Podagogy: can podcasting enhance the quality of learning and teaching in Higher Education?

Nicola J. Woods and Simon Phillips

School of Education, University of Wales, Newport, Lodge Road, Caerleon, South Wales, NP18 3QT, United Kingdom. Email: Nicola.woods@newport.ac.uk; Simon.phillips@newport.ac.uk

Abstract

“Podagogy” is defined as the “art or science of using podcasts for educational purposes” (IMPALA Project, 2006). A growing literature reports on the many and various ways in which this new discipline is developing: including, for example, podcasts for encouraging reflective learning; podcasts as a new medium for presenting tutor feedback; and, perhaps most prolific in current publications, the potential of podcasts to provide “portable education”. This paper presents a review of a selection of publications in podagogy and, in doing so, raises important questions about how podcasting can best be used to enhance the quality of students’ learning experiences. The paper includes a critical analysis of the concept ‘Digital Native’ and argues that any attempt to introduce new technological tools into pedagogy must be empirically informed: specifically, research needs to be undertaken to investigate which technological tools are important for students, how and why students use various aspects of technology and, most importantly, the hopes, ideals and expectations that students have for using technology (for study, work and leisure) in their future lives.

Introduction

Podcasting, the use of pre-recorded personalised on-demand audio (and video) content to subscribers, was first introduced in early in the 21st century and has since seen an exponential growth in use in many and various contexts. Dubbed word-of-the-year by the New Oxford American Dictionary in 2005, the term originally derived from a compound of broadcasting and iPOD but is now frequently interpreted as an acronym for “personal on-demand” (Frydenberg, 2006, p. 2).

Following its inception in the media, the educational potential of podcasting was soon recognised. From the practical advantages for teaching that such a ‘moveable’ device offers (according to Austin, 2007, podcasting makes Higher Education (HE) as “portable as a pop song”), through pragmatic benefits of (re)engaging students who may be “impatient” with other forms of learning (Chan and Lee, 2005) to opportunities for enhancing education through the promotion of critical learning (Reynolds and Bennett, 2008), few have doubted the potential of podcasting to change the way we communicate with our students and organise contexts for learning and teaching. The use and implementation of podcasting in HE can be traced to the year 2004 when the Duke University, USA distributed to new students over 1,600 iPODS already equipped with induction schedules, academic calendars and podcasts. Other universities were quick to follow1 and, as many reviewers of podagogy have remarked, there has since been a swift

---

1 Arizona state University, University of Denver and North Carolina A&T State University were all early adopters of podcasting technology (Lum, 2006, pp. 34-35).
growth in the use of podcasting in universities across the world. According to Udell (2005), the reasons for the rapid rise of podcasting include: the popularity of the internet, broadband connectivity, the accessibility of the multimedia personal computer, blurring of the distinction between streaming and downloading media content and, not least, the proliferation of MP3 playback equipment.

However, despite such rapid development, not all are convinced of the educational merit of podcasts. While some bemoan the lack of pedagogical research into the value of podcasting (Guertin et al., 2007), others report only “marginal” improvement to students’ learning experiences following the introduction of podcasting as a method of teaching (Malan, 2007, p. 393). Reflecting such research results, Hargis et al. conclude that there are “no examples which clearly indicate proven foundational pedagogical uses and outcomes for podcasts” (2005).

Podcasting and Pedagogy

It is true that the first attempts to incorporate podcasts into HE pedagogy were woefully inadequate. Tales of students tuning in (and swiftly turning off) to long, complex and monotonic podcasts are rife. Frydenberg’s (2006) experiences are typical, revealing how the number of students using podcasts (on an introductory technology course) rapidly declined after the initial “novelty period” had worn off. Others have observed little positive influence of podcasting on educational outcomes or achievement (Malan, 2007), while the mismatch between modern educational theory and the learning experience provided by tutor-produced podcasts has also been the subject of considerable critical comment. Reynolds and Bennett (2008) observe, for example, how the passive listening task required by tutor-generated podcasts fails to provide opportunities for communal interaction that a social constructivist approach to education considers vital to successful learning (see Brown et al., 1989, for an exposition of this theory which, in simple terms, centres on the premise that meaningful learning takes place in situated interactions between learners and not in the minds of individual learners engaging with abstract content).

It is perhaps for these reasons that Malan (2007) argues that the real benefit of podcasting is “not necessarily to educate better, but to educate further” (p. 390) and, by the same token, that the portability of podcasts provides educational opportunities for those for whom traditional enrolment and attendance is not feasible. Mellow (2005) agrees that it is the “flexible learning” opportunity offered by podcasts which is most valuable and, following this line of argument, Campbell asks us to picture the following scene:

“Imagine a busy commuting student preparing both emotionally and intellectually for class by listening to a podcast on the drive to school, then reinforcing the day’s learning by listening to another podcast, or perhaps the same podcast on the drive back home” (p. 34).

An obvious corollary to this prospect is that the incorporation of podcasts as an aspect of pedagogy offers the potential for lifelong learning beyond the confines of the classroom. Consequently, the use of podcasts provides opportunities to engage a range of diverse learners and to promote inclusivity².

While the importance of facilitating access to (higher) education is indisputable (and the idea that students might access educa-

² Though it is important to acknowledge that the use of podcasts may discriminate against certain members of diverse student populations: e.g. audio pods are clearly inappropriate for students with hearing impairments and may also be less than ideal for students whose learning styles are highly visual. Furthermore, not all are convinced that inclusivity will be enhanced by the simple introduction of technologies into teaching: a British Telecom survey undertaken in 2001 revealed that 85% of school teachers believed that the government’s ICT-focused curriculum was likely to put pupils from less privileged backgrounds at a disadvantage. The importance of taking measures to lessen the ‘digital divide’ are, therefore, considered crucial (reported by Rebecca Smithers in The Guardian, Thursday 18 October 2001).
ional content from any geographical location is captivating), the question remains as to whether this is the sole advantage of incorporating podcasting technology into pedagogy. Is podcasting only useful for increasing the quantity of education through improving accessibility or, in contrast to Malan’s (2007) view, can podcasting be used to enrich the quality of learning in HE? This is a key question for the present research and one which, where investigated, has had mixed results.

Reynolds and Bennett (2008) aim to assess the educational value of podcasting by investigating the impact on students’ learning experiences. Acknowledging the importance of engaging students beyond the level of passive listening, Reynolds and Bennett distributed gapped handouts for students to complete whilst listening to podcasts. Results of the research were ambiguous: while students appeared to retain more information when the material was presented in audio as opposed to textual form, there was no significant difference in students’ understanding or application of the material presented. Notably, a subsequent survey revealed students’ negative evaluations of the use of gapped handouts. While Reynolds and Bennett report that they found this criticism “unexpected”, it perhaps not altogether surprising since gapped handouts are a particularly traditional method of assessing students’ engagement with new technologies.

Nevertheless, the research of Reynolds and Bennett clearly points to the importance of encouraging student activity (especially associated cognitive activity) with podcasts. As Brittain et al. (2006) argue, it is vital to “actively involve the client”: this can be achieved by (i) engaging students in the design and production of podcasts; and (ii) ensuring that students have a voice in providing formative evaluation of podcasting projects. In the following sections, we consider these two forms of student engagement in greater detail, turning first to a consideration of students as producers of podcasts.

### Student Producers of Podcasts

Advocating a method that will be employed in the present research, Frydenberg (2006) invited students to design and create their own podcasts. A key positive consequence of this student-focused approach is that it shifts the function of podcasts from merely providing a channel for imparting information (from tutor to student) to a means of encouraging collaborative work in student groups. Podcasting is, therefore, elevated to a pedagogical position in which it has the potential to foster team work and, as a consequence, to create and sustain learning communities - communities in which students are “empowered to express themselves creatively” (p. 6).

It is significant that observed benefits of podcasting are not limited to the HE context. Piecka et al. report on a project in which podcasts were developed “by students for students” in a 7th grade science classroom (2008, p. 203). Amongst several positive outcomes, Piecka et al. observe that:

“One important reason that podcasts aid in learning is because they provide students with the tools and skills to build and present their own knowledge. Because students actively create and listen to podcasts they develop their research and technical skills and acquire an understanding of the content” (2008, p. 215).

In support of this observation, Lee et al. (2008) show how student endeavour facilitates “collective learning, as well as supporting social processes of perspective-taking and negotiation of meaning that underpin knowledge creation” (p. 501). Aiming specifically to develop students’ skills in digital literacy as well as to enhance abilities relating to problem solving, conceptualisation, expression and teamwork, Lee et al. were particularly interested in the manner in which podcasts can be used to facilitate the social construction of meaning and knowledge. Using a pedagogy aimed at encouraging student ownership of the learning experience, students scripted and produced podcasts in which they engaged in discussion of
important issues relating to their IT course and, in some cases, invited lecturers and other experts to give their views on particular topics.

Results reveal that producing podcasts encouraged students to engage with “idea generation, collective problem solving and reciprocal dialogue, as well as in the exchange and revision of ideas” (Lee et al., 2008, p. 513). Outcomes such as these are far removed from the limited impact of tutor-produced, didactic podcasts. Indeed, the types of activities in which students engage in designing and producing their own podcasts (including active and independent learning, team skills and reciprocity) are precisely those which would be promoted by modern collaborative learning theories and constructivist epistemology in which, as noted above, learning is seen as an essentially social activity and process.

The positive impact on learning that results from student engagement with podcast production is confirmed by research in which students have been encouraged to play a key role in evaluating their own (podcast promoted) learning and development.

Student Evaluation of Podcasting

The value of eliciting student evaluations of teaching practices is irrefutable, especially in cases in which new content is being delivered or where the method of teaching is innovative. However, in many cases, student evaluations are used only to review and revise aspects of teaching (be it the content of the curriculum or the methods in which the curriculum is communicated). In this respect, the value for students who provide evaluative feedback can sometimes be neglected and opportunities for students to consider, reflect and deliberate on their own learning experiences are, therefore, missed.

In relation to podcasting, there are a few studies which avoid this trap and, often by use of student-centred focus groups, do attempt to encourage students to learn from their evaluations. In the research of Lee et al. (2008), for example, focus group discussions with students reveal how the experience of producing podcasts promoted team building and collaborative construction of meaning. One of the student participants comments that producing podcasts “gives you another angle, and shares other ideas” (sic), while another notes that “I’m trying to encourage other people and hopefully they can criticise me in return”. It is interesting to note how the terms ‘encourage’ and ‘criticise’ are used synonymously in this last statement. The interpretation that ‘criticism’ (like encouragement) is something to be welcomed is surely significant in the light of the collaborative nature of podcast production in which the reporting student had engaged.

In her paper ‘Confessions of a Podcast Junkie’, Windham (2007) provides an engaging account of the growth of podcasting in HE from a student perspective. Supporting the statements of Mellow (2005), Campbell (2005), Dale (2007) and others (see above), Windham highlights the advantages of podcasts as “portable education”, pointing specifically to the benefits of podcasted material for students who, perhaps because of family commitments or full-time paid work, have to fit education around their lifestyle rather than their lifestyle around education. Windham (2007) describes students’ attitudes towards podcasting and lists the following “tips” for tutors who are intending to introduce podcasting into their teaching practice:

- **Don’t assume**: just because a student owns an iPOD “doesn’t mean that the student is podcast-savvy”.
- **Keep it simple**: podcasts should be concise and engaging.
- **Quality counts**: ensure quality in recording.
- **Make it relevant**: make sure that podcast content is relevant to the rest of the course “otherwise, it’s just cool technology to have”.
- **Offer something more**: e.g. podcasted material should be additional to, not a replacement for, information provided in
Don’t limit imagination: e.g. when encouraging student production of podcasts, ensure that students are given open license to use their inventiveness and ingenuity and that they are not constrained by lists of criteria such as content and length of podcasts.

Encourage exploration: related to the point above, encourage students to “think outside the box” and support their creativity.

It is worth expanding on just a couple of Windham’s (2007) words of advice here. First of all, the importance of her initial recommendation – Don’t assume – cannot be overestimated. If the introduction of new technologies into learning and teaching is to be successful, it is imperative that students’ experiences are used as the focal point for development. As Wyndham points out, it is not justifiable to presume that all students are digitally literate: just because a student may have been born in the digital age, this does not mean that he or she is competent in dealing with digital technologies.

Indeed, there is growing criticism of the construct ’Digital Native’: a term coined by Prensky (2001) to refer to individuals who “think and process information fundamentally differently” because they have lived their lives in a culture saturated with “computers, videogames, digital music players, video cams, cell phones, and all the other toys and tools of the digital age” (p. 1). In a study of first year students at the University of Melbourne, for example, Kennedy et al. (2008) observe that, outside of the use of well-established digital tools, there is a great deal of variation in students’ experience of other technological activities (e.g. creating/maintaining a blog, using RSS feeds and, perhaps most surprising, engaging with social networking software). Consequently, Kennedy et al., issue the important warning that students who belong to the ‘Net Generation’ will not necessarily understand “how to use technology based tools strategically to optimise learning experiences in university settings” (p. 116).

Defining the nature of digital literacies and investigating how we can best help students to develop them is a key aspect of the current research. Ethnographic work will facilitate insights into students’ access to technological tools, students’ competencies in various technological activities and, not least, students’ own ambitions and expectations of technology (for study, leisure and career opportunities, for example). Only once this information has been collected and analysed, will attempts be made to introduce podcasting into pedagogy.

Following Windham (2007), relevancy is another key theme to be addressed and methods of making the content of podcasts relevant has been central in research undertaken with students in the School of Computing, Engineering and Information Sciences at Northumbria University. Having been given the opportunity to provide evaluation and feedback, students point to the importance of “embedding” podcasts into module material in a way that allows for the “migration of learning” – moving from lecture (introduction/explanation) to podcast (preparation/ reflection), for example (Laing et al., 2006, p. 516).

However, while embedding podcasting into pedagogy is clearly crucial, it is interesting to note that student evaluations of podcasting projects reveal aspects of development that go far beyond subject-specific curriculum content. For example, both Windham (2007) and Lee et al. (2008) point to the manner in which producing podcasts can support and enhance a range of (transferable) skills, especially language and communication skills: one student podcaster interviewed by Windham reports that, in order to produce successful pods “you have to learn how to gather your thoughts properly, speak properly.” (2007, p. 7), while Lee et al. (2008) also report the significant influence of podcasting on linguistic skills:

“You want to get your words right. Like your sentence structure, the way you put things together”
“We stumble over words, they don’t make sense, or we just can’t get the words out! we re-wrote half of our parts, because we just couldn’t get it to make sense to us” (Lee et al., 2008, p. 515).

Many other important skills for study and employability have also been noted as an incidental result of student engagement with podcasting - team working, time management, problem solving and critical thinking, to name but a few (see, for example, Huann and Thong, 2006; Cane and Cashmore, 2008).

Perhaps we should not find these positive outcomes to be too surprising. In 2005, Campbell (2005) considered how students have been “blogging, shooting and editing video, creating Flash animations, manipulating photographs, and recording digital audio for many years”. Describing how these are the tools of young peoples’ “native expressiveness”, Campbell proposes the convincing argument that, with the right guidance, these tools can be used by students to “create powerful analytical and synthetic work” (2005, p. 36). By incorporating such tools into pedagogy, we recognise that “podcasting, unlike any other medium presently available, allows students to develop a voice of their own to share with the class and the world” (Piecka et al., 2008, p. 215).

### Conclusion

Few would dispute the importance of encouraging students to develop a ‘voice of their own’. We would only re-emphasise that, in order to achieve this most important of aims, it is crucial that the introduction of new technologies (and podcasting in particular) build on students’ own experience, knowledge and understanding. By means of ethnographic work with diverse groups of learners from many different walks of life, the current research aims to elicit students’ thoughts, values, ideals and expectations about using technology. In the light of this collaborative work, we will then proceed to engage with students to find out precisely how podcasting can be used to develop key competencies in, for example, collaborative learning, communication, literacy and IT.

Generic skills which, somewhat paradoxically, are most successfully taught and learned when embedded into the specific subject areas studied by students. Is podcasting a way forward for embedding skills into the curriculum and developing abilities that are necessary for successful employment, career development and, not least, lifelong learning? Only by building on students own experiences and working together to encourage them to design, develop, produce and evaluate podcasts will we be able provide answers to these important questions. In this way, the potential for podcasting to improve the quality (not merely the quantity) of learning in HE will be revealed.

### REFERENCES


