

Short Communication

Podcasting is Dead. Long Live Video!

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Introduction

Podcasting (an automatic mechanism whereby multimedia computer files are transferred from a server to a client, en.wikipedia.org/wiki/podcast) is becoming increasingly popular in education. Although podcasts enable students and teachers to share information anywhere at anytime, the most frequent application of the technology to date has been to allow students to download audio recordings of lessons or lectures. Over the last two years, I have conducted trials of podcasting involving two campus-based undergraduate courses on which I teach. Working with two cohorts consisting of 150 first year and 90 second year biological sciences students, I delivered weekly learning support materials to these groups of students. These podcasts were intended to support learning on these courses and did not directly replace lectures. They were most definitely not recordings of previous lectures. Rather, the podcasts were intended to give feedback on students performance on the previous weeks assessment, pointing out areas where many students had struggled and suggesting strategies for improving future performance.

However, both quantitative and qualitative analysis of the use of audio podcasts on these modules collected via download statistics, module questionnaires and focus groups clearly showed that these were not popular with students. These audio files generated an average 0.30 downloads per student per file. Direct file downloads (generated by students clicking on hyperlinks) accounted for more than twice as many file accesses as subscriptions to the podcast RSS feed. The main reasons cited for not listening were that students said they "didn't feel the need" or there was "not enough time". Technical issues and unfamiliarity with podcasting were also cited by a minority of students as significant barriers to uptake. Most strikingly, the students also regarded podcasting as "entertainment" or "not relevant" to academic study. The idea that all new undergraduates are an enthusiastic part of the 'Web 2.0 generation' is clearly optimistic.

Although I was disappointed with the response to my audio podcasts, I was relieved to find out that I am not alone. A recent white paper from Carnegie Mellon University on podcasting corroborates these findings (Deal, 2007). Students do not listen to all the podcasts provided even when given the opportunity to subscribe to an RSS feed (Cann, 2006) and they do not view the podcasts as a replacement for lectures, although some do see them as helpful as additional support materials. In classes where the podcast replaces the lecture (and the time is devoted to practical study and labwork) they resent the extra time needed to listen. The paper concludes that "podcasting does not contain any inherent value and is only valuable inasmuch as it helps the instructor and students reach their educational goals". Although students are enthusiastic about academic staff providing podcasts, particularly as replacements for missed lectures, the actual take-up of audio files is low (Guertin *et al*, 2007).

Not easily put off by a little setback, I abandoned my podcast learning support model in favour of direct access to short online videos in the style of YouTube (www.youtube.com). These were

delivered via an institutional VLE without the option to subscribe via RSS, since this choice had previously been rejected by the students. The videos ranged in length from three to five minutes and consisted of a short "talking head" introduction, screencasts (digital recording of computer screen output with audio narration), and occasional interventions by a puppet character with helpful tips. Samples of the material produced can be seen at microbiologybytes.com/maths/videos.html.

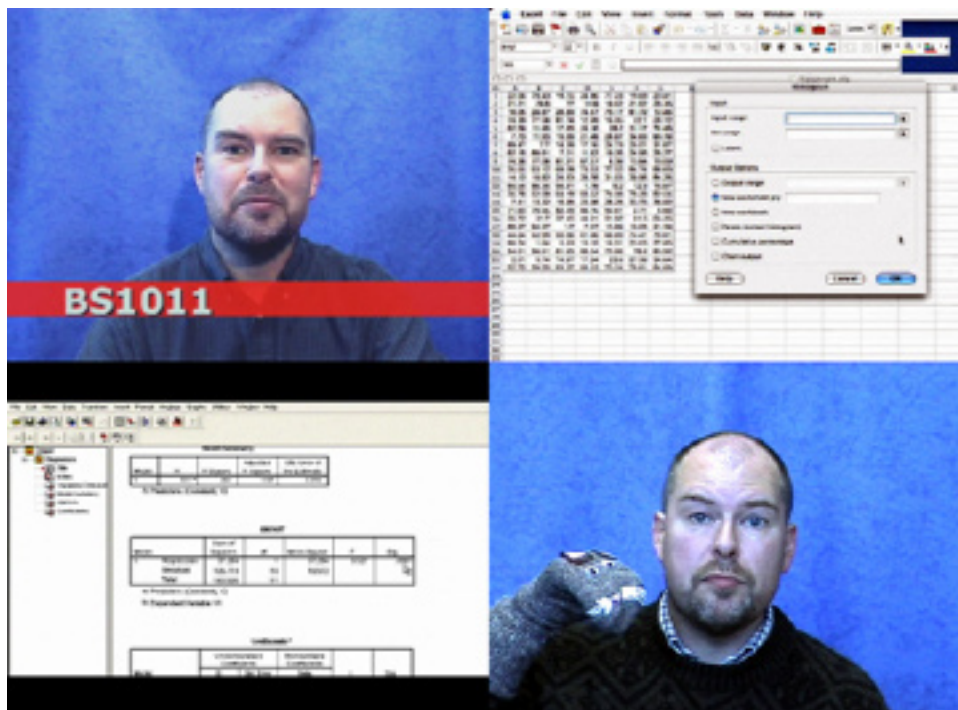


Figure 1 Screen captures of videos described in the text. Online samples of the material produced can be seen at microbiologybytes.com/maths/videos.html

In stark contrast to the audio podcasts, the video format generated an average 1.75 downloads per student per video, over five times the response rate from the same cohort to the audio files provided the previous semester. Focus group comments supported the positive reception for the video format in comparison to the audio podcasts. 9/12 (75%) of students had watched one or more of the videos (c.f. 9% for the podcasts). 11/12 (92%) had watched an online video clip previously, implying that familiarity with this format as well as direct "click and watch" access was responsible for much of the increased uptake. Other comments from the students included "Much better than the podcasts" and "I prefer the videos to your lectures".

A further trial of the video format was carried out on a cohort of 90 second year students to support a set of statistics assessments. The format was the same as for the first year cohort but without the puppet character. This group responded with an average of 0.92 downloads per student per video, nearly three times above the response rate to the audio podcasts.

Widespread use of online video learning objects has implications in terms of staff resources and training. Traditional HE audiovisual departments are not ideally placed to produce this type of learning material. Although seemingly effortless, the production of successful online videos is a highly-skilled process, requiring an understanding of user psychology and behavior, which is quite different from that of television viewing. The following brief taxonomy of online

video (Table 1) is derived from Rocketboom, the most successful video podcast (Rocketboom, 2007).

Table 1 Video Format, Viewing Platform, Users Psychology and Best Practice

Viewing platform	Best format for viewing	Acceptable duration of video
Mobile devices, tiny screen	Short format, viewer close to screen in active mode. File size, length and surrounding environment may be a serious issue to access and viewing	< 5 min
Computer monitor, medium screen	Short-medium format, viewer fairly close to screen, sitting vertically in active mode (wanting to click, short attention span)	< 10 min
Television, medium-large screen	Medium-long format, viewer further from screen in passive mode. Usually more comfortable posture	< 1 hour
Cinema, large screen	Long format, viewer far from screen in passive mode: "entertain me"	< 3 hours

The puppet character ("Sockie") was included as an experiment to break up any repetitive pattern of "talking head" followed by screencast which the videos followed. Since viewers of online videos are in active mode (Table 1), with mouse in hand and ready to click, the puppet was used as a deliberate attempt to create some novelty and originality in what might otherwise seem an all too familiar format. The puppet appeared in at different points in the videos and sometimes not at all. Moreover, to allow comparisons, the puppet was used in the videos for the first year cohort but not in the videos for the second year group. I had some concerns that the use of a puppet might be viewed by students as condescending, but the limited use of this device does not seem to have generated this response as judged by comments on feedback questionnaires:

- I quite liked the puppet, made me laugh.
- The videos were fun especially the sock bunny.
- Socky is annoying!
- Name up to three ways in which this module could be improved: Kill Sockie! LOL

Even if student's opinion were divided, the puppet device seems to have achieved the intended outcome of maintaining student's attention to the videos. Moreover, the take-up of the videos containing the puppet (1.75 downloads per student per video) was higher than the take-up from the cohort where the puppet was not used (0.92 downloads per student per video), indicating that the puppet did not have a detrimental effect on viewing and may also have contributed to the strong preference for the video format over the audio podcasts.

The widespread availability of broadband services makes it highly feasible to distribute short video clips online. The most obvious manifestation of this potential is the rapid growth in popularity of YouTube and many similar services. YouTube has achieved a high public profile and has shown both the appetite for this medium and the fact that the majority of internet users can access the service (Hitwise Intelligence, 2006). A recent report indicates that YouTube

looks set to overtake BBC.co.uk in share of UK visits within a matter of weeks (Hitwise Intelligence, 2007). Although the penetration of this technology into the student demographic is very high, teachers and academic staff are lagging seriously behind in the take-up of this new form of communication. Online video has a high acceptability to young learners. YouTube alone has almost 20 million visitors each month, with around 44% female, 56% male, and the 12- to 17-year-old age group most dominant (Nielsen/Netratings, 2006). In addition to ongoing investment by educational institutions, online video provides enormous flexibility to learners via computers, game consoles and mobile devices such as phones and video players.

Audio podcasting and the RSS subscription model in particular is severely limited in its acceptability and hence its utility to many student consumers, whereas short YouTube style videos have very broad acceptance and offer a much richer format for instruction. Long live video!

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