ENGAGING STUDENTS LEARNING WITH VIDEOS (IN FURTHER EDUCATION PROGRAMMES) MORE ACTIVELY

Aleksandar ZAFIROV, Munich University of Applied Sciences / Center for Innovation in Teaching and Higher Education, Germany
Sebastian GEBAUER, Landshut University of Applied Sciences, Germany
Klaus KREULICH, Munich University of Applied Sciences, Germany
Karl STOFFEL, Landshut University of Applied Sciences, Germany

BACKGROUND

Public tender “Partnership of regions and universities” (“Partnerschaft Hochschule und Region”)

In 2015 the Bavarian State Ministry of Education, Science and the Arts started a public tender process for all Bavarian universities including universities of applied sciences. The aim was to promote ideas and concepts in order to expand academic learning in rural / non-metropolitan areas of Bavaria. In order to gain public funding the following criteria needed to be matched by the applying universities:

- concepts have to include new course(s) of study
- learning takes place off-site at extramural places of learning in rural / non-metropolitan areas and / or online
- socialisation of the students within an academic environment, although they are (partly) studying at extramural places of learning

Project “Digitales-Studieren.Bayern”

As one of five, the joint proposal of the Landshut University of Applied Sciences and Munich University of Applied Sciences was accepted and set up as a project by the end of 2015. The aim of this joint project, named “Digitales-Studieren.Bayern”, is to develop and to offer the further education programme “Engineering and Management Energy & Logistics” in Lower Bavaria.

Cooperation

Both universities, the Landshut University of Applied Sciences (LUAS) and the Munich University of Applied Sciences (MUAS) are responsible for different remits of the project. LUAS assumes the function of the provider of the programme and is responsible for organisational issues, such as promoting the programme, study advisory service, matriculation of the students, etc. Furthermore, it is responsible for building up and maintaining technical infrastructure which includes a video studio, where educational videos are produced, a streaming server to provide these videos to the students and the (technical) equipping of the extramural places of learning.

The Munich University of Applied Sciences provides counselling services in the field of media didactics that help lecturers to set up online and blended learning courses. The
counselling includes topics like didactic methods, communication and collaboration in online and blended learning scenarios, formative assessments. In addition to that the Munich University of Applied Sciences does scientific monitoring and develops a scientifically validated communication concept on learning and teaching at extramural places of learning. Furthermore, training on using Moodle tests and using the LaTex environment within Moodle is given. The Munich University of Applied Sciences also provides conceptual work on summative and formative electronic assessment. Besides counselling services and conceptual work, tests for formative assessment are set up on Moodle.

**Target group**

The target group of this further education programme is (self-) employed and needs to deal with a number of requirements and expectations. Besides employment, students have to deal with expectations in their private lives, and the expectations of their lecturers in order to perform adequately academically and to pass their exams. In addition to these, caring for family etc. may consume a relevant amount of (learning) time. In order to address the specific needs of this target group the overall learning concept of this course of study focuses on online and blended learning scenarios, accompanied by face-to-face seminars and practical laboratory courses.

**DIDACTIC CONCEPT**

In order to provide flexibility to the students most of the courses are designed with a blended learning approach. Blended learning combines ‘traditional' classroom learning experience with online self-study phases in which students are learning independently with learning materials, and have control over the time, place and path of their learning to some extent (Norm Friesen, 2012). Furthermore, some of the courses are designed with a flipped-classroom approach. According to Abeysekera & Dawson (2015) flipped-classroom is a pedagogical set that needs to match the following criteria:

1) move most information-transmission teaching out of class
2) use class time for learning activities that are active and social, and
3) require students to complete pre- and/or post-class activities to fully benefit from in-class work.”

Figure 2: Sequence of a course designed with a flipped-classroom approach.

Self-study phases online
During the online phases students are learning with educational videos, lecture notes, scientific articles and formative online self-assessments in order to prepare for class. Although the students are learning independently within these self-study phases they need to become familiar with the academic culture. This kind of socialisation within an academic environment will not only take place at the extramural places of learning, but also during the online phases, e.g. by including discussions on the scientific subjects presented in the learning materials.

Figure 3: Examples of learning materials used in self-study phases.
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In order to engage students more actively while they are watching educational videos a video player that allows timestamped comments is about to be implemented in the further education programme “Engineering and Management Energy & Logistics”. In the following different didactical scenarios to engage students will be described.

Take notes and get into discussions

Students watching an educational video are able to save comments like notes, ideas and thoughts that come up while watching the video. These comments are saved to the specific timestamp and will be shown every time the timestamp is passed when the video is watched. All comments are only visible to and can only be edited by the author by default, but can be shared with fellow students that also have access to the video. This allows students to provide their thoughts and questions to their fellow students or a tutor or the lecturer. That means comments can be shared with a specific person or with a group for a targeted distribution of thoughts and questions. Recipients are able to respond with text, symbols and drawings, which may serve as a starting point for further discussions on the topic presented on the specific timestamp.

Guide students’ attention

Lecturers have the possibility to integrate cues and questions which appear during the video and are shown to the students. Cues and questions guide the student’s attention and lead them to observe the content in more detail.
Engaging students learning with videos (in further education programmes) more actively

ZAFIROV, GEBAUER, KREULICH & STOFFEL (DE)

Figure 5: Example of providing a cue (bordered red) for students’ guidance.

Explanation on Fig. 5: The given question students should answer is: “Remember the visited training: which didactic methods support learners in the systematic source work?” The given question engages students to remember, collect and share what they had learned before.

The lecturers are also able to respond on students’ answers, e.g. in order to go into deeper discussion on that topic.

Furthermore, lecturers can provide links to scientific articles, exercises and formative assessments related to the topic presented in a specific section of the video. Lecturers are able to control how many seconds these cues or questions are shown, and whether the video should stop for a couple of seconds to ensure students are able to read the given information carefully.

Feedback - deal out and deal with criticism

Another didactic scenario in which timestamped comments may support students learning can be described as “reflection on (their own) learning products”. In this case, learning processes and products like mathematical operations and their result(s), or speeches and presentations, are recorded and presented to lecturers and fellow-students in order to get feedback on their working / learning processes and their learning outcomes.

This scenario will also foster the mandatory criteria “socialization of the students within an academic environment” set down by the Bavarian State Ministry of Education, Science and the Arts in an online learning environment, because before fellow-students can observe and interpret the presented learning product, and give comprehensive feedback at a scientific level, they must know the topic well themselves. According to Altrichter (2000) getting feedback with temporal distance to a learning situation allows learners to analyse and reflect on their learning, and to discover other ways of conduct. Thinking of ways of how to deal
with topic-related problems in the future will help learners to prepare for such situations on a behavioural level, according to Neuweg (1999).

Figure 6: Example of getting feedback on a presentation and a follow-up discussion.

REFERENCES


