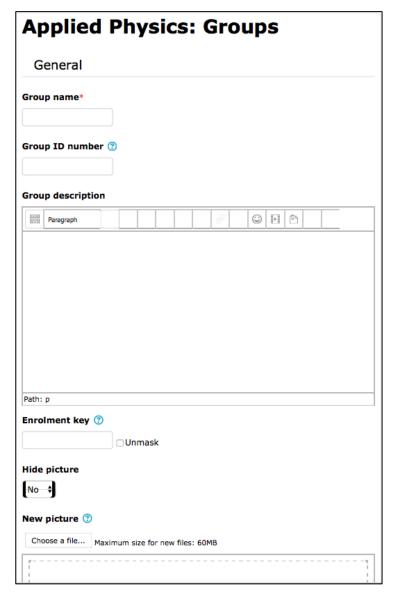


Figure 3.1.5: Create group page

- 4. Click on "Save and display" at the bottom of the page. The name of the group will now appear in the group list on the Groups page (see *Figure 3.1.4*).
- 5. Select the group you just created and click subsequently on the "Add/remove users" button.
- 6. On the Add/remove users page, there are 2 columns, as shown in *Figure 3.1.6*. The left column lists the existing members of the group and the right column lists the potential members. To add a member to the group, select the name of the member from the potential members list and use the left-facing arrow "Add" button to add the member to the list in the left column.

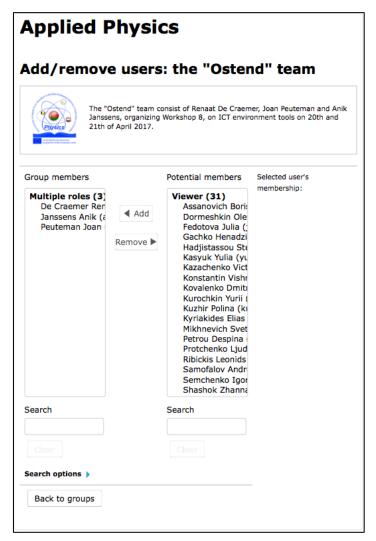


Figure 3.1.6: Add/remove users page

- 7. Click now on the "Back to groups" button.
- 8. Repeat steps 3 to 7 for each group you need.

## 3.2 Communicating with Your Class

The added value of integrating the Moodle system in your education program does not lie in the content, but in the interaction between you and your students.

#### 3.2.1 Creating a Forum

A forum is a powerful communication tool for online discussions. Thanks to the ability of an asynchronous communication, you and your students can take your time composing replies.

#### Creating a Forum

Creating a forum is relatively easy. The key to success is choosing the right options for the type of forum you want to create. Moodle has 4 basic forum types:

- A single, simple discussion: you can create only one discussion in this forum keeping the conversation focused on one particular topic;
- <u>Each person posts one discussion</u>: each person on the class can start only one discussion having multiple replies;
- Q & A forum: requires students to post their perspectives before viewing other students' posting. After initial posting, students can view and respond to others' postings;
- Standard forum for general use/ displayed in a blog-like format: there can be one
  or more discussions in this forum and anyone with permission can post multiple
  discussions.

To add a standard forum for general use to your Moodle course, you follow the steps below:

- 1. Click successively on "Turn editing on" and on "Activity chooser on" in the Administration block.
- 2. Click now on the "Add an activity" button in the course section you would like to add the forum and select "Forum" from the activity menu.
- 3. On the Adding a new Forum page, as shown in *Figure 3.2.1*, give the forum a name and write (optionally) a descriptive forum introduction.
- 4. Select the "Standard forum for general use" as the forum type.



Figure 3.2.1: Adding a new Forum page

To select the general options (see Figure 3.2.2), you follow the steps below:

- Click on "Attachments and word count" and choose a maximum attachment size and a maximum number of attachments to limit the maximum size and number of the students posts
- 6. Click now on "Subscription and tracking" and select one of the following subscription mode options:
  - Optional subscription: participants can choose whether to be subscribed;
  - Forced subscription: everyone is subscribed and cannot unsubscribe;
  - Auto subscription: everyone is subscribed initially but can choose to unsubscribe at any time;
  - <u>Subscription disabled</u>: subscriptions are not allowed.
- 7. Set the read tracking (to highlight any new posts) now to "optional" allowing the participants to choose whether to turn the read tracking on or off.

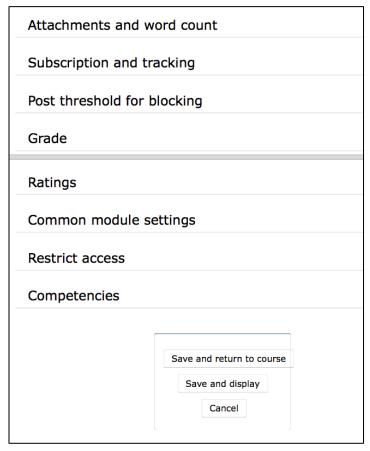


Figure 3.2.2: Options of the Adding new Forum page

To select the rating options (see *Figure 3.2.2*), you follow the steps below:

- 1. Click on "Ratings" to allow posts to be rated. Any ratings given in the forum are recorded in the Gradebook (see below).
- 2. Select one of the following aggregate types defining how ratings are combined to form the final grade in the Gradebook:
  - No ratings: the activity will not appear in the Gradebook;
  - Average ratings: the mean of all ratings;
  - Count of ratings: the number of rated items becomes the final grade. Note that the total cannot exceed the maximum grade for the activity;
  - Maximum rating: the highest rating becomes the final grade;
  - Minimum rating: the smallest rating becomes the final grade;
  - <u>Sum of rating</u>: all ratings are added together. Note that the total cannot exceed the maximum grade for the activity.

- 3. Choose the type of the scale. You can use either a scale made up of words, called "Scale" or a numerical scale, called "Point".
- 4. If "Scale" is chosen, you can then choose the scale from the "Scale" dropdown. If using "Point" grading, you can then enter the maximum grade available for this activity.

To select the common module options (see *Figure 3.2.2*), you follow the steps below:

- 1. Click on "Common module settings". The group mode defined at course level is the default mode for all activities within the course. If you don't force the group mode at course level (see above), you can define here the group mode setting.
- 2. Select "Show" or "Hide" determining whether your students may view the activity or not.
- 3. Choose now one of the 3 group mode options:
  - No groups: everyone participates as part of the class. Groups are not used;
  - <u>Separate groups</u>: each group can see only their own work. They can't see the work of other groups;
  - <u>Visible groups</u>: each group sees their own work, but they can see the work of the other groups as well.

Finally, click on the "Save and return to course" button at the bottom of the page. The forum name will now be a link in the course section where you added it. If you want to go back to change any of the options, you can click on "Edit settings".

#### **Using a Forum**

If you click on the Forum name in the course page, you will see the Forum page, as shown in Figure 3.2.3.

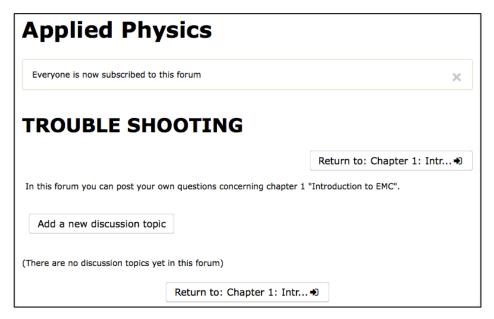


Figure 3.2.3: Forum page of a Forum "TROUBLE SHOOTING"

Subscribing to a forum will send the user an email when there are new postings in the forum. To select a subscription mode, you follow the steps below:

- 1. Click on "Subscription mode" in the Forum administration block and choose for one of the 4 possible types of subscription mode:
  - Optional subscription: everyone can choose to be subscribed;
  - <u>Forced subscription</u>: everyone is now subscribed to the forum, as shown in *Figure* 3.2.3;
  - Auto subscription: everyone is now subscribed to the forum;
  - Subscription disabled: subscriptions are disallowed.
- 2. Click now on "Show/edit current subscribers, if you want to see who's subscribed.

To create a new discussion, you follow the steps below:

- 1. Click on the "Add a new discussion topic" button (see Figure 3.2.3).
- 2. On the new discussion topic page, as shown in *Figure 3.2.4*, give your new discussion a subject.

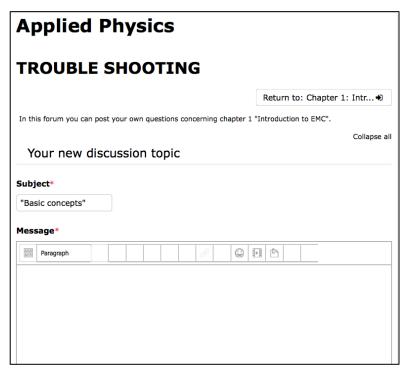


Figure 3.2.4: New discussion topic page (upper part)

- 3. Write your message in the space provided.
- 4. Now, you can choose to subscribe to the discussion if subscriptions were enabled when the forum was created. Therefore, you have to tick the box "Discussion subscription" (see *Figure 3.2.5*).
- 5. If you want to attach a file/ picture (see *Figure 3.2.5*), click on the "File picker", left above the space where you add the file/ picture, and successively on "Upload a file" in the toolbar on the left side of the new window. Click now on the Browse button to find and choose the file on your computer. Be sure your document is smaller than the maximum attachment size for the forum. Write the name of the file/ picture in the "Save as" box. Finally, you click now on the "Upload this file" button.



Figure 3.2.5: New discussion topic page (lower part)

- 6. If you want to add a URL address, click on "URL downloader" in the toolbar on the left side of the new window. Fill in the URL address in the box provided and click on "Download"
- 7. Click on the "Post to forum" button. Now, you will see a screen telling you the post was successfully saved and how long you have to make changes to your post before it's mailed to the subscribers. The default editing time is 30 minutes.
- 8. The success screen should automatically send you back to the main forum page. You will see the discussion you just created. If you can still edit the post, you will have an "Edit" link bottom right. After editing and saving your post a second time, you will see the main forum page again, as shown in *Figure 3.2.6*.

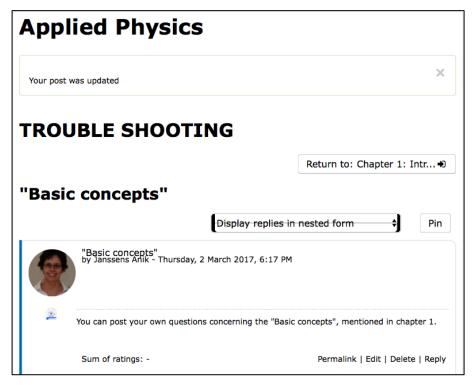


Figure 3.2.6: Main forum page after an update

<u>Note</u>: If you have enabled ratings in the forum, you will see information about the rating at the bottom of the page (see *Figure 3.2.6*).

#### Managing a Forum

If you make your discussions an important part of your class, you can really get people talking. However, you will need to manage your forum. Otherwise, your forum can quickly sprout and spread like an unruly weed. There are several keys to managing a forum.

- <u>Student expectations</u>: let your students know how often you intend to respond to questions and posts, for example once a day or once a week. If you don't set expectations, some students will expect you to be on call 24 hours a day.
- Behavior issues: make your expectations for student conduct clear. Some students
  may say things in an online discussion they would never say in person. Rude or
  hurtful remarks can shut down a discussion or completely divert the thread of the
  conversation. The use of rating scales can moderate students' behavior. If the
  situation gets out of control, you can ultimately delete the students' posts from the
  forum.

 Student moderator groups: assign a small group of students to moderate duties, such as moving the conversation along, answering basic questions and summarizing a discussion. If students knows they are responsible for being able to discuss intelligently with their classmates, they are much more likely to do the reading profoundly and to really understand the topic.

#### **Managing an Online Discussion**

Getting your students to participate in an online discussion can be a challenge. There are several "tips and tricks" to support the discussion.

- Starting the discussion: is the hardest part. Once people start talking, at least a
  few will probably continue the discussion. As you start your class, it would be
  useful to have some "icebreakers" helping your students to get to know each
  other and to get used to discussing issue online. Start the discussion with
  concrete, compelling and open-ended questions.
- Encouraging participation: is also necessary. The strategy for encouraging participation is to engage with the forum yourself. If your class meets face-to-face, bring up important postings and discussions in class. By merging the online environment with the face-to-face environment, you show your students that you value their participation. Devote frequently part of your lecture to talk about what was happening online.
- Grading forums: will help you to enhance the discussion. You will need to grade on quality, not just quantity. To be successful, you must clearly define your grading criteria. Do you want your students to support their argument with citations? Do you want them to acknowledge the other person's point of view and then offer a critique? Do they need to support their arguments with facts? Many students need scaffolding to be able to participate effectively in academic forums that differ from the social forums. It is a good practice to give students some credit just for participation, but full points can only be achieved with a high-quality answer.

#### 3.2.2 Using Messaging

Messaging is a private communication tool between you and your students or between 2 students. Unlike forums, messaging is not course-specific; users may send messages to each other regardless of whether they are enrolled in the same course.

#### **Preparing Messaging**

To add a Messages block to your course page, you follow the steps below:

- 1. Click successively on "Turn editing on" and on "Add" in the "Add a Block" block.
- 2. Select "Messages".

To add users to the offline contacts, you follow the steps below:

- 1. Click successively on "Turn editing on" and on "Messages" in the Messages block.
- 2. Choose a course in the "Message navigation" drop-down menu. A list of all participants of this course appears.
- 3. Click on the users name. Subsequently, click on "Add contact" under the users name. The users link is now added to the list of offline contacts.

### Sending a Message

To send a Message, you follow the steps below:

- 1. Click successively on "Messages" in the Messages block and on a link of a user, added to the list of your offline contacts.
- 2. Write your message in the provided box and click on the "Send message" button.

#### Reading a Message

When you are sent a message, the Messages block will display the name of the person sending the message with a link to read the message. After reading, you may type a reply and click on the "Send message" button.

## 3.3 Assessing Your Class

Feedback on performance is a critical part of a learning environment and assessment is one of the most important activities in education. A well-designed test can give you valuable information about what your students understand and what they don't. If the feedback is rapid enough, it can be a critical tool for your students to help them become more successful.

## 3.3.1 Creating a Quiz

Moodle guizzes have 2 major components:

- Question bank: contains questions of any type and arranged in a certain manner.
   You can create a question bank based on chapters of a textbook, weeks in the
   semester, important concepts or any other organizational scheme. The question
   bank can be reused in multiple quizzes, shared between classes and courses
   and even moved between systems;
- Quiz body: is a container of various types of questions from the question bank.
  The quiz body is what students see when they take the assessment. It also defines how the students interact with the quiz. The questions can be chosen manually or at random, and displayed in a set or random order.

#### **Creating a Quiz Body**

To create a guiz body, you follow the steps below:

- 1. Click successively on "Turn editing on" and on "Activity chooser on" in the Administration block.
- 2. Click now on the "Add an activity" button in the course section you would like to add the quiz and select "Quiz" from the activity menu.
- 3. On the Adding a new Quiz page, as shown in *Figure 3.3.1*, give the quiz a name and write a descriptive introduction for the quiz.

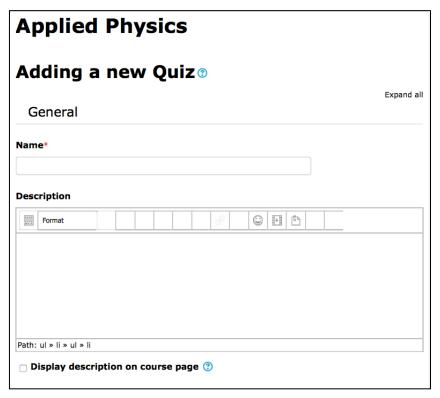


Figure 3.3.1: Adding a new Quiz page

4. Include any special instructions for taking the quiz, as shown in *Figure 3.3.2*.

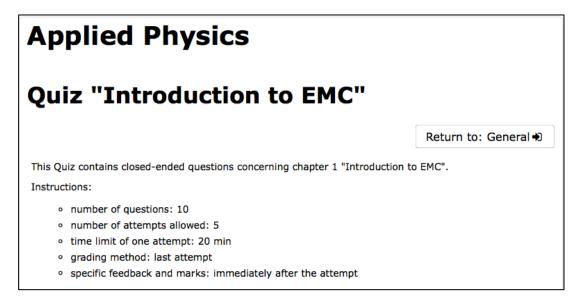


Figure 3.3.2: Special instructions for the Quiz

To select the timing options (see *Figure 3.3.3*), you follow the steps below:

- 1. Click on "Timing" and choose opening and closing dates for the quiz.
- 2. Determine the time limit of an attempt. Select "Open attempts are submitted automatically" when time expires. In that case, the quiz is automatically submitted with the current answers at the end of the allowed time.

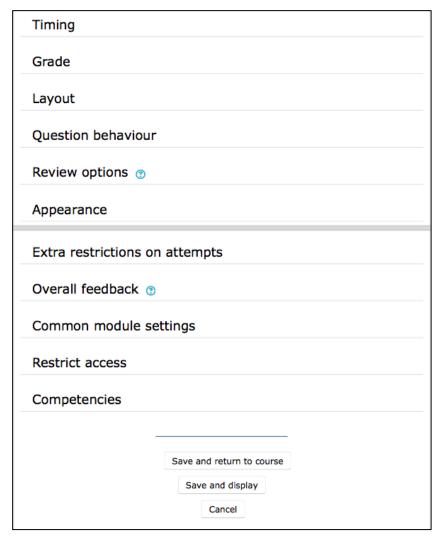


Figure 3.3.3: Options of the Adding new Quiz page

To select the grade options (see *Figure 3.3.3*), you click on "Grade" and choose:

- Grade category in which this activity's grades are placed in the Gradebook (see below);
- Grade to pass, i.e. the minimum grade required to pass;
- Attempts allowed, for example 3;
- Grading method, for example last attempt (all other attempts are ignored).

To select the question behaviour options (see *Figure 3.3.3*), you follow the steps below:

- 1. Select "Yes" for the shuffle within questions. If enabled, the parts making up each question will be randomly shuffled each time a student attempts the quiz. This setting only applies to questions that have multiple parts, such as multiple choice or matching questions.
- 2. Choose for the "Deferred feedback" mode if you wish the students to enter an answer to each question and then submit the entire quiz, before anything is graded or they get any feedback.

To select the review options (see *Figure 3.3.3*), you follow the steps below:

- 1. Choose for the "Immediately after the attempt" option. This setting applies for the first 2 minutes after "Submit all and finish" is clicked.
- 2. Tick one or more of the following possibilities:
  - The attempt: to allow the student to review the attempt at all;
  - Whether correct: to cover the textual descriptions "Correct", "Partially correct" or "Incorrect";
  - <u>Marks</u>: to give the numerical marks for each question and the overall attempt score;
  - <u>Specific feedback</u>: to give feedback that depends on what response the student gave;
  - General feedback: to show the same general feedback to all students;
  - Right answer: to generate automatically a summary of the correct response;
  - Overall feedback: to give feedback at the end of the attempt, depending on the student's total mark. To add the text of the overall feedback, you have to click on the "Overall feedback" option (see *Figure 3.3.3*) and write the text in the provided window. By specifying additional grade boundaries (as a percentage or as a number), the text shown can depend on the grade obtained.

To select the common module settings (see Figure 3.3.3), you follow the steps below:

- 4. Click on "Common module settings". The group mode defined at course level is the default mode for all activities within the course. If you don't force the group mode at course level (see above), you can define here the group mode setting.
- 5. Select "Show" or "Hide" determining whether your students may view the activity or not.
- 6. Choose now one of the 3 group mode options:
  - No groups: there are no sub groups, everyone is part of one big community;

- Separate groups: each group member can only see his own group, other groups are invisible:
- <u>Visible groups</u>: each group member works in his own group, but can also see other groups.

Finally, click on the "Save and return to course" button at the bottom of the page. The quiz name will now be a link in the course section where you added it.

Clicking on the quiz name, you will see a screen where you will select questions to include in the quiz body (see below). To see how your quiz appears for your students, you can select "Viewer" from the "Switch role to..." drop-down menu in the Administration block. The "Return to my normal role" link restores your editor status.

If you want to change any of the options, you can click on "Edit settings".

#### **Creating a Question Bank**

You create quiz questions in the so-called question bank. In this bank, categories and subcategories are used to organize your quiz questions for your course and for sharing between courses. Afterwards, you can add the questions to the quiz body you just created.

To make categories and subcategories, you follow the steps below:

- 1. Click successively on "Turn editing on" and on "Question bank" in the Administration block.
- 2. Click subsequently on the "Categories" button to enter the Edit categories page, as shown in *Figure 3.3.4*. At the top of the page, all current categories are listed.
- 3. Choose now the parent category, i.e. the category in which the new category will be placed. By default, there is only one category, called "Default" (see *Figure 3.3.4*). If you choose "Top", the new category will not be contained in any other category.
- 4. Type the name of your new category in the text box.
- 5. Add a meaningful description in the "Category info" area.
- 6. Click on the "Add category" button. Your new question category will appear in the list of current categories.
- 7. Repeat step 3 until step 6 for every category you want to create.

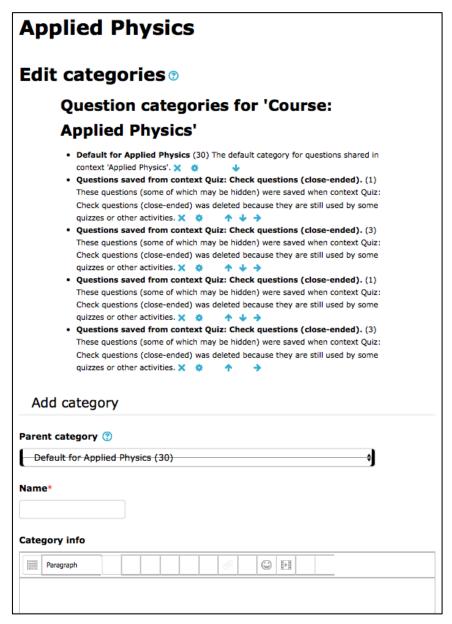


Figure 3.3.4: Edit categories page

To add some questions, you follow the steps below:

- Click successively on "Turn editing on" and on "Question bank" in the Administration block.
- 2. Click subsequently on the "Questions" button to enter the Question bank page, as shown in *Figure 3.3.5*.

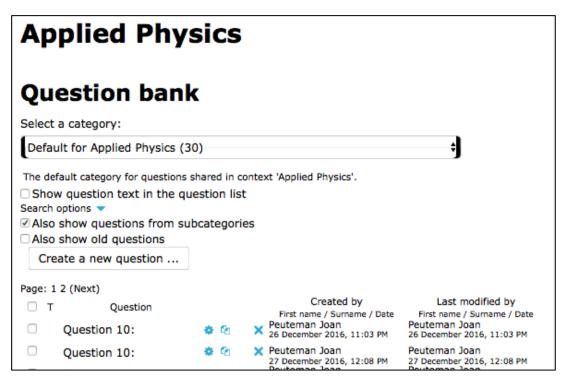


Figure 3.3.5: Question bank page

- 3. Select a category to which you want to add a question. The area below the category will display all current questions belonging to this category. In *Figure 3.3.5*, only a few questions of the category "Default for Applied Physics" and its subcategories (without the question text) can be seen.
- 4. Click on "Create a new question" and select a question type from the dropdown menu. Some examples of question types are briefly described below:
  - Multiple choice: allows the selection of a single or multiple responses from a predefined list:
  - <u>True/False</u>: a simple form of multiple choice question with just the 2 choices 'true' or 'false';
  - Short answer: allows a response of one or a few words that is graded by comparing against various model answers, which may contain wildcards;
  - <u>Numerical</u>: allows a numerical response, possibly with units, that is graded by comparing against various model answers, possibly with tolerances;
  - Essay: allows a response of a few sentences or paragraphs. This must then be graded manually;
  - <u>Matching</u>: the answer to each of a number of subquestions must be selected from a list of possibilities;
  - Algebra: student enters a formula that can include one or more variables;

- Spreadsheet: has the basic functionality of a spreadsheet (like formulas);
- <u>Select missing words</u>: missing words in the question text are filled in using dropdown menus:
- <u>Calculated multiple choice</u>: is like a multiple choice question but can include formula results from numeric values;
- Ordering: put jumbled items into a meaningful order.
- 5. Click on "Add" at the bottom of the dropdown menu.

In the next section, only the procedure to add a multiple choice question will be described, as a textbook example for adding a question type:

1. On the Adding a Multiple choice question page, as shown in *Figure 3.3.6*, give the question a descriptive name. <u>Note</u>: "Question 1" isn't a good idea, if you will use this name to track your questions later!

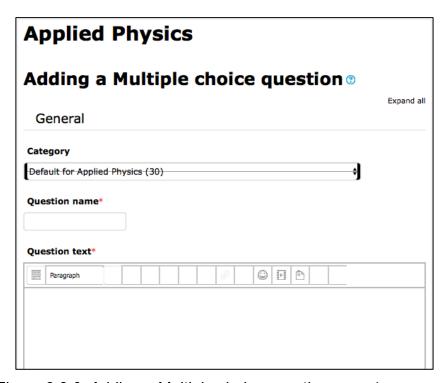


Figure 3.3.6: Adding a Multiple choice question page (upper part)

- 2. Create the question text.
- 3. Set the Default mark, for instance "1" (see Figure 3.3.7).
- 4. If you wish, add general feedback, i.e. the text shown to the student after he has completed the question. General feedback will be displayed only if selected in the options for students to review the quiz (see above).

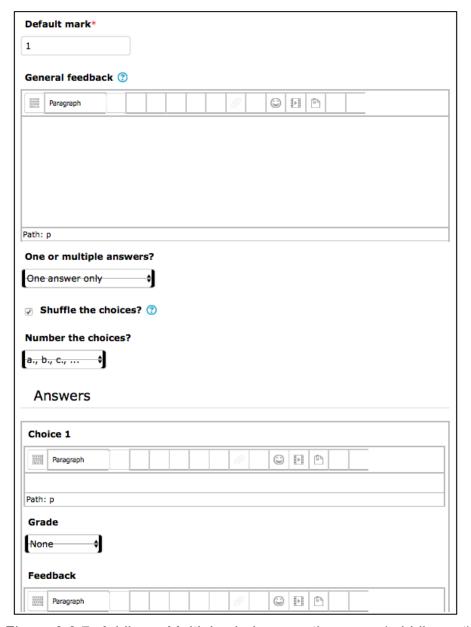


Figure 3.3.7: Adding a Multiple choice question page (middle part)

- 5. Choose whether your students can select only one answer or multiple answers.
- 6. Choose whether answers should be shuffled. If enabled, the order of the answers is randomly shuffled for each attempt, provided that "Shuffle within questions" is also enabled (see above).
- 7. Select a type of numbering the choices.
- 8. Write your first response in the "Choice 1" answer field, as shown in Figure 3.3.7.

- 9. Select a grade percentage for the answer. This is the percentage of the total points possible for the question, selecting a given answer is worth. You can select positive percentages (for the good answers) and negative percentages (for the wrong answers).
- 10. If you wish, add feedback for each response. Feedback will be displayed only if selected in the options for students to review the quiz (see above).
- 11. Repeat step 8 until step 10 for every choice you want to add. Any unused areas will be ignored.
- 12. If you wish, add combined feedback for any correct/ partially correct/ incorrect answer (see *Figure 3.3.8*).
- 13. Click the "Save changes" button at the bottom of the page to add the question to the category.

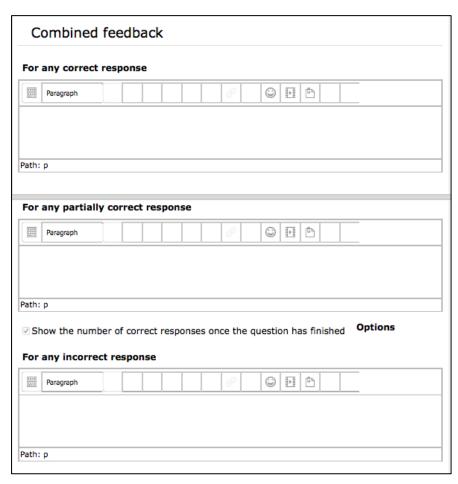


Figure 3.3.8: Adding a Multiple choice question page (lower part)

#### Adding Questions to a Quiz

Once you have created your questions in the Question bank, you need to add them to the quiz. Therefore, you follow the steps below:

- 1. Click on the "Quiz name". On the screen of the quiz, you will see your instructions and the grading method.
- 2. Click now on "Edit quiz".
- 3. Set and save a Maximum grade.
- 4. If you turn on the "Shuffle", then every time the quiz is attempted, the order of the questions will be shuffled into a different random order.
- 5. To add a question on the Editing quiz page, as shown in *Figure 3.3.9*, click successively on "Add" and on "from question bank".

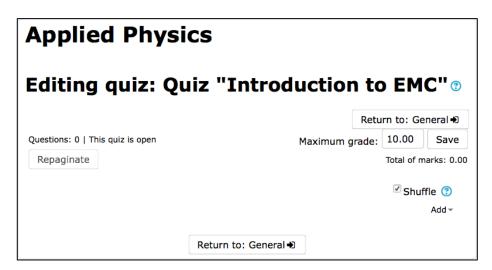


Figure 3.3.9: Editing quiz page

- 4. Select a category. All current questions belonging to the selected category are now displayed.
- 5. Select one or more questions by ticking them. If you want to have a preview of a question, you can click on the "Preview" icon, located to the right side of the question.
- 6. Click on the "Add selected questions to the quiz" button. The questions appear on the Editing quiz page.
- 7. Choose for every question a maximum mark in the Grade column on the right side of the list of quiz questions. As a consequence of your choice, the total of marks is now presented on the page.

- 8. If you want to change the order of the questions, click the arrow buttons in the Order column on the left side of the list of the quiz questions.
- 9. Click on the "Repaginate" button, choose the number of questions per page and click on "Go".
- 10. Click on the "Return to: General" button.

#### 3.3.2 Creating Assignments

Assignments are a useful tool you can use in creative ways to collect more authentic responses from your students than is possible with the quiz engine. There are 3 assignments types:

- <u>Upload any digital content (files)</u>: allows each student to upload files in any format, such as a word-document, a spreadsheet, an image or audio and video clips. Your students can submit individually or as a member of a group;
- Offline activity: is useful to remind the students of an assignment performed outside of Moodle. It could be something face-to-face or on paper. The student can see a description of the assignment, but he can't upload any files;
- Online text: allows each student to type text directly into the text editor.

When reviewing assignments, you can leave feedback comments and upload files, such as marked-up student submissions, documents with comments or spoken audio feedback. Assignments can be graded using a numerical or custom scale or an advanced grading method. Final grades are recorded in the Gradebook (see below).

#### **Creating an Assignment**

To create an assignment, you follow the steps below:

- 1. Click successively on "Turn editing on" and on "Activity chooser on" in the Administration block.
- 2. Click now on the "Add an activity" button in the course section you would like to add the assignment and select "Assignment" from the activity menu.
- 3. On the Adding a new Assignment page, as shown in *Figure 3.3.10*, give the assignment a name and describe carefully your assignment.
- 4. Add, possibly, an additional file, such as an answer template. This file will be displayed on the assignment page under the description.

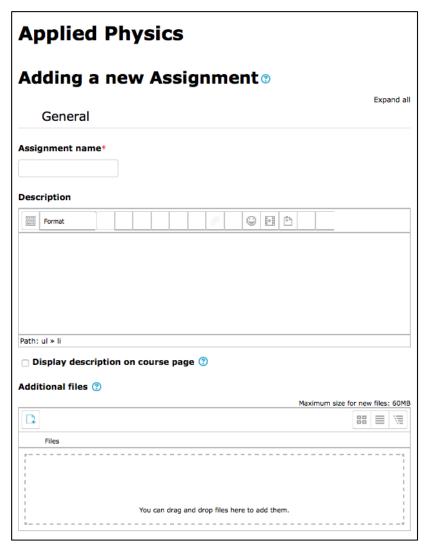


Figure 3.3.10: Adding a new Assignment page

To set the availability options (see *Figure 3.3.11*), you follow the steps below:

- 1. Click on "Availability" and set the "Allow submissions from" date for your assignment. Your students will not be able to submit before this date.
- 2. Set now the "Due date" for your assignment. Submissions will still be allowed after this date but any assignments submitted after this date, are marked as late.
- 3. Set, possibly, the "Cut-off date" for your assignment. If set, the assignment will not accept submissions after this date without an extension.

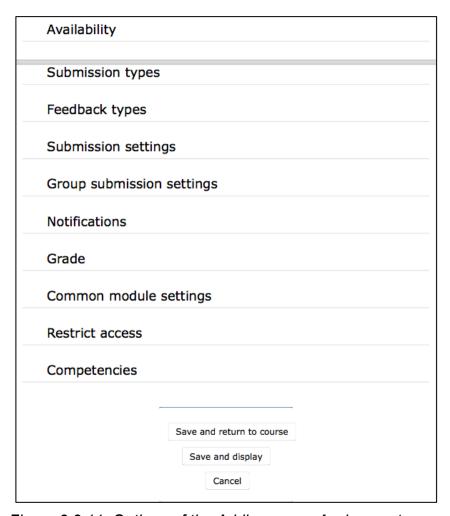


Figure 3.3.11: Options of the Adding a new Assignment page

To choose the submission and feedback types options (see *Figure 3.3.11*), you follow the steps below:

- 1. Click on "Submission types" and tick the "Online text". Your students will be able to type rich text directly into an editor field for their submission.
- 2. Enable the "Word limit" and fill in the maximum number of words that each student will be allowed to submit.
- 3. Click on "Feedback types" and choose one of the following possibilities:
  - Feedback comments: comments for each submission:
  - Feedback files: files with feedback to be uploaded;
  - Offline grading worksheet: a worksheet with student grades to be downloaded and uploaded.
- 4. Tick "Comment inline". If enabled, the submission text will be copied into the feedback comment field, making it easier to edit the original text.

To determine the (group) submission settings (see *Figure 3.3.11*), you follow the steps below:

- 1. Click on "Submission settings" and choose "yes" next to "Require students click submit button". In this case, your students will have to click a "Submit button" to declare their submission as final. This allows students to keep a draft version on the system.
- Choose "yes" next to "Require that students accept the submission statement". In this case, your students have to accept the submission statement for all submissions to this assignment.
- 3. Determine how the student submission attempts are reopened. The available options are:
  - Never: the student submission cannot be reopened;
  - Manually: the student submission can be reopened by the teacher;
  - Automatically until pass: the student submission is automatically reopened until
    the student achieves the grade to pass value, set in the Gradebook (see
    below).
- 4. Finally, define the maximum number of submission attempts that can be made by your students.
- 5. Click on "Group submission settings" and choose "yes" next to "Students submit in groups" if you want that your students submit in groups. Your students will be divided in groups based on the default set of groups. A group submission will be shared among group members and all members of the group will see each other's changes to the submission.
- 6. Choose "yes" next to "Require group to make submission". Users who are not members of the group will be unable to make submissions.
- 7. Choose "yes" next to "Require all group members submit". In this case, all members of the student group must click the "Submit button" for this assignment before the group submission will be considered as submitted. If you choose "no", the group submission will be considered as submitted as soon as any member of the group clicks the "Submit button".

To receive notifications about the submissions of your students (see *Figure 3.3.11*), you follow the steps below:

- 1. Click on "Notifications" and choose "yes" next to "Notify graders about submissions". You will receive a message whenever a student submits an assignment, early, on time and late. Otherwise, you can choose "yes" next to "Notify graders about late submissions". In the latter case, you only receive a message whenever a student submits an assignment late.
- 2. Choose "yes" next to "Default setting for "Notify students" if you want to set the default value for the "Notify students" checkbox on the grading form (see below).

To select the grade options (see *Figure 3.3.11*), you click on "Grade" and choose:

- Grade type: if using "scale", you can then choose the scale from the "scale" dropdown menu. If using "point", you can then enter the maximum grade available for this activity;
- <u>Grading method</u>: if using "Simple direct grading", you choose for the default grading mechanism. "Marking guide" and "Rubric" are examples of advanced grading mechanisms.
- <u>Grade category:</u> in which this activity's grades are placed in the Gradebook (see below);
- Grade to pass: setting of the minimum grade required to pass;

To select the common module settings (see *Figure 3.3.11*), you follow the steps below:

- 7. Click on "Common module settings". The group mode defined at course level is the default mode for all activities within the course. If you don't force the group mode at course level (see above), you can define here the group mode setting.
- 8. Select "Show" or "Hide" determining whether your students may view the activity or not.
- 9. Choose now one of the 3 group mode options:
  - No groups: there are no sub groups, everyone is part of one big community;
  - Separate groups: each group member can only see his own group, other groups are invisible;
  - <u>Visible groups</u>: each group member works in his own group, but can also see other groups.

Finally, click on the "Save and return to course" button at the bottom of the page. The assignment name will now be a link in the course section where you added it.

Clicking on the assignment name, you will see a screen showing the description of the assignment, the grading summary and the submission status. To see how your assignment appears for your students, you can select "Viewer" from the "Switch role to..." drop-down menu in the Administration block. The "Return to my normal role" link restores your editor status.

If you want to change any of the options, you can click on "Edit settings".

## **Managing Assignment Submissions**

Once you have created an assignment, you have to manage the submissions of your students.

To view your student's submissions, you follow the steps below:

- 1. Click on the "assignment name" and have a look at the "Grading summary". You can see the total number of participants, the total number of submissions, the due date and the remaining time.
- 2. Click on the "View all submissions" button. A list of all participants appears on the screen. In this list you find information about every participant, in particular:
  - User picture/ Surname/ first name/ Email address
  - Status/ Last modified submission/ File submissions/ Submission comments
  - Feedback comments/ Annotate PDF/ feedback files
  - Grade/ Last modified grade / Final grade

To grade a submission, you follow the steps below:

- 1. Click on the "Grade" link next to a particular student's name. A new window will open containing a feedback area (see *Figure 3.3.12*). For an "Online Text" assignment, the text is displayed in a box with the word count above. If "comment inline" has been enabled, the text is copied into the feedback comments field.
- 2. Review the student's assignment and write down the grade for the assignment. You set the scale before when you created the assignment (see above).
- 3. Type comments regarding the student's work in the feedback comments field. Optionally, you can add a feedback file.

4. Click "Save changes". The message "The changes to the grade and feedback were saved" appears. Click on "OK".



Figure 3.3.12: Feedback area of an assignment submission

Students can see their grades and comment in 2 ways. First, they can click on the "assignment name". They will see their grades and comments below the submission status (see *Figure 3.3.13*). Alternatively, they can click on the "Grades" link in the Administration block of the course. They will see the grades for all graded activities and they can then click on the "assignment name" to get the written feedback.

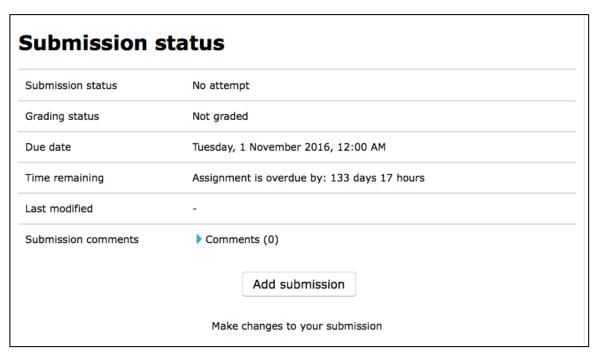


Figure 3.3.13: Submission status of an assignment

### 3.3.3 Using a Gradebook

Grades reduce a complex task, i.e. learning a new subject, to a single measure of success in a course. Therefore, tracking and calculating grades are serious and tedious tasks. Fortunately, Moodle has a great tool, the so-called "Gradebook", to help you. Moreover, your students will appreciate being able to check their grades at any time and to compare themselves to the class average.

#### **Setting up a Gradebook**

To setup your own Gradebook, you follow the steps below:

- 1. Click successively on "Turn editing on" and on "Gradebook setup" in the Administration block. On the Gradebook setup page, as shown in *Figure 3.3.14*, you see an overview of all graded activities.
- 2. Click, if you want to change the grade options, on the "Edit settings" button, to the right of the name of the graded activity. Normally, you have already selected these grade options when creating the graded activity (see above).
- 3. Click on "Add category" at the bottom of the Gradebook setup page. If you have a lot of graded activities in your course, then arranging them into categories will make grade viewing easier, since the "Grader report" page can be set to display grades for one particular category rather than for all activities. In addition, you will be able to set weights for the categories (see below).

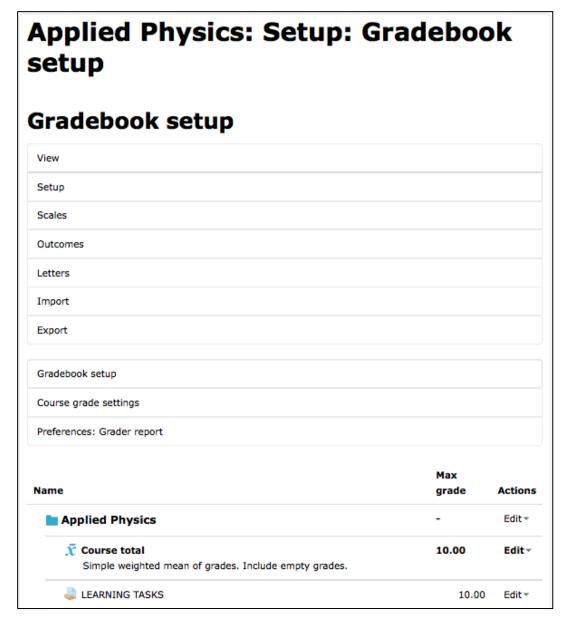


Figure 3.3.14: Gradebook setup page

- 4. On the Setup: New category page, as shown in *Figure 3.3.15*, give the category a name and determine the aggregation, i.e. the combination of grades, such as:
  - · Mean of grades,
  - Median of grades,
  - · Lowest grade,
  - · Highest grade,
  - <u>Mode of grades</u> (= most frequently grade)
  - Natural (= sum of all grade values scaled by weight.

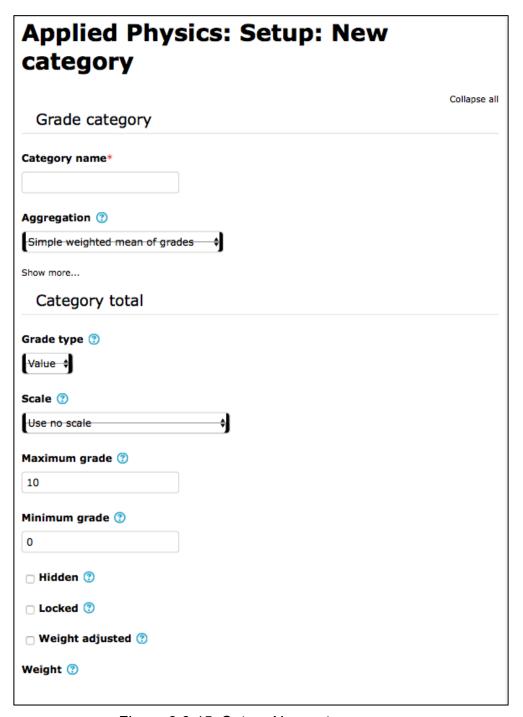


Figure 3.3.15: Setup: New category page

- 3. Choose one of the following grade types:
  - None: no grading possible;
  - Value: a numerical value with a maximum and minimum;
  - Scale: an item in a list;
  - Text: feedback only.

- 4. Write down a value for the "Weight", i.e. the percent that a category will contribute to the grade's total. The individual weights must add up to 100.
- 5. Click on the "Save changes" button at the bottom of the page. The new category appears in the Gradebook setup page.
- Select now the graded activities that you want to move to the new category by ticking them in the rightmost column. Select this category in the "Move selected items to" dropdown-menu. The graded activities will be automatically moved to the selected category.
- 7. Don't change the course grade settings (set up as default) that determine how the Gradebook appears for all participants in the course.
- 8. Don't change the preferences of the Grader report, set up as default.

### **Using Grades**

To access the grades area, you follow the steps below:

- Click successively on "Turn editing on" and on "Grades" in the Administration block. You enter the "Grader report page", containing (if set as default) a list of your students in the course together with their grades for the course total and for each graded activity.
- 2. Click on the "Grades for x" button, to the right of the name of a student x. You see, now, the user report of student x, containing only his grades for the course total and for each graded activity. Alternatively, you can click on the "Single view for x" button, to the right of the "Grades for x" button. You see, now, a single view of student x, containing only his grades for the course total and for each graded activity. This is useful when you are looking at grades together with the student x and you need to protect the privacy of other students.
- 3. Click on the Down or Up Arrow button, next to the name of the graded activity, to sort student totals in descending or in ascending order. There is also a "Single view" button, next to the name of each graded activity, to show the grades of the students for only one particular graded activity.

<u>Note</u>: Students can check their own grades by clicking on "Grades" in their Administration block.

## **Importing Grades**

Grades can be imported in different ways. First of all, grades can be imported <u>via a CSV</u> file with format as follows:

- Each line of the file contains one record;
- Each record is a series of data separated by commas or an alternative separator;
- The first record contains a list of fieldnames defining the format of the rest of the file;
- A fieldname containing user identity data is required either username or ID number or email address.

To import grades via a CSV file, you follow the steps below:

- 1. Click successively on "Turn editing on" and on "Grades" in the Administration block.
- 2. On the Grade report page, click on the "Import" button.
- 3. Click subsequently on "Choose a file" to pick up a CSV file. Alternatively, you can drag and drop a file in the provided box.
- 4. Choose the separator used in the CSV file (normally a comma).
- 5. Set the Verbose scales to "Yes" if both numerical and verbose scales are to be imported. Set the Verbose scales to "No" if only numerical scales are to be imported.
- 6. Click on the "Upload grades" button at the bottom of the page.

A second way to import grades is by a <u>"copy-paste"</u> of the grades from <u>a spreadsheet</u> into the Gradebook. The spreadsheet should have a column containing user identity data – either username or ID number or email address. Each column for import should have a column header.

To paste grades from a spreadsheet, you follow the steps below:

- 1. Click successively on "Turn editing on" and on "Grades" in the Administration block.
- 2. On the Grade report page, click on the "Import" button.
- 3. Choose now for "Paste from spreadsheet".
- 4. Copy and paste the grades from a spreadsheet into the provided box.
- 5. Set the Verbose scales to "Yes" if both numerical and verbose scales are to be imported. Set the Verbose scales to "No" if only numerical scales are to be imported.
- 6. Click on the "Upload grades" button at the bottom of the page.

Finally, you can import the grades via a XML file, containing user ID numbers and activity ID numbers.

To import grades via a XLM file, you follow the steps below:

- 1. Click successively on "Turn editing on" and on "Grades" in the Administration block.
- 2. On the Grade report page, click on the "Import" button.
- 3. Choose now for "XML file".
- 4. Click subsequently on "Choose a file" to pick up a XLM file. Alternatively, you can drag and drop a file in the provided box.
- 5. Click on the "Upload grades" button at the bottom of the page.

### **Exporting Grades**

To export grades, you follow the steps below:

- 1. Click successively on "Turn editing on" and on "Grades" in the Administration block.
- 2. On the Grade report page, click on the "Export" button.
- 3. Select, by ticking, the Grade items you want to be included in the export of the grades.
- 4. Choose the following "Export format options":
  - Include feedback in export,
  - Exclude suspended users.
  - Grade export display types (to be chosen from real percentage letter),
  - Grade export decimal points (to be chosen from 0-5).
- 5. Click on the "Download grades" button at the bottom of the page.

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