Quality-Improvement of University Seminars through Enhanced Podcasts on yovisto.com

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Hasso Plattner Institute

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Quality-Improvement of University Seminars through Enhanced Podcasts on yovisto.com

Grit Matthias

Department of German Studies
Cornell University
183 Goldwin Smith Hall
Ithaca, NY 14853-3201
gm326@cornell.edu

Harald Sack, Jörg Waitelonis

Institute for Computer Science
Friedrich-Schiller-University Jena
Ernst-Abbe-Platz 2-4
04473 Jena
sack@minet.uni-jena.de
jorg@minet.uni-jena.de

Abstract: Today, using podcast is a well known and more and more accepted tool in academia to store and share knowledge. Podcasting can enhance the learning effect and trains media competences, if done by the students itself. Letting the students create enhanced or video podcast in seminars, instead of giving presentations, allows more educationally valuable time for discussions and feedback in the actual seminar. This paper discusses how this can be applied, what requirements are necessary, and how they can be meet with the help of yovisto.com.

1 Introduction

Nowadays overcrowded seminars have become part of day-to-day university life. In addition most of the lecture time is consumed by those obligatory, credits ensuring presentations held by students. Unfortunately six or more students have to give one presentation, due to the raising number of enrolling students in proportion to the number of academic faculty members. Thus the remaining lecture time often does not leave enough time for mandatory evaluation and discussion. Moreover, this situation might not improve within the near future.

Enhanced podcasts (EP) in combination with the facilities of the academic video portal yovisto.com[1], can solve this problem. The proposed approach will not just warrant the quality of academic seminars despite increasing numbers of students, it will furthermore increase seminar quality. Using EPs for students' preparation raises motivation and students' engagement (as proven by McLoughlin et al. [MCL06]), and it will support fexibility considering time and location. Besides those mentioned advantages, this paper will mainly concentrate on creating (more) quality discussion time in seminars due to relocating students' presentations. The - usually most of the lecture time consuming - presentations will be moved outside the classroom. They will be produced in form of

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[1] http://www.yovisto.com, formerly known as Osotis - Academic Video Search [SW07]

EPs by the students and made available to the other students and instructors on yovisto.com. Those podcasts will serve as mandatory preparation before class, which will leave sufficient time for discussion and evaluation in class.

This paper will first introduce podcast as the enabling technology and yovisto as the Web 2.0 platform to efficiently work with video podcasts. The next section will go into detail on didactical use and possible realization of the proposed approach. Finally, expected results are discussed and the conclusion summarizes the paper.

2 Podcasts as Enabling Technology

Podcasts are the media format, which will enable the didactical concept of moving students' presentation outside the seminar class room in order to create more time, and therefore enhance the quality of seminars. This section will give a briefly technical introduction on classical audio podcasts, EPs, video podcasts, and the production of them.

2.1 The Common Podcast

A pocast is typically a series of digital audio files, also called episodes. What distinguishes a podcast from regular digital audio files on the internet available for download, is the possibility to subscribe to them. The subscription and download of podcasts is usually free of charge. The "label", which marks the single episodes as part of a subscription package is written in a mark up language called XML[2] in form of an XML schema called RSS[3]. For example XHTML[4] is also an XML schema and responsible for a website's form, which is read by an internet bowser that displays the form. Following the same pattern RSS feeds enable Podcatchers[5] (e.g. Apple iTunes) the subscription and download of audio files to the personal computer. Subscription means that once the podcast, which is referenced to by the URL of its RSS feed, is added to the Podcatcher, the computer downloads new episodes automatically when connected to the Internet.

Podcasts are becoming more and more popular and accepted as a new type of media. In addition the production of such podcasts is very easy, can be done by anyone, and with freeware programs (such as Audacity[6]) [BC06]. The content of podcasts can cover any topic, and take any form, for example news, personal diaries, radio shows, and educational lectures. Since the single episodes are downloaded and stored on a personal computer, they can also be moved or copied to portable devices, such as mp3-players or mobile phones. Therefore it is possible to play or actually replay episodes at any time

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[2] http://www.w3.org/XML/
[3] Really Simple Syndication, http://www.w3.org/2001/10/glance/doc/howto
[4] http://www.w3.org/TR/xhtml1/
[5] Programs for downloading and subscribing Podcasts.
[6] Free Audio Editor and Recorder, http://audacity.sourceforge.net/

and place. Podcast episodes are usually MP3- or AAC-coded[7] but they can be extended with images in order to produce EP or video podcast (vodcast), as described in the following section.

2.2 Enhanced Podcast and Video Podcast

Episodes of EPs are usually presentation slides accompanied by audio, usually a voice recording of the person giving the presentation. Every presentation slide is embedded in the episode file as image. Every image belongs to a particular position of the audio stream. If the playback reaches this particular position the image is displayed automatically. In addition, cue points can be placed into the file in order to refer to particular positions, which enables the producer to chapterize the episodes. The player software can then jump to particular customized chapters. A very common use of EPs in e-learning is to record presentations, lectures, and speakers. Slides of MS PowerPoint- or PDF-presentations can easily be embedded and synchronized with the spoken content.

Contrary to EP, in a video podcast the episodes are made up of regular digital video files. Like EPs videos have become more and more popular in podcasting because they have the the potential to offer superior support to visual learners [MW06]. „They not only can show examples that would be used in a classroom, but also give the distance learning student a more personalized experience with the instructor."[BC06].

2.3 Production of Podcasts

Producing podcasts is done in two steps: The first is to record and master the episodes. The second step is to publish them in the World Wide Web (WWW). That can be done either on your own WWW server or on WWW hosting services.

The audio podcast episodes are very easy to produce. Every regular audio recording software or hardware can be used to record the MP3 or AAC audio files. As already mentioned this can be done through available freeware (e.g. Audacity). For publishing the episodes on your own a RSS file must be created additionally to the MP3 or AAC audio file. For this many different tools can be used, even a simple text editor would be sufficient [BC06]. Yet, the most common way to create the RSS feed is to upload the podcast episodes to a podcast capable WWW hosting service (e.g. podspot.de, yovisto.com). The corresponding RSS feed is generated automatically by the hosting service. Thus, the author or publisher of the podcast must not have any knowledge on creating RSS feeds or knowledge about HTML or XHTML. This is the least time consuming method.

To create an enhanced or video podcast is a bit more complex than producing a regular audio podcast. The difference is that you need to synchronize the images with the audio or rather record a video with camera equipment or a screen capture software (e.g.

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[7] Advanced Audio Coding

Camtasia Studio[8]). For this purpose you can use software like GarageBand from Apple or the Movie Maker from Microsoft [Me]. Even novices can create enhanced or video podcasts with this software out-of-the-box. The software creates the publishing-ready episode file, which can be uploaded to podcast hosting services such as yovisto.com. Appropriate RSS feeds for content syndication are generated automatically, thus no knowledge on creating RSS feeds is required by the author. In contrast to other video hosting services like YouTube[9] or Sevenload[10] yovisto.com provides additional useful features to work with video data [SW06]. These are: to search within videos, to place tags and discussions on any particular position of videos, and to give the users the possibility to interact with each other and share knowledge.

2.4 Publishing Enhanced Podcasts with Yovisto

Yovisto is a Web 2.0 platform to upload, share, search, tag, and discuss academic videos. Yovisto provides an automated mechanism to generate a full-text index of the videos. Additionally with yovisto it is possible to describe video content collaboratively and finally search within the videos. Users can place keywords or labels (tags) to any position within a video (collaborative tagging) and they can start or carry on discussions belonging to any position within the video. Moreover, users can write or edit wiki-pages to enrich the video content with further information, such as images or hyperlinks. The content based search functionality of yovisto is the most important additional benefit for the user and allows an efficient search through yovisto's repository (currently providing about 5000 videos). Frydenberg notes the deficit of not being able to search within podcasts (see [Fr06]), but with yovisto this deficit of accessibility is obsolete.

To publish a new podcast with yovisto.com the following steps have to be done: The first step is to create a new lecture series. A yovisto.com lecture series represents the podcast. Because of the academic background, in yovisto a lecture always has to belong to a university or equivalent organization. Every information on that lecture such as title, description, author etc. are automatically forwarded to the RSS feed, so the user does not need to care about this. The podcast is now subscribeable (see figure 1). The second step is to upload a video. The video represents an episode. The video upload form prompts the user to enter some metadata for the episode such as title, subtitle, descriptions, and some more. After the upload, the video processing engine starts to transcode the video into the flash-video distribution format to view it on the yovisto.com website. At the same time the yovisto.com engine segments the video and analyses its visual content to extract written information (intelligent character recognition) [SW07].

Once a video is uploaded and automatically analyzed through the yovisto.com engine, the user can start to work with it or subscribe the podcast (see figure 1). Working with the video means: (1) collaborative tagging, (2) having discussions, and (3) creating of wiki-pages.

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[8] http://www.techsmith.com/camtasia.asp
[9] http://www.youtube.com
[10] http://www.sevenload.de

Figure 1: Overview of a lecture podcast at yovisto.com: (1) RSS feed of podcast to subscribe with podcatcher. (2) Upload of new episode video. (3) Creation of new podcast lecture. (4) Episodes of the current podcast.

As already mentioned, with yovisto.com users can place tags and discussions on any position within the video. Figure 2 shows (simplified) how this can be done: While watching the video the user can enter a tag or keyword into the input text field next to the video player. At this instant the playback stops. After submitting the tag by hitting the return key or pressing the send button, the playbacks starts again, thus the user is not missing out on something in the video. Then the tag appears in the tag cloud above the search field. There are different modes on the tag cloud. The user can choose between his own tags and the tags of all users and furthermore between the tags of all videos and the tags of the video currently playing. Tagging helps the user to recover his own highlighted and marked locations very quickly, but it helps also other users to find this locations within the video efficiently and comfortably.

Starting a discussion is done as easily as placing a tag. By clicking on 'new discussion' the playback stops and the user can enter a statement or question. After submitting text the playback goes on. Note that a discussion is also bound to a particular position in the video, this helps to assign the discussion to a scene and to quickly navigate to this location, without the need of sliding the video back and forth manually.

For every episode and every podcast itself, the user community can maintain wiki-pages to collect and manifest more information about the video. This wiki-pages typically track the version history to avoid vandalism and support backup.
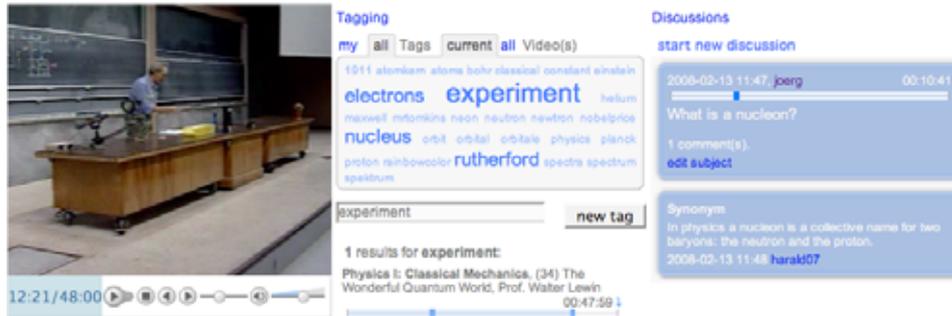
Figure 2: Collaborative tagging, and discussions.

The next section will discuss the didactical aspects yovisto.com will impact on if used in academic seminars.

3. Didactical Use and Realisation

The real didactic potential of EPs is only fully used, if students themselves are producing them and publish them on yovisto.com. There, they are available to their peers as well as to the teacher.

The foundation follows the principle that students record their presentation and publish them on yovisto.com as episode of an EP; most importantly they publish it before class, in which their presentation subject will be discussed. The presentation slides for the EP are identical with a presentation being held in person during the seminar. The students then simply record their voice explaining their slides. Doing this will move students' presentations out of the classroom and leave enough time to discuss the seminar subject itself. The other students are required to listen and watch the presentation as preparation for the class, which can be done wherever and whenever they Since yovisto.com offers the possibility to tag and to bookmark any position of a video, it is no longer necessary to watch the entire episode at once. Students can tag or bookmark the EP reverting to the exact position whenever they like.

In this way, a seminar presentation does no longer have to be held by four or more students. Now two or three groups of one or two students can produce independently an EP episode about the same topic and publish it. This also provides the opportunity to discuss the given topic from different perspectiv es and approaches.

3.1 Course Design

In this section ways will be explained to structure the class and organize presentations topics. The EP production will be explicitly didactically discussed and ways to include additional course material will be demonstrated.

Course Structure: The course will be structured by creating a lecture series. This can be

done even before publishing the first episode of the EP. Once a lecture series is created there is a possibility to create a wiki-page just for this lecture series. The wiki-page can contain a description of the course and it can contain links to other materials, webpages, PDF-files, and digital material (graphs, pictures, etc.). Since the potential of a wiki-page is in the collaborative writing function, this wiki-page for the lecture series can be used to structure the class. More explicitly: to provide a list for the students containing all the possible topics for the students' presentations. The students then can sign up for the presentation, by simply editing the wiki-page.

In order to attach additional material to a single EP episode also a wiki-page can be used. That is, besides the wiki for the lecture series a wiki-page to every single. This could be used by the producers of the episode to add comments and material, even long after their presentation was published.

Podcast Production: The mentioned presentation, which are held by the students, traditionally in class during lecture time, will now be produced as EPs by the students. This is especially effective for classes with a large number of students, since smaller groups can prepare for the same topic independently, unlike before when they had to prepare and give one presentation together, since there is a limited number of presentation topics compared to the large number of participating students. Considering the situation of today (at least in Germany) the number of students will rise unproportional to the academic faculty members. Even in High School education podcasts, produced by students are used to provide them with the opportunity to voice their opinion, or to practice a foreign language, since the present situation of sometimes 30 students in one class and the limited time in class [Do08].

Frydenberg describes that: "[...] podcasting in an academic setting has become an accepted one-way channel of communication between teacher and students [...]" [Fr06]. So through students becoming producers, this one-way channel can be reversed and diversified, since students produce videos for students and for the lecturer.

Especially in K-12 education - lots of times also for foreign language education - numerous successful podcast projects already exist, where the students themselves are the producers (e.g. English homework-podcasts for German students [Do08]). Therefore if High School and sometimes also Junior High School students can produce podcasts, only being technically instructed through a handout (see Dorok [Do08]), then it will be no insurmountable obstacle for university students to produce EPs.

However producing an EP episode requires different skills than preparing a traditional presentation, and it demands focus on different aspects. First of all the technical knowledge, can be provided through worksheets, which could be implemented into the lecture series' wiki, or it could be explained in form of an EP episode itself. Or it could also be tutored by volunteer students, as it was successfully done by Chan et al [CLL06]. This might seem like extra work at first, but it will also grant students extra qualification. This qualification can be documented and awarded as additional acquired media skills. In addition as reported by many project, where students produced podcasts, the production itself has a very positive affect on students' motivation, for example as

described by McLoughlin, et al. [LLC07], and Frydenberg [Fr06].

3.2 Utilization

Bennett and Cooper [BC06] used podcasts to support instruction. Their students' reacted very positive to those podcasts, because they obtained the ability to repeat, stop and review instructions and because they were able to control the speed of the materials to coordinate with the executions of the procedure. Applied to the proposed concept this would mean, students can customize and individualize the reception of the presentation according to their own learning style. They can bookmark a certain position and return to it whenever they like without having to fast-forward the video of the presentation every time. As proven and stated by Bennett and Cooper [BC06] this is highly appreciated by students.

By using the tagging function of yovisto.com the video can already be structured and indexed by the producers placing tags at distinct time positions in the video. Important segments of the video can also be emphasized by tagging. It can be done, e.g. by the teacher to draw students attention to important information (e.g. relevant for exams), by other students, or by the producers.

To additionally benefit from their produced videos besides the class presentation, students can use them for portfolios, especially for e-portfolios. With such a portfolio they can demonstrate to their future employers their skills in producing EPs as well as in creating good visual presentations with adequate audio descriptions. Such a portfolio could also be created directly on yovisto.com, in their user profile. This user profile can be made public and freely customized, including own videos, lecture series they participated in, and other digital.

3.3 Interaction

In traditional seminars with students giving presentations during the lecture, which usually takes up most of the lecture time itself, not much time is left for in-class interaction among the students or between the students and the teacher.

As already mentioned above, not just using the podcast for interaction - multiplying and diversifying the channel from the instructor to the students, from students to students, and students to instructor - especially the discussion function provides a solid foundation for interaction between students, as well as students and teacher, and vice versa.

Discussions, feedback and evaluation can be proceeded in three different ways: before class independently on yovisto.com, during class, or after class again on yovisto.com. This will also increase the quality of seminars, since so far there is usually little time for evaluation or feedback.

Discussion: Students and the teacher can voice their questions and comments while watching the video, and start a discussion even before the class, since comments are

visible to their peers. This discussion can even be placed at the relevant part of the video, which is extremely convenient, since everyone can view the video segment right where the discussion is taking place, there is no need to refer to a certain time of the video with everyone intending to plan on participation in the discussion having to fast-forward to the certain segment of the EP episode first. Which might actually decrease the willingness and participation in discussions. This functions also enables to continue a class discussion even after the class itself.

Feedback: Using the discussion function of yovisto.com, feedback can also be given online. Two different ways of feedback are possible. One is the feedback to the presentation itself (e.g. structure, visualization etc.). Since the production of EP episodes requires special attention to the visual aspects of the slides, as well as aural presentation skills. The other type of feedback would concern the content itself. Feedback can be given by the peer students of the producers or by the teacher. This feedback can then be used by the producers to eventually improve there EP episode (improving the appearance of the presentation, clarifying certain points, or correcting the content), since the possibility exists to upload new versions and replace the old version at any time. Peer students can also use feedback to voice uncertainties they come across studying the video before class, considering the content or how it is presented.

Evaluation: Evaluation can be achieved just like discussions and feedback. Hence new ways of evaluation can be created through the integrated tools offered by yovisto.com: Presentations can be evaluated by students of the same seminar, by students from higher classes, by tutors, by the lecturer, or by the public. Just like for feedback, once the video is evaluated, the producers have the opportunity to upload an upgraded, corrected version of their presentation. In addition lecturers have the opportunity to search through presentations of earlier seminars on yovisto.com and compare them to presentations of the current seminar to avoid plagiarism.

4 Conclusion

Giving a seminar presentation in person in front of a real audience requires different skills as the offline production of EPs. EPs cannot replace the student's experience of speaking live, giving a coherent talk without the possibility to interrupt and upgrade, overcoming nervousness and making contact with the audience. Seminars offering EPs cannot replace traditional seminars, but they offer the possibility to meliorate the difficult situation in today's overcrowded seminars and give students the chance to broaden their skills.

This work proposes an approach to enhance the quality of seminars in academia and school through the use of podcast in combination with the platform yovisto.com. Producing podcasts on the part of students increases the students' motivation, students' engagement, and media skills, as shown by McLoughlin [LLC07], and Frydemberg [Fr06]. Podcasts used in seminares are often limited to the lenght of some minutes because of the lack of content based accessibilty. With yovisto.com and its automated and collaborative facilities for resource annotation such as tagging, dicussions and wikis

it is possible to search within and to structure the podcast videos, for the first time. These are the requirements yovisto provides for a well equipped environment to produce and publish podcasts in an academic context. This gives the possibility to move the students presentation out of the classroom, to leave more quality time for discussion and feedback.

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