Using iPod Technology to Engage Primary Students with the Deconstruction and Reconstruction of Audio Text

Jeff Vardy | Wollongong Diocese of Catholic Education, and
Lisa Kervin | University of Wollongong

New technologies such as iPods and podcasting permeate the lives and daily routines of many young children as they engage with these technologies in a variety of ways. An iPod is a small, portable music player which now has video capabilities and can be updated when connected to a computer, while podcasting is a method of syndicating electronic content automatically to a computer through RSS (Really Simple Syndication) feeds. The use of iPods in education is still a relatively new concept, much as the Internet was a decade ago. The opportunity to investigate possibilities for their use in classrooms is both timely and necessary.

It has been argued that there is a partition between the technology that is used within everyday life and that that is used in many classroom settings (Dede 2005). Sanford and Hopper (2001) report that teachers need new skills and understandings in order to successfully educate their 21st century students. These students are often referred to as ‘millennial learners’ as they have been heavily influenced by information technology. Many researchers (for example, Dede 2005, Oblinger 2003) have asserted that these learners need to be taught using the technology they are accustomed to. There has been a global movement to implement modern education technologies at a tertiary level (Oliver 2001). In Australia, the advent of the use of iPods in education is just starting.

The project reported herein has been supported with an Apple University Development Fund (AUDF) grant from the Apple University Consortium (obtained by Dr Doug Reid and Dr Lisa Kervin from the University of Wollongong in 2005). In 2006 the nineteen 30GB fifth generation video iPods were provided for student use in two Grade 4 classrooms at two neighbouring schools. This article focuses on the way they were used and incorporated within teaching and learning experiences in ways that were responsive and connected to curriculum outcomes across the Key Learning Areas at one of these school sites.

Description of the project at the school site

This two-stream independent primary school is located in metropolitan New South Wales, south of Sydney. The school has an enrolment of approximately 370 students, with 24 students within the focus class for this project.

Prior to the introduction of the iPods within the classroom, the class teacher was provided with an iPod to explore and become acquainted with. This became his personal property throughout the duration of the project and frequent opportunities were made to investigate the capabilities of the iPod in collaboration with members of the project team.
Regular team meetings were held external to either school site and a listserv hosted by the University of Wollongong was established to enable the teachers and researchers to engage in regular communication as a team.

The class teacher nominated that he would like to explore the use of the iPods with his whole class. To facilitate this, he was provided with 12 video iPods, 12 splitters (to enable two students to use each iPod) and an additional 12 sets of headphones. Each student in the class was provided with access to the equipment at a ratio of one iPod per two students. This technology was formally incorporated in the 4 Blue classroom in May 2006.

![Figure 1. One iPod between two students in 4 Blue](image)

During the period May to November 2006 the students in 4 Blue engaged with a range of tasks that incorporated the iPods within their classroom learning experiences. These tasks were developed by the teacher, often in consultation with one or both research partners, and were designed to complement existing classroom processes, themes and curriculum outcomes. The class teacher was supported throughout the duration of the research project with visits from academic partners once or twice each week (mid term 1 – mid term 4 2006). What follows are descriptions of tasks undertaken within this class as the teacher engaged the students with audio text.

**Learning about the technology**

Initial interactions with the equipment were focused on familiarising the students with the technology. Time was allocated for the students to explore the capabilities of the iPods after explicit modelled sessions led by the teacher. During these experiences the students demonstrated their ability to quickly learn processes to manipulate the iPods.

Further to this, many procedures needed to be put in place to facilitate the smooth management of the iPods within the classroom. Each student was provided with their own set of headphones for hygiene issues. These were labelled in individual snap-lock plastic bags. Further procedures were introduced to safely recharge and store the iPods within the classroom.

Time was spent modelling and experimenting with the technology at regular intervals throughout the project, particularly with the introduction of new peripherals (such as the voice recorders). It became apparent that the students needed considerable input and demonstration before they were able to manipulate the technology easily and confidently.
Creation of radio shows

The students engaged with a unit of work collaboratively developed by the teacher and academic partner. This unit was focused on the Talking and Listening strand of the English K-6 syllabus (Board of Studies 1998) and involved the students working with radio shows. In response to this curriculum focus, students engaged with:

- Investigation and deconstruction of oral texts
- Exploration of the parts of a radio show
- Creation of the parts of a radio show
- Putting together the class radio show
- Evaluation of the radio show

The students deconstructed sample audio texts to critically analyse features of text organisation, grammatical characteristics and the structure of the text to support them in the creation of their own. Students worked in teams as they planned, scripted, recorded and edited their own radio show. Each team within the class was able to successfully create its own ‘radio ad’ to be included within a radio show.

Once the students had completed their radio ads students from another class were involved in listening and evaluating student work product. As this was their first experience at creating an audio text, this feedback provided important input from an audience and was used to guide further development and refinement.

Student creation of podcasts

The initial focus on deconstruction, reconstruction and interaction with audio texts appeared to equip the students with a range of skills and strategies. Their apparent eagerness to engage with such texts resulted in the teacher providing regular opportunities for the children to create podcasts. Students worked in teams to create podcasts on a variety of topics, such as key issues in the news, school events, student experiences and student opinion pieces. More directed podcasts were also created discussing key curriculum themes and interviews with visitors to the school. The podcasts that emerged from the project resulted in a number of high profile people visiting the classroom to create podcasts with the students. Such visitors included:

Figure 2. Teacher modelling of iPods
• Children’s author Sue Whiting visited the class to be interviewed by the students to create a podcast
• Professor Yoshiharu Masuda from Nagoya Gakuin University in Japan came to talk with the students about the historical representations of sound; students conducted a podcast with him to further capture his knowledge
• Children’s author Susanne Gervay visited the class to be interviewed by the students to create a podcast
• Two teachers at another school visited the class to observe the iPods in use and podcasted their reflections with the students

Prior to the recording of any podcast, the students engaged in significant research, planning and articulation of purpose. The teacher developed clear proformas to guide this process and engage the students in critical thinking about the purpose of the podcast and intended audience. An example of one of these proformas is included in Figure 4.

**Development of a class website**

To support the facilitation of information and sharing of student work product, a class website was developed. The teacher, when talking about initial plans with the researchers, identified that such a space would allow students to easily access audio materials they needed for classroom experiences while also providing a forum where work samples could be posted and shared among the class members. The website was seen as a way to further extend the seamless integration of the iPod and podcasting technologies within the classroom to support student learning. Further, the site provided parents with access to the children’s work samples, which they could peruse at a time convenient to them.

The site proved to connect the students, and the class as a whole, with the wider community. The teacher described this connection process as a form of ownership. The students created the site, they knew what was contained within the site and therefore owned the site. This meant that they were increasingly motivated to share the webpage with others. This appeared to result in increased interest in the project from families within the school and the local community in general. The students were increasingly aware of this attention and the knowledge of having a wider audience for their work product appeared to motivate their creation of more, higher quality samples of work. This cycle of extrinsic and intrinsic

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**Figure 3. Radio ad developed by one team of students**
motivation was an unexpected positive outcome that led the students to excel and take the initiative in their talking and listening activities.

Listening to audio books and podcasts from other sites

Audio stories were accessed and downloaded to individual iPods for students to engage with during ‘reading’ opportunities in the classroom. These were downloaded from http://librivox.org/childrens-literature/, a site containing audio books, free from copyright. These were positively received by the students and acted as examples of ‘exemplary’ oral reading. They provided clear models for the students and demonstrated high levels of phrasing and fluency when reading. Opportunities to listen to these texts enabled the students to identify characteristics of engaging oral texts that supported their subsequent evaluation and critique of their own oral texts.

Connections to websites where podcasts were available for download were connected with in the course of classroom study. As an example, when constructing information reports on animals, the students accessed podcasts from Minnesota Zoo and San Diego Zoo to support their gathering of information.

Project outcomes

The literature argues that millennial learners, students in our classrooms today, have a familiarity and acceptance of current technology that older people do not have (Dede 2005,

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**Elements of a Podcast**

Below is a list of elements that you would commonly find in most podcasts. You can read them to ensure you have a sound knowledge of the various elements, or even use it as a checklist for when you are creating your own podcast.

<table>
<thead>
<tr>
<th>Speaking Elements</th>
<th>Description</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>An introduction usually sets the scene for the podcast and informs the audience of the topic.</td>
<td>To let the audience know what the podcast is about and introduce those doing the talking.</td>
</tr>
<tr>
<td>Interview</td>
<td>These are the questions that the interviewer asks in order to obtain information and facilitate discussion.</td>
<td>To inform the audience about the podcast topic. A podcast is generally a conversation between people with the interviewer asking the questions and directing the discussion.</td>
</tr>
<tr>
<td>Closure</td>
<td>The closure draws the podcast to an end. It can be done as a part of the discussion or can be recorded later as an extra.</td>
<td>To let the audience know the podcast is over. It may also recap the main points covered and perhaps mention future podcasts that may be in the making so that those who subscribe have an idea of what is coming next.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Extra Elements</th>
<th>Description</th>
<th>Purpose</th>
</tr>
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<tbody>
<tr>
<td>Sound effects</td>
<td>Sound files or backing tracks that are added to the voices in a podcast.</td>
<td>These are generally added to give the podcast a more professional finish. They are used to make your podcast sound more interesting with the effects selected because they fit with the content.</td>
</tr>
<tr>
<td>Art work</td>
<td>Pictures or graphics that can be used to represent the sound file of the podcast.</td>
<td>They should support the content of the podcast and, again, to make it look more professional. The podcast can contain many pictures, or just one.</td>
</tr>
<tr>
<td>URL Links</td>
<td>A website link to sites that are mentioned in the podcast, or to sites that would support the content.</td>
<td>They can serve the purpose of adding more information to your podcast so that the audience can visit those sites to find out more information.</td>
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**Figure 4.** A pro forma used to plan the development of a podcast.

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**Figure 6.** Class website with the ability to subscribe to the site. URL: http://web.mac.com/ipodproject/
Throughout the duration of this project, we found that while the students were able to quickly navigate and manipulate the iPods, a significant time commitment was necessary in initial phases to ‘teach’ them how to manipulate the technology and identify specific affordances the tools offered to them as users.

The millennial learners within this classroom demonstrated that experiences offered through the incorporation of the iPods supported student engagement through the learning opportunities presented to them. In particular, the more hands-on approach to learning more abstract and sophisticated concepts within the English curriculum appeared supportive for these students. They were supported with opportunities to engage with processes of facilitation and reflection. These learners were able to take greater responsibility for their own learning as they were able to individualise their learning environment to support this process. This individualisation was supported through the use of technology because of the attitudes and experiences held by these students regarding technology. A collaborative learning environment was also found to support student learning outcomes in the technologically integrated environment, as students helped to create a synergetic atmosphere in the classroom. Students appeared to share with each other and push themselves to improve their work to create more sophisticated products to better demonstrate their mastery of concepts in the curriculum areas they engaged with.

The iPods appeared to provide a number of affordances to learning experiences within this classroom. These included the displaying of audio and video multimedia content, creation of multimedia material, presentation of student work, control of playback, sharing of student work and opportunities to focus inquiry on aspects of the curriculum in a new engaging fashion, such as deconstruction and reconstruction of audio texts.

At this school site, the construction of podcasts was found to be the best use of the technology to support and enhance student learning. The complex nature of the podcast creation process included many educational opportunities. From the initial setting of each of the tasks, students had control of the process up to the publication of the podcast. This process had many steps, including topic selection, planning of content, acquisition of content, organising the timeline and locations of the recordings, recording, quality assurance of the recording, inclusion of appropriate sound and visual multimedia to support the goal of the podcast, editing the work, reviewing and accepting feedback, and, finally, completing the podcast for others to experience. Each of these stages needed to have structures put into place to support the students. Structures and scaffolds such as planning, guidelines and proformas were provided so that students had the greatest opportunity to achieve success. Flexibility in the classroom to enable students to find time to work together and prepare for the creation of the podcast as well as space for students to have a quiet area to do their recordings supported the incorporation of the technology within this site.

The student-centred environment that was created also led to positive learning experiences for the students. They had ownership of their work and appeared proud of what they had accomplished. The students controlled the content and quality of the work and set high standards for themselves after they understood what this emerging genre of work was like and their expanded audience. The opportunities to create and to examine podcasts from other children and people from other countries gave them a greater insight into many topics, such as text deconstruction, than students traditionally have in primary school classrooms.

The research conducted within this classroom has revealed that the inclusion of these on-demand technologies within primary contexts has the potential to transform and enrich learning experiences for many students and that the technology needs to be used in a way that is both authentic and pedagogically appropriate for the experience.
References

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