



Blending technologies in ESL courses: A reflexive enquiry

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Despite persistent calls for a fuller integration of technologies in second and foreign language teaching, particularly in English as a Second Language (ESL) courses, pathways that lead to the effective blending digital resources remain both unclear and complex. The aim of this paper, then, is to explore the blending of technology in second language teaching contexts. To achieve this aim, we undertook a longitudinal and reflective action research project. As part of a self-styled 'community of innovation' involved in reflexive action research, we collectively produced and made use of podcasts in two different ESL settings for one year. The podcasts served as emblematic digital resources in a 'case study' of new technologies to focus our efforts. During the year, we met to discuss our experiences with relation to professional development, classroom use and curriculum change. Starting with a brief review of the literature, we then present our work these themes and set out a research agenda focused on the blending of technologies in second language programs.

Keywords: technology integration, ESL programs, listening, blended curriculum

Introduction

In a widely cited article, Bax (2003) calls for the integration of technologies throughout foreign and second language teaching programs. Successful integration, Bax notes, can lead to 'normalisation' such that technologies go "almost unnoticed" in a language classroom, much like we no longer truly notice paper and pens in our otherwise daily routines of teaching (Bax, 2003, p. 23). In a related article, Chambers and Bax (2006) suggest a number of ways to achieve successful integration of technologies that include, for example, changes in physical configurations of classrooms, institutional support and leadership, and reduced workloads to accommodate professional development. The integration and blending of technologies, however, has been seen as a complex issue across the higher education curriculum (Bonk & Graham, 2006) and has been little researched in foreign and second language settings (Stracke, 2007).

The aim of this paper is to explore the integration of technologies into language classrooms. To achieve this aim, we undertook a longitudinal and reflective action research project that sought to blend podcasts in two English as a Second Language (ESL) contexts. As part of a self-styled 'community of innovation' (Dodds, 2007), we collectively produced and made use of podcasts throughout the two different instructional settings for a year. We chose to podcasts (as opposed to, for example, blogs or wikis) as an 'emblematic' technology that helped us to focus our efforts and act as a 'case study' of new technologies. As in other educational settings, our podcasts consisted of interviews, lectures and short updates (Harris & Park, 2008). During the year, we met to discuss our experiences concerning the integration of the podcasts with relation to professional development, classroom use and curriculum change. Following a brief review of the literature, we present each of these themes and then conclude our paper with an agenda for further action research to do with the blending of technologies.

Second language listening and materials development

In the context of language learning, podcasts are most often used to teach listening skills. Throughout many language programs, listening skills are taught with the use of audiotape cassettes for use either in the whole classroom or for use by the individual student. Recorded listening materials, such as podcasts,

generally fit into one of two categories. In one, they can be 'purpose built' to meet the developing needs of learners at various proficiencies; in a second 'authentic' style, they can be drawn from native speaker resources from the mass media, for example, or unedited recordings of native speakers (Mishan, 2005). According to second language acquisition specialists (Chappelle, 2001; Jamieson, Chappelle & Preiss, 2004; O'Bryan & Hegelheimer, 2007), well-designed learning materials meet three criteria:

- Input salience: Rephrasing, repeating, key phrases are present and build the likelihood of acquisition;
- Enhanced input: Representations of concepts are presented both visually and verbally;
- Authenticity: Consists of an unscripted variety of voices, real life topics, a range of perspectives.

The teaching of listening in the second language classroom is a multi-purpose activity; that is, learners must use the resources both for 'learning to listen' and for 'listening to learn' (Vandergrift, 2004). Further, a listening activity can be built such that it is a project (e.g., discerning the opinions of several experts in a particular topic area), or a task (e.g., following oral directions in map reading), as a resource (e.g., honing the ability to distinguish amongst discrete sounds) or as a stimulus for related work in other skill areas (e.g., listening to a lecture and then writing up a summary before having to deliver an oral presentation).

Solid instruction in foreign and second listening consists of motivating the learners' interests, engaging with them at the appropriate level and encouraging the use strategies to help compensate for lapses in understanding (Lynch, 2009; Vandergrift, 2007). The teaching of second language listening, however, has been long dominated by the 'language lab' in which learners were either seemingly tethered in isolation to bulky tape players, or put into a crowded classroom with a single cassette or CD player. Potentially, then, podcasts can be used the basis of an innovative 'podagogy' that promotes active, mobile learning (Abdous, Camarena & Facer, 2009; Dale & Pymm, 2009). Rose-Augillar (2007) suggests that, in the second language curriculum, podcasts can better provide:

- Exposure to spoken language and a multitude of characteristics;
- A range of resources, including both purpose-built and authentic materials;
- Exposure to the culture of the areas where the target language is spoken;
- An engaging set of materials that could be tailored to an adequate length.

Podcasts then, partially due to their availability, ease of production and widespread distribution, seemingly have a lot of promise to spur the development of second language listening (Diem, 2005; Stanley, 2006). Nonetheless, despite reading about such claims, we found ourselves a bit sceptical: With such a clear pathway and motivation for using them, why has there been reluctance to make more use of podcasts in second and foreign language teaching contexts? What are some of the issues that arise along the road to the 'normalisation' of technologies? We these questions, and many others in mind, we developed an action research project that set out to further examine issues that arise in the blending of technologies.

Developing an action research project

For our purposes, we see action research as a teaching-focused study that is designed to investigate a classroom-based pedagogical innovation. Action research is problem-solving, systematic and critical; it is carried out directly by instructors, and is focused on improving educational practice. At its core, action research revolves around a four-phase 'plan-act-observe-reflect' cycle of inquiry (Costello, 2003, pp. 4-7). In many ways, however, action research is best seen as a structured and proactive process of reflection. Rather than simply muse about the day's events, action research helps instructors to engage in an *intentional and visible process* to formalize concerns, draw out hunches, examine issues and develop plan to move forward (Dana & Yendol-Silva, 2003, p. 7). Congruent with constructivist approaches, critical reflection acts as both a catalyst for change and a pathway for evaluation.

As a first step in our action research study, we produced a series of podcasts. Production went smoothly; within a single morning session, we created nearly two dozen recordings. In line with suggestions to highlight 'authenticity' in our listening materials (Mishan, 2005; Lynch, 2009), we varied the number of speakers, their gender, the nominated topics, and the speaking pace of each recording. Our speakers were diverse: amongst the eight of us who worked on the recordings, five of us were born overseas and half were highly proficient non-native speakers of English. Topics, too, varied widely and touched on areas such as modern relationships, stress management, sports fans and the weather in Melbourne. After recording the segments, we edited them to improve the quality yet left in hesitations and background noise in the recordings.

To make the recordings available to our entire group, we then distributed the podcasts through a learning management site. Accordingly, we were each charged with the task of making use of the recordings in our teaching and to reflect on our experiences in their use. As we began to use the recordings, we met regularly to talk, interview each other and analyse our collective impressions of integrating the podcasts into our teaching. After some time, our discussions increasingly centred on issues concerned with professional development, issues concerned with classroom use and the challenges of undertaking curriculum change.

Professional development issues and technology integration

Professional development issues were interwoven throughout our discussions. Admittedly, like many tertiary educators, we found it best to engage in our own 'informal professional development' that consists of "activities such as sharing knowledge with colleagues, spontaneous learning arising from work or personal activities and acquiring knowledge through browsing websites or 'surfing the net'" (Mansvelt, Suddaby & O'Hara, 2008, p. 578).

McCoy (2000) lists five hindrances to technology integration: 1) insufficient time, 2) lack of relevant institution development, 3) lack of on-site technology support, 4) inadequate or no access to necessary hardware or software, 5) and receiving few rewards for efforts. Swain (2005) noted that there were a range of cultural, organizational, psychological, and social barriers to integration. For Swain, integration could be graded along a continuum of being unacceptable, acceptable to ideal. In the latter, technology not only be available and supported, but it used in 'meaningful ways' throughout the curriculum.

One limitation to such conclusions, however, is that they focus on individual factors related to the teachers and the teaching environment. As Oxford and Sei-hwa (2006) point out, there is a need to consider a number of socio-cultural influences regarding technology integration. The influences include, for example, 'obvious' social factors that prompt integration like strong national standards, 'less obvious' factors such as inequitable allocations of social capital and 'immediate' institutional influences that revolve around training opportunities. Our own teacher training, too, was largely devoid of a strong emphasis on technologies and this certainly influenced our perceptions (Kessler, 2007).

In a survey of our own practices, we agreed that insufficient time was the top barrier to integration. Despite the ease with which we made the podcasts, we struggled to blend them into the curriculum. Could reducing the amount of classes per week, getting support from colleagues, sharing the materials used by different teachers, and reducing the scope and complexity of our own learning activities help? We concluded that, amongst ourselves, 'obvious' factors such the weight of national standards did not figure into our calculations. Neither did we feel that we were in inequitable situations that made integration difficult. We did, however, feel that 'immediate' institutional factors influenced our slow efforts, particularly as we often felt that our efforts to better use technology were thwarted by a perceived lack of perceived reward. None of us, however, felt that we were able to design a more transparent reward structure: Perhaps it was a matter of their being more 'innovators' who could press for changes in our institutional settings?

Sporadic integration in a fixed syllabus

In a second stage of our discussions, we set out to blend the podcasts into one of our teaching settings -- a commercial ESL college. Briefly, the purpose of the college is to train foreign students in English for a variety of purposes that include recreational, social and academic goals. Some students are in Australia to learn English for 'fun' or personal fulfilment, others are learning to meet the demands of living in an English speaking country, and a third group takes the ESL subjects to gain entry to Australian universities. Specifically, we focused on the latter group of learners who were attending the ESL course to gain entry to an Australian tertiary institute or to improve work prospects.

Generally, the syllabus in academic ESL courses is relatively fixed. Students, and teaching staff alike, expect to be tackle topics that are specific to meeting university requirements that include passing ESL examinations such as the Test of English as a Foreign Language (TOEFL) or meet other standards. Our podcasts were intended to help students in this situation work on their 'extended' and 'authentic' listening skills as part of a complimentary set of materials. We introduced them both in classes and offered them to students for self-study. After a few weeks of trying this, we noticed a number of existing student practices with podcasts and identified barriers to the integration of technologies (Table 1).

Table 1: Student practices and barriers to podcast integration

Existing student practices	Downloading podcasts of lessons and entertainment Recording podcasts as part of online learning Listening in class as part of a lesson
Existing barriers	Not owning, or little access to players Lack of awareness of podcasts as learning tools Incompatibility (mp4a vs mp3) Technology reverting from 'awe' to 'bore'

Although our students had previously listened to podcasts for both personal and educational purposes, we found that they reported similar issues as those reported by Hsu, Wang and Comac (2008) as well as in a recent study by Abdous, Camarena and Facer (2009). In essence, our students were relatively comfortable with the use of podcasts; nonetheless several issues arose that included boredom and a lack of a perceived need for the resources. Such issues became barriers to the acceptance of podcasts used in the classroom. Some students did not appreciate, for example, that our podcasts were 'homemade' – what we thought was 'authentic' they thought was 'simple'. We encouraged students to make their own podcasts as a way to practice speaking, listening and digital literacy skills. However, like one of the issues that arose in a study of undergraduate medical students, many of our students were hesitant to produce podcasts (Petrovic, Kennedy, Chang & Waycott, 2008). Concerns of compatibility of file formats between players, too, came up in the course of our introductory phase of podcast integration. Despite initial enthusiasm for the podcasts, we soon found that students became less motivated to use the digital resources particularly for independent study.

Integrating the podcasts in actual practice, as we knew from our own discussions and reviews, required us to make a substantial investment in physical resources and time. Now in the institute, the realities of having little or no time to blend the digital recordings into a lesson became an increasingly high barrier to the integration of technology against a background of crowded syllabus, tight schedules, and seemingly onerous responsibilities. In addition, it is not uncommon to find that institutions, like ours, continue to have inadequate infrastructure development since most hardware/software purchase decisions are often negotiated and organised amongst its management team/developers. Commercial language schools are, of course, run with a clear profit motive. Teachers in these situations lack of both adequate technology infrastructure and support, as well as a range of other barriers that include the lack of a central learning management system, a lack of digital recorders and players that are suitable for the classroom, and an embedded use in the curriculum for cassette-formatted commercial materials. Is the blending of technologies, as Corbel and Taylor (2003) note, largely impossible at low-resource institutions?

Blending podcasts in a flexible syllabus

In a parallel stage of our project, we set out to blend the podcasts in a program that was relatively well-resourced and flexible. In this context, we were fortunate enough to be able to revise the syllabus with the aim of technology integration. Here, we could work to meet the principles of blending rather than attempt to integrate podcasts into an existing syllabus. With the both the literature and previous experiences in our minds, we started two months in advance to prepare the blending of technologies into an academic bridging program for international scholarship students. The five-week, 100-hour intensive subject is designed to offer postgraduate students from developing countries (AusAID scholars) ample opportunities to experience Australian *academic* culture, develop social networks and make a transition from work to study. The program includes tours of campus facilities, an excursion, guest speakers, shared morning teas and other events that help to bolster a sense of belonging and community.

The postgraduate students are from a range of disciplinary backgrounds. In this cohort, for example, we had 36 students bound for degree programs in five different faculties. One continuing challenge is to determine how much 'generic' material can be balanced against 'discipline specific' resources. Academic content is largely concerned with the development of critical thinking, active learning and writing skills. The underlying pedagogical philosophy of the subject is social constructivism; as such, materials that are for study in the disciplines are used, assigned tasks require social negotiation and self-directed learning is emphasized (van Lier, 2004). In this context, though we are aware of that the students struggle at times with academic English, the focus on ESL skills *per se* is minimized.

The podcasts that we had made earlier, we thought, were perhaps a bit too casual. We started again, and this time we recorded topics that were likely to be directly related to the student experience. In brief, we made podcasts from both lecture material related to aspects of university life and then on topics such as accessing student health services or developing critical thinking. We also reworked other aspects of the program to better incorporate blended approaches including putting more material online, changing the style of presentations and developing online assessment practices (Table 2).

Table 2: Key changes in the curriculum design

Established program	Blended program
Materials in a large booklet	Materials available, as much as possible, in digital format
Lectures – teacher focused	Seminars – participatory, student focused
Separate, individual tutorials in a small tutorial room	Large group, team teaching in a large technologically equipped ‘double’ classroom
‘Support’ sessions clearly distinguished from ‘academic’ sessions	Support and academic sessions interspersed throughout the syllabus
Paper-based submission, with face to face consultations at set times	Online submissions, with face to face consultations and additional interactions on line

With the changes set, we taught the five-week intensive. From our own perspective, having more materials better prepared was a definite bonus in the road to better technology integration. We felt that the course ran more smoothly, and we saw too that the students reacted positively to the blended approach. Being their first time in an Australian tertiary setting, perhaps they came to expect that such styles of teaching were the norm. The quality of teaching scores were strong (4.3 out of 5 on average across nine items), and slightly higher than in previous years with a marked increase in questions to do with the use of online technologies.

Near the end of the program, we held a two-hour debriefing session to discuss our perceptions of the revised, blended syllabus. As in previous sessions, we took notes and covered a wide range of topics but kept a single question in mind: How did such an approach affect our teaching and perception of the subject? With an eye on space limitations, we put our preliminary conclusions in a summary (Table 3).

Table 3: Emerging themes as a consequence of blended design

Focal area	Preliminary conclusions about blended approaches
Student impact	Responsibility for learning is heightened as students must learn to get, and use, digital materials; the requisite need for computer skills may negatively affect the teaching of other academic skills such as writing and argumentation
Teacher competence	Blended teaching is a new competency for instructors as it requires greater flexibility and a keen knowledge of the materials, how to access them and when to use them for best effect; increased flexibility can be very demanding
Blended spaces, shared responsibilities	Working in a single large open classroom necessitated team teaching, and that was a positive outcome, and highlighted the point that teaching resources may be even more important than learner resources
Student learning styles	Students were coming from ‘traditional’ systems of learning, and blended learning was more active, participatory and demanding than what they were familiar with so it took time and patience to socialize the students
Assessment practices	Blended approaches led to a rubric based, standardized view of assessment that made marking more equitable; results were more immediate and were readily made available digitally, perhaps strengthening their impact
Overall program goals	Where does blending lead to ... more blending? Or, are we ourselves using a blended approach, only to lead the students to a variety of university postgraduate subjects that may be delivered in a ‘more traditional’ manner?

With these themes in mind, it became clear to us that blending approaches are best achieved in high resource settings where a teaching team is strong and supported enough to make changes at the root level of a curriculum. Professional issues that had plagued us to do with the lack of time, too, were addressed through a long lead time of two months. With our year of experiences drawing to a close, it was time to discuss some final points for reflection.

Discussion

After a year of working on technology integration, particularly with podcasts, what have we learned? As a group we also gained, to differing degrees, a sense of achievement in having pooled knowledge, experience and resources to overcome barriers and contribute to others through our collective documented experiences. Clearly, professional development issues came to the fore of our concerns. Though relatively easy to produce, our own results compounded earlier findings: insufficient time, and lack of IT support, thwarted our best efforts. To overcome these issues, our self-style 'community of innovation' (Dodds, 2007) fuelled our motivation. We feel that we have made progress working together in an action research project. Perhaps, most importantly, we can now see more clearly the barriers to implementing Web 2.0 technologies; because of this, the 'action' we take here is to be alert to hindrances, both personal and institutional. Hopefully, such an awareness can help us better navigate challenges as we seek to increased opportunities for using technologies with our learners.

The integration of the podcasts into a standing curriculum within a language school proved challenging. The students, for one, were not overly impressed with our efforts and seem at times to be bored. Faced with the realities of poor resourcing and continued workload pressures, we ourselves questioned the worth of taking on a blended approach. Critically, we began to wonder if blending works best in educational settings that have well-resourced, or even 'threshold' levels of technology. At present, difficult commercial imperatives seemingly limit what we can do to further integrate new technologies.

Building a 'blended curriculum' from the ground up, we found, was largely successful. The generous lead time, owning the subject ourselves, and having a motivated team of instructors help foster that feeling of success. Students reacted positively, too. We know that this first-time use of blending is not perfect but nonetheless we can see where we can continue to improve. In this case, blended learning makes sense and it works.

As we continue our action research, we think that narrowing the scope of our efforts to focus on listening materials design might be productive. Aspects such as planning and design, or performance issues, would allow for specific analyses of impact on learners. More investigations are also required to further describe the range of audio file qualities suitable for low budget, very low budget and high budget contexts as the power of this in effecting learner ownership could be made generally available with a range of empirical research to support it. We recommend future researchers to pay particular attention in experimenting with genre, and with a variety of social utilities afforded by podcasting. Issues, too, relating to post production can also be investigated, for example determining whether students find uploading podcasts for submission as homework more motivating than written submission.

Development of a blended assessment practices, too, are certain to gain our attention. Although we were aware of assessment issues, we need to have a more rigorous approach to planning and documenting such processes. Learners might require some form of measurement of their progress and growth or membership development as they take part in differing discourse community conversations over time. Could podcasts as a static material and peer-assessment as a dynamic way to rate and rank content contribute to language learner membership into their preferred discourse communities?

Because podcasts are a potentially an individual, mobile media, they can potential shape learner goals and needs further out of the classroom. Likely, then, students will one day learn only those parts of language that are relevant to their unique personal and professional needs. These learners will require customised, just-in-time assessment modules and thus become agents of their own consumption and production. What is needed next is to explore this concept more formally. Longitudinal, mixed methodology studies may contribute to a better understanding of the implications of taking on a blended approach in a second language setting.

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