A RENAISSANCE OF AUDIO:
PODCASTING APPROACHES FOR LEARNING ON CAMPUS AND BEYOND

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Abstract

In this paper, we urge practitioners to consider the potential of podcasting for teaching, learning and assessment. Our perspective is drawn from research on IMPALA (Informal Mobile Podcasting And Learning Adaptation), which showed that there is a range of successful podcasting approaches for students on campus. After briefly surveying the background literature, we provide examples of three approaches, from three different universities: 1) helping students to prepare presentations and assessed work, 2) offering feedback from staff on students' assessed work, and 3) assisting undergraduates to make the transition from school or college to university. Finally, we answer the important question for EDEN attendees: can podcasting approaches like these be converted for distance education? On the evidence available to date from IMPALA and other studies, we feel confident in predicting that podcasting will be integrated more and more into distance education, to the immense benefit of the long distance learner.

Background literature

Audio is not a new technology in education. Learners have been listening to educational radio for nearly a century (Hawkridge and Robinson, 1982). Even before that, they could listen to audio recordings. Durbridge (1984) identified audio's key educational advantages. She found that students liked learning from audio because they learned well from recorded sound. They found audio useful for understanding spoken language, analysing music and hearing the professor's voice. They liked listening in on conversations about parts of their courses. They also liked being 'talked through' tasks in the laboratory or workshop, listening to discussions and opinions from experts in their field, and being encouraged by the voice of somebody they knew and respected. Bates (1981, 1984), Perraton (2006), Power (1990), Yates and Bradley (2000) and Young et al (1980) provided examples of the use of audio from primary and basic education to higher education, covering a range of formal, non-formal and informal curricula, in economically developed and developing regions, offered both at a distance and on campus.

Although audio had been proved successful in terms of student learning, especially in distance education, Power (1990, p. 43) recognised that its use had been 'often undervalued'. Among the reasons were perhaps the lack of production, recording, distribution and playback facilities for audio, and, in the case of radio, the lack of flexibility of broadcast schedules. Lee and Chan (2007) pointed out that audio had been neglected and underused recently.

Podcasting has changed the position of recorded audio as a medium of learning. Today, audio 'is experiencing a renaissance' (Schlosser and Burmeister, 2006). What Schramm (1977) considered a 'little medium' more than four decades ago – in terms of its cost and complexity to produce compared with television or film – is now about to make a big appearance on the educational stage.

A podcast is a digitally recorded sound (or sometimes sound with vision) file. The name comes from the Apple iPod, a small, very portable player with a huge memory into which thousands of podcasts can be downloaded. Podcasting is strictly speaking the process of rendering the files accessible to listeners, usually via the Internet or a computer network from which they can be downloaded onto an iPod or similar MP3 or MP4 player. However, as with 'broadcasting' and 'broadcasts', podcasting is often applied to the whole system of making and using podcasts.

Podcasting can now be considered as a stable and mature technology, ready to move from experimental and pilot uses into mainstream education. There is a significant body of empirical evidence of the impact of podcasting on student learning and staff engagement. Academics are actively developing a range of podcasting approaches within a variety of educational contexts, though most take a single aspect of teaching and learning (for example, presenting information to students) and develop a podcasting approach to support it.

Several trends work in favour of podcasting moving from a peripheral to a core technology for learning. First, researchers and practitioners are piloting many different approaches to using podcasts to support learning. We give just three examples, but many more are described fully in Salmon and Edirisingha (2008). Details of others are available in the literature and in conference proceedings (EDEN, ALT-C, Online Educa), in informal and formal communities of practice such as *Podcasting for Pedagogic Purposes* (podcastingforpp.pbwiki.com/), the *Podagogy Research Group* (wlv.ac.uk/Default.aspx?page=11527) and JISC *Emerge* (elgg.jiscemerge.org.uk/).

Second, recent technological developments support podcasting. In 2007 Apple introduced *iTunes U* (apple.com/itunesu/), a dedicated Internet-based service 'to manage, distribute, and control access to educational audio and video content for students within an educational institution as well as the broader internet' (Wikipedia, n.d.). *iTunes U* offers a library of thousands of free podcasts provided by leading universities such as Harvard, Cambridge and the Open University. Some universities have developed their own media streaming approaches where staff and students can upload and share podcasts (e.g., *LUTube* at the University of Leeds (lutube.leeds.ac.uk/)). Meantime, broadcasting corporations such as the BBC have made it possible for listeners to download, again from the Internet, podcasts of many radio broadcasts of educational value. It is also possible to place podcasts directly on the VLE or webpage along with other education materials that students are expected to access.

Third, academics and students of the podcast generation have certain advantages over those who used audio cassettes for learning. Software for creating, editing, distributing and accessing podcasts is available free or at low cost on the Internet, and it is relatively easy to use (Mobbs, Salmon and Edirisingha, 2008)). The necessary hardware is also cheap to obtain, indeed many laptops now come with built-in microphones. Podcasts can also be accessed and used with personally-owned digital devices that were bought for other purposes, such as mobile phones, laptops and PCs. Most university students and staff now own such devices and are familiar with how to use them to listen to sound files. As Ramsden (2007) pointed out, such developments have made podcasting a low-threshold technological activity.

Academics may worry that their students will not turn up for lectures or seminars if academic content is made available as podcasts. Research on this issue offers some consolations! Gajasinghe's (2007) survey of 92 UK undergraduates at Loughborough University UK found that only 3 percent said they would not attend if lectures were available as podcasts. Most used recorded lectures as a learning resource – something to revisit and study in their own time and at their own pace, just like books. Evans (2008), in his study of 200 undergraduates at Brunel University in the UK found that podcasts offered students an alternative technology for learning rather than replacing lectures. Copley's (2007) survey of undergraduate students at Southhampton University in the UK suggested there would be little impact on lecture attendance as a consequence of podcasting. Malan's (2007) study of podcasting of lectures at Harvard University found that students valued podcasts as a tool for revision rather than as a reason for not attending lectures.

Podcasting approaches to support student learning

Early adopters of podcasting have chosen a range of approaches to using it for learning. The approaches that we present here were developed within a research project started in 2006 called IMPALA (Informal Mobile Podcasting and Learning Adaptation, www.impala.ac.uk), involving colleagues in 10 universities in the UK, South Africa and Australia. IMPALA was and is empirically based, within an action research framework. It started with a pilot at the University of Leicester in an undergraduate engineering module (Fothergill, 2008) that integrated podcasting and e-tivities based on Salmon's (2004) five-stage model for collaborative online learning.

Using the guidelines and a preliminary podcast model developed from the pilot, IMPALA partners created their own podcasting approaches to address their specific teaching and learning challenges. Over 500 students and 20 academic staff have taken part in IMPALA since 2006. The podcasts' impact on students' learning was studied through collecting and analysing qualitative and quantitative data.

The podcasting approaches developed in IMPALA and the students' learning outcomes are reported fully in Salmon and Edirisingha (2008): they include using podcasts to provide summaries of lectures, podcasts to prepare students for geography field work, podcasts to help students learn to use computer software, and so on. Here we present examples of three approaches, from three different universities: 1) helping students to prepare presentations and assessed work, 2) offering feedback from staff on students' assessed work, and 3) assisting undergraduates to make the transition from school or college to university.

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June 2009

Podcasting to help students to prepare presentations and assessed work

An approach adopted by Rothwell (2008) at Kingston University was to use podcasts to help undergraduates to develop their skills in preparing mid-semester presentations and an end-of-semester portfolio as assessed work. Rothwell's students, who come from varied backgrounds in the humanities and social sciences, take her core module in English Language. They receive very little support from their peers as they have no previous cohort identity: many are meeting for the first time. She felt that the conventional, face-to-face study skills sessions were inadequate, and used podcasts to address the skills her students required for assessed work.

Rothwell developed a series of podcasts, each about 10 minutes long, and made them available fortnightly on the course VLE site. Her podcasts aimed to: enhance students' understanding of the module's core concepts and issues, improve their revision, writing, speaking and presentation skills, and offer them frequent advice on developing the end-of-semester portfolio. She divided each podcast into short sound clips. Some clips explained key concepts covered in lectures and seminars, some were discussions between students and staff on assessment tasks, and in others, the student mentors (senior students) provided study tips. With a view to developing collaboration and cohort identity among her students, she arranged for podcast content to be generated from interviews with current and previous students, and from interviews with student mentors who help Level 1 students at the Faculty's drop-in academic skills development centre.

Rothwell's approach to using podcasting yielded benefits and positive learning outcomes for her students (for full details see Rothwell, 2008). Her podcasts became a valued resource for students to learn more about and clarify issues related to preparing presentations and developing portfolios for assessment. The podcasts, as a useful complement to other sources such as the advice centre, offered her students choices of time, location and sequencing of their learning of study skills.

Podcasting to offer feedback from staff on students' assessed work

The rationale behind France and Ribchester's (2008) approach to using podcasts at the University of Chester in the UK to offer feedback to students on their assessed work was that feedback can perform an important function in the teaching and learning process. Feedback, if it is of high quality, can help students to reflect on their work. They decided that podcasts would improve the nature and quality of their feedback comments. Their series of podcasts provided feedback for students on two geography modules (one in first year, and the other in the final year). In the first year module, students were assessed using short question-and-answer tests and a fieldwork report presented as a web site. In the final year module, undergraduates completed three assignments: a single PowerPoint slide (an e-postcard) designed to 'persuade' a world leader to change policy on a key aspect of climate change, a group oral presentation and a fieldwork report (France and Ribchester, 2004).

Their feedback to students was via two kinds of podcast for each assignment. They created a personalised one for each student, with feedback on the quality and mark for each assignment. The second kind contained comments on the performance of the group as a whole, reflecting on general strengths and weaknesses of the students' work. Each student received a single sound file containing both podcasts: his or her personal feedback and the group feedback. Students received an automatic email as soon as a new sound file became available for them to download. They were encouraged to listen to comments on their own performance and then to compare what they had done with the group's performance. These podcasts did not replace textual feedback altogether; students also received brief written feedback and a mark for the assignment. In addition, the podcasts were posted in the feedback section of each student's electronic progress file (personal development planner), embedded into the university's VLE.

The evaluation of France and Ribchester's podcasts showed that their students valued the in-depth and detailed feedback on audio more than what they would normally get as written feedback. They appreciated the personalised nature of some of the feedback, and the immediacy and sense of intimacy conveyed by tutors' voices. Feedback via the podcasts reached students quicker, and they liked the flexibility of listening to podcasts where and when they wanted to.

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Podcasting for transition from school or college to university

The most recent research within IMPALA is on a podcasting approach at the University of Leicester to support new undergraduates' transition from school or college to university (http://www.impala.ac.uk/impala4t/index.html). Studies of undergraduates' satisfaction, academic performance and retention identify the critical importance of the first year for shaping their attitudes and approaches to learning. Successful transition to university has a direct impact on students' later learning experiences, particularly during their first year.

Most interventions to support transition are based on institution-driven approaches such as courses on learning and study skills. The knowledge and experience of students who have already made the transition have rarely been exploited. Such knowledge (called 'hot knowledge' by Ball and Vincent, 1998), can be identified as the socially embedded knowledge prevailing in networks of friends, family, relatives and neighbours, and those who are generally considered as 'people like me' (Hutching, 2003, p. 110).

Podcasting can capture this 'hot knowledge' and make it available to aspiring entrants and first-year undergraduates. IMPALA taps the knowledge and experience of students who recently made their own transition. With a lecturer's guidance, second- and third-year students in the Department of Biological Sciences have created a dozen podcasts addressing a variety of social and academic issues important for successful transition to university. These podcasts are available at www.startinguni.info and on *iTunes U* for public access.

Early results from interviews with students suggest that they see the student-created podcasts as helpful in three areas of transition: social, academic and institutional. For each area of transition they identified specific attributes that need to be considered by academic institutions in supporting new entrants. Early results from interviews with students suggest that they see the student-created podcasts as helpful in three areas of transition: social, academic and institutional. For each area of transition they identified specific information needs that need to be considered by academic institutions in supporting new entrants. These include information and knowledge about services available within the institution, such as the library facilities, the VLE platform and support services; information about tutorials, assignment submission procedures and communication with tutors; and developing relationships with peers and specific interest groups.

Discussion and concluding remarks

All three of these approaches are examples of podcasting being used on campus. The important question that arises for EDEN attenders is whether they can be converted for distance education.

We consider first the IMPALA pilot study. Fothergill (2008) used podcasting in *Optical Fibre Communication Systems*, an undergraduate module in electrical engineering, with 30 second- and third-year campus-based students who studied the module online using the university's Blackboard VLE. He had substituted his "physical" lectures for e-lectures but did meet the students three times during the module for a tutorial, attendance at which was optional. He began weekly podcasts to supplement his online teaching through providing updated information and guidance on the weekly activities, and to motivate his students by incorporating relevant news items and a fun item such as a joke. His podcasts complemented the module's e-tivities (structured online group activities, see Salmon, 2002) by providing summaries and further guidance to students. Each 10-minute podcast appeared on the VLE at the beginning of the study week, for nine consecutive weeks. Usually, an introductory news item was followed by the main content section, which typically referred to the previous week's work and extended this forward to the following week. At the end, were lighter weight but fibre optics related items, perhaps a joke or even a rap! Since this module was and is being taught online, it would be fairly easily adapted for distant students. Fothergill's approach to using podcasting would be admirably suited to them, helping them to feel a sense of community by 'meeting the prof' in each week's podcast. In fact, he called it 'profcasting'. The real difficulties would arise in providing distant students with facilities for tutorials, not in using his podcasts.

Rothwell's (2008) approach to podcasting at Kingston University would convert well to distance education, except that she was helping her students in part to hone their presentation skills: distant students seldom if ever have opportunities to present their work face-to-face. She was also helping her students to get their portfolios ready to be assessed: that is something distant students on certain courses have to do too, and her podcasts would help them. She asked students, including the student mentors, to help her to create podcasts based on their experience. That approach would transfer particularly well to distant students, who could speak up about the problems and solutions they had found, for the benefit of other students new to distance education.

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France and Ribchester's (2008) approach at Chester University in the UK to using podcasts to give their students feedback on assessed work would convert to distance education almost without alteration. Distant students would appreciate even more than their campus-based colleagues the spoken feedback from tutors on their work. The podcasts would help to bridge the gap, since in many cases distant students never meet their tutors.

The podcasting approach being used at the University of Leicester to support new undergraduates' transition from school or college to university is very well matched to the needs of distant students, except of course the experiences and advice from students contained in the podcasts would have to be related not to campus-based study but to learning at a distance. Distant students are often older too, therefore the transition might be less often from school or college than from not having studied for some years to studying at university level away from the campus, using the materials and systems provided.

On the evidence available to date from IMPALA and other studies, we feel confident in predicting that podcasting will be integrated more and more into distance education, to the immense benefit of the long distance learner.

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