E-LEARNING COURSE DEVELOPMENT IN MOODLE

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Abstract: *Moodle is a software package for producing internet-based courses and websites. It is an ongoing development project designed to support a social constructionist framework of education. There are several possibilities to create a new curriculum in Moodle. We use the basic activities to create a course, but we can use some complementary tools too. There are about 200 modules and blocks which are available from moodle.org website. We use for example AutoView Presenter which allows you to put video on-line with synchronized slides. A web based editing interface is used to configure the video/slide sources and to set the slide trigger times. Beside this module we test and use some modules, which can be very useful in material development.*

Keywords: *e-learning, Moodle, course development*

1. Introduction

Moodle is a software package for producing internet-based courses and web sites. It is an ongoing development project designed to support a social constructionist framework of education. Moodle is provided freely as Open Source software (under the GNU Public License). Basically this means Moodle is copyrighted, but that you have additional freedoms. You are allowed to copy, use and modify Moodle provided that you agree: to provide the source to others; to not modify or remove the original license, and apply this same license to any derivative work. Moodle will run on any computer that can run PHP, and can support many types of database.

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 a student or teacher might approach studying or teaching an online course.

2. Complementary tools in Moodle

There are several possibilities to create a new curriculum in Moodle. We use the basic activities to create a course, but we can use some complementary tools too. There are about 200 modules and blocks which are available from moodle.org website.

We use for example AutoView Presenter which allows you to put video on-line with synchronised slides. A web based editing interface is used to configure the video/slide sources and to set the slide trigger times. Beside this module we test and use some modules, which can be very useful in material development. I give a short list about these modules.

- A Microsoft Word template for easy making Moodle questionnaires. Questions are exported into a Moodle XML file, which can be then imported into your course's question bank. The template allows creating of multiple choice, true/false, short answer, numerical, matching, as well as missing word questions;

- Covcell Audio/Video Conferencing Tool. Conferences can be audio, video or mixed. The number of participants depends on the available bandwidth. Conferences of more than three participants can be moderated or unmoderated.

- Inwicast Mediacenter is a bloc module which adds multimedia capabilities to Moodle so that teachers can easily publish, manage and share audio and video podcasts in various formats (flash flv, mp3, mp4, wmv, mov, etc). The main purpose of this

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module will be distributing (Streaming) video content along with some notes and attachments to the students. Also the students can keep their personal notes about the video/teacher's note.

- Audio recorder. This learning tool allows students to record an mp3 audio file, saving to a local folder. The student can then upload it as an assignment. It works similar to the assignment module.

3. Video and slide sources in Moodle

AutoView Presenter allows you to put video on-line with synchronised slides. A web based editing interface is used to configure the video/slide sources and to set the slide trigger times.

In order to put together an AutoView presentation you will need a Macromedia Flash movie which contains the slides and a video file which can be played as a progressive download from Moodle, or alternatively a video loaded onto a streaming video server.

Slides can be prepared in Powerpoint (or similar formats), but you will need to import your slides into Open Office to create the final Flash movie. Once you have your slides in OpenOffice, use the File/Export menu option. Select Macromedia Flash (SWF) (.swf) from the file format drop down, choose a file name and save the slides. You might be able to use Flash files created by other PPT→SWF conversion software.

Alternatively, if you can't access OpenOffice to create the flash movie, you can use a set of image files. Manual creation of these files could be quite laborious; you will need to export your presentation as JPEG images

In theory any video which can be played by one of the supported video plugins could be used with these presentations. In practice, you would want a video that has been prepared with low bit rate, (56k for modem use or 256k-512k for broadband). The following file formats are recommended: MPEG 4 (.mp4), Quicktime (.mov), Windows Media (.wmv or .asf), Real Player (.rm).

The module requires two parameters, the first is a name, and the second is an XML configuration file which AutoView will use to store the presentation data. AutoView is designed to be portable; using a separate XML configuration file instead of storing information in the Moodle database will make it easier for us to produce implementations for other systems. This file will be created for you by AutoView if you don't have one already, all you need to do is enter the file name you want AutoView to use for the XML config file.

Once you have set the slide titles, the linking between the video and the slides can be set up. Press the play button on the video plugin to start the video. Every time you reach a slide change point in the video, click the Move and Set button. Do this until you have set time indexes for all the slides. You can manually adjust the time indexes by typing in a time index into the boxes on the left.

Fig. 1. *Using AutoView module in Moodle*

4. Making quizzes for Moodle with a word template

This template is good for easy making Moodle questionnaires. Questions are exported into a Moodle XML file, GIFT file, which can be then imported into your course's question bank.

The template allows creating of multiple choice, true/false, short answer, numerical, matching, as well as missing word questions.

Papers are written electronically, using a word-processing application. We recommend a Windows-compatible word processor (WinWord).

GIFT is the most comprehensive import format available for importing Moodle quiz questions from a text file. It supports Multiple-Choice, True-False, Short Answer, Matching and

Numerical questions. Various question-types can be mixed in a single text file, and the format also supports line comments, question names, feedback and percentage-weight grades.

In addition to these basic question types, this filter offers the following options: line comments, question name, feedback and percentage answer weight.

Percentage answer weights are available for both Multiple Choice and Short Answer questions. Percentage answer weights can be included by following the tilde (for Multiple Choice) or equal sign (for Short Answer) with the desired percent enclosed within percent signs (e.g., %50%). This option can be combined with feedback comments.
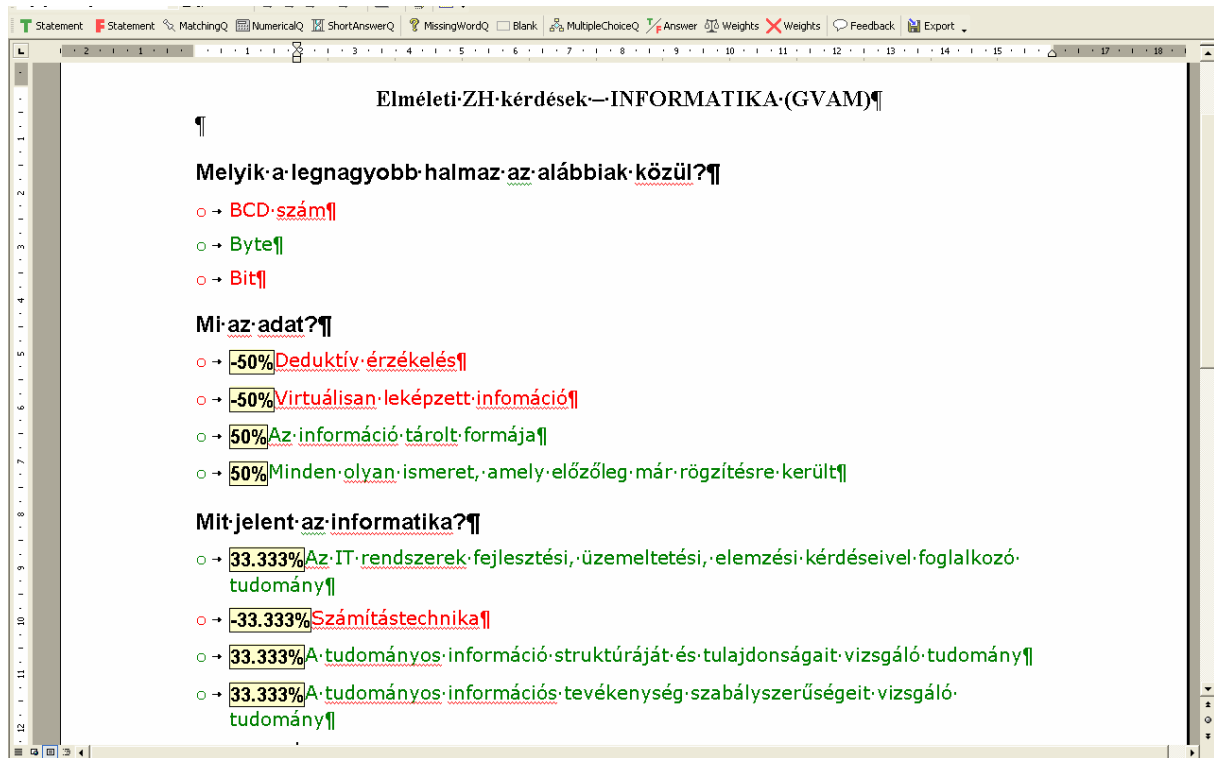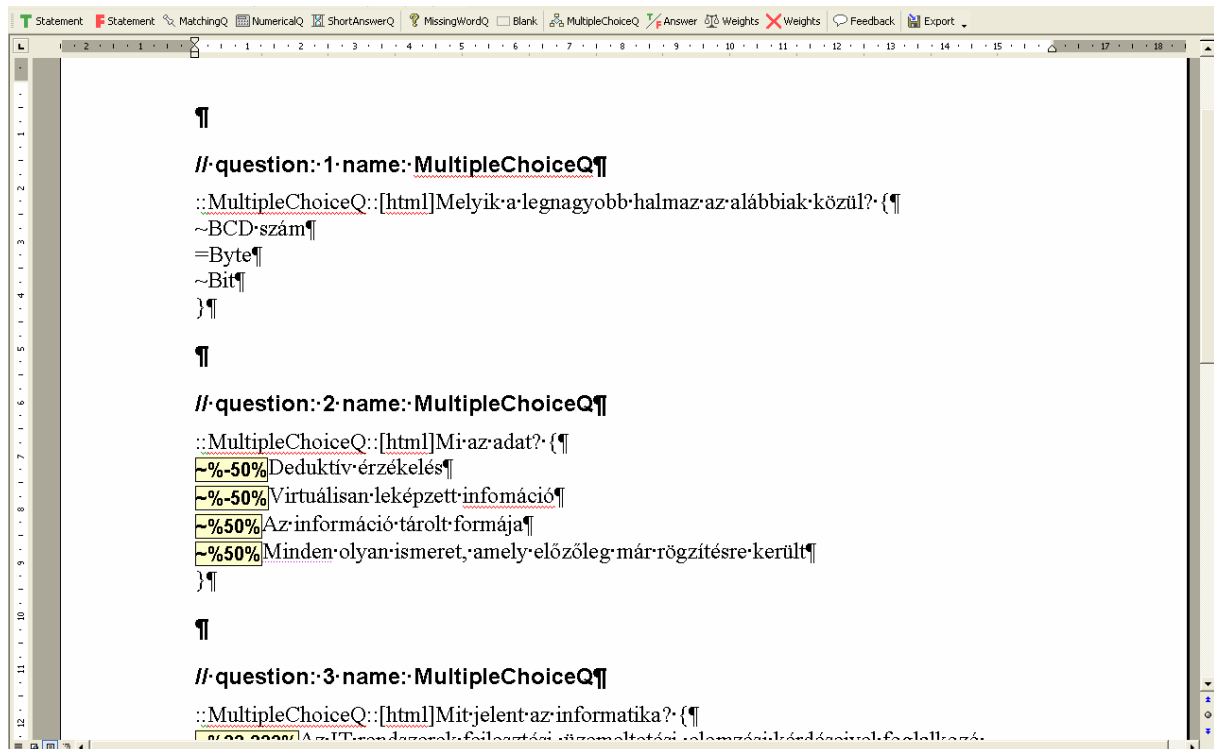
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Fig. 2. *Making quiz with template*

Fig. 3. *Exported GIFT text*

5. Conclusion

In summary, Moodle is a great tool for teachers because it is a platform to save and achieve teaching material easily and a collaborative online platform for teachers and students to learn together. Besides creating courses, it is also very useful to join the online communities to keep yourself updated with the world and to know a

circle of scholars that will truly encircle the globe. On moodle.org website we can easily find a lot of modules, which are very useful to extend our Moodle site with them. These tools help us to make teaching more effective.

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