

Instructional Design for Blended Learning Settings: Moodle & more

A Manual

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Introduction

Unlike other works, this manual does not claim to be scientific but pragmatic. It does not deal with the presentation of different learning theories and approaches or the combination of theory and practice. Rather, the manual results from the teaching practice and it addresses those who are involved in the teaching practice. It answers the desire to have a guide on how to plan, design and implement an e-learning course. Thus, target group of this manual are teachers in Higher Education, interested in the use of e-learning.

This manual serves as a hand-out focusing on the practical implementation of new media, i.e. Moodle, within a course. The idea is to not only provide the description of different modules from a technical perspective, but their use from an instructional technologist's perspective. Therefore, different learning theory premises are kept in mind, without being explicitly formulated; different types of learners will be considered as well as the demand for a variety of methods and media use and for coping with heterogeneity within the classroom setting; various social settings are treated and reflected. The aim is to show how successful thus good practices from the traditional classroom setting can be transferred into the virtual learning space. The aim is to show that teaching (with educational technologies) in a digital world does not mean to reinvent the world.

The concept of this manual covers different sections: planning and design of e-learning courses, Moodle's advantages and disadvantages, how to create learning and teaching resources, presentation and instructional use of the blocks and modules provided by Moodle. The first section gives an introduction to key concepts in e-learning, even though a clarification of these concepts cannot be the target of a manual focusing on the practical use. This first section outlines the points which need to be considered during the planning and design of e-learning settings including tips and tricks from practice, e.g. formulating teaching and learning objectives, work sheets, and questions and basic design possibilities and limits. It covers all aspects that are particularly "dangerous" as they may provoke confusion and trigger. Section two deals with Moodle as a learning management system (LMS) and identifies the system's strengths and weaknesses. The third section introduces Moodle's blocks, resources and modules integrating the Moodle Documentation¹ combined with some further information about their didactic and instructional value both for teachers and students. Whereas the official Moodle Documentation explains how these elements can be created from a technical point of view, some techniques and methods describing their use in an instructional or constructivist setting will be added. The description focuses on collaboration, communication, evaluation and the organization of the learning process. It presents methods adopted from the traditional, "analogue" learning space and adds some tips and tricks from the practical experience, e.g. e-moderation, chatiquette, or netiquette. Communication via Moodle can facilitate teaching and learning, if the teacher is aware of some tips and tricks.

This manual is intended to serve as a counsellor. Much of what is presented has probably already been known, some methods and tricks are certainly already used, though perhaps not consciously.

¹ https://docs.moodle.org/28/en/Main_page

Designing an e-learning course: first steps

If one has decided to design an e-learning course, integrating educational technologies, they should take into consideration several steps; these steps are basically the same as in any traditional course concept. There are only a few additional points that have to be considered. The so-called ADDIE model covers the different phases of a course, from the framework analysis to its possibly necessary reorganization or redesign.

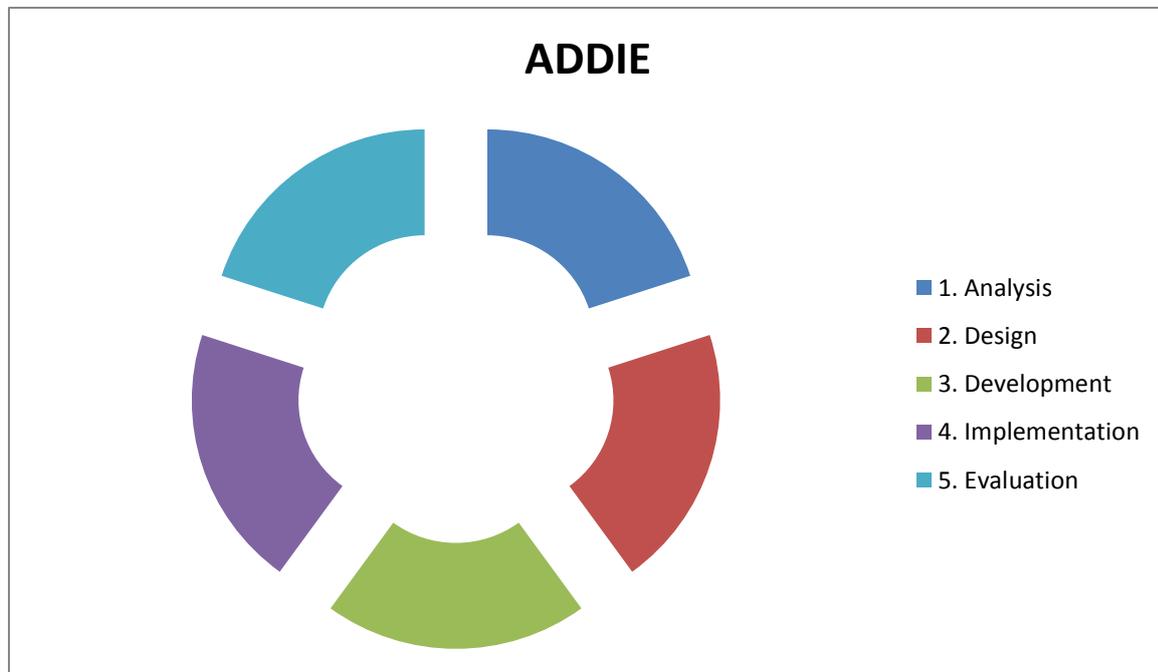


Figure 1: ADDIE Model

Start with the framework analysis. The framework may be predetermined by the institution and should therefore be checked in advance.² The following questions help to identify the requirements:

- How many students are expected in the course? What do they know (both literally and in terms of media literacy)? What is the group composition in terms of e.g. origin, age, sex, education?
- What about the existing infrastructure? Is there a computer room with sufficient computers or a laptop class? Is there a projector in the classroom or is it necessary to book a room with a projector? Do the students have the opportunity to work at home or outside the classroom with the learning management system? Do all learners have a computer with Internet connection at home? Will there additionally be mobile devices, e.g. smartphones, tablet computers?
- What technical requirements have to be taken into consideration? What software is available or has to be installed?
- What type of course (e.g. a lecture, a seminar) should be enriched by using educational technologies? What has to be considered in this context, i.e. as defined by the educational institution (e.g. number of tests, type of examination, and level of student's participation)?
- Which kind of course is planned: a Blended Learning course or an entirely virtual course? If it is a virtual lecture: Where are the learners from? Is it necessary to schedule time shifts? What language has to be chosen for the course or its resources?

² A checklist concerning the framework analysis can be found in the appendix.

- Does the integration of educational technologies affect a unit, several units or an entire course?

After these preliminary questions were clarified, the framework is set and the content has to be designed. To reach this objective mind maps can be created or lesson plans can be written. The following mind map shows the main points that have to be considered:

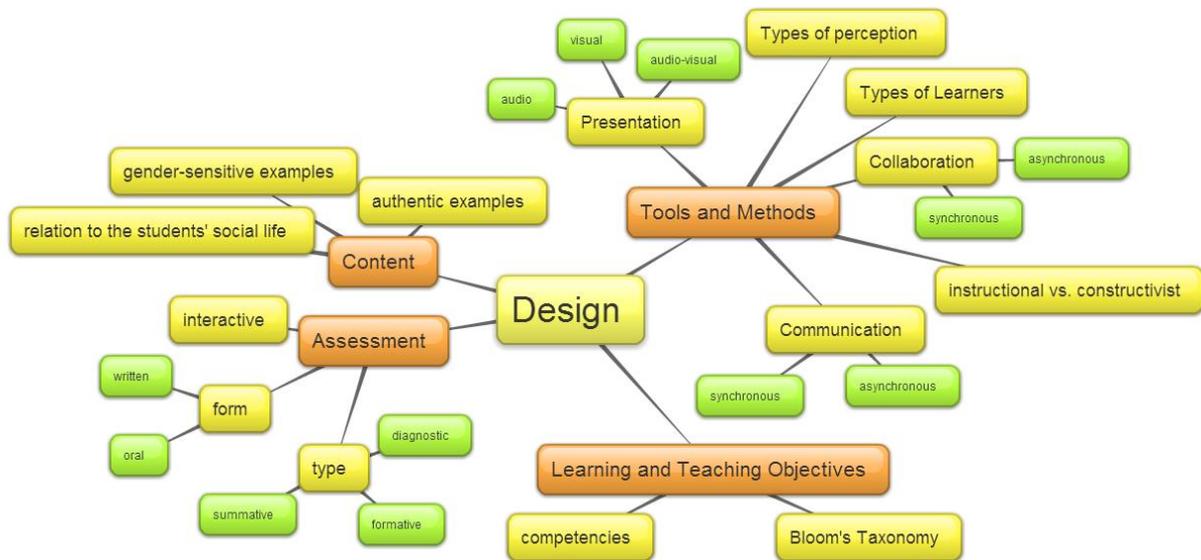


Figure 2: Designing a course

Content and/or teaching and learning objectives are often given by the institution or the curriculum. Students do not only acquire professional or personal skills, they also develop methodological skills; using digital media within the teaching and learning process requires a certain media literacy. In the framework analysis there is one question concerning the students' prior knowledge and media literacy. These findings should be taken into account when defining the teaching and learning objectives of a course.³

How to formulate teaching and learning objectives

Many researchers and theorists have dealt critically with the topic of teaching and learning objectives. Various classification models or taxonomies of learning objectives have been the result of this critical examination. They distinguish a cognitive, an affective and a psychomotor domain.

TIP 1: Brevity is the soul of wit!

Formulate short but several learning objectives. For the students, it is, in terms of motivation, better to check off several points on a to-do-list to visualize their learning process than to have just one point with a huge amount of information.

TIP 2: Use positive wording!

It is possible to formulate learning objectives in two ways, using the formulation *Learners can...* or *I can...*, i.e. a personalized version. Choose a version that appears adequate for you/ your study group.

³ A concise overview of various taxonomies can be found on the web page of [Learning and Teaching](#) and on [Wikipedia](#).

TIP 3: Use bullet points!

Bullet points help to structure the learning process. The learners can work sequentially and do not lose track.

TIP 4: Formulate clearly!

If clear, descriptive (instead of *passé-partout* or common) verbs are used, it is easier to formulate differentiated learning objectives and cover various skills: The learners can *name* something, *reproduce*, *perform*, they can *apply*, *classify* or *analyse* something, they can *interpret*, *design* and *justify*. The selected verb indicates the learning objective.⁴

TIP 5: Mention the HOW TO!

Tell the learners how to achieve the learning objective and, thus, give them some valuable and important study tips (e.g. *I can learn to play the chromatic scale at a pace of 80 by exercising, starting slowly and increasing my pace continuously.*).

TIP 6: There is not just factual knowledge!

Keep in mind that there is not only factual knowledge, but also personal, social, methodological and communicative skills that can be developed and fostered. Different exercises may focus on different skills according to different learning objectives.

TIP 7: Keep the learning objectives in mind when choosing the assessment!

Looking for suitable assessment forms and tasks or formulating questions, remember the learning objectives. The more clearly they are formulated and the more detailed they are, the more they help assessing the students' performance. Formulate questions that cover media literacy. If, for example, a student writes a forum posting not according to the requested formal criteria but has indicated that they know how to write postings, the learning objective remains, in fact, unachieved.

Once, the teaching and learning objectives are formulated, content creation starts, even though the content is mostly predetermined by the curriculum or the institution and has to be considered when formulating the teaching and learning objectives. A clear separation between these two areas is neither possible nor useful. And it also contradicts the practice. It is in any case necessary to pay attention to gender aspects: formulate in a gender-sensitive way and provide examples focusing and addressing both men and women.⁵

It is important, however, that only after this phase of formulating learning and teaching objectives and choosing the content the tools and appropriate methods are selected. It is clear to first answer the question what to teach (i.e. what kind of content, which purpose) and only then how to do it (i.e. what tools and methods to choose to teach the content and achieve the objectives?). As in traditional teaching settings, methods and tools should be varied and mixed in order to address as many senses, thus perception channels, as possible and to achieve a sustainable learning effect. The different types of learners in a learning group will be thankful. A wide variety of social settings (e.g. single, partner or team work, plenum) to ensure social and self-learning and to develop teamwork

⁴ Here are some resources to find [action verbs](#) to formulate learning objectives according to [Bloom's Taxonomy](#). *TeachThought* shared a [poster about Bloom's Taxonomy](#) and a [list of 249 action verbs](#).

⁵ The [Evaluation for gender sensitive teaching](#) may help reflecting the way of teaching.

skills should also be included. When it comes to this point, it has to be stated that in the digital learning space the same issues have to be taken into account, as in traditional classroom settings where media (e.g. overhead projectors, blackboards and whiteboards) have already been used for a long time.⁶

These traditional media can be replaced by new media partly and partly supplemented to guarantee additional benefits. Thus, learners can, e.g., learn and repeat the learning matter whenever and wherever they want to, they may acquire additional skills, such as media literacy or collaborative skills through interactive exercises, and deepen their knowledge through differentiated learning resources selected according to their level of knowledge and fields of interest. In order to succeed a teacher has to be selective. “Less is more!” You do not have to use everything at once, but select the best tool and method according to a given situation. Even not using (new) media, the ex-cathedra teaching or lectures without accompanying slides and hand-outs is a sign of variety. Variety and diversity are crucial magic words concerning successful teaching and learning processes. Not only methods should be diversified to address different learning styles, but also various media and social settings help to achieve an attractive and sustainable learning and teaching process.

Learning and Teaching with new media: different settings

Talking about e-learning means to talk about a field with numerous terms used in different settings:



Figure 3: Word cloud

Basically all terms mean the same; however, they establish their specific characteristics and focus on specific aspects of the learning process. The *Oxford Dictionaries* (2015) define e-learning as “conducted via electronic media, typically on the Internet”, the *Cambridge Dictionaries Online* (2015) as “learning done by studying at home using computers and courses provided on the internet”, *Collins English Dictionary* describes it as “an internet-based teaching system”. A longer definition is given by *Webopedia* (2015):

⁶ An overview over the transfer of traditional methods into the field of new media will be given later in this manual.

Education via the Internet, network, or standalone computer. e-learning is essentially the network-enabled transfer of skills and knowledge. e-learning refers to using electronic applications and processes to learn. e-learning applications and processes include Web-based learning, computer-based learning, virtual classrooms and digital collaboration. Content is delivered via the Internet, intranet/extranet, audio or video tape, satellite TV, and CD-ROM.

Thus, e-learning means to integrate digital media into the learning and teaching process to enhance the learning outcomes, as Tony Bates (2008) declares: e-learning comprises “all computer and Internet-based activities that support teaching and learning – both on-campus and at a distance”. E-learning can be seen as a supplement to the on-campus-training, it comprises distance learning and virtual learning settings. The weighting of face-to-face classroom and online (distance) teaching can be quite different, but when both elements are present, one can speak of a blended learning setting.

Blended learning combines the advantages of both forms of instruction (face-to-face and online) and creates new opportunities and challenges for both the teacher and the learner.

Face-to-face	Online
to meet and get to know each other personally	to be independent in time and space
to create a network	to learn at one’s own pace
to address each other directly	diversity of learning and teaching resources
to react spontaneously	to easily cover different learning types (audio, visual, audio-visual)
it is possible to learn from each other if cooperation, collaboration and interaction are enabled	
instructional and constructivist phases can be alternated	

Figure 4: Blended Learning

Becoming personally acquainted, to set up social contacts, the opportunity to address people directly and to spontaneously react to classroom disruptions can be taken from conventional classroom settings. The learners can learn anytime, anywhere, at their own pace and according to their needs which can be seen as strength of the online phase. The use of a learning management system makes it possible to prepare and provide resources with multimedia and multisensory contents. In addition, an LMS is the place to integrate additional, advanced, more detailed or recapitulatory materials that help both slow learners and gifted students.

In this context, three concepts or settings that differ in their degree of interactivity and complexity can be distinguished according to Bärenfänger (2005: 17):

- **Learning by distributing:** The concept is characterized by a classical structure in terms of design. Lessons take place in a face-to-face situation. All learning resources (scripts and self-assessments) as well as administrative information are handed out and treated within the classroom and additionally presented or stored online. The setting is mostly teacher-centred. The teacher provides materials for the learners, even though it is also possible that students collect and upload materials. The students work with the provided resources in a self-study setting at home or in the classroom. Collaboration, communication and interaction do not take place online but in the classroom (face-to-face). LMS, blogs or CMS serve as platforms to collect, store and distribute learning materials.

- **Learning by interacting:** The concept is a teaching and learning setting that consists of both classroom and online phases that interlock regarding content and organization. Their contents are coordinated. Resources (e.g. scripts, self-assessments) and administrative information are available on a learning platform, a blog or a wiki, for example. It is not the distribution that counts but interaction, communication and cooperation. The aspect of working together and communicating outside the classroom is central. Students can be coached individually online, communication takes place in the peer group. Chats, forums and audio- or video-conferences can be used as well as e-mails or instant message systems. This concept corresponds to the concept of blended learning. In the virtual learning environment (e.g. an LMS) not only resources are stored, but activities are implemented to encourage and support the interaction between the learners (e.g. via interactive exercises, a communicative exchange among learners in a synchronous and an asynchronous way). The learners interact with each other and may also interact with the teacher.
- **Learning by collaborating:** Learners use the online phases for collaboration and cooperation. It can range from a common brainstorming, to collaboratively writing a text and create a wiki together. The teacher takes the role of the learning facilitator; approaches such as Game Based Learning (GBL) or Problem Based Learning (PBL) are common in the virtual learning environment. The instruction is student-centred and self-controlled. (Cf. Redbird Advanced Learning 2014) The face-to-face phases can be reduced to a minimum, which is to be recommended for professionals or large spatial distances, as e.g. the [Open University](#) or the [EU project VCSE](#) (Virtual Campus for a Sustainable Europe) show. The learning management system is the virtual basis of a virtual learning space.

The blended learning setting is a way of teaching that is supported by the use of digital media and has the aim to combine the strengths of in-class and online teaching. For teachers, this concept means to outsource individual elements or phases of instruction in the virtual space. Some advantages or opportunities result from this combination for the teaching and learning process:

- **Flexibility:** The chance to learn independent in time and space helps especially working students and students with care responsibilities who do not have to come to the institution for attending an entire course, but can complete parts of the training at home. The blended learning setting allows learners to complete exercises at their own pace and repeat those areas individually, where they still have needs or some catching up to do. Thus, blended learning is an adequate response to the heterogeneity in the classroom.
- **Diversity:** By the provision of materials on an LMS or a virtual learning environment, students can always and everywhere access all the materials for training purposes. In addition, an LMS allows providing different and even supplementary materials that could not be done in the classroom itself. Students can learn in a self-directed and self-organized way, benefitting from the potential of multimedia materials. Unlike in printed scripts and hardcopy templates, audio-visual and multimedia elements as well as interactive exercises can be made available.
- **Focus on the productive skills:** If behaviouristic exercises (e.g. terminology learning) are outsourced into the digital learning space by designing them in a digital format that allows learners to repeat exercises as often as needed (in contrast to paper and pencil exercises) and receive instant results, in-class exercises can focus on productive and critical thinking

skills. The learners get feedback immediately after completing an exercise. If they encounter any issues, these can be resolved in the classroom setting.

- **Individualization and personalization:** A virtual learning environment offers the opportunity to work with learners individually and to answer individual questions. Teachers can offer at regular intervals virtual office hours, students can keep an online appointment instead of coming to the institution. Thus, learning success is strongly influenced as the *Horizon Report* underlines. (Cf. Johnson et al 2014: 26f.)
- **Promoting media literacy:** The annual *Horizon Report 2014* identifies the use of digital media in teaching in blended learning settings and the extension of teaching to online learning opportunities as key trends that will influence Higher Education within the next one to two years. (Cf. Johnson et al. 2014) This shift means for the students that they do not only have to develop factual knowledge, but also the level of media literacy.

The more interaction, collaboration and communication, the more time-consuming the teaching setting is for the teacher, who has to consider in a very precise way the students' needs, to formulate tasks and goals, to design an appealing and inviting learning environment. At the same time challenges arise – not only for teachers – that partly show up in the traditional classroom but in a modified form. Main points which are often seen as barriers or obstacles to the implementation of blended learning settings are:

- **Copyright in the digital space:** If teachers store materials online on a server (e.g. an LMS), they might commit a copyright infringement depending on the national law. It is therefore important to keep in mind copyright and copyright related rights when creating materials for the use in a blended learning setting.⁷
- **Additional effort due to the redesign of educational materials:** In many cases LMS are almost exclusively used for storing digital and digitized materials (scripts), providing pictures, videos, articles and other resources. Learners work through these resources (“learning by distributing”). To go beyond this mere distribution of materials, it often requires a redesign of learning resources (e.g. exercises). It is possible to upload cloze and multiple-choice questions and the answer key as scanned documents. However, the additional benefit for the learner is low. Interactive exercise formats have a greater effect. They are auto-corrective and in the best case provide instant feedback. Learners do an exercise, immediately know whether their answer is right or wrong (and the correct answer), and at the same time get feedback with regard to the right solution and how to solve the problem. Existing exercises have to be converted to interactive formats, which means an additional effort in terms of time, methodology and media literacy for teachers. As practice shows, furthermore, people rather claim that digital resources have to be current, since the upgrade paths are shorter than e.g. in a printed book. This claim for actuality should be included into the considerations regarding teaching preparatory times and financing plans.
- **Strengthening of media literacy of teachers and students:** The “[l]ow digital fluency of Faculty” as Johnson et al. (2014: 22) name it, is one of the central challenges regarding the use of digital media in teaching. Teachers should have a basal technical knowledge about the functionality of the LMS in order to integrate it into their teaching setting, but should mainly be trained in terms of instructional methodology. Digital media should be used because they

⁷ Think of the possibility to use and create Open Educational Resources (OER). (Cf. [OER Commons](#); [OER infoKit](#))

offer an additional benefit for the teaching and/or learning process. It is not the medium itself, but its specific application within a teaching and learning setting that counts: “The American Library Association’s Digital Literacy Task Force defines digital literacy as the ability to use information and communication technology to find, evaluate, create, and communicate information” (ibid.). Digital literacy ranges from search strategies or content and resource curation, to the development of interactive exercises. In this context, both teachers and learners have to be trained.

- **Adaptation of teaching and learning methods:** In addition to the above mentioned re-conception and re-design of exercises and resources, the adaptation of teaching and learning methods is a challenge. For the teachers, the inclusion of digital media means to get used to virtual teaching environments. It is not about developing new technologies, but to integrate them in a meaningful way into the teaching process and probably to adapt the teaching model. (Cf. Johnson et al. 2014: 2f.) For the learner blended learning usually means a high degree of personal responsibility and self-control, i.e. skills that often have to be developed and, in addition to technical skills, are encouraged through blended learning settings.

Digital media can be integrated in every single phase of the teaching process. On a a) micro level, i.e. a single course unit, b) meso level regarding a certain topic or c) a macro level in an entire course. Regarding a single unit or lesson, one distinguishes three phases that are interlocked to achieve a sustainable teaching and learning process: introduction, elaboration and saving the results.⁸

- During the **introduction**, it is important to give an orientation and to motivate the learners. In a traditional introduction students and teachers may discuss the homework, but it can also be the introduction to new topics. In online classes such scenarios can be implemented, for example by using student response systems or by starting discussions in a forum or chat using a method called *cyber storming*. An impulse that in the past was printed or projected via overhead transparency can now be digitally available on an LMS and is still accessible for the students after the lesson. In addition, the introduction to a new topic can be done via a multimedia video sequence which was then difficult.
- The **elaboration** builds on the findings of the first phase, tasks are now completed, and different competencies - methodological, factual, technical or social-communicative - are developed and trained. Problems are discussed and new subject areas treated.
- **Saving the results** means consolidating and strengthening the knowledge. This objective can be achieved by summarizing the individual contributions, thus the results of a discussion, using a technique applied in e-moderation called “weaving”. (Cf. Salmon 2004) The results are evaluated and reflected, revisions are done. In the past, pin boards and flip charts were photographed or copied. Nowadays the photos and images can be uploaded to an LMS and are accessible for the entire class. This virtual learning environment additionally enables to track discussions in a forum, to save and publish chat logs, or to collaborate in a wiki. Especially in our nowadays digital world with smartphones and tablet computers, this last phase may be guaranteed by recording a video. The possibilities seem to be almost endless and depend on the resources available to the learner.

⁸ The well-known German educationalist Hilbert Meyer (2011: 122-180) has introduced these three phases in the second volume of his book *Unterrichtsmethoden*.

For learning in a digital learning environment, no matter what medium, concept or method is used, it is highly important to formulate assignments in a clear and precise way. Due to the lack of direct interaction in the digital space raising one's hand and asking a question are often difficult. It is therefore important to ensure clear and unambiguous assignments. In the traditional classroom the teacher can react spontaneously and reformulate an assignment when they realize their students' helpless faces. In a virtual classroom, however, the teacher has to anticipate as many questions as possible in the design phase, help students with a well formulated assignment and give them assistance to relieve the learning situation. Here are some tips to formulate assignments efficiently and effectively at the same time.

How to formulate assignments in a virtual learning environment

If you want to integrate activities and interactive exercises in an online course, it is important to formulate particularly clear and precise assignments. Due to the lack of a face-to-face situation a direct, spontaneous interacting between students and teachers is not possible.

TIP 1: Brevity is the soul of wit!

Students usually read the assignments on the screen and screen reading is tiring. Therefore, assignments should not be excessively long, but have to include all important information.

TIP 2: Use outline symbols!

If your assignment is longer than expected, use graphical symbols, e.g. bullet points, to structure it. Specify the various steps of the assignment. In which order is the work to be done?

TIP 3: Address the learner directly!

A welcome formula at the beginning makes the learners feel directly addressed.

TIP 4: Formulate the assignments directly and prompting!

Avoid long phrases, e.g. "~~May I ask you to please provide the work of colleagues with comments?~~" and use formulations such as "Comment on the work of your colleagues!"

TIP 5: Formulate in a gender-sensitive way!

Formulate your assignments always addressing both sexes and try to find examples and topics in a gender-sensitive manner that adapt to the needs of both sexes.

TIP 6: Respect a consistent structure of assignments!

An assignment should contain several points that are marked, if possible, by structuring bullet points:

- **Heading or directly addressing the learner**
- **Aim of the task** (according to the teaching & learning objectives)
- **Content of the task** (What to do?)
 - Work Order (What to do?)
 - Deadline (By when to do?)
 - Place (Where to do?)
 - Form (In which form/format? How long?)
 - Instructions (Which aspects are mandatory? How to e.g. create a forum post?)
 - Details concerning tools and resources (What materials to consult? Where to look?)

- **Evaluation of the task** (Method of evaluation? Who evaluates? Will there be an evaluation?)
 - **Next Steps?** (What happens after completing the assignment?)
 - **Closing formula** (a few kind words at the end)
-

When all the previous steps are met, there is one missing: evaluating the learning outcomes. As mentioned above in the part about teaching and learning objectives, not only the expertise in terms of the acquired factual knowledge but different skills should be evaluated as learning outcomes. A virtual learning environment offers several options and tools to guarantee a broad evaluation. First, however, the formulation of questions should be considered. Here are some simple tips and tricks.⁹

How to formulate questions in a virtual learning environment

In the learning process, three assessment forms can be distinguished: summative, formative and diagnostic assessments. Summative means to look at all performances and to decide about advancement or failure. It is mainly used at the end of courses. The objective of the summative assessment is to select. The diagnostic assessment, instead, is set at the beginning of one's studies, a unit, or a topic. Here again a selection process is the goal, but diagnostic assessments test the entry requirements and basic knowledge. It can be used e.g. to stake out prior knowledge and to check the prior knowledge in order to be able to tailor and adapt the course design to the students' knowledge level and to prepare, if necessary, further resources to help weaker students to close the gap. The formative assessment focuses on the students' learning progress. The learners receive continuous feedback on their performance and not only at the end or beginning of a (thematic) unit. The formative assessment means to accompany the students in their learning and competence development, and to provide feedback at several milestones. (Cf. Thelwall 2000)

Basically, two different types of questions can be distinguished: open and closed questions. A closed question expects a short, clear answer, open questions, however, cannot be short and clear, i.e. answers in a word, or sentence. Open questions expect longer, more descriptive and usually individually written answers. In a digital assessment environment of an LMS, closed questions are mostly auto-corrective, whereas open questions have, however, to be corrected individually by the teacher. Regardless of the type of question the formulation has to follow some basic principles:

TIP 1: Formulate clearly!

When formulating questions be aware of what exactly you want to know or the learner to do. Which aspects have to be covered to which extent in an answer? Pay attention to the fact that the questions are formulated in a way that they require clear answers. Do not formulate in a too general or common way, but precisely: the clearer the questions the more precise the answers.

TIP 2: Formulate questions – and no statements!

Make sure that questions are recognized as questions. If you want interpretations of declarative sentences, point it out. The same holds for leading questions that should be avoided.

⁹ The concept phase of online and/or electronic exams is very time consuming and needs to be well prepared. Furthermore, students are often more afraid of online tests than of paper and pencil tests. Think about doing pre-tests to accustom the learners to the test setting and questions types. As a teacher check as early as possible, which technical support is granted by the institution to help conducting e-assessments and which preliminary (organizational) arrangements have to be made.

TIP 3: Avoid cumulative or multiple questions!

Ask several short questions instead of one long question covering various aspects. Creating an e-assessment means to formulate questions and answers in advance, in contrast to an oral exam where spontaneous reactions are possible. The teacher has to think of possible answers keeping in mind e.g. typos or misunderstandings. As mentioned above screen reading is more tiring than paper reading and therefore short questions and answers seem to be recommendable.

TIP 4: Ask questions addressing different types of learners!

Keep in mind to not only ask questions from the various fields but also addressing more than one sensory or perception channel. Remember to use, e.g. different verbs activating the different types of learners: Where do you see the problem? How do you approach the problem? Through these short verbs the different types of learners feel concerned and can - especially in stressful situations – access their favourite learning channel.

TIP 5: Answer the questions yourself!

It makes sense to once do the test oneself before enabling the students. This pre-test helps to see whether embedded videos and images are displayed properly, if the questions appear in the correct order and whether mistakes – typos as well as marking right and wrong answers – can be eliminated.

Online testing is great as questions and answers are entered by the teacher, the answers, however, are checked automatically and the students get the results and, thus, feedback immediately. In order to obtain good results, it is important to have clear and understandable questions and answers, otherwise misunderstandings could occur which cannot be eliminated by raising a hand and asking a question as it happens in traditional assessment settings.¹⁰

Keep in mind, however, that there are on the one hand open and closed answers that cannot be checked automatically to the same extent, and on the other hand that online testing provides more than multiple-choice questions. And even multiple-choice tests may be difficult to pass: Choose the answer options carefully! And if the students have to type manually short-answers, consider various creative spellings that might occur, and decide how tolerant to be in this issue.

Classroom arrangement

In every classroom setting, both face-to-face and online, the feel-good factor plays a crucial role. It does not only hold for the course but also the design of work sheets. If one feels good and the overall impression is positive, motivation to deal with an issue is higher which also positively affects the learning behaviour. If study materials are appealing, they support a better learning. Teaching and learning resources as well as the virtual learning environment can be arranged in an appealing (multimedia and multisensory) way. Keep in mind: less is more!¹¹

TIP 1: Use images!

Images do not only spice up learning and teaching resources, they can also be stand-alone impulses or resources. Set images as highlights, choose them in accordance or contrast to the content.¹² Pay always attention to the image's quality as they may lose quality if they are resized. But where to find

¹⁰ A checklist can be found in Connie Malamed's (s.a.) article [10 rules for writing multiple choice questions](#).

¹¹ Interesting tips and tricks for media design can be found on the websites of [eLearning Brothers](#), [E-Learning Industry](#), [Learning Solutions Magazine](#) and [eFront](#).

¹² If you resize images directly in a text document, the file size remains, thus use editing programs ([GIMP](#), [Pixlr](#)).

images teachers are allowed to use? Many images found online are copyright protected. So, if you look for free pictures, search for images that are licensed under Creative Commons (CC).¹³

TIP 2: Structure and organize!

Make sure that your resources have a clear and consistent structure - also on a graphical level. Try to arouse some sort of brand recognition for the learners by designing worksheets using the same fonts and graphic elements. Exploit the visual moment. It does not only spice up your resources, but enables a quick visual perception. Learners recognize at first view the kind of work they have to do and the related requirements. It is very important to remain consistent and to use icons and symbols in the same meaning and context. Here is a brief overview of some symbols, standard word-processing programs provide and how they can be used for work sheets:

Icon	Meaning
	advantages, disadvantages, well done, poor
	written task
	reading task
	done
	not done
	Attention! Nota Bene! (NB) Tip!
	computer-based exercise
	listening tasks
	oral task
	practical exercise
	to watch, to read
	single work
	partner work
	team work
	riddle, difficult exercise
	role play
	send the homework via e-mail
	take notes
	song
	media-bases exercise
	deadline
	something is missing
	easy exercise, exercise for beginners
	intermediate exercise, exercise for advanced learners
	difficult exercise, exercise for professionals

Figure 5: Symbols and icons

¹³ There are many websites and collections that provide free images. [Creative Commons Search](#) is a search engine specialized on finding resources, e.g. videos, images, music, licensed under CC.

Moreover, it is important to use bullet points and other structuring symbols. They should have a permanent place in digital documents and LMS, as they facilitate a quick overview over a topic, a document or a course unit. Bullet points can be accompanied by headings that help navigating through a document or a course by adding structure. There should be different environments on an LMS, as an administrative or organizational environment, an assessment, a communication environment, different thematic environments, a collaborative and a research environment amongst many others. All the reading assignments have one specific area; all assignments are in a different one, all communication tools (e.g. chats and forums) can be found in one environment. Divide the content into small portions and give them a meaningful and perhaps provocative or eye-catching heading. Subtitles - just like pictures – loosen a straight structure and may provide additional information probably not provided by the text.

TIP 3: Use a consistent colour scheme!

Whether you create a presentation, design a hand-out or want to spice up a course on the LMS: Do not forget to use colours! Make sure, however, that colours are used wisely and emphasize the right things. Keep in mind, for example, that

- a combination of **yellow and black** is a way of highlighting;
- some people suffer from red-green blindness, avoid direct combinations of these colours;
- loud colours are catchy but complicate longer reading;
- only really important things should be emphasized;
- it is important to use one highlighting method (colours, italic or bold font, underlining);
- in web design bright (pastels, and darkened) colours should form the background, the font should be dark;
- screaming elements and animations should be used sparingly to call the learner's attention;
- UPPER-CASE CHARACTERS are harder to read and hold a specific function in e-moderation.

Learners cannot always be attentive, so it is up to the teacher to control and draw their attention.¹⁴

Moodle in teaching and learning

Moodle is “a learning platform designed to provide educators, administrators and learners with a **single robust, secure and integrated system**¹⁵ to create personalised learning environments.” ([https://docs.moodle.org/28/en/About Moodle](https://docs.moodle.org/28/en/About_Moodle)) It is Open Source software, thus freely available, and helps teachers to organize their teaching process in a constructivist learning setting. It is therefore not only a course management system but a possibility to create personal learning environments. The meaning of Moodle can be explained in different ways:

The word Moodle was originally an acronym for Modular Object-Oriented Dynamic Learning Environment, which is mostly useful to programmers and education theorists. It's also a verb that describes the process of lazily meandering through something, doing things as it occurs to you to do them, an enjoyable tinkering that often leads to insight and creativity. As such it applies both to the way Moodle was developed, and to the way

¹⁴ If you know how course pages are perceived, it is also easier to design them. Gergely Rakoczi gives an interesting insight into [Eye Tracking and e-Learning: 22 Useful hints](#), for further information his publications. (Cf. <http://www.rakoczi.at/index.php?id=3>)

¹⁵ Bold font in the original text.

a student or teacher might approach studying or teaching an online course. Anyone who uses Moodle is a Moodler. ([https://docs.moodle.org/22/en/About Moodle](https://docs.moodle.org/22/en/About_Moodle))

Moodle is modular, dynamic and enables collaborative, communicative and creative work in terms of a constructivist teaching and learning model. Thus, Moodle has the advantage that the different resources, activities and blocks offered by the learning platform can be used separately and independently of each other.

Moodle courses are characterized by a consistent structure and consist of three areas: the header, with the course title and a navigation path, the side panels on both sides, where the blocks are situated and the central part that can be filled with text, study resources and modules. These three areas are created by default and can be filled with content. It is important to underline that not all possibilities have to be fully exploited. Some activities, blocks and learning resources are not suitable in the same way for all courses.

Moodle enables the implementation of activities, the distribution of resources and the adding of blocks. On the one hand it offers possibilities of rather static, although multimedia data distribution; on the other hand it can be seen as a platform for dynamic communication and collaboration, for evaluation and organization, which certainly can be seen as one of the most important advantages of Moodle. In contrast to a content management system, the learning platform Moodle does not only foster to manage and deliver documents, it can be much more:

Moodle

... allows both instructional and constructivist teaching and learning scenarios as it offers both static learning resources and dynamic activities.

... offers various tools for synchronous (chat, extensions to integrate audio- and video-conferencing) and asynchronous communication (forum, e-mail, blog ...).

... allows slipping into different roles – e.g. teacher and student – and thereby opens up educational spaces for role-playing, e.g. by assigning functions within the group of learners, such as a discussion leader or an e-moderator.

... ensures that everything is kept in the right i.e. in one place: Learners and teachers find all resources centrally organized. Teachers have the possibility to upload all resources at the beginning of a semester or a course unit and turn sequentially visible, thus accessible, all relevant information; students find everything in one course and can also stay in contact with their colleagues on the platform. Documents and tasks are no longer sent via e-mail or distributed on a CMS, accompanied by a social network to have the possibility to communicate, but everything is gathered in one course.

... is cross-platform compatible. It is not important, whether the learners use iOS, Linux or Windows. Moodle works with all operating systems and almost all browser versions (Internet Explorer, Google Chrome, Mozilla Firefox, Safari ...).

... has a predefined structure, but also allows individual design: Different Moodle courses have the same general structure, but using the built-in text editor to add images or change the fonts and sizes, the appearance can be individually adjusted.

... is flexible and can therefore be used in various fields. Moodle is not only a classical LMS, but can be used for managing projects, or contexts, where communication and collaboration are important.

... is modular and thus allows a modular working process. Moodle cannot only be used for an entire semester course, but also for individual modules or units, or even phases of a unit.

... is intuitive to use. This means that the procedures to implement different activities and to upload documents are always the same. The Moodle community supports users by providing explanations and tutorials. The [Moodle Docs](#) page for example contains detailed descriptions of every single element Moodle offers (i.e. modules, blocks, and resources). The website is available in German, English and many other languages and all users can contribute to this documentation.

... is dynamic and constantly improves regarding structure and usability. Moodle is delivered in a core package, but can be adapted for one's own needs or an institution's needs. On the website <https://download.moodle.org/> there are different download areas, e.g. Standard Moodle and Extend Moodle. It is thus possible to customize the system individually, e.g. different language packages or additional activities, blocks or questions and assignment types can be added to the Standard Moodle.¹⁶

... gathers everything in one single and central place. Documents, link collections, organizational information, communication tools, or collaborative activities: Everything is accessible in one course and it is no longer necessary to send e-mails, to search websites or the teacher's storage shelf.

... is customer-oriented. Besides the above mentioned [Moodle Documentation](#) for almost every area of Moodle a specific forum is available, where the users can collaborate, ask questions, complain about malfunctions and help each other.¹⁷ Everyone can contribute with their expertise to solving a problem, which even might not yet have been noticed by others.

... allows teachers to give feedback on several levels. Whereas within a traditional classroom feedback is given promptly and directly, in virtual learning setting the lack of spontaneous reactions often leads to mistakes and misunderstandings as the face-to-face communication is missing. Many learning platforms offer reduced possibilities to add feedback, e.g. by responding to forum or glossary posts. Moodle is different: It is possible to formulate specific feedback answers for each element of a test that is automatically visible for the learners.¹⁸ Each answer of a multiple-choice test can thus be furnished with a specific feedback, e.g. helping instructions and further information. Teachers can for example provide clues to help students who answered a question incorrectly by telling them where the right answer can be found. They can also add further information and references for those students who chose the correct answer(s). Although it asks for a quite time-consuming preparation, it supports learners in their learning process as it can be compared to

¹⁶ Not every extension available on this download page is to the same extent stable, secure and fully working. The Moodle administrators of an institution will decide whether the installation makes sense or whether it might be better to wait until the module is working correctly, is stable and safe.

¹⁷ An overview can be found on the following page: <https://moodle.org/course/view.php?id=5>.

¹⁸ Besides the test, the *assignment* allows feedback by adding personal comments to the students' work.

formative assessment.¹⁹ Besides, it is no obligatory to fill out all feedback possibilities from the start; it can also be done over the years.

Where is the catch? Moodle was created by teachers for teachers, so it is very well adapted to the needs of teaching programs. The platform is constantly evolving and changing, which can be seen as a disadvantage: the platform changes and people who are used to work visually and might be confused when the appearance they are familiar with changes. It can be annoying, but it is usually only a mere matter of habit. After a short period of time the change is no longer noticed. A second weakness of Moodle is certainly the design of the central part, where the resources and activities are located. As soon as many different topics or weeks are set, it happens that you need to scroll down for a while to reach the section you are looking for. Folders or an alternative course format can help to avoid this scroll-to-death. Or maybe it is necessary to change the course design.

Another argument against Moodle – or more generally the use of an LMS in general – is the aspect of extra work. If the teacher asks their students to do work, e.g. collaboration or communication, outside the course hours, the teacher has supplementary work too: E-moderation takes time. Furthermore, the implementation and maintenance of a Moodle course are often time-consuming. You have to create and upload worksheets and formulate and write assignments for online activities. You should hereby look for an appealing and inviting course design and widen the question pool, and create auto-corrective tests to continuously monitor the learning objective. To create a Moodle course for the first time is a piece of extra work. And maybe the course will not be used by the students as the teacher imagined they would. A Moodle course can be saved, exported and imported, and thus re-used. The teacher decides whether they want to recover the entire course or selectively some parts of it. It is possible to use different modules and sections in a new course. The same holds for the questions in a question pool or the entries in a glossary: Once created they can be imported into any new course.²⁰

Regarding communication there is yet another disadvantage: Moodle is highly text-oriented. Regarding language teaching, the development of, for example, oral skills is limited. Chat and forum are scripture-based; recordings of spoken language are for example only possible if specific plugins are installed, or if audio files are uploaded into in a forum or a database. The standard package does not include modules to foster oral communication; audio- and video-conference tools must be integrated separately. The integrated messaging and communication system is no full substitute for an e-mail program but a great help to manage organizational and administrative issues.

E-moderation

In the age of e-learning, the role of the teacher changes sustainably. It is, thus, necessary that the teacher in some - especially collaborative and communicative - contexts plays the role of a facilitator or moderator. In the virtual area this role is called e-moderator according to Gilly Salmon (2004). E-moderators need new skills that do not focus on the technical, but the motivational and organizational field: “Successful online learning depends on teachers and trainers acquiring new competencies, on their becoming aware of its potential and on their inspiring the learners, rather

¹⁹ The question pools can be transferred from one course to another; it is constantly expanded and adapted.

²⁰ Write the texts in a text document and copy and paste it to Moodle. Save the document, all images and pictures separately on a computer or in the cloud.

than on mastering the technology.” (Salmon 2004: vii) The role of e-moderators, therefore, is to encourage learners to collaborate and communicate, to maintain interactivity and strengthen the motivation in moments of weakness. The role does not mean to cope with technical aspects:

The essential role of the e-moderator is promoting human interaction and communication through the modelling, conveying and building of knowledge and skills. An e-moderator undertakes this feat through using the mediation of online environments designed for interaction and collaboration (ibid. 4).

The intensity of the work as an e-moderator varies according to the “purposes, intentions, plans and hopes” and “the motivation, knowledge and skills of the e-moderator.” (ibid. 52) The e-moderator decides how much dedication and time they spend – in Higher Education primarily depending on the course type –; it may vary and they can also resort to their traditional classroom teaching skills. They may focus attention to the role as a facilitator and e-moderator, to have a shift from teacher-centred instruction to the desired construction of knowledge. It is necessary to support and guide the group. In order to achieve this objective, there are some points to consider that apply especially for online classes. Gilly Salmon (ibid. 28-50) suggests thinking in five different stages. Stage 1 is called “Access and motivation”, stage 2 “Online socialisation”, stage 3 “Information exchange”, Stage 4 means “Knowledge construction” and finally at stage 5 “Development”. Figure 1 shows *The Five Stage Model* as designed by Gilly Salmon:²¹

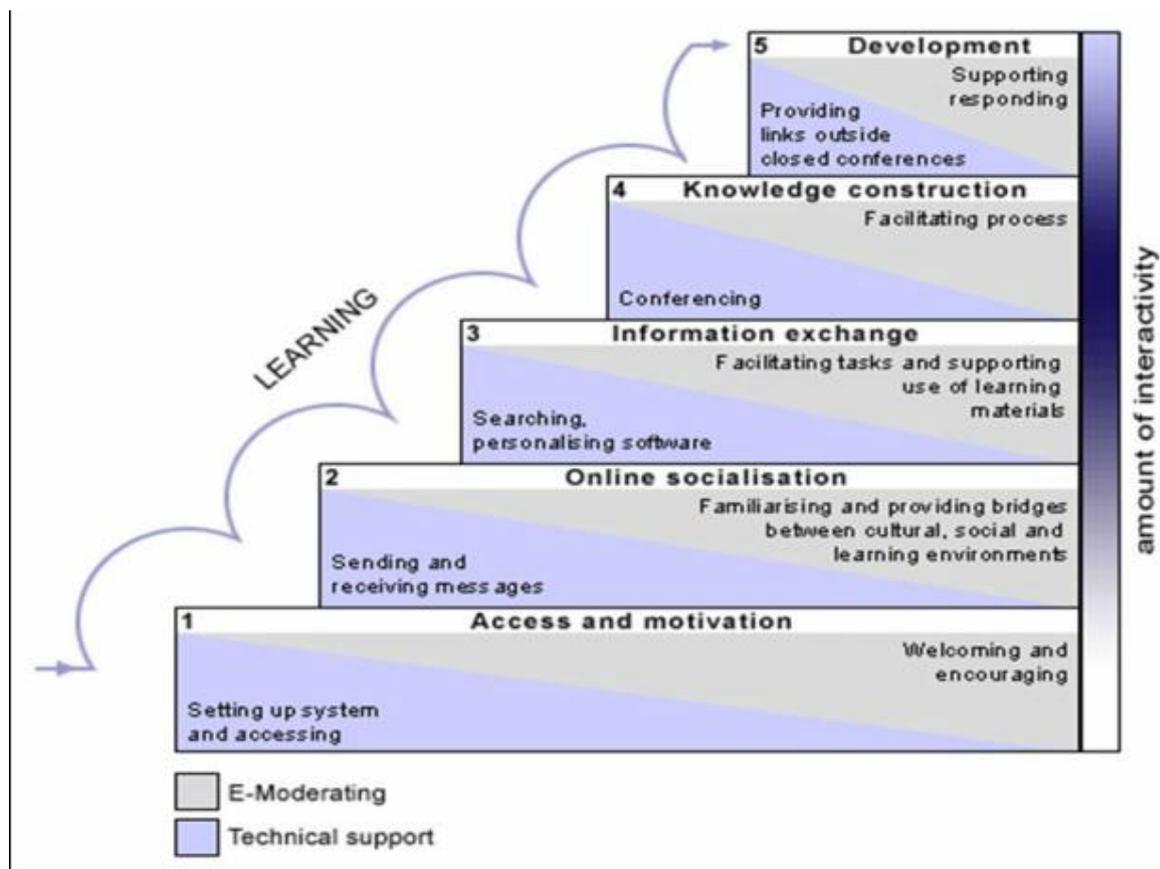


Figure 6: The Five Stage Model by Gilly Salmon licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License.

²¹ Salmon’s web page explains these stages. (Cf. <http://www.gillysalmon.com/five-stage-model.htm>)

It seems obvious that the individual stages build on each other and skipping stages is hardly possible, as it is true for learning, “that participants learn about the use of computer networking *along with*²² learning about the topic, and with and through other people.” (ibid. 28) At every stage figure 1 shows on the left the technical support, whereas on the right can be seen the e-moderator’s tasks and competences. By climbing up the ladder the degree of interactivity increases and simultaneously the degree of instruction decreases in favour of the construction of knowledge. At each stage learners and teachers stay individually in terms of time and dedication:

Given appropriate technical support, e-moderation and a purpose for taking part online, nearly all participants will progress through these stages of use. There will, however, be very different responses to how much time they need at each stage before progressing. The model applies to all online software, but if experienced participants are introduced to new-to-them software, they will tend to linger for a while at stages one or two, but then move on quite rapidly up the steps. (ibid. 30)

The learners should get familiar with the learning environment Moodle and the course design. However, be aware that – as mentioned in the quote – there must be a “purpose for taking part”. Motivation flattens from time to time. It is then the moderator’s turn to help and motivate the learning group and to keep the knowledge construction going without being too instructional. A good e-moderator gives the learners the feeling of being there, without having to be physically present.

Stage 1: Access and motivation

Prior to the course, the students should be informed. Do they need to make any arrangements for the course? What do they have to expect? Where do they have to log in and how? Are there any pre-course tasks to be done?

Communicate clearly the first steps to take!

Send an e-mail to the participants of your online course, e.g. a welcome message in which you do not only welcome them, but also include the link to the learning platform, explain the log in procedure or attach documents regarding these points. Remind the students to remember their login information (or include it if it is newly created) and name a deadline for completion. Specify whether texts have to be read or tasks must be performed in advance. You will see the students’ reactions and know if there are technical problems that have to be clarified, if your assignment is clear or not and if some preliminary work has to be done. Participants will have very specific problems and concerns. The possibility to contact the teacher or a help desk via e-mail gives them the sense of safety that they need in order to pass the first hurdle.

In this first mail write down what type of software/hardware is required for the course. Do the participants need a webcam or a microphone? What programs or applications are used? Do they have to register in advance (e.g. Skype, Twitter, Picasa, Facebook, Blogger ...)? Which browser should be used? Keep in mind that not all students are Windows but also Mac and Linux users.

Motivate from the beginning!

Motivate your students by briefly explaining the benefits of the online platform. Why should they consult it? Why is e-learning important or beneficial? What relief does this form of teaching offer? What are the benefits of teaching with Moodle? For many learners working with Moodle means

²² Emphasis in the original.

additional work and that they depend on technology. Try to reduce these prejudices and fears from the beginning. Put yourself into the role of your learning group. (Cf. *ibid.* 104f.) What could prevent them from participating actively? Which issues should therefore be addressed? Which back up possibility should be offered? Tell the students e.g. what the system can/cannot do and inform them about the monitoring possibilities, that a teacher can see, e.g. when they logged in in Moodle.

It would be possible to post a message at the beginning of the course – perhaps in the forum – where the program and the requirements are explained. This message could be sent a second time in the middle of the course, as a half-time message, where the progress is resumed and the next steps are explained. And at the end of the course – or shortly before – you a last motivating mail can be sent in which the recent tasks are summarized and the students’ progress is underlined. This does not only increase motivation, it gives an overview and helps adjusting timing and planning. (Cf. *ibid.* 132ff)

Test the tools before using them in class!

Before using tools in different e-learning settings, try them out! Has it already happened that the overhead was not working just the day you would have needed it? Or that a PowerPoint presentation looked different than at home? In online classes a teacher must be able to reply to technical questions as well: Where can I find it? How do I stop/enable something? In order to not lose the thread, get yourself into the student role and try out all functions of tool or learning platform.²³

Stage 2: Online socialisation

On this second stage, it is important to “seek a climate of strong enhancement of the well-being of the online group, based on respect and support for each other, rather than corner cutting in the service of instrumental personal goals” (*ibid.* 33). Create a pleasant atmosphere; give the students the feeling that in the online group the (positive) working atmosphere is important to achieve the objectives collaboratively and cooperatively.

First, create a personalized environment. Moodle provides the opportunity to become, in advance, familiar with the system by updating the personal profile. This step has the advantage that the learners become familiar with the system and its structure and the teachers benefits from the fact that the group is no longer an anonymous mass but a personalized group of learners. Thanks to the personalized profiles, individuals can be identified with their specific interests and pictures. In addition the pictures help to better memorize the names and faces of the learning group!

The same is possible in a forum where learners introduce themselves, name their expectations and prior knowledge. You can also ask them to add the operating system and browser (Internet Explorer, Firefox, Safari, etc.) they use and to reveal if they have prior experiences with e-learning or Moodle. This can help the teacher to get a general idea of the group and to show students ways “to understand how online contributes to learning for *their* topic, *this* course, *this* discipline”²⁴(*ibid.* 33). The teacher decides whether this introduction should be personal or not and which questions need to be answered and it is their job to formulate the posting’s requirements in a clear assignment.

²³ If you want to perform a synchronous communication environment, a chat or an audio- or video-conference, try to be the first in the online room.

²⁴ Emphasis in the original.

Determine rules!

Together with the students, a code of conduct for working in the virtual learning environment should be set. It should determine how often the students have to drop by to stay up to date, provide tips for gender-sensitive formulation of posts and comments. It makes sure that communication happens respectfully and that different opinions and attitudes are accepted from the beginning. The teacher should clearly tell the students, what they want/expect and they you do not tolerate at all.²⁵

Find a substitute for the lacking non-verbal communication!

Do not forget that online communication and interaction can be difficult due to the “lack of non-verbal and visual clues” (ibid. 34). This lack of means of non-verbal communication, of markers highlighting irony and sarcasm can complicate communication. Help the learners finding opportunities to bridge this missing element - it cannot be replaced.

Create spaces for (semi) private exchange!

Give students in the virtual space the opportunity to talk privately. Do not underestimate the importance of cigarette breaks or the coffee machine’s role not only for the students and their well-being, but also for socialisation and group dynamics. For this reason create a space where the learners gab and communicate privately not talking about course content and collaboration. This can happen in a chat or a forum that can be called *cafeteria* or *student lounge*. Information exchanged in these (semi)private rooms, of course, does not count towards grades, as participation in this forum or chat is not mandatory. But even the certainty that there is such a space, can be extremely useful for the work atmosphere and group development, because the participants recognize that they are not alone with their experiences, problems and obstacles.

Give participants time to familiarize with the new learning space!

Not all participants simultaneously begin to use the platform, and only some of them have the courage, the experience or time to start immediately after login to participate in the course, to write posts, in short, to be active. Give them some time:

Some are initially reluctant to commit themselves fully to public participation in conferencing, and should be encouraged to read and enjoy others’ contributions to the conference for a short while, before taking the plunge and posting their own messages. This behavior is sometimes known as ‘lurking’, although the term can cause offence! ‘Browsing’ is perhaps a safer word. (ibid. 36f.)

More reluctant participants need time to adjust! But be aware that these initially passive participants after a certain time get active; otherwise they will become so-called lurkers. This, for example, can be achieved by asking for feedback on comments of others. Sometimes it is easier to write a comment on an existing posting first, before writing a posting of your own.

Stage 3: Information exchange

At this stage, the content work, i.e. information exchange, starts. Due to the possibility offered by Moodle, information in the form of resources, links and documents, can be provided online in one

²⁵ If you are not sure about what kind of rules are needed in a virtual learning space, here are some ideas and suggestions: Wikipedia (http://en.wikipedia.org/wiki/Etiquette_in_technology); Netiquette (<http://www.albion.com/netiquette/>); Rules (<http://www.education.com/reference/article/netiquette-rules-behavior-internet/>); Chat rules (http://wiki.gronenland.com/uk/wiki/Chat_Rules) and Chatiquette (<http://www.ker95.com/chat101/html/chatiquette.html>).

location, and it can be retrieved by the students at any time and any place: They do not get lost searching information in the vastness of the World Wide Web. At the same time they can talk about the given information, can analyse, write and discuss texts with each other. The e-moderator's role at this stage is to keep the group active:

Critically, by this stage, ensure that every participant has a role to play and is actively participating. I'm not suggesting you should treat browsers or vicarious learners as criminals, but instead you should continue to both design and e-moderate for active participation and workable online relationships. (ibid. 38)

Pay attention to the group dynamics and identify lurkers, i.e. followers, who do not actively participate in the discussion or whose contributions do not correspond in terms of quality or quantity. Address them directly in private messages, such as e-mails or short messages, and motivate them. In this way a productive work of the group can be ensured.

Provide tips in terms of time management

Be aware that, for learners, there are different ways to react to the numerous pieces of information provided in an online course and to deal with them:

Participants develop a variety of strategies to deal with the potential information overload at this stage. Some do not try to read all messages. Some remove themselves from conferences of little or no interest to them, and save or download others. Others try to read everything and spend considerable time happily online, responding where appropriate. Yet others try to read everything but rarely respond. These participants sometimes become irritated and frustrated. They may even disappear offline. E-moderators need to watch out for each of these strategies and offer appropriate support and direction to the participants. (ibid. 39)

Learners, who act passively over a longer period of time, can be addressed in a private message or an e-mail. Give them tips on which activities they should concentrate or how they can close the gap. Specify which pieces of information are particularly relevant, what must be done as a prerequisite for other exercises or tasks, so they are not falling completely behind. Animate them through personal feedback! Do not forget to complement students, doing a good job, on their work, and to may be slow down those responding to everything and doing even more. Make sure that you do not lose some (passive) students in the early stages and others get already exhausted in the first weeks!

An e-moderator invests a lot of time in preparation and organization. Note the planned and spent time, especially during your first e-moderation attempts. You will get an idea of how much time you have to plan for this work. Give your learning group some information about how much time they should plan per task and by when it has to be done. This time indication can be a helpful guide and orientation for learners. Keep in mind that untrained users need more time than experienced. Above all: Specify when you read messages. Do you read news at the weekend? Do you usually read them at 6 o'clock pm or even later? Students will be prepared and not nervously waiting for a reply. Establish a certain rhythm by posting or sending summaries on the same day and at the same time. Or be regularly online at given times, so there is a fixed structure for the learners. (Cf. ibid. 65)

If you get messages that may be relevant to all participants, summarise them in their central points and post them in a special forum provided for this purpose. You may name it FAQ (Frequently Asked

Questions). Inform your learners about the fact that they find important information and answers to frequently asked questions in this forum. It should therefore be visited regularly.

Give feedback!

The most important thing at this stage, and probably for e-moderators the most time-consuming, is to give feedback and to make the learner feel appreciated in the work they have done:

E-moderators should celebrate, give value to and acknowledge contributions to discussion processes and knowledge sharing by participants, and give credibility, authenticity and verification of information offered. Summative feedback and assessment can be introduced at stage three, especially if aligned with the online processes and achievements. (ibid. 40)

Even if you respond to posts with only a few lines: Students will pick up the motivation they need to continue to participate actively. Tasks that are not assessed or controlled lose their importance and will no longer be done from now on, because “no one is interested anyway”. Make the learners feel that their contributions are valuable, help them at the same time to improve the quality of their contributions by giving advice and, if possible, examples. Tell them about their progress and the gaps that may still exist. As a consequence, no participants get “lost” along the way.

Stage 4: Knowledge Construction

At the fourth stage the knowledge construction begins, i.e. the real collaboration and interaction between the participants. They express their opinions in texts, comment their colleagues’ opinions and are commented. New perspectives and points of view may occur and be transferred into one’s own work. The point is to present one’s own point of view, to learn about new positions and react to others’. Knowledge construction takes place, because: “The use of networked technologies enables access to the communication and sharing of [...] knowledge, the opportunity to present and publish individual and collective views, and easy ways of building on the ideas of others.” (ibid. 41) The various opinions are equal in their value. The e-moderator can retire more and more at this stage, even if there is still work for them. They can attribute the e-moderator’s role to their participants and even participate in the discussions, but their presence should always be appreciable:

However, some participants may feel uncomfortable at expressing controversial views [...]. It takes skill in online activity design and interventions by the e-moderator to overcome such reluctance. E-moderators may need to ask more questions, seek more discussion, motivate, challenge, complement and encourage all participants. Attempts can be made to gradually reduce dependency of the virtual group on the e-moderator. E-moderators should design for group interaction, create a feeling of ‘presence’ [...], but also make it clear they are not always available, perhaps ‘handing on the baton’ to participant leaders in small groups. (ibid. 42)

In this case, the e-moderator basically takes the same role as during group projects in the traditional classroom: The groups should have the feeling of being supported and recognized, even if the moderator mainly stays in the background. For this reason, it may be necessary to remind the learners that they must not “expect the e-moderator to provide ,the answers”” (ibid. 45). Knowledge construction should be the result of their cooperation and interaction, the e-moderators intervene when problems and obstacles arise or give useful tips. The e-moderator may also serve as a manager who merges individual contributions. A technique called *weaving* might help in this case.

Weaving

Weaving enables e-moderators to transfer and put together various discussions in order to become a homogeneous complex. As forum postings have a written character it is easier to merge them into a structured text than minutes taken from memory.²⁶ So you can take various posts in different forums that touch the same topic and interweave them into a common message:

They pull together the participants' contributions by, for example, collecting statements and relating them to concepts and theories from the course. They enable development of ideas through discussion and collaboration. They summarize from time to time, span wide-ranging views and provide new topics when discussions go off track. They stimulate fresh strands of thought, introduce new themes and suggest alternative approaches. In doing all this work, their techniques for sharing good practice and for facilitating the processes become critical. (ibid. 42)

It is not about summarising different opinions, but it means to interweave them into a text and to introduce one's personal point of view. Salmon (ibid. 156) describes the "differences between summarizing and weaving" as follows:

Summarizing is rather like reproducing the material in shortened form, picking out the main points. The original meanings are not removed. Weaving is a more creative task that selects themes and rearranges them into a new statement, making connections that may not have been intended by the writers. Compare with lots of woollen threads. A summary might say 'there are five red ones, five white ones and five blue ones and two of other colours.' A weave might say 'I have made a small flag out of coloured wool, including some that I had left over from another project!' So to summarize, the summary shortens, the weave selects and adds to, and the insight may be that the e-moderator weaves when he or she selects some themes from the participants and relates these two things that he or she is aware of.

The resulting woven text should foster further discussions, bring new ideas, thus give the discussion new stimuli. Some participants' statements can be cited, others are summarized paraphrasing the results. It is important to give positive feedback or to add critical points. Be critical and take a meta-reflexive position. If any questions are left open, repeat them and ask the participants to comment on these new woven contributions. Thus, a –confusing – discussion could be brought back on track.

Stage 5: Development: Self-organization and personal development

This last stage designates a meta-level, a stage of reflecting the work with e-learning courses and Moodle. Arrived at this point, the participants call for new challenges in the form of more opportunities and rights within the system, new software or even the ability to become an e-moderator. It is a stage of self-organisation and personal development. "It is also at this stage [...] that participants find ways of producing and dealing with humour and the more emotional aspects of writing and interacting." (ibid. 48) They have internalized the technical requirements, their focus shifts to the reflection of their own role and the desire to meet new roles. They "reflect on and discuss how they are networking and [...] evaluate the technology and its impact on their learning processes." (ibid.) The learning platform or e-learning course are scrutinised even critically regarding methodology and systemic components. Demands and suggestions are the result. Use these opinions

²⁶ The weaving of a text can also be delegated as a task to a participant to document for example the results of group discussions.

for the course. See the possibly critical comments as constructive criticism and as a potential perspective that allows you to optimise the course for the next time.

Select the tools specifically!

The decision which communication tools to use is determined on the basis of many small factors, e.g. the group size. Can you split the groups? Is a synchronous or asynchronous communication desired? Which maximum group size do the programs and tools at your disposal allow? Moodle's chat and forum are not limited to a maximum number of participants. You can work with almost infinite groups. The smaller the group, the greater the participation and output for each participant. Small groups facilitate to "catch" all learners, large groups facilitate lurking. It is thus preferable to split large groups into smaller groups, which is even less stressful for the e-moderator!

Be present!

For the participants, it is important to feel the presence of the e-moderator who cannot be present 24 hours a day. Here are some tricks Gilly Salmon mentions (ibid. 160) to convey to the participants that the e-moderator is available:

Send out a personal e-mail letter to all participants before the course starts, indicating how often they can expect you to visit (usually once a day).

Greet each participant by a welcome e-mail on his or her first arrival, as well as acknowledging his or her arrival in the conference.

Ask for each participant so send a personal e-mail to the e-moderator as well as post a message in the conference, early in the course. This helps to check who has arrived and when, and makes it easy to respond individually.

Mention each participant by name at some point in early summaries. Continue to mention individuals in your messages. This is very motivating and a fine way to acknowledge contributions.

Run an e-tivity at stage one, exploring how participants expect to fit the conferencing into their daily lives, and self-disclose a little about yours.

As the conference builds up and you find you have many messages to read on your arrival each day, focus on the last few messages in a thread (rather than reading them chronologically).

For more tips and tricks read Salmon (ibid. 160f.). It is clear that you can pick up the points that fit into your teaching. Writing a first message in a forum helps you to accustom the learners to deal properly with a forum. Keep also in mind that if you once cannot - for official or personal reasons - be online for a longer period inform the group to avoid unnecessary panic and despair.

The issue of evaluation...

If you interact and communicate online with your students an assessment should take into account four factors:

1. Motivation and online socialization skills demonstrated through regular and frequent contributions.
2. Knowledge and understanding demonstrated through sharing of relevant information.
3. Ability to draw out, compare and reflect on applications of knowledge in a variety of contexts demonstrated by the quality of message

contributions. 4. Ability to evaluate and synthesize others' contributions on the discussion board, and post messages accordingly, hence demonstrating personal development and learning. (ibid. 114)

Not only the factual knowledge as a competence or an expertise can be checked and evaluated: It is not just about declarative knowledge, but to evaluate skills, i.e. procedural knowledge. Students should develop technical knowledge, show that they are able to deal with online communication (tools) and develop specific social and communicative competences in this area. The coordination of cooperative or collaborative projects requires some time and effort of your students.

Students also require a certain time to get used to the new settings, to participate in a video conference or to write in a chat and to do assignments in time and in a desired form. Note the motivation and engagement as well as the progress of competence development: "The learning point for me here was that I should not assume lurking necessarily meant laziness" (ibid. 115). In the beginning mistakes in forum entries or in the participation in chats may occur. It is then the e-moderator's task to spot the reasons and help the learners helping themselves. Passivity does not always mean laziness; there is maybe a technical or communicative problem. Announce in any case at the beginning of the course, what is important for you in a forum, or chat, how many posts and which quality you expect. The more transparent your learning objectives are (also in terms of the development of social, communicative and media literacy), the easier it is to achieve them.

From a didactic point of view, the use of a learning platform, especially Moodle, for teaching can be motivated from several perspectives. Due to the individual configurability of the course appearance, a pleasant and welcoming learning environment is created which can facilitate motivation. Are the learning resources stored in a customised environment, the comfort factor and motivation increase. At the same time the learning platform can be optimally adapted to the needs of each learner group. Through the integration of multimedia content as well as a wide variety of activities enhancing collaboration and communication, the different types of learners as well as different knowledge levels can be addressed.

Moodle offers a particular possibility of personalization that makes the otherwise anonymous space more personal. Students and teachers can create and update their profiles by uploading a photo or picture. For the teacher it is possible to repeat the names and photos at home to remember them more easily, which can be a relief in a classroom setting. In addition, a few words about themselves, their interests and research areas, the office hours or a link to the teacher's homepage can be added, so the students find these pieces of information in one place. Especially in communicative situations it is due to this personalization possible to communicate with students and not with anonymous computers. Again, the feel-good factor plays an important role.²⁷

Due to the flexible customizable roles, students can receive special roles for any activity, thus, for example, assume the role of an e-moderator and therefore acquire not only factual knowledge, but are also actively involved in the training and development of their media literacy, the methodological

²⁷ For more useful tips, visit https://docs.moodle.org/28/en/Teaching_do's_and_don'ts.

and social-communicative skills. It is the flexible roll design as well as the group function on Moodle that contribute decisively to a sustainable learning, as real learning by doing is enabled.²⁸

Chatiquette

If you work with chats, as in any communication, some rules have to be respected. They can be formulated collaboratively in an activity on Moodle, or also be handed out by the teacher. Here are some rules and tips that have been tested in the online classroom.

- Welcome the people entering the chat!
 - Note: “Hello” is enough - it is not necessary to greet everybody individually.
- Stay polite!
- Accept your fellows’ opinions!
- Writing IN UPPER CASES is considered rude, because it is interpreted as “SHOUTING”!
- If you answer a question or respond directly to someone, then write @ next to the name!
 - @name: I know ...
- When you reply to a specific topic, then post @ and then the topic!
 - @Weather: Today you can ...
- Pay attention to your typing speed! Not everyone types as fast as you!
- Give your students the chance to respond and wait for answers to your contributions.
- Longer messages take a long time to be read. Write rather short messages, and terminate them with three dots (...) to inform that the message has a second part. Close the posting with a punctuation mark!
- Inform the learners whether case sensitivity has to be respected.
- Do not worry about typos. They occur! Correct errors only if the meaning is impaired.
- Use emoticons to express emotions or irony, but do not overuse them!
- Use abbreviations sparingly! Use only abbreviations that are known.
- Shift private conversations to take place outside of the chat or in a specially created chat!
- Say goodbye at the end of the chat!

More information on the Chatiquette, further rules and also information about abbreviations and emoticons can be found in the section that deals with the chat module. Similar rules can be applied in forums. We then talk about a Netiquette.

- The rules of courtesy and objectivity, of giving feedback and topics’ relatedness must be observed.
- Abbreviations and smileys should be used sparingly.
- However, it is important to pay attention to spelling and the structure of the posts, as the typing speed is not crucial and the postings can be reread, thus should have a certain quality. It is not the quantity that counts but the post’s quality. Contributions simply expressing consent without any new content should therefore be reconsidered.
- In forum posts you have the option of inserting pictures or other media files that can easily be attached. Pay attention to copyright!

²⁸ As chat logs can be saved, learning outcomes can be secured without any extra work.

- A topic-specific content-oriented forum, unless the learner-centred *cafeteria*, only works, if it is moderated. Think about whether you do the moderation yourself or ask your students.²⁹
-

Moodle's structure is very simple. As described above on the left and on the right there are the so-called blocks and in the centre there is the course area for study materials and activity modules. The next part will deal with these three elements: blocks, learning resources and activity modules.

Blocks

Blocks are elements that are on the right and on the left of each course. They are not assigned to a specific course section, but the whole course. Accordingly, their orientation is more general. Currently, there are, as you can see at <https://docs.moodle.org/28/en/Blocks>, the following standard blocks, even though they are not necessarily enabled by default on all Moodle instances:

- Activities
- Admin bookmarks
- Administration
- Blog menu
- Blog tags
- Calendar
- Comments
- Community finder
- Course completion status
- Course overview
- Course/site summary
- Courses
- Feedback
- Flickr
- HTML
- Latest news
- Logged in user
- Login
- Main menu
- Mentees block
- Messages
- My latest badges
- My private files
- Navigation
- Network servers
- Online users
- People
- Quiz results
- Random glossary entry
- Recent activity
- Recent blog entries
- Remote RSS feeds
- Search forums
- Section links
- Self-completion
- Social activities
- Tags
- Upcoming events
- YouTube

Two blocks are pre-set, can be moved, but not deleted: the block *Navigation* that allows not only navigation within the course but also across different courses, and the block *Administration*, where the general course settings are managed. In addition to these standard blocks supplementary blocks can be added by the administrator, as for example a block dealing with accessibility that allows customization of font size and contrast. Some of the blocks can be added multiple times, others only once.³⁰ In the following section some standard blocks are briefly described.³¹

²⁹ A concise overview of rules for communicating online is offered by the University of British Columbia in the article [Communicating Online: Netiquette](#).

³⁰ This second group will automatically disappear from the menu after adding a block to the course.

Administration

This block is a core block to administrate and manage the course settings. Three key areas can be distinguished: *Course administration*, *Switch role to* and *My profile settings*. Thus, this block allows modifications of the general course settings and the settings of your own profile. It is therefore rich in functionality. (Cf. https://docs.moodle.org/28/en/Administration_block)

Calendar

It adds a calendar where various elements can be inserted manually, for example block units, regular units or office hours. Moreover, events regarding activities such as deadlines for submissions or tasks are automatically added to it. The calendar is particularly effective when it is used in combination with the block *Upcoming events*. (Cf. https://docs.moodle.org/28/en/Calendar_block)

Courses

The block indicates all courses a person is enrolled in (in different roles). It also allows the navigation between different courses. (Cf. https://docs.moodle.org/28/en/Courses_block)

HTML

It is a very flexible block where images, text, links or videos can be embedded. Use the embed-code (e.g. of a video, photo, a word cloud) to directly display the corresponding object. A title may be added, but it is not mandatory to add one. (Cf. https://docs.moodle.org/28/en/HTML_block)

Latest news

The block shows all the new messages from the news forum pre-set in each Moodle course. Date and title are displayed and clicking on “More” the entire forum post can be seen. (Cf. https://docs.moodle.org/28/en/Latest_news_block)

Messages

The block gives an overview over all messages received. These messages can be viewed in the Administration block and the Profile. (Cf. https://docs.moodle.org/28/en/Messages_block)

Navigation

Navigation is a block that displays different links: *My home*, *Site pages* (including the blogs), *My profile*, *Current Course*, *My courses*. It helps to easily navigate between courses, access the blog, check files and manage the course messages. The course you are currently in is written in bold. (Cf. https://docs.moodle.org/28/en/Navigation_block)

People

This block is a link to the list of the course participants. It can also be accessed in the Navigation block. (Cf. https://docs.moodle.org/28/en/People_block)

Recent activity

It indicates the changes made in the course since the last login, regardless of whether there are new/deleted posts, tasks, and documents. (Cf. https://docs.moodle.org/28/en/Recent_activity_block)

³¹ For more details consult the Moodle community’s website. It offers descriptions of all blocks (cf. <https://docs.moodle.org/28/en/Blocks>) and explains how to manage them (cf. https://docs.moodle.org/28/en/Managing_blocks).

Upcoming events

It shows all appointments that are in the calendar, i.e. appointments manually added to it, or deadlines added to activities, such as the submission date of a task or the end of a lesson. Upcoming events are therefore double highlighted at the course page and in the calendar. (Cf. https://docs.moodle.org/28/en/Upcoming_events_block)

Course administrators can see additional blocks to the standard blocks here presented. Their detailed descriptions can be found in the Moodle documentation (cf. <https://docs.moodle.org/28/en/Blocks>) and the *Blocks FAQ* (cf. https://docs.moodle.org/28/en/Blocks_FAQ). Many of these blocks depend on activities within the course.

Resources

Resources include all static elements, which may be found in a Moodle course: all study materials and references.³² There are seven resources that can be distinguished.³³

- Book
- File
- Folder
- IMS content package
- Label
- Page
- URL

Book

This module allows creating book-like resources in a multi-page format. Websites can be integrated as well as text that is written manually. This book can be printed entirely or selectively, i.e. single pages or chapters of the book can be printed. (Cf. https://docs.moodle.org/28/en/Book_module)

File

Various file types can be uploaded and are provided with their specific icons (e.g. Office applications, PDF, images), thus the learner recognizes the file type at first sight. Here are some tips (cf. https://docs.moodle.org/28/en/File_resource):

- **Name the file clearly!** Especially if you have many files in your course, a clear name is important to find the documents easily.
- **Add PDF!** Not all students have Microsoft Office, but free alternatives (e.g. LibreOffice). If this is the case, there may be problems. PDF offers a solution as the layout is fixed.
- **Use ZIP repositories!** If you want to upload multiple files simultaneously, use a ZIP repository. It can be unzipped directly on Moodle. But beware: Choose the resource *Folder* because otherwise just one document will be displayed in the course. Furthermore keep in

³² Work sheets and uploaded articles are static elements because, although they can stimulate interaction, interaction takes place in an activity or in the classroom setting, but not in the resource itself.

³³ For more detailed information look at the Moodle documentation with its Resources page (cf. <https://docs.moodle.org/28/en/Resources>) providing all necessary information about these elements and Resources FAQ (cf. https://docs.moodle.org/28/en/Resources_FAQ) where frequent questions are answered.

mind that the file names you want to zip do not contain any special characters or accents, as they can cause problems when unpacking.

- **Pay attention to the copyright!**
- **Size matters!** Keep in mind that the file size affects the downloading and opening time. Large files lead to problems and delays, especially if the internet connection is not stable enough.
- **PPT and PDF!** Do you want to show a PowerPoint presentation, upload it as a PPT and PDF. Hide the PPT file, leave the PDF visible and accessible for download.

Regarding the display options, it depends on the teacher which one to choose. You can force the download; open the files in a new window or a pop-up which may cause problems if a pop-up blocker is used. (Cf. https://docs.moodle.org/28/en/File_resource_settings#Display)

Folder

The folder is like a directory. It is created directly on the course page. In this folder various types of documents can be stored. (Cf. https://docs.moodle.org/28/en/Folder_resource)

- Use a folder when you want to provide a huge number of documents and media to a specific topic. So the course structure remains well-arranged.
- Name the folder in a meaningful way, especially if there are several folders.
- If you want to upload multiple documents or resources at the same time, create a ZIP file and upload it to the folder, where you unpack it. Keep in mind that the file names you want to zip do not contain any special characters or accents, as they cause problems when unpacking.
- Within a folder subdirectories can be created. The data stored in the folder can be renamed or moved anywhere within the subdirectories by clicking on the icon next to the folder name.

IMS content package

IMS content packages can be integrated into Moodle due to this resource, i.e. pre-built e-learning packages that can be created in a standard syntax and thus integrated into different learning platforms. (Cf. https://docs.moodle.org/28/en/IMS_content_package)

Label

A label is a field within a course section where a text can be inserted. This label is visible on the Moodle course page and can be moved from one section to another. (Cf. <https://docs.moodle.org/28/en/Label>)

- You can embed video and audio elements directly in this label, which are then automatically played via an integrated player.
- The label can be used within a course section for subtitles and body text. So you can structure and keep clear sections that are complex and longer.
- Add text boxes and images, and other media elements to make your course not only attractive, but also suitable for different types of learners.
- This label can be edited like any other text element using the html editor. (Cf. https://docs.moodle.org/28/en/Editing_text)

Page

The page is like a small website that grows. In contrast to an uploaded text document, this page can be edited online, thus if something needs to be added or deleted, it is not necessary to download and re-uploaded it. (Cf. https://docs.moodle.org/28/en/Page_resource)

- Use the page to provide a link list growing during the course or a list of central concepts, if you do not want to add a glossary.
- Use the page as a calendar for presentations and you are able to quickly react to any changes that might occur.
- It can be used to embed audio, image or video resources. The learners do not leave the course, in order to consume the resource's content, thus are not distracted by other content.
- Make sure to insert your text in the section *Page Content* and not *Description*, otherwise the students will not see the content.
- Select *Save and preview* to check the page.

A page can only be filled by teachers or people assigned *teacher rights*, thus assign the teacher role to your students so they can insert text, images and other information to the text page.

URL

Links can also be provided and have a small globe as an icon to be easily identified at the course page. The link will automatically open in a new window if the setting is chosen. (Cf. https://docs.moodle.org/28/en/URL_resource)

- Copy the link in the field *External URL*. When you click on *Choose a link*, next to the *External URL* field, you can only access certain repositories such as YouTube, Picasa or Wikimedia enabled for your course.
- Rename the links in a meaningful way, especially when multiple links are provided.

These static resources are static but only in terms of interaction. You can use the small icons which are found in the editing mode next to the resources and move them freely, duplicate or edit them, turn them visible, hide or even delete them. But beware: Moodle contains no trash, where you can restore mistakenly deleted resources. If an element is deleted, it is cannot be restored.

Activity modules

Activities are dynamic elements that allow interaction in terms of communication, collaboration, evaluation and organisation. In the Moodle standard package different activities can be found that are explained in the Moodle documentation. (Cf. <https://docs.moodle.org/28/en/Activities>) In the latest version there are 14 activities in the Standard package that will now be briefly described.

- Assignment
- Chat
- Choice
- Database
- External tool
- Feedback
- Forum
- Glossary
- Lesson
- Quiz
- SCORM
- Survey
- Wiki
- Workshop

Beside these 14 core activities the activity *HotPot* is mentioned, as it is a proven way to add short quizzes to Moodle. The structure of the explanation is always the same. The activity is described shortly, the link to the Moodle documentation is added and some further information is given concerning didactic aspects.

Assignment

The module allows teachers to collect homework or assignments in an online database, to assess and evaluate them and to give personal and individual feedback. Teachers can choose from different assignment types (e.g. online text³⁴ or file submission, doing an assignment alone or collaboratively) and different types of feedback (e.g. online text or file submission).³⁵ The assignment can be graded, i.e. the students receive points or grades and a detailed verbal feedback for their assignments. The evaluation should go beyond the content evaluation in terms of the quality of work and take into account formal aspects as well, such as the timely completion of the work and the required format. For this reason, it is especially important to write a clear work order, which can at the same time serve as criteria for grading or assessing. A submission deadline can be set; the teacher sees when the students have uploaded the latest version of their assignment. Only student and teacher see the submitted document or the online text. If the document should be seen by all participants, it is necessary to upload it in a forum or to use the Workshop module.

If you want to correct uploaded files, download them first, correct them in a way the students can see your comments and corrections and save the file under a new name. Then upload it to Moodle. So you can always see what changes you have made to the original document and whether students meet your changes.³⁶

Moodle Documentation

- https://docs.moodle.org/28/en/Assignment_module

How to use the activity

Assignments can be integrated at any point of a course, but they are above all suitable for the final phase of consolidation as they allow practicing and applying new knowledge. However, tasks can also be added to introduce a topic. The students write down their personal desires and needs at the beginning of the semester, set learning objectives and check them at the end of the course.

- Learning diary
- Reading diary
- Taking minutes
- Reflections

³⁴ Tell your students to write the texts in a text document (doc, docx, odt) to benefit from the spell check and to copy and paste it into Moodle. Keep in mind that the formatting possibilities of the editor are limited: footnotes and page numbers, for example, cannot be displayed.

³⁵ Not just written, but also oral or audio-visual work can be uploaded. Students can register their voice with a mobile device or other technologies. The freeware tools [Audacity](#) and [Ardour](#) allow the recording and editing. The submitted work must not exceed a maximum file size that is set in the *Administration* block.

³⁶ The assignment online text does not show changes or different versions of a document as older versions are not stored but replaced by the recent one. If you want to have the possibility to see different versions of a document or a text, the Wiki would be a better solution for you.

Expenditure of time: ★

Setting up the assignment module is not time-consuming, but it can be complicated to formulate the tasks so that it contains all the necessary information, but remains readable and understandable. Write your work orders in a text document and save it on your computer to use it more than once. The corrections may also be time-consuming depending on the feedback type and the format of the assignment submission (e.g. writing a comment).

Methods

- The online text assignment can be medium for conducting a **learning diary** to help students recording and monitoring their own progress. Formative assessment is therefore guaranteed.
- The online text type can also be used as **private office hours**, i.e. one-2-one (asynchronous) communication, no one else but student and teacher see the dialogue.
- The upload of audio recordings can help students to **improve their oral skills**. The teacher gives audio feedback and it is just the teacher and the students who can hear the assignment and feedback. However, the private framework cannot replace a public presentation.

Giving Feedback

- <http://www.faculty.londondeanery.ac.uk/e-learning/feedback/>
- <https://www.cabrillo.edu/services/jobs/pdfs/giving-feedback.pdf>
- <http://www.forbes.com/sites/prettyyoungprofessional/2011/05/16/how-to-give-feedback-that-works/>

Chat

The chat offers in a virtual learning scenario a synchronous, i.e. simultaneous communication facility. Students talk with each other or with teachers in real time. Depending on the concept and objectives chats can be established with the teacher's participation, or in their absence. It is possible to react spontaneously to opinions, or questions of colleagues. Therefore, it is necessary to announce the day and time of the chat and to invite the participants! Students express their views on a topic and interact communicatively with each other.³⁷

The role of the teacher in the chat can be heterogeneous. They can participate actively in the discussion, or take the role of an e-moderator.³⁸ It seems important to determine in advance which form of conversation is chosen. Do all students speak at the same time? Is there a specific order? The method varies depending on the chat's purpose.³⁹

³⁷ They can see the chat logs of expired chat sessions only when the teacher enables this function.

³⁸ If you assume the role of an e-moderator, formulate the introductory phrases in advance. Consider also how to keep the conversation going! Formulate questions; be careful when integrating participants who do not actively participate in the chat. Ask for the reasons of their passivity.

³⁹ Sometimes it is better to have small group chats, than to discuss with the entire group. In a cyber-storming the maximum number of participants is almost unlimited, but if you want to do an expert's chat, it makes more sense to have groups of up to eight participants who work together in order to avoid confusion and stress. As the Moodle chat is only written, it has to be stated that it has a visual dominance and that the different typing speeds must be taken into account. If you want to do an oral chat, you have to integrate a separate tool. In this case you have to check the framework (account, needed hardware and so on).

Moodle Documentation

- https://docs.moodle.org/28/en/Chat_module

How to use the activity

The chat's advantage is that it can be used in content and technical as well as in formal and organizational contexts:

- Discussing general course topics
- Getting to know the participants
- Answering questions (e.g. before an exam)
- Survey learning needs
- Expert's chat
- Feedback round
- Online office hours
- Support community-building
- Cyber storming on a specific topic

The chat provides, in purely quantitative terms, a simple overview to see the learners' participation. However, the quality can only be decided individually. Concerning evaluation of chat contributions, it must be clear in advance what the teaching and learning objectives are. Is it media literacy, i.e. the handling of the chat as a communication tool? Should the students learn a specific social behaviour? Is it primarily an organizational chat? Is active participation needed as in an expert's chat or a cyber storming? The grading depends therefore always on the method used and the purpose attached to it.

Expenditure of time: ★

The arrangements made before chatting are important. Define chat rules (Chatiquette) and communicate them to your students! You can make them accessible in a forum, for example. These rules should count towards the assessment, in terms of media literacy. In preparation for the chat, prepare yourself by formulating greeting and farewell formulas, as well as leading questions and phrases and copy and paste them in the chat. Then you do not have to concentrate on typing but you have the necessary time to focus on questions and answers.⁴⁰

Methods

- **Cyber storming:** In traditional classrooms you can use sticky notes and chalk to execute this method. Cyber storming is just a brainstorming in a chat room. Let your students find as many terms regarding a specific topic as possible in 5 minutes. This is an easy way to test prior knowledge. And you take the fear of using a chat. This brainstorming can be used as the basis of a mind map or a word cloud to visualise the collected items. The number of participants is not limited.
- **Circle talk:** The teacher displays a certain order in which each participant appears in the conversation. This method is very nice, as in Moodle it is not possible to "raise the hand" as in video-conferencing tools for example. The group should not be too large. It would be interesting to ask the learning group to be prepared for the chat session, so they can answer quickly without having to think too long.

⁴⁰ If you want to show emotions in the chat, but avoid misunderstandings, set a list of possible and known emoticons ("smileys") and abbreviations. Make it available in a forum or a wiki!

- **Hot chair:** The traditional hot chair can be replaced by a role-playing game. It can be performed depending on the content, for example, as an expert's chat. You can use the hot chair as a quiz round in which the expert has a particular role, the others have to guess the role (only *yes* and *no* are allowed answers).

Word Clouds

- www.tagxedo.com
- www.wordle.net

Useful links

- [List of Emoticons](#) (Wikipedia)
- [List of Text Emoticons](#)
- [NetLingo](#)

Choice

It is a learning activity where students vote on a specific topic or question. The teacher formulates a question and gives the students at least two, but possibly an infinite number of different choices as answers. It is important that only one (!) question may be asked with several possible answers. The teachers always see which option the students have chosen, even if the choice is set as anonymous. Teachers can set a limit for each answer option. If this limit is reached, students cannot choose the option anymore. The results can be downloaded in different file types, e.g. ods, xls(x) or txt.

Choice can be used to start a new topic, as well as to transfer knowledge, as the participation of the learning group can be checked. It allows asking short questions concerning content or organizational aspects. The results are not included into grading. The choice module helps teachers in terms of administration as organizational issues can be outsourced from the traditional classroom.

Moodle Documentation

- https://docs.moodle.org/28/en/Choice_module

How to use the activity

Choice can be used in different ways, at an organizational level and for knowledge transfer.

- Grouping
- Surveying learning needs
- Finding appointments
- Surveying progress
- Surveying individual learning objectives
- Feedback

Expenditure of time: ★

Both setting and implementation are not time-consuming for the teacher. It is just important that the questions and answers are formulated clearly and unambiguously and the structure is clear.

Methods

- The **dots query** is traditionally performed on whiteboards or flipcharts with glue dots. You can use the choice module to transfer it to the virtual learning environment.

- **Lists** traditionally handed out in the classrooms can easily be managed in the digital learning environment. Students choose an option; the results can be exported and saved.
- **Short and quick quizzes** can be implemented in the classroom as traditionally done with hand signs or audience response system. If the results are not displayed, the students declare their choice without being affected by the responses of their colleagues.

How to formulate questions

- <http://www.k-state.edu/ksde/alp/resources/Handout-Module6.pdf>
- http://www.helpsteaching.com/about/how_to_write_good_test_questions/
- http://www.indiana.edu/~best/pdf_docs/better_tests.pdf

Database

The database is an activity that allows students and teachers (like a glossary, but less text-based) to collect data (text, images, links, etc.). The teacher sets a template, thus the design of the entries is similar, and defines the individual data fields. They can choose different options: *Image, File, Date, single choice, geographical coordinates, multi-select, menu, menu (multiple choice), text, text area, URL, number*. With the database they create a place for collecting various data that can be entered manually or, for example, uploaded as files or images. This data can be displayed in either a mask, a list or RSS feed. The teachers set if the entries are shown without or after they permitted it.⁴¹

Teachers do the preparatory work, i.e. the basic settings and the definition of the data structure. Educators can take both a passive and an active role within this activity, which ranges from creating individual items, correcting and viewing student contributions to solely create the entries.

Moodle Documentation

- https://docs.moodle.org/28/en/Database_activity_module

How to use the activity?

A database is used to collect and provide data that is available for all course participants.⁴² The kind of data varies. Anyway, the database can be used at different stages of the learning unit:

- Presentation topics
- Presentation of the course participants (image upload, disclosure of individual information)
- Review of completed tasks
- Feedback on lectures, work, etc.
- Collecting various data (files, links, pictures, dates ...) on various topics
- Collecting questions for a (final) exam

Expenditure of time: ★★★

Creating the database activity takes place in two steps: First, the database is created on the Moodle course page, as an “outer shell” that has then to be divided into different content fields.⁴³

⁴¹ The entries can be exported and saved in the database as either Excel or ODS files (Libre or OpenOffice). They can be re-imported.

⁴² If you want to create a keyword collection on a certain topic; the glossary could be the suitable tool. If you want the students to upload materials, documents or other resources, you can use a forum. If you want the students to work collaboratively on a document, use the wiki.

Methods

- **Data collection** can be done in the classroom on a blackboard, whiteboard or flipchart. In a database it can be collected online, the data has a specific structure and is visible to the entire group.
- **Scheduling** can be made easy with a database. All relevant data can be entered - the teacher is freed from these organizational tasks.
- Do a different **presentation of the participants** at the beginning of a course, by uploading a photo that describes one personality.

Further information

- https://docs.moodle.org/29/en/Using_Database

Forum

A forum offers the opportunity to asynchronously, i.e. independently of time and place, communicate and collaborate. Participants can create their own forum posts about specific topics, read and comment those of their colleagues.⁴⁴ The discussion forum is open for all, regardless of time and place. It is also possible to use a forum for providing teaching and learning materials and to read, describe and comment the work of each other. In addition, it is also possible to create individual forums targeted to specific topics and answers, which facilitates the handling of online communications' processes.

Read posts can be marked, so all participants of the forum always see the recently added information. In addition, teachers have the opportunity to block students if they do not follow the rules. If students post in a wrong forum, teachers can move the discussion in another forum. Teachers can actively post, read and comment messages. They can also act as facilitators who lead the different threads and so keep the communication going.⁴⁵

Provide different forums for different topics and purposes. Create a setting, in which students can communicate informally (e.g. a *lounge* or *cafeteria*), a forum on organizational issues, one for professional discussion and a forum for Frequently Asked Questions (FAQ). As the quality of the contributions should be preserved, teachers could handout some information about writing contributions ("Netiquette").⁴⁶

Moodle Documentation

- https://docs.moodle.org/29/en/Forum_module

⁴³ In activities such as database, glossary or forum, it is certainly an advantage to provide sample data sets, so the students have examples as a guide for their own work.

⁴⁴ A forum can be used as an alternative for the task uploading assignment, namely if the teachers want that all participants can see each uploaded contribution and evaluate it. In the default news forum only trainers can write posts! If the students should be able to work together and to create posts, a second forum has to be added manually.

⁴⁵ It is possible to customize the setting of a Moodle profile to get once a day an e-mail compiling all forum postings instead of mailing each contribution in a separate message.

⁴⁶ In order to make communication successful, it may be necessary to provide students with feedback rules. An e-moderation of the forum should in any case be considered. Provide the forum with a strong introduction text, set the rules, tasks and objectives. This is important if you offer several forums on various topics and discussions and allows you to ensure that issues and problems are posted in the right forum.

How to use the activity?

Write a manual or guide for your forums.⁴⁷ Make clear how often participants should visit the forum and how much time they should spend on commenting on new posts. A forum can be used in many ways, beyond the communication aspect. It can also be used as a diffusion medium for teaching materials.

- Collecting the participants' expectations
- Creating forums for discussion of FAQ
- Bulletin board
- Providing courseware, handouts, presentations...
- Peer review of tasks or activities (both face-2-face and online)
- Perform a public learning diary
- Continuing discussions started within the classroom

Expenditure of time: ★★

It is important to decide the forum's objective (in advance), as it influences various decisions, e.g. the form of the forum. The different forum types vary regarding the number of posts that can be written but not regarding the number of answers. It is not time-consuming to create, but to guide and moderate a forum. If the forum aims to facilitate interaction among students, the teachers do not have a lot of work. If the forum is used to work on content, discuss problems or crucial questions, the teacher, from time to time, has to act as an e-moderator: Contributions should be woven or summarized, lurkers have to be motivated and over-motivated writers have to be slowed down to obtain a certain balance.

Methods

- The **round of introductions** is particularly easy to implement with the forum. Start with this activity before the course start: the students get to know each other and the forum.
- The "**critical friend**" can be performed at any time of a course and it is possible to treat different topics. Pairs or larger groups work together on a topic, for example, and create a digital artefact. This document is read by a critical friend, i.e. a second group. The first group reacts to the peer feedback of the second group.
- Create a **lounge** or **cafeteria** as a place where students interact and communicate in a semi private or informal context, such as the coffee machine in the face-to-face-classroom. Maybe this place is left to the students (teacher's absence).

Further information

- https://en.wikipedia.org/wiki/Etiquette_in_technology
- <http://www.bbc.co.uk/webwise/guides/about-netiquette>
- <http://emojipedia.org/>
- <http://www.internetslang.com/>
- <https://www.youtube.com/watch?v=amyQjAESkZM&feature=youtu.be>

⁴⁷ It may be important that teachers create the first entry in a forum, to facilitate students to embark on a topic. You can summarize and make accessible to everyone frequently asked questions in a forum entitled FAQ (Frequently Asked Questions)! You can then take over, expand and adapt it in later courses!

Glossary

The glossary is a collaborative activity similar to a dictionary. The participants or teachers create glossary entries, and comment on their colleagues' entries. Search within the glossary can happen according to various criteria: by author, date or alphabetically. In addition, it can be decided whether the search takes place in full-text or not. The entries can be provided with key words and the glossary can be exported (in XML format), so it is possible to import existing entries in other courses.⁴⁸ A print function facilitates the printing of single items. According to the glossary setting students can add and upload documents and files to their entries and edit them without any limitation.

Teachers need a clear concept for the creation of glossaries. On the one hand the display format has to be chosen. One distinguishes between various formats: *simple, dictionary style; continuous without author; full with author; full without author, encyclopedia, entry list; FAQ*. On the other hand, teachers have to formulate a precise task and integrate it in the description. It should specify the entry's format (length, sources, language ...) and should specify how many entries the students should submit within a specific period and how many contributions they have to comment. The teacher decides if the entries are approved by default or have to approve it manually, if the editing is disabled, and multiple entries are possible. These specific settings should be mentioned in the description. Students do not see them.⁴⁹

Moodle documentation

- https://docs.moodle.org/29/en/Glossary_module

How to use the activity?

The glossary can be used in a single homework or throughout the semester as an ongoing work.

- Create multilingual dictionaries
- Create a FAQ-glossary
- Collect central concepts or crucial terminology
- Comment the contributions of the group
- Collaborative entry writing
- Collect exam questions and answers defined by the students

Expenditure of time: ★

Methods

- **Together and not alone!** If a course is challenging regarding terminology and the students have to look up many new, unfamiliar terms, they benefit from each other if the terminology they look up is added to the glossary. Others do not have to look up the same items.⁵⁰
- **Frequently Asked Questions** can be displayed in a glossary.
- **Questions-1x1!** Exam questions and answers can be collected in a glossary. The teacher is relieved, the students learn already when formulating the questions and answers. In this case

⁴⁸ You can also create a global glossary that is visible in all courses.

⁴⁹ Provide your students with a handout dealing with scientific paper writing and the correct citation style! Specify how many contributions can be quoted from scientific literature and how many should be written in their words. Provide your students at the beginning of the work with some glossary entries you generated. So they know what you expect from them and can use your contributions as a reference.

⁵⁰ The glossary can also be used to do book reviews and to collect useful resources (links, documents etc.).

the teachers should check the answers before approving them. A peer review process can be introduced: the students comment on the quality of their colleagues' questions and answers.

Further information

- https://docs.moodle.org/29/en/Using_Glossary

Hotpot

The HotPot module allows teachers to integrate interactive exercises created with the freeware authoring tool [Hot Potatoes](#) into Moodle.⁵¹ These exercises are created and then uploaded to Moodle.⁵² Hot Potatoes comprises five modules, a cloze (*JCloze*), a crossword (*JCross*), a matching (*JCloze*), a mixed sentence (*JMix*) and a short-answer or multiple-choice (*JQuiz*).⁵³ Hot Potatoes quizzes can be imported into three Moodle modules: Quiz, Lesson and Hotpot. The grades achieved within the quizzes can be integrated into the Moodle grade book.

Using this activity, teachers can make their teaching learner-centered.⁵⁴ They create several additional interactive exercises according to the knowledge levels of their students and the different types of learners within a learning group (as it is possible to integrate images and audio elements). Weaker and stronger students will find the necessary help or practice. The test reports can be presented in different formats: as HTML, Word or Excel files (for download). Access control is possible: Teachers can block a quiz until a certain activity has been completed as a prerequisite.

The module offers the possibility to add alternative solutions as well as feedback to the exercises. It is therefore a tool to include formative assessment for higher or optimized learning outcomes.⁵⁵

Moodle documentation

- https://docs.moodle.org/29/en/Hot_Potatoes
- https://docs.moodle.org/29/en/Hotpot_module

How to use the activity?

Students can check and consolidate their knowledge using different quiz formats and fill gaps and weaknesses. They practice independently, learn in a self-regulated way and repeat certain exercises several times. It is therefore a powerful self-assessment tool.

- Identifying prior knowledge and weaknesses
- Providing material for independent and self-regulated learning

⁵¹ Hot Potatoes is a freeware authoring tool that can be used regardless of Moodle. Create the exercises and send the automatically generated htm files via mail to your students.

⁵² When formulating the questions and answers try to be clear and unambiguous. This allows you to avoid confusion. When creating interactive exercises use a uniform layout that should not detract from the exercise. Pay attention to not using too bright colors but a clear structure (the formatting options provided by Hot Potatoes are unfortunately not very sophisticated).

⁵³ The modules *cloze*, *matching*, *short-answer* and *multiple-choice* can also be found in the Quiz module. It is easier to create them with Hot Potatoes than with the Quiz module, even though the design is less appealing.

⁵⁴ Let your students create their own questions and answers. Collect them for example in a wiki, forum or glossary and then integrate them as Hot Potatoes exercises into Moodle. These exercises are first created on your own computer and then integrated into Moodle. Several people create exercises collaboratively; they store them centrally (e.g. on Dropbox), use them in their teaching and benefit from each other's work.

⁵⁵ When you set up the exercises try, in any case, to ensure that a variety of exercises at different levels is available and address the different types of learners.

- Individualized training and consolidation scenario
- Providing asynchronous training material (relief of the teaching)
- Identifying and monitoring the learning progress

Expenditure of time: ★

Methods

- **Self-Assessment!** Hot Potatoes allows students to check their knowledge at any time and to identify existing gaps immediately. The exercises are auto-corrective and can be repeated as often as necessary.
- **Be the potato!** The students create Hotpot exercises from the learning material and upload it to a forum. These exercises can be tested by their colleagues, feedback can be provided.
- **I'm the potato!** The round of introductions can be designed with Hot Potatoes exercises. Students create an exercise about themselves - a crossword, a multiple choice test or a matching-exercise. The exercises are uploaded and done by the group that is forced to read the presented pieces of information attentively to solve the quiz.

Further information

- [Hot Potatoes download](#)
- http://www.cyberteacher.it/esercizi_eng.htm
- <http://spot.colorado.edu/~simone/atlas7800/hotpot.pdf>

How to formulate questions

- <http://www.k-state.edu/ksde/alp/resources/Handout-Module6.pdf>
- http://www.help-teaching.com/about/how_to_write_good_test_questions/
- http://www.indiana.edu/~best/pdf_docs/better_tests.pdf

Lesson

The lesson is a highly complex activity that provides learning resources in a pre-structured manner, thus enabling an individual, adaptive access to these resources. The contents of each chapter can be served in small bites and checked by added questions. Students can click a learning path. It is possible to create a linear structure with a simple *Next* button at the bottom of a page. However, teachers can also create a non-linear structure of the lesson by adding questions. Students read a text or watch a video and then answer a question.⁵⁶ According to their choice they come to a different page: If the answer is true they enter the next topic or page, if it is wrong, they have to repeat the "level". The lesson is thus personalized and learner-centered; self-directed and autonomous learning are crucial. Strong learners can be encouraged, weak learners can repeat those questions or topics that cause problems.⁵⁷

The structure of a lesson can therefore be more or less simple or complex. The questions that appear on a question page can additionally be used as learning cards and thus be used as a self-assessment tool that works independently from the information pages. The lesson is a pre-determined learning

⁵⁶ It is possible to integrate videos, audio elements and images to a lesson.

⁵⁷ There are two types of lessons: lessons to exercise and graded lessons. The difference between these two types is that the grades achieved in the graded lessons are imported to the grade book.

unit that presents content in a specific and teacher-centered way. The teacher creates the learning path i.e. the lesson; the students find their way through it. Different questions types are possible:

- Multichoice
- Essay
- Matching
- Numerical
- Short answer
- True/false

After answering a question, students receive standard Moodle feedback; if the teacher has entered an individualized or personalized feedback students receive it additionally. Different settings allow students to adapt their answers and to correct them if necessary. At the end of the lesson, students get an evaluation of their results and hints, concerning e.g. what questions are answered incorrectly. Teachers can set different learning paths, which are updated depending on right or wrong answers given by the students on the question pages. This module requires a complex planning process, because teachers have to find suitable sequels for all possible decisions made by the learners.⁵⁸

Moodle documentation

- https://docs.moodle.org/29/en/Lesson_module

How to use the activity?

A lesson can be used in different phases. They can serve both as a self-learning exercise, and a way to adjust different knowledge levels. However, it can also be used for evaluation.

- Micro learning units
- Short self-regulated learning units
- Self-study for deeper learning about certain topics
- Integration of a short online phase
- learning through flashcards

Expenditure of time: ★★★

The planning effort of a lesson is very high and needs to be well elaborated. The teachers need to consider different scenarios and should try to think like their students and add their students' ideas and needs in the course of the lesson.⁵⁹ The important thing is to realize that the lesson is a highly individual work; the students neither communicate nor collaborate or interact. These processes should be covered through activities related thereto.

⁵⁸ When the student answers a question, they get a feedback that has been entered by the teacher according to the type of answers. It can be done by a simple Good! or provide further information and tips. For incorrect answers, the proper solution can be provided or some supplementary information. Furthermore, a certain jump (this page, next page, previous page, end of the lesson) is bound at each answer. By opting for one of the answers, one way of the learning path is taken.

⁵⁹ If your experience has shown that the same wrong answer appears again and again, you can use it as an answer and add a specific feedback that helps to find the point of failure and offers appropriate information and assistance. Write down and collect these questions and answers in a separate text document where you save the feedback text as well.

Methods

- **Storytelling interactive!** Let a continuing story be created interactively! The protagonist makes some decisions which are important for the next steps in the story. The students have to write the end of the story in a wiki or a forum.
- **Resources for different learning styles!** Choose one topic and provide lessons focusing on video, audio content or texts and images. All lessons treat the same topic, the design varies.
- **Multimedia flashcards!** You can also provide a series of concepts, vocabulary or information within the form of multimedia flashcards.
- **Build a micro lesson!** This method covers the micro learning aspect. Teachers can create micro learning units for their students so they can practice on their own.

TIP

When you set up the exercises try to ensure a variety of exercises at different levels and address the different types of learners.

Further information

- https://docs.moodle.org/29/en/Building_Lesson
- https://docs.moodle.org/29/en/Using_Lesson

Quiz

The quiz module allows teachers to create tests, self-checking exercises and self-assessments. The activity itself provides the shell, various questions, takes from the question bank, can be integrated. By default, twelve types are available.⁶⁰

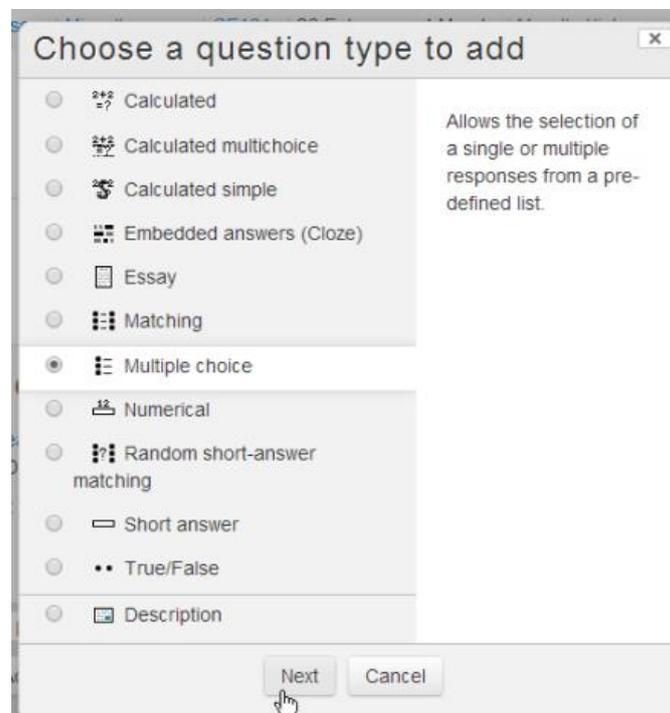


Figure 7: Question types (<https://docs.moodle.org/29/en/File:questionpicker.png>)

⁶⁰ There are many more question types that can be installed by the Moodle administrator, but these types are installed by default. A list of all questions types and an explanation of their behavior, structure and qualities is provided by Moodle and can be found at the [Moodle documentation page](#).

When creating a quiz it is possible to set up the quiz and use the questions stored in the question bank. It is also possible to set up the quiz and to formulate the questions and answers afterwards.⁶¹ The grades of each quiz can be seen in the grade book, i.e. they are part of the overall evaluation of the course and can be downloaded as text or Excel files.⁶² There is also the opportunity to import questions from another question pool or an external resource or file (*import*) or to export them into other courses or files (*export*). Teachers can furthermore rotate or fix both the positions of the questions and the answers in a test.

The test results can always be seen by the teacher. In the administration block there is a field called *grades* that leads to the field *grade administration*. Teachers can check who has already passed the test when the test was started and completed or which evaluation and feedback the students got. Detailed answers and statistics can be seen as tables/graphics and downloaded as Excel or text files. In the statistics area teachers can view different aspects, including the dispersion of results, the percentage of correct answers per question, which can be an indication of a question's difficulty... These results' analysis is a valuable contribution to quality assurance. What question is particularly difficult? What (wrong) answers are most often chosen?

When a teacher creates a test, they are prompted to write an introduction which can be used to give some information that should be read or consumed by the students before opening the test. Audio and video files or websites can also be linked (as a prerequisite or assistance for the test). Students decide, within their autonomous, self-directed learning process, whether they need/accept this help.

Moodle documentation

- https://docs.moodle.org/29/en/Quiz_module

How to use the activity?

Students have the opportunity to check their knowledge by taking the test once or several times. If the teachers provide feedback, learners get an immediate response to their learning progress. In general, self-assessments and tests can be used at different moments and to achieve different goals.⁶³

- Check prior knowledge
- Identify and monitor the learning progress
- Review achieved learning outcomes
- Identify weaknesses
- Feedback option on the results
- Provide materials for independent and open, self-regulated learning

⁶¹ Pay attention to the question formulating process so they are unmistakably clear and unambiguous. For example, avoid double negatives and leading questions, that's the a way to guarantee that there is less confusion among students. Check *How to formulate questions?* for further information.

⁶² A test is not necessarily designed for grading. It can be understood as an opportunity to exercise, to consolidate one's knowledge or as a controlling mechanism for teaching and learning objectives.

⁶³ Let your students formulate questions and answers that can be collected for example in a wiki, forum or glossary and transmitted to the question pool. One question can appear in different tests. Questions can have points or are left without points; it depends on the objectives (test for grading or to practice).

Expenditure of time: ★★★

The creation of the quiz is not time-consuming, but writing questions, finding answers and providing good feedback is. Formulating questions takes time, as they should be clear and unambiguous. Furthermore, additional conceptual questions should be answered: Should there be points? How are the questions and answers weighted? What kind of feedback is given where and in which form? Consider, if possible, a variety of methods. Select several question types, so learners of different learning styles can be equally addressed!

Methods

- **Self-Assessment!** The module *test* allows students, at any time, to check their knowledge and to recognize existing gaps immediately. The solutions are provided in an auto-corrective way and are immediately available; the exercises can be repeated almost infinitely. Due to the large number of different issues, and the possibility to integrate video and audio elements, different learning styles can be addressed.

Further information

- https://en.wikiversity.org/wiki/User%3AJtneill/Teaching/Online_Quizzes_and_Exams_with_Moodle
- <http://www.moodlenews.com/2011/friction-less-learning-with-quizzes-in-moodle/>
- https://docs.moodle.org/29/en/index.php?title=Using_Quiz&redirect=no
- https://docs.moodle.org/29/en/Building_Quiz
- <https://docs.moodle.org/29/en/Questions>

How to formulate questions

- <http://www.k-state.edu/ksde/alp/resources/Handout-Module6.pdf>
- http://www.help-teaching.com/about/how_to_write_good_test_questions/
- http://www.indiana.edu/~best/pdf_docs/better_tests.pdf

Survey

Survey is a module that allows teachers - as the name suggests - carrying out surveys. Teachers choose between three standardized science-based instruments: *ATTLS (Attitudes to Thinking and Learning Survey)* with 20 questions, *COLLES (Constructivist On-Line Learning Environment Survey)* with 24 questions and *Critical Incidents*, a survey instrument with six open questions. The questions are preset and cannot be changed. All surveys are intended as an evaluation or reflection of learning settings or processes and are provide feedback to the teacher. The survey results can be exported in as Excel or text files. Questions cannot be adapted or replaced in the current version.⁶⁴

Moodle documentation

- https://docs.moodle.org/29/en/Survey_module

⁶⁴ If teachers want to use their own questions, they can use tools as [LimeSurvey](#) or [Google Forms](#). The surveys created with these tools can be easily integrated in Moodle. As an alternative to this standard module the additional modules [Feedback](#) or [Questionnaire](#) can be used, as they can be installed and unlocked.

How to use the activity?

Teachers can use it to reflect their teaching and, if necessary, adapt to the students' needs. They can evaluate, improve or assure the quality of their teaching.⁶⁵

- Survey the learners' attitude
- Evaluate the learning behavior
- Feedback

Expenditure of time: ★

As the surveys are standardized, the creation does not take too much time. Since everything is already set by default, the time used to set up and carry out this activity remains limited – so are the teachers' possibilities.

Methods

In this case, an analysis of the methods is not useful because it is a preset activity using standardized surveys to evaluate the learners' behavior.

Further information

- https://docs.moodle.org/29/en/Using_Survey
- <https://dougiamas.com/archives/herdsa2002/>
- https://docs.moodle.org/29/en/Feedback_module

Wiki

Wiki is a learning module that allows teachers and students to collaboratively design a website without special programming or computer skills. The contents of this website may be created and revised by a group or an individual. Several wiki pages can be linked; the text is directly written and formatted in the browser.⁶⁶ It is possible to insert images, graphics, and links. An advantage of wikis is that older versions are not lost but can be reactivated. There is also a function to display the differences between two versions of a wiki.⁶⁷

Students are able to work together on a project. They work self-organized and are creatively active, thereby treat content from different viewing angles. Depending on the setting, students can work individually or together. In addition to the creation of wiki pages students can also comment other contents or areas, but cannot reactivate older versions of a wiki page. Only teachers are allowed to do so. If a wiki is used to assess, teachers can view the pages by the degree of students' participation and thus understand the students' individual performances. Teachers can also import existing wikis and use them as a structuring element; even uploading files can be allowed.

The teacher's role depends on the wiki's concept. They can participate actively or passively in a wiki, but should provide material for writing wikis, using the right citation style etc. and should be

⁶⁵ If teachers evaluate their course at the beginning and at the end, they can "catch the students' mood" that can contribute to quality assurance.

⁶⁶ Various formatting tools can be chosen within a wiki: the well-known HTML editor, the Creole editor, and the NWIKI format. Regarding the Creole format some useful information can be found [here](#).

⁶⁷ Probably, the most known Wiki is the [Wikipedia](#).

available prior to the start of the wiki creation.⁶⁸ The teacher should be present as a coach and be available not only in the area of formatting, but also the handling of wikis for example.⁶⁹

Moodle documentation

- https://docs.moodle.org/29/en/Wiki_module

How to use the activity?

A wiki can, as any other collaborative work, be used at different stages, in different forms and for different purposes: for organization, evaluation, communication and collaboration. One advantage is certainly that a wiki can be edited together and over a longer period of time and thus can grow even over the duration of an entire course.

- Survey knowledge
- Survey learning needs
- Document progress
- Arrange appointments (lectures, consultations)
- Organize course rules
- Survey achieved learning outcomes
- Present group work
- Peer review
- Feedback
- Create common scripts
- Brainstorming

Expenditure of time: ★

Methods

- **Brainstorming without mind map!** If students should collect thoughts or resources and the elements do not have to be graphically interconnected as in a mind map, the wiki can be the solution, as they can be grouped in punctuations or a table. Images, audio and video files can be included in the collection and are linked together without much effort.
- **The special handout!** The findings of a group work can be presented in a wiki page instead of a traditional presentation. Students easily insert images and links: both internal links (within the wiki), which refer to different sub-aspects, as well as external links that can be opened with one click. Additional documents are uploaded; the handout is a multimedia product.
- **The collaborative script!** At the end of the semester documents with notes and questions are often exchanged. This work can be done directly in a wiki. The students jointly create the script for the course and, at the same time, have mutual control.

⁶⁸ If the wiki should for example be used to write a common transcript or to accompany a project, it is advisable that the teacher provides the structure and creates the different pages that should be filled by the students. New pages are created as follows: [[Page name]] If one then clicks on the newly generated red link, a new window opens and one creates a new page, that can be filled and saved. The link color changes to blue.

⁶⁹ Provide the students with some information about formatting, handing out for example a style sheet as a template! This step increases the comparability of the jointly designed pages. If students work together, rules should be in place. For the purposes of a wiki one talks of the [Wikiquote](#). It is important to set clear rules, give information about formatting and to set a deadline.

- **Storytelling!** A wiki can be used to write stories. Every student writes one word, paragraph or chapter. One student writes their paragraph, then the next student starts writing.

Further information

- <https://en.wikipedia.org/wiki/Wiki>
- https://docs.moodle.org/29/en/Using_Wiki
- https://docs.moodle.org/29/en/Creole_format
- <https://en.wikipedia.org/wiki/Wikipedia:Etiquette>
- <http://dots.ecml.at/TrainingKit/Activities/Wikis/tabid/2816/language/en-GB/Default.aspx>

Workshop

The workshop module allows teachers to integrate a peer assessment instance. It is a complex activity that is divided into five distinct phases.⁷⁰ It allows students to self-reflexively see their own work, and to review their colleagues' works. They read, assess and comment. The pool of feedback is thus quantitatively higher than the teacher's pure feedback. There are possibilities of self- and external assessment: Students are able to comment on and evaluate not only their class mates' works, but, depending on the setting, even their own.

Students are able to read, assess and evaluate each other's work. They see their own uploaded task and their fellow students' papers they were asked to give feedback for. Furthermore, they may evaluate in a first step a work assigned by the teacher to train giving feedback. The students' feedback can be part of the assessment. The peer reviews can be seen as an independent mark or are part of the final grade. The teachers define, for example, how many pieces of work the students must comment on.⁷¹

The teachers, especially in the planning phase of a workshop, take over an important role, because it is complex regarding conception and creation. Then, the teachers take a less active role during the workshop phase, but can also actively participate in the assessment, evaluation and commentary. The students' assessment has two parts: the review of their own submission (80 points by default) and the review of the reviews (20 points by default).⁷² The teacher's assessments can either have the same weight as those of the students, but they may also be more important.

Moodle documentation

- https://docs.moodle.org/29/en/Workshop_module

How to use the activity?

The workshop is used as a peer assessment tool. It is therefore suitable for all projects that are subjected to an evaluation carried out not only by the teacher and can be used at any time of a course. Participants need clear evaluation criteria, so that the assessments remain comparable. Even

⁷⁰ The different phases open automatically. It is, thus, important to check if the dates are set correctly.

⁷¹ Formulate a meaningful introduction to the exercise. This text should include a description of the assignment, the objectives and finally the time frame of the workshop phases.

⁷² Define clear assessment and evaluation guidelines and criteria to help students within the review and assessment process! The more concrete the criteria are, the easier the students' work regarding comments or peer assessment will be. There are different forms of assessment such as rubrics, or comments that must be used by the students within the assessment process.

the formulation of feedback should be practiced before.⁷³ Therefore, it seems to make sense to use the workshop after a short introduction by the teacher, since this activity is less intuitive than others.

- Project work
- Work in small groups
- Feedback

Expenditure of time: ★★★

Setting up the workshop module claims time and considerations by the teacher. The workshop can only start when some input regarding the peer review process or the feedback process is given.⁷⁴

Methods

- **Peer-assessment:** Since the workshop module is an evaluation or peer-assessment tool, it is difficult to speak of methods. What can be implemented with the workshop is the mutual evaluation of project or team work. It should be noted, however, that group submissions are not possible (so far).
- **Critical friend:** The critical friend as described by Maier-Häfele & Häfele (2004: 342f.) can be solved using the workshop module.
- **Create a question pool for exams!** You may let your students create exam questions and corresponding answers on a specific topic and let them then be evaluated by their student fellows. They assess and comment on not only the question's logic and clarity, but also the answers' accuracy.

Further information

- https://docs.moodle.org/29/en/Workshop_grading_strategies
- https://docs.moodle.org/29/en/Using_Workshop
- http://www.ascilite.org.au/conferences/wellington12/2012/images/custom/cox_julian_moodle.pdf
- <http://www.moodleblog.net/2010/02/15/a-brief-journey-into-the-moodle-2-0-workshop/>
- <http://fie-conference.org/fie2009/papers/1254.pdf>
- <http://dl.acm.org/citation.cfm?id=1562877.1562985>
- <http://www2.oakland.edu/elis/traindocs/Moodle/Workshop/index.html>

Giving feedback

- http://www.mindtools.com/pages/article/newTMM_98.htm
- <http://www.entrepreneur.com/article/219437>
- <http://www.dummies.com/how-to/content/giving-constructive-feedback.html>
- <https://www.cabrillo.edu/services/jobs/pdfs/giving-feedback.pdf>

⁷³ Help your students giving meaningful constructivist feedback by providing them with supplementary information about feedback strategies and techniques.

⁷⁴ As an alternative to the workshop a forum can be set up. If no peer assessment is needed, the assignment module would also be suitable as an alternative.

Appendix

Checklist workshop and course design: Key issues

Didactic analysis

Target audience

- How many students do I expect?
- What previous knowledge do they have? (learning experience, use of media)
- What expectations do the participants have?

Teachers

- What knowledge do the teachers have?
- What are the teaching objectives using digital media? (learning support, self-assessments, research environment, etc.)
- What expectations do teachers have regarding the use of media in teaching?
- Is there teacher training?

Objectives of the Institution

- What content should be taught?
- What are the objectives to be achieved?
- What is the position and proportional part of media-supported elements in the curriculum?

Technical framework:

- What software/hardware is available or should be available?
- What learning platform is available?
- Is there an Internet connection?

Timeframe:

- How long does the course take?
- In which form will it be held? (blended learning, virtual...)
- What is the proportion of media-supported elements in a course?
- At what stages digital media are used?

Spatial conditions (when used in classroom teaching)

- Computer/Internet
- flipchart, blackboard, whiteboard, overhead projector, ...

Didactic decisions

- describe learning objectives
- define contents
- select methods/media
- select an assessment method

Instructional approach

- create learning resources
- set up the course/ design the course area
- write texts and set up activities

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Tools & Websites

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