

Review of Podcasting Research

This review of research on the use of podcasting in HE seeks answers to three questions:

- Does podcasting reduce lecture attendance?
- Does podcasting improve exam results?
- Is there evidence of effectiveness / preference for audio, video or enhanced podcasts?

I have also noted suggestions for making better use of podcasts for learning.

What do we mean by podcasting? Recording of learning situations (usually lectures but sometimes seminars) in audio, video and/or 'enhanced audio' (where sound is accompanied by slides) to be made available online as a resource for students.

Does podcasting reduce lecture attendance?

Providing podcasts of lecture does not seem to have a negative impact on lecture attendance. Some studies report a small reduction in attendance at lectures when podcasts are available (Traphagan et al 2009, Harpp et al 2004) with Harpp et al suggesting a reduction of less than 10%. The significant finding, however, is that even where there is a drop in attendance this does not translate into lower student performance because the podcasts seem to compensate. Traphagan et al (2009) note that 'availability of additional course materials online, such as Power Point slides and lecture notes, had a greater negative impact on classroom attendance than webcasting'.

Other studies (White 2009, Bryans Bongey et al 2006, Grabe and Christopherson 2008, Harley et al 2003 and Holbrook & Dupont 2003) have found no significant association between attendance and download frequency in part because 'students overwhelmingly preferred the actual lectures to the recorded podcasts' (Bryans Bongey et al 2006). It seems that students see podcasts of lectures as useful additional resources that they use to increase their understanding (Bryans Bongey et al 2006) and that good lectures continue to attract students (Harley et al 2003)

One study noted a difference in (self-reported) attendance across two different courses in which podcasts were provided, with students in a large group of mainly first years more likely to skip class than students in a later year and smaller group (Holbrook & Dupont 2009). We can speculate that this may be the result of a more mature understanding of the learning process in the later years and/or a sense of disengagement in large first year cohorts.

Does podcasting improve exam results?

Some have classed podcasting as 'pedagogically neutral' (Deal 2007a) because podcasting lectures does not necessarily lead to improved student outcomes, though it has been suggested that podcasts allow students to learn more effectively / efficiently. McKinney et al (2009) set up an experimental 'exam' to evaluate the impact of lecture podcasts on student performance but noticed an improvement 'only when the student took notes as they would do during a lecture, and when they listened to the lecture more than once'. Other studies have been unable to detect an improvement in student performance where lecture podcasts are used (Grabe & Christopherson 2008, Falzon et al 2005, Harley et al 2003).

There is evidence that lecture podcasting can improve results however, if podcasts are used to free up time for more active, hands-on sessions, for example if the podcasts present material before a face-to-face session that engages students in active learning (Traphagan et al 2009, Day and

Foley 2006) or if the time is used for working on project and problem-solving in class (Kurtz, Fenwick & Ellsworth 2007).

Is there evidence of effectiveness / preference for audio, video or enhanced podcasts?

The evidence on student preferences for different types of podcast is contradictory with Grabe and Christopherson (2008) dropping their analysis of audio podcasts because so few students accessed audio files and Cann (2007) asserting that short YouTube-type videos get more downloads than audio podcasts, whereas Copley (2007) noted 80% of students downloading audio, compared to 61% downloading video, and Brittain et al reported a strong preference for and use of audio-only files (66.1%) even though students had initially requested video.

Better ways to use podcasts

So far, the research and case studies referred to have concentrated on the most common form of podcasting in HE – the recording of lectures – but there are other ways to use podcasting to enhance student learning. Copley (2007) identified student demand for 'supplementary 'stand-alone' materials, such as short revision summaries and briefings for assignments' and Ralph et al (2008) reports on the popularity of what came to be known as 'podules' - 'small files ... that were 5 to 10 minutes listening duration and produced by the lecturer to summarise the key point of the lecture, highlight a particular issue or act as a guide to further reading or listening'.

There are also several examples in the literature of students producing their own podcasts, such as summaries of seminar discussion (Ralph et al 2008), this was often done in groups and seems to have had some beneficial effects in terms of student learning (Ralph et al 2008, Stokes et al 2008, Lazzari 2009).

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