

Learner Generated Videos in a Blended Learning Course

Tilman Göhnert, Heike Choi, and H. Ulrich Hoppe

University Duisburg-Essen, COLLIDE-Group, Duisburg, Germany
{goehnert, choi, hoppe}@collide.info

Abstract. In recent years, videos have become an important type of learning resource, e.g. as a popular medium for online learning offerings in general and in the context of MOOCs in particular. Typically experts create these videos with the goal of teaching the viewers. However, creating videos as a creative process on the part of the learners can also foster learning directly. This paper presents an approach for using learner-generated videos in blended learning scenarios and an evaluation of this concept in the context of a blended learning university course.

Keywords: learner generated videos · blended learning · learner generated content · computer supported collaborative learning · learning styles

1 Introduction and Background

Videos have more and more become an important type of learning resource during the recent years. They are especially popular in the context of online learning offerings in general and MOOCs in particular. Usually experts or teachers create these videos with the goal of teaching the viewers. However, recently also the creation of videos by learners has come into focus of innovative learning practice and research. On the one, video production is a creative process that should support the learners' active construction and consolidation of knowledge. On the other hand, such videos are another category of learner created knowledge objects (also called "emerging learning objects" – cf. [1]) that, in turn, can stimulate rich and meaningful interaction through sharing and discussion in a community of learners.

From a pedagogical point of view, our video based learning approach is conceived as a kind of "experiential learning" following the model proposed by David Kolb [2]. As the name indicates, experience is a central aspect of this model and Kolb sees experience as the basis and necessary impulse for the process of learning. He describes the learning process as a cycle, which starts with concrete experience (CE), continues with reflective observation (RO), abstract conceptualisation (AC), and active experimentation (AE), and then begins again with new experiences [3]. The abilities connected to the individual aspects of the learning cycle also can be used for defining different styles of learning. Learners with strong CE abilities and strong RO abilities have a diverging learning style. Similarly, RO and AC abilities form an as-

simulating learning style, AC and AE abilities form a converging learning style, and AE and CE abilities form an accommodating learning style [3].

Our approach presented in the next section defines a multi-phase video creation process, which targets all four of these different learning styles through different activities.

2 Approach

The video creation process presented here contains four main phases, which are all designed as group activities (see Fig. 1 for an overview). In the first phase, the learners prepare and script videos based on course-related tasks. Based on the output of that phase, a storyboard, the learners record and edit the planned videos using screen-cast tools in the second phase of the process. After these two phases, the groups are mixed and before entering the third phase, in which the learners create review reports for videos created by their peers. The regrouping makes sure that students discuss the topic at hand during the review process with others than their video making partners and that nobody is reviewing a video he or she has created. The last phase is a discussion of the resulting videos and reviews with the whole course. The process can be extended by entering one or more additional video-enhancement cycles before going into the final discussion. The video-enhancement cycle replaces the original storyboard creation phase with a storyboard revision phase, which not only takes the task but also the already available storyboard(s), video(s) and review report(s) as input. From there the process goes again through the video creation phase and the review phase, which can then lead again either to an additional video-enhancement cycle or into the final discussion. In the video-enhancement cycle the group formation of the earlier video creation and review phases are restored before entering the respective phases.

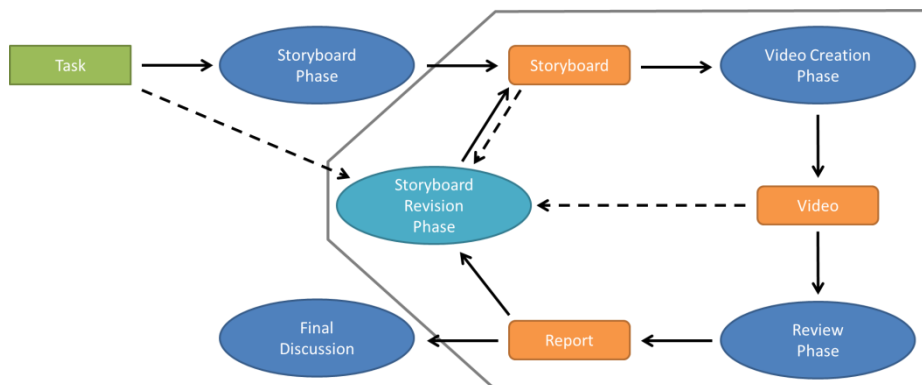


Fig. 1. Overview of the video creation process

Although it is not restricted to specific technical support tools, we designed the above pedagogical concept in conjunction with a technical realization based on the Moodle¹ LMS. For implementing the concept, we used the generally available Moodle plugins for forums, chats, and wikis. The forum is intended as a means for distributing announcements to all learners. The chat and the wiki serve as communication and collaboration spaces for the students within their groups. The chats can be used for volatile discussions, whereas the wikis should be used for collaboratively creating the storyboards and the review reports. For sharing videos in the platform, we use a plugin created in our group, which offers an overview of all videos currently available in the course, upload of individual videos, and video assignments, which accept videos as submission for the assignment.

3 Application and Evaluation

We have applied and evaluated the presented approach in a master level university course on (social) networks analysis with 23 participants. The video creation activity was introduced towards the end of the course. The students' task was to perform a network analysis of the voting behaviour of countries in the Eurovision Song Contest² and was intended as kind of a wrap-up activity connecting different aspects of network analysis discussed in the course. We told the students that the video should explain the analysis process itself, including the choice of analysis methods, and should present and discuss the findings of the analysis process.

Although the course itself was taught as a presence course, we decided to perform the video creation activity as a blended learning activity. The instructions were given both in class and in the Moodle forum. The storyboard creation phase was implemented as collaborative online activity based on chats and wikis. The students were distributed in six groups of 3 - 4 students each. The storyboard creation phase lasted one week and was split in sub-phases: individual wikis for taking personal notes, chats and wikis for working in pairs, and a chat and a wiki to work in the whole group. This split was based on the idea of the Think-Pair-Share method [4] with the goal of fostering collaboration in groups which were formed only for this activity. The videos were created in class to be able to offer the necessary hard- and software for the video creation process and so that teaching staff was accessible to help the groups in case of technical problems with the video production³. The review process was again a homework activity to be done in remixed groups. The whole task was closed by a discussion in class about the findings of the analyses and of the analysis processes used.

For evaluating the concept and the technical implementation, the participating students were asked to fill in questionnaires to classify their individual learning style and on their perception of the activities as such and of the tools used in the activities. The

¹ <https://moodle.org/>

² <http://www.eurovision.tv/>

³ We used the Camtasia Studio screen recording tool for video creation:
<http://www.techsmith.com/camtasia.html>

questionnaire used for assessing the learning style was the one by Honey and Mumford [5] based on the original questionnaire by Kolb. For assessing the acceptance of the concept and the technical implementation we used a self-designed questionnaire.

Of the 23 participants in the overall activity, only 14 returned all questionnaires. Therefore the generalizability of the results is very limited, but they still give a first impression of the acceptance of the concept. This is especially true for the evaluation regarding learning styles, as although all learning styles were present in the course, the accommodating style was only represented by one student. The evaluation showed that the concept itself was in general well accepted; both in the individual phases and the complete process. The majority of students would participate again, given the opportunity. This finding is also backed by the number of participants. Although not all participants in the activity did participate in all phases, the number of participants was far higher than the usual number of participants in the exercise sessions (around 10) and the usual number of people submitting the homework assignments (around 4). However in contrast to our expectation, the video creation phase was the one perceived most positively by all students irrespective of their individual learning styles. For the remaining phases slight differences based on the learning style were found, but especially this part of the evaluation needs future consideration due low number of participants. Regarding the technical implementation all students perceived screen casting as a well-suited method for video creation. Also the Moodle support was generally accepted. However an analysis of the actual students' activities on the platform showed that the Think-Pair-Share approach was not really used with most of the groups only filling the wikis for the final results. This could be partially based on the students already knowing each other before, at least from the course and in many cases also from earlier study activities. This is backed by the fact that many of the students reported having used additional means of communication external to the Moodle platform, which included Skype⁴, Facebook⁵, and Google Docs⁶.

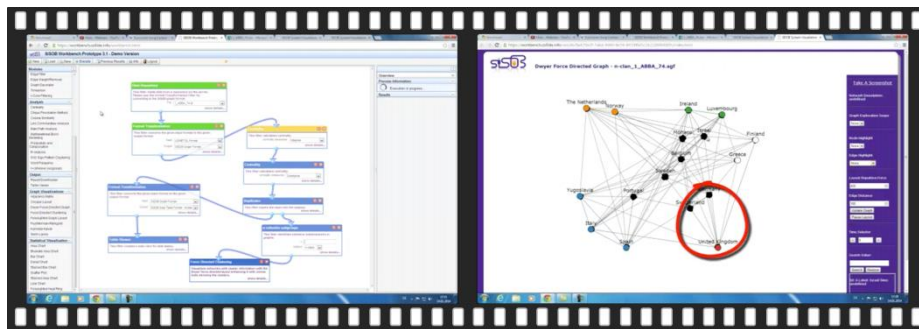


Fig. 2. Frames from a student generated video

⁴ <http://www.skype.com/>

⁵ <https://www.facebook.com/>

⁶ <https://docs.google.com/>

Fig. 2 shows some typical frames taken from one of the participants' videos. On the left hand side is a recording of the network analysis tool that was used in the process and was also used to describe the performed analysis. On the right hand side is a visualization of analysis results which was used to present and discuss the analysis results. All of the created videos showed that the students had considered the task, how the known network analysis techniques could be applied to it, and had successfully applied them. Therefore and also due to the relatively high participation, the activity was considered a success also from the point of view of the teachers.

4 Discussion

The evaluation results based on the 14 returned questionnaires and on an analysis of the Moodle activities showed that the approach itself was well received and seemed to motivate the students. Also the technical realisation of the video creation itself with screen casting tools is promising for future applications. However the collaboration support through Moodle might be reconsidered, especially for blended learning scenarios. Either the usage of external tools should be taken into account from the beginning or tools meeting the expectations of the learners should be integrated.

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