Hyperlink and annotation as solutions to Comprehension and Engagement problems with multimedia and video

Gisella Paoletti, University of Trieste, Dept. of Humanities, paolet@units.it

Abstract
The contribution that I would like to present during the workshop concerns the E-Learning approach implemented in my University for post-graduate training preparatory to teaching and for courses in several Departments. We organized blended courses involving the use of multimedia video and collected data on how the resources were implemented and on the reactions and preferences of users.
We undertook a process of reflection, revision and reorganization of the produced resources that takes into account what is suggested by our users and from research available in related fields. In particular, we are analyzing the effect of factors such as the duration and complexity of the video on attention, understanding, engagement of audio-visual resources.
The purpose of the analysis is to identify problems and solutions in the production of resources, for the sharing of practical and conceptual knowledge, overcoming constraints and resistances that oppose traditional teaching tools and new ones (but already widespread and familiar).
We all witnessed the advance of the video resources, which at the moment seems to be overwhelming. In fact today, unlike a few years ago, the production of a video does not require advanced technical skills and to own powerful programs. With an equipment available to almost everyone, it is possible to produce multimedia resources which have the advantage of facilitating the processing of the material through a double visual and verbal presentation and it is possible to provide resources that can be used and re-used profitably in education and training (e.g. microteaching). However, we know that some of the features of a video may limit its effectiveness: the length (which is affected by our concentration and attentional limits and may causes comprehension difficulties, as in Risko et al. 2012; Paoletti, 2016), the density and complexity of the information which often make it necessary for the student to watch and re-watch parts of the video that are sometimes not well marked and traceable, which might lead to the dropout of the resource (Kim et al., 2014).

As a lecturer, I took care of these issues because I produced a variety of presentations for my courses at University and in postgraduate disciplinary and vocational teacher training (PAS and TFA) at my University. In an attempt to reconcile the students demands of participation with logistic and time management difficulties, we proposed and tested various methods of presentation of the lessons (in presence, blended) producing a series of multimedia videos (Paoletti et al. 2014). We are now engaged in the reorganization of these resources. The purpose of editing is to improve readability and comprehensibility, interaction, and appeal of resources, which we know can support motivation and permanence/engagement with the resource (Lenzner et al. 2013; Phillips & Chaparro, 2009).

As a researcher I was involved in the analysis of video use because I am interested in its effectiveness and in the conditions that can cause cognitive load of multimedia presentations. The reference is to research fields which study attention, understanding and learning from multimedia resources (Cigognini & Paoletti, 2015).

Finally I work on e-learning by coordinating the e-learning activities of my University. I propose to lecturers from different disciplines a pedagogical reflection on the assessment of the resources we produced. I recently coordinated a series of meetings on production and publication of online material. In particular I recently organized a meeting on the use of video in teaching scientific and humanistic courses. We have analyzed aspects related to the duration and the number of sources (audio, video, external and internal links) that can be used, as well as the assumption that a personalization of the resource by the addition of a talking head can contribute to the interest and engagement with the resource (Kizilcec, 2015). As a preliminary result of the meeting it can be said that certain habits are very consolidated. It is difficult to adapt to the suggestion of shortening the lesson. It is difficult to organize the lesson in order to lighten the density of information. And it may be difficult to create a resource which correspond to one’s intention.

Whether University students are different from MOOCs users is an open question. There are probably differences among users of open resources on general topics, the famous MOOCs, and students of standard University courses. Yet the results from Moocs data bring to our attention the fact that our students has limited attention and prefers short resources, dropout the long ones, are facilitated by well-built and well-marked resources. Research is needed in order to verify the conditions which may facilitate learning as respect to these variables.

I would be very interested in a comparison and discussion with specialists from different contests and disciplines. I am particularly interested in the themes of audiovisual information density and
length and on the solutions, such as indexing, segmentation. I am also interested in the effects of adjunct as captions, transcripts, hyperlinks, annotation. Of course, other issues will be very welcome. It will be interesting to analyze new problems and new solutions.


