

What's Going On? A customisable video-interpretation tool

Steve Bond, Jerome Lewis & Caroline Ingram
London School of Economics and Political Science

Introduction

DART (Digital Anthropology Resources for Teaching) is a JISC/NSF-funded project involving the London School of Economics (LSE) and Columbia University in New York, aiming to address problems in the undergraduate teaching of anthropology through the development of digital learning tools and other learning activities. At Columbia the team are addressing large-scale issues through the development of digital library technologies, whereas at the LSE we are working on the small-scale, building digital learning tools to tackle specific teaching problems in anthropology. The tools we have developed are designed to be completely customisable, so that their content can be replaced, and the tool re-used for teaching a different subject.

In this paper we focus on one of these tools, a video-interpretation exercise that we call "*What's Going On?*". We explain how the tool has been used in teaching at LSE and evaluate its success. We also show how the tool can be customised to use different content, and provide evidence of its successful re-use at another university.

What's Going On?

At the start of the DART project, the LSE Department of Anthropology held an away-day with staff to try to identify the key problems in the teaching of undergraduate anthropology. The main issue that emerged was the paradox that, while anthropological knowledge is constructed by means of ethnographic fieldwork, our students never actually get to carry out fieldwork themselves. Therefore they are always reading other people's interpretations of data, and tend not to question critically the conclusions that those people come to. We wanted, therefore, to find a way to give students a sense of what it means to collect and interpret data in an unfamiliar environment.

In *What's Going On?*, a student watches a 6-minute video clip of an event involving a Mbendjele hunter from Congo-Brazzaville. The video is enhanced by way of subtitles (text overlaid on the video image) and captions (text and hyperlinks alongside the video image) which are independently synchronised with the video playback. At first, the subtitles and captions are consistent with the level of knowledge that a fieldworker might have after only 3 months in the field. The subtitles are therefore very incomplete, with only basic phrases translated, reflecting the poor grasp of language that a fieldworker generally has by this stage. The captions provide links to additional information that is similarly sparse. After watching the video, the students write a 150-word analysis of the scene, explaining what they think is "going on".



[Currency in Conqo-Brazzaville](#)

03:09.5

Figure 1: The *What's Going On?* interface

After this first exercise is completed, it is repeated in the following class, this time with the subtitles and menu links enhanced to represent 9 months' experience, and the students submit a second, 300-word analysis in which they also reflect on any changes in their understanding. In the intervening week they will have had a lecture/tutorial class in which some of the background is explained to them. Finally, after a third viewing, representing 18 months' experience, they submit a final 600-word report. All pieces of work are assessed, and discussed in class after the end of the exercise.

In this way, students learn first-hand how anthropological knowledge develops incrementally and is constantly revised, that no ethnography is ever 'complete', and they discover the extent of their own subjectivity and cultural biases. They do this exercise at the same time as reading an existing ethnography of the Mbendjele, leading them to critically question how the ethnographer arrived at his conclusions.

You can try the Mbendjele *What's Going On?* exercise, as used at LSE, at:

<http://clt011.lse.ac.uk:8383/Steve/wgo/wgoLevel1.html>

Hotspots

As well as subtitles and captions, *What's Going On?* can also deliver 'hotspots' in synchronisation with the video. These are highlighted areas of the video image that appear at specific moments during playback. When clicked, they bring up a piece of text or a hyperlink that relates to the highlighted area.

We have not used this feature for the Mbendjele exercise described above, because we didn't have any particular need to relate information to specific areas of the image. However, it is a feature that could prove useful in other contexts.



Figure 2: The hotspot feature

The hotspot feature is demonstrated below, using a different video clip. Please advance to 20 seconds to find the hotspot:

http://clt011.lse.ac.uk:8383/Steve/wgo/pegtymel/wgo_hotspot.html

Authoring Suite

What's Going On? is a Flash movie which loads up all its content from external files, based on the settings specified in a configuration file. All the data is stored as XML, and the video clip itself is converted to Flash. So, changing the content is a matter of editing the configuration file to point to a new piece of video, and creating new subtitle, menu and hotspot files to accompany the new video.

To facilitate this process, we have created a suite of authoring tools for *What's Going On?* that will allow a teacher to select a video clip to use in the exercise, and interactively add subtitles and captions to the clip via an easy-to-use interface. A hotspot editor is also in development to complete the suite.

The major remaining obstacle to re-use by teachers is the need to get the video clip into Flash format, which requires dedicated software. Until Flash's video-handling facilities become more flexible, this situation seems unlikely to change.

The link below allows you to try the authoring suite for yourself. Please ignore the first 2 steps and follow the instructions from step 3 onwards, using the example video clip *demo.swf*:

<http://clt011.lse.ac.uk:8383/Steve/wgo/authoring/step.html>

Evaluation at LSE

The tool has now been used and evaluated with two successive years' cohorts, and results for the third year have been collected but not yet analysed. We did not make any substantial changes either to the tool itself, or to its implementation, as a result of

the first year's evaluation results, so effectively we have been evaluating the same thing in each year.

The main instrument of evaluation was a student questionnaire. In 2004, we used a single, online questionnaire at the end of term, which gave us a 30% response rate. In 2005, we changed to using a series of short, paper-based questionnaires that were completed in class. This raised the response rate to 100%.

The results from both cohorts showed strongly that students enjoyed the exercise, that they felt it helped them to engage with the text and to understand the analysis of ethnographic data, and that they felt that the exercise was an effective way to learn. When asked what the point of the exercise was, and what they thought they had learned from it, their answers corresponded well with our intended outcomes. Few technical problems were reported, the principal complaint being an occasional slowness of the video – either to load or to play back. When asked how they would improve the tool, the most popular suggestion was to make the video image larger – however, there is an obvious tension between this and the problem of slow downloads. The relative rareness of such comments suggests that we have this balance about right, so we have no plans to change the video size at present.

Use at Waterloo

The customisability of *What's Going On?* has been demonstrated in practice at the University of Waterloo in Canada, who used the tool in anthropology teaching during the autumn term of 2005.

The aim of the tool at Waterloo was to address the distinct pedagogical needs of the students on the course, who are drawn from both arts and engineering backgrounds. The latter group express curiosity about the specific processes involved in collecting anthropological data, but they have tended to be sceptical of anthropological claims to 'truth'. *What's Going On?* enables students to "collect" ethnographic data and make anthropological inferences, and thus understand the nature of the knowledge obtained.

As at LSE, the students watched a short video clip three times over the course of several weeks, each time with more verbal information in the form of subtitles and captions to simulate the growing understanding that occurs during ethnographic fieldwork. The clip was taken from an ethnographic film showing the activities of a group of Chukchi reindeer herders in northern Siberia. During the exercise, information about the past and present lives of Chukchi was included in class lectures and assigned readings. The students' task was to write short, ethnographically descriptive letters from 'the field' to their parents or professor. There was an enormous amount of visual information in the 6 minute excerpt, including the preparation of new skin clothes, taking down tents, lighting of a ceremonial fire, roundup of the reindeer herd and sacrificial slaughter of two deer, painting human faces with reindeer blood, and drumming.

The new content was added to *What's Going On?* by an undergraduate research assistant at Waterloo, with advice provided from the DART team. This process was very straightforward and in fact was done before the development of the authoring tools described above.

Student attitudes to this *What's Going On?* exercise were measured using a similar questionnaire to that used at LSE, which 77 students (about half the course) completed. All respondents reported that they learned something about Chukchi

reindeer herders by using the tool, and slightly more than half (53%) said that they were interested in learning more about Chukchi as a consequence. Most students understood the explicit goals of the exercise – to learn something about ethnographic data collection and analysis, and the overwhelming majority of respondents (81%) claimed to have learned something about how to analyze ethnographic data. However, their written work was less convincing. While a few of the essays showed ethnographic insights based on their observations of the video footage, overwhelmingly the students transferred the verbal data, especially the information linked to captions, to their essays.

The teaching staff at Waterloo have concluded from this evaluation that some changes are required to the content of the information provided with the tool, and to the accompanying lectures. They will also alter the instructions for the writing assignments, to stress the need to *interpret* the visual data.

Conclusion

What's Going On? provides a simple, portable means of enhancing video with subtitles, captions and hotspots. It has been used to simulate fieldwork in anthropological teaching at LSE and the University of Waterloo, and has been a popular success with students at both sites. The tool is fully content-independent, as demonstrated by its re-use at Waterloo. A newly-developed authoring suite should greatly simplify the customisation process in future.

The tool is freely available for use in higher and further education. We are keen to see it applied in different subject areas, and we can provide support to anyone who wishes to use it in their teaching. Please contact the authors to find out more.