Student-Produced Podcasts in Language Learning – Exploring Student Perceptions of Podcast Activities

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Abstract

Podcasts are a useful tool for developing speaking skills in language acquisition settings, particularly within the context of the emerging Mobile Assisted Language Learning (MALL). While much research has emphasized the effectiveness of teacher-produced podcasts, this study seeks to address the gap in knowledge on student-generated podcasts in language learning. In addition to highlighting some of the main pedagogical considerations of using podcasts in language learning, this paper explores students' perceptions of podcasts as a learning tool. To this end, this study describes the results of two surveys which were conducted with two different student cohorts over the course of two years. The surveys explored the students' levels of acceptance and enjoyment of activities in which they had to produce their own podcasts, as well as the perceived learning benefits. The discussion section describes a range of positive learning outcomes and highlights the pedagogical implications of using podcasts in class. The paper concludes with some practical suggestions for the effective use of student-generated podcast activities in the language classroom.

Keywords: podcasts; language learning; collaborative learning; digital storytelling; learning technology; MALL.

Introduction

Multimodal instructional formats involving the Internet and mobile devices (e.g. smart phones, iPads, tables, laptops) have altered traditional classroom formats not only in terms of space and time but also in terms of the variety of learning opportunities. This is all the more important because in the digital age learners are no longer passive consumers of information but rather now have countless opportunities to actively produce content and share it with others. The learning opportunities that have emerged in the digital era include multimodal approaches and tools for teaching and learning that put the focus on the learners and alter traditional concepts of teaching and learning.

The use of podcasts inside and outside of the classroom is one such innovative tool that has garnered increased interest in the field of tertiary level language learning. A podcast is a digital audio (or video) file that is created and then uploaded to an online platform to share with others. Since it can be downloaded to play on any computer or portable device, it is also part of the paradigm of Mobile Assisted Language Learning (MALL). The use of mobile devices affords learners the opportunity to learn anytime and anywhere, alone or with others, and "has the potential to assist learners at the exact point of need and in ways that are congruent with learners' increasingly mobile, always-connected lifestyles" (Shield & Kukulska-Hulme, 2008, p. 249). The use of podcasts in tertiary education is considered to promote motivation and engagement, cognition and learning, learner autonomy and innovative opportunities for teaching and presenting (Salmon & Nie, 2008). Podcasts are a form of personalized learning that can be tailored to learners' individual needs and extend learning beyond the classroom.

However, while much research has been done to examine the effectiveness of teacher-produced podcasts, for example to transmit (preparatory or supplementary) learning materials or give audio feedback to students (e.g. France & Ribchester, 2008; Lonn & Teasley, 2009), there is a significant gap in research examining the learning benefits of student-produced podcasts (Forbes, 2015; Lazzari, 2009; Rothwell, 2008; Salmon & Edirisingha, 2008). Thus, the present study explores opportunities for creating – rather than consuming – podcasts and examines the perceived benefits and challenges of student-generated podcasts in language learning.

Literature Review

Audio podcasts have long been used in language learning as a unidirectional teacher-to-students mode of transmitting information and course content, for example by recording lectures, providing preparatory material for the next lesson, or giving audio feedback (France & Ribchester, 2008; O'Bryan & Hegelheimer, 2007). Similarly, audio recordings have long been used in language learning to foster authentic listening practice and to supplement textbooks and other teaching materials. Rosell-Aguilar (2007), for example, found that podcasts provide language learners with a wide variety of real-world situations that give them plenty of opportunity to study sentence structure and vocabulary. However, the idea of student-created podcasts has only been gaining traction in recent years, as educators have started to see the vast potential it offers. Producing podcasts requires students to master a number of skills, including researching and analyzing information, creating an outline, drafting and editing a script, and repeated rehearsals to practice pronunciation and fluency (Phillips, 2015). In addition to these useful skills, student-produced podcast assignments offer several additional benefits, which are outlined in the following sections.

Motivation and Confidence

Motivation is essential for any kind of learning and necessary before any learner is willing to invest time and energy into the learning process (Fleenor & Hodhod, 2016). This is certainly true for learning a foreign language, which can be quite frustrating at times, in particular as proficiency increases. This phenomenon can be equated with the economic concept of diminishing returns: Beginning learners can reach a basic level of communication ability within a relatively short period. However, as language ability advances, learners commonly feel that their rate of improvement decreases significantly, which can lead to increased frustration. In the case of Austrian tertiary education institutions, English as a Second Language (ESL) courses start at the intermediate and upper-intermediate level, and many English learners have already reached the level at which they begin to become frustrated by their perceived slow progress. Emerging multi-media-based applications such as podcasting offer opportunities for innovative, learner-centered educational activities that can foster learner motivation and tailor learning to student needs.

Since podcasting is still fairly new in higher education and many students have not been exposed to it, learning a new educational tool such as podcasting can lead to increased student motivation and enhance the learning experience (see for example Dale & Povey, 2009; Lonn & Teasley, 2009). Novel experiences are also memorable and may enhance student curiosity about the task and provide a welcome break from text-based learning. Several researchers (Kemp, Mellor Kotter & Oosthoek, 2011; Nie, Cashmore & Cane, 2008; Prensky, 2009) have pointed to the novelty factor of experiential learning as a main stimulus for learning. A number of researchers have also found that the use of podcasts in education can increase intrinsic motivation (Asoodar, Marandi, Vaezi & Desmet, 2014; Dale & Povey, 2009; McMinn, 2008; O'Bryan *et al.*, 2007; Royer 2009). In contrast to extrinsic motivation, which relies on good grades as a reward, intrinsic motivation is achieved when tasks are interesting and challenging, (O'Bryan *et al.*, 2007).

In addition to the novelty factor, students may also feel a greater sense of ownership when creating their own podcasts. Students who are actively engaged in the creation of knowledge by making authentic and creative use of the target language may feel a sense of pride and purpose. For example, in their study on whether audio recordings assist language learning, Hsu, Wang & Comac (2008) found that the majority of students felt a greater sense of ownership and control of their learning compared to traditional pencil-and paper work. Also, knowing that they can reach a large audience with their podcast can be a highly motivating factor for many students. When students are challenged to share their podcasts with others, they may put more effort and attention to detail into them because they know that people other than their teacher will hear the results (McMinn, 2008). At the same time, the fact that their "production" is recorded makes it more permanent and makes the students more accountable for the work they produce, which helps provide enough incentive to produce meaningful results.

Finally, less confident students or those who are reluctant to use English in class have ample time to prepare their podcast at their own pace. Anxiety, which is all too common in real-time interaction in a foreign language, can then be reduced, and student confidence can be boosted, which ultimately enhances the overall learning experience. Thus, Hsu *et al.* (2008) found that over 80% of the students who participated in the study believed that creating audio

recordings is an effective language learning tool that increased their confidence in their English speaking skills.

Collaborative Learning

Podcasting can be a very powerful tool to increase class interaction and foster collaborative learning by developing the skills needed to work towards a shared goal. Thus, Stoltenkamp, Mapuva, Khumalo, & Kies (2011) assert that the majority of the nursing students in their study indicated a positive correlation between podcasting and enhanced group work. In particular, students pointed out that collaborating with peers on the podcast assignment led to better reflection and understanding of their work. Similarly, in their pilot study about student-produced podcasts on the ethical issues of modern genetics, Nie *et al*. (2008) reported that medical students viewed group-based podcasting assignments as helpful for sharing opinions and looking at the topic from different perspectives, thereby enhancing reflective skills. This is in line with Salmon and Nie (2008) who contend that student-generated podcasts "encourage students to reflect on their own learning, improve their performance during content creation as well as reconsider and modify their ideas" (p.9). In addition to the cognitive benefits of broadening their knowledge of the topic and perspective taking, students highlighted the benefit of team-working and community-building skills (e.g. time management and task allocation), which were enhanced by the group podcast assignment.

Language Production Skills

One of the key issues in language learning is the difference between receptive and productive language skills. Second-language learners (L2) tend to have higher receptive skills, whereas productive language skills take much longer to acquire. Unfortunately, factors such as limited class time and large group size are often detrimental to fostering language production skills in class. However, in a technology-enhanced, learner-centered environment, opportunities for self-paced independent learning can be provided in order to compensate for these traditional limitations.

In this context, it is important to keep in mind that self-paced independent or autonomous learning requires students to develop self-awareness of their own learning styles and strategies. However, this awareness is often assumed rather than taught in tertiary education. Podcasts can strengthen learners' reflective processes by compelling them to define, plan and monitor their thinking and learning during the production process (McLoughlin, Lee, & Chan, 2006).

The deliberate, multi-stage process of producing a podcast also helps students develop awareness of key aspects of the target language that they often overlook. When speaking, students generally have difficulty hearing their own pronunciation errors and prosody mistakes. Paralanguage, such as stuttering, pausing, pitch, pace and power changes of the voice, makes communication authentic and natural, and students have to be aware of different intonation systems in a foreign language. When recording a podcast, students have to practice and rehearse the script several times in order to sound fluent and authentic. While this may be repetitive for students, repetition and practice in language learning is key for pronunciation and fluency (Sze 2006; Hsu et al. 2008). Such active use of language is key to fostering language awareness. Huang and Hung (2010) found that the asynchronous nature of audio recordings enabled students to focus on their weaknesses and gave them time to iron out problems, which ultimately resulted in superior results. Furthermore, listening to their own

recordings helps learners identify language errors, particularly in pronunciation and grammar, and fosters self-improvement. Additionally, comparing their own work to the work of others can give students a valuable perspective on their own abilities and inspire them to try new things (Armstrong, Tucker, Massad, 2009; Ashton-Hay & Brookes, 2011; Stanley 2006; SZE 2006). Similar results were found by Sun (2009), who reported student-perceived improvement in fluency due to an increased willingness to take risks with the target language.

Transferable Skills

The process of creating a podcast can also help students develop transferable skills that are considered desirable in the modern-day professional world. For example, Middleton (2009) found that student-generated podcasts enhanced student creativity in their academic work, and Armstrong *et al*. (2009) found that the team-based podcast project proved to be "a creative outlet for students to express ideas, share perceptions and bring experts to the classroom" (p. 88). Similarly, Lee McLoughlin & Chan (2008) found that creating podcasts helped students grasp academic concepts more effectively, and Dale (2007) stressed the benefits of student-produced podcasts in developing creative and critical thinking, as well as problem-solving skills. This was confirmed by Kemp et al. (2011), who found that podcasting assignments afforded students opportunities for creativity when writing the audio script, devising techniques to capture the audience and using non-scientific language to describe scientific methods or concepts.

Other researchers have emphasized the enhanced digital literacy skills acquired when producing podcasts, which are essential in the modern knowledge society. Some researchers have argued that educators must adapt their teaching styles to meet the needs of the generation of digital natives and to communicate in the language of their students (e.g. Morris & Chikwa, 2014; Prensky, 2001). Today's students, most of whom were born after 1990, are often characterized as digital natives who "think and process information fundamentally differently" (Prensky, 2001, p. 1). They differ from "digital immigrants" (i.e. the previous generation) in that they grew up with digital technologies and can therefore move smoothly between online and offline spaces. Podcasts can help this new generation of students refine their digital skills. For example, Forbes, Khoo, & Johnson (2012) found that student-produced podcasting contributed to student confidence and the development of digital literacy, and Kemp et al. (2011) found that students developed competence in modern Web-based technology. Of course, they also pointed out that the perceived improvement in skills and technical aspects of audio production was much lower the second time around, which is not surprising considering that the technology can be mastered relatively simply the first time around.

Methodology

The primary purpose of the study was to explore student perceptions of the educational value of podcast producing activities. The study was conducted as part of the interdisciplinary course *"English for Health Professionals"*, a mandatory course in the first semester of the three healthcare-related Bachelor Programs *Health Management and Health Promotion*, *Physiotherapy* and *Nursing Studies*. Although the course is mandatory, English is not a core subject, which affects the level of motivation for some students (as discussed below). The course is designed in a blended learning format and focuses on human health and lifestyle, nutrition-related diseases (e.g. diabetes, hypertension) and disease prevention. The students use the Moodle platform to communicate and exchange information with the instructor and

their peers and to perform assigned tasks both autonomously and collaboratively. In the course discussed here, students were assigned two different podcast assignments, both of which were mandatory, but not graded.

The Podcast Assignments

Podcast Competition

Students produced a five-minute podcast in a group of at least three people on a topic pertaining to nutrition-related diseases or lifestyle choices. The formats, which the students could determine themselves, included expert interviews, panel discussions, product advertisements, personal anecdotes, etc. The podcasts were uploaded to the Moodle course management system, where they were made available to other students and faculty. To increase motivation, encourage creativity and give them a better understanding of their own abilities, the students were required to listen to all of the podcasts from their respective course and then vote for their favorite three. The course winners then entered a final round in which the entire faculty of the Health Department and the students voted to determine the final winner (Phillips, 2015).

Digital Storytelling

The second podcast assignment was completed individually and was designed to enhance the students' metacognitive skills and self-reflection by empowering them to share and articulate their thoughts. This podcast was an exercise in digital storytelling. Digital storytelling involves using computer-mediated tools to tell stories and provides rich opportunities for self-reflection that are difficult to accomplish through written assignments (Matthews-Denatale, 2008). Self-reflection can take place because students are not put on the spot and can think about what they want to say before recording it or even go back, delete, edit and re-record it. In her book *Digital Storytelling – Tips and Resources*, Gail Matthews-Denatale (2008) explains that telling a story and learning are inextricably linked because telling a story is also a process of meaning-making, and educators who integrate opportunities for storytelling into their courses foster participant learning. She goes on to explain that *"through storytelling, students are asked to reflect on what they know, to examine their (often unquestioned) assumptions, and – through a cyclical process of revision– to record their "cognitive development process"* (Matthews-Denatale, 2008, p. 2).

In the present case, students were asked to reflect on why they chose their particular career path (i.e. nursing, physiotherapy, or health management & health promotion) and then create a podcast in which they talked about the past experiences that led them to enroll in their degree program, their current feelings about their studies, and their expectations for the future. The podcasts, which ranged from 3 to 10 minutes in length, were uploaded to the Moodle platform, and the students were then asked to listen to at least two of their peers' podcasts and provide personal feedback in a Moodle discussion forum.

Data Collection

In order to gauge student perceptions of the educational value of these podcast producing activities, an anonymous online survey using the EvaSys software was administered to two different student cohorts, namely the students in the aforementioned class in fall 2014 and fall 2015. Of the 79 students surveyed in total, 83.5% were female and 16.5% male, and the majority (77.2%) were between 18 and 22 years old. Both cohorts were very similar in that

the student population is quite homogenous (i.e. mostly Austrian Native-German speakers), while their linguistic abilities ranged from intermediate to upper-intermediate (B1 to B2) due to their different educational backgrounds.

In terms of content, the first part of the survey included general questions on demographics (age, gender), general technology use (e.g. hours/day spent online, social networking accounts, perceived confidence with new technology), and experience with internet resources for language learning, blended learning and Content Management Systems. The second part of the survey focused on the level of acceptance and enjoyment of podcast production activities (e.g. ease of use of new technology, time-management, collaborative vs. individual podcast, oral confidence), as well as the perceived learning benefits (e.g. practicing new vocabulary & listening comprehension, feedback, improvement of oral competence, confidence, digital literacy). The survey gathered both quantitative and qualitative data and included open and closed questions. The open questions gave students the opportunity to articulate their thoughts on the podcast activities more clearly. The answer format of the closed questions included yes-no answer categories, matching categories and rating scales using a four-level Likert scale from "strongly agree" (1) to "strongly disagree" (4). In the data analysis, the categories one and two (strongly agree and agree) and three and four (disagree and strongly disagree) were pooled.

In order to avoid selection bias and increase the reliability of the study, the survey was made mandatory and administered at the end of the semester as part of the final class in the computer lab. Thus, all students present on the last day of class completed the survey, and not only those most likely to respond. In the first year the survey was administered, the response rate was 98%, and in the second year it was 100%. In addition to the survey, face-to-face time was used before and after the podcast assignments to address any issues or difficulties with the use of this technology. Concepts and issues that arose during class discussion before the assignment were incorporated into the online survey. For example, when the task was assigned, students expressed anxiety regarding the new technology or apprehension with regard to listening to their own voices. These concerns were then addressed in the survey.

Results and Discussion

The survey gathered information about the students' perceived digital competence, their attitudes towards and confidence with computers and digital technologies as well as the perceived learning benefits of producing podcasts. Of the 79 participants, almost all of them (96.1%) had a social networking account, with the most popular networks being Facebook (93.7%) and Instagram (39.2). The vast majority of students (84.6%) also indicated that they are very confident or confident when using digital technologies, and an overwhelming 98.7% stated that they have a positive attitude towards new learning technologies.

Although Campbell asserted in 2005 that more and more students know how to use podcast technology, none of the students in this study had ever created a podcast before, and many of them needed continuing guidance throughout the process. This novelty factor gave rise to feelings of anxiety in most students due to the combination of unfamiliarity with the technology and the anxiety involved with speaking English. Their concerns were voiced in class when the podcast task was first assigned, as well as in the open questions section of the survey administered after the course, which gave students the opportunity to explain their general perceptions of the podcast assignments:

> *When I first heard that we had to produce a podcast I was shocked and a bit overwhelmed.*
> *The task seemed too big to handle at the beginning.*

This initial anxiety is consistent with the results of Kemp *et al*. (2011), who also found insecurity and anxiety in students who were asked to produce podcasts.

In addition to the students' reported anxiety about the task, the majority of students (65.8%) also found the production of podcasts time-consuming. This was confirmed in the open-ended section of the survey where some comments addressed mixed feelings about the assignments:

> *I like the podcasts but they were too time consuming and I spent a lot of time on them.*
> *I prefer traditional homework assignments to podcast-productions because I don't like the group interviews; a benefit was our chosen topic and that we had much fun producing it, although it took a lot of time.*
> *In general, they are a good idea but they take a long time to produce and also technical knowledge.*

These findings echo those of other researchers who have found that students need significant technical training and support (e.g. Lee & Tyan, 2008; Lonn & Teasley, 2009). In contrast, Forbes (2015) found no issues with time management or the technical difficulty of producing podcasts in her pilot study on student-generated podcasts involving teacher education students. However, she noted that her students found the task challenging but worthwhile, they received a fairly high-level of technical support, and "student teachers can certainly not expect this level of technical support in their own schools and classrooms (p. 202). Crow (2009) found that students initially struggled with the time required to produce podcasts but eventually became accustomed to the process for subsequent assignments. Similarly, in the present study, 90% of the students indicated that producing the second podcast was easier than the first one, as confirmed by this statement:

> *I think this time was easier because I was alone and much faster because I knew how to do it.*

Thus, even the late adopters and technophobes among the students seemed to grow more comfortable with the technology after only a single attempt.

Another notable factor that came up in class feedback sessions after the assignments was that the students did not like the sound of their recorded voice. In order to gauge the group's feelings about this issue, a question was added to the anonymous survey, and a remarkable 87.3% of the students indicated that they did not like the sound of their voice on a recording. This result was echoed in the open-ended part of the survey in which students expressed their reservations in comments such as*:*

> *I think it was a good idea but I hate my voice on the podcast.*
> *I think it is pretty helpful but I don't like the sound of my voice so I don't   necessarily want to do it again.*

> *My problem is that I am afraid to speak and don't like to hear my voice. I often don't know the right words so that I can express myself. This is why I didn't like the podcast assignments.*

This is not that surprising. When we speak, what we hear is a mix of what resonates in our chest and throat and what comes out of our mouth. The recorded sound is different because it is more isolated, and most people have not heard this recorded version of their own voice enough to get used to it (Geoghegan & Klass, 2005). Presumably, the more often people hear their own voice, the more they get used to it, and it would be interesting to see how people would respond to this question after completing several podcast assignments over a longer period of time.

In addition to increasing confidence with technology, the survey results suggest that the experience of producing a podcast may also increase the confidence of students who are reticent to speak English in class. On the survey, 81% of the respondents asserted that less confident students benefit from the podcast assignments, and 77.7% claimed that the assignments enhanced their speaking confidence. This was confirmed in the open-ended section by statements such as:

> *At the beginning I didn't want to do a podcast because I don't like to listen to my own voice, but now I can say that it helped me overcome my fear of speaking. I also learned to use some of the new vocabulary.*

> *I really liked the podcast activities because it was different and totally new to me. I see a lot of benefits since you have to speak in a foreign language, which we didn't really practice in school. Furthermore, it increases your confidence in speaking English to some extent.*

This finding is in line with the results of Hsu *et al*. (2008), whose study participants also expressed increased levels of confidence, and Kemp *et al*. (2011), who found that student-produced podcasts enhanced the presentation skills of the geology students participating in the study.

Beyond increasing student confidence in their English, the results also indicated that the students felt the podcast assignments enhanced their language skills. In fact, 84.4% of the respondents asserted that the podcasting assignments helped improve their language skills, and 87.4% found podcasting a useful tool for practicing and putting new vocabulary into context. Some comments referred to enhanced speaking skills in general:

> *I think it is a great opportunity to improve your skills in speaking. I see a lot of benefits in producing a podcast.*

> *It was an interesting experience and a good way to practice speaking skills because we had to record it many times before it was perfect.*

> *I could improve my English because I could hear my own mistakes.*

> *It seems to me if I would produce podcasts more often I could really improve my English.*

Ultimately, despite their initial reluctance to engage with this new technology, at the end of the semester 91.1% of the students strongly agreed or agreed that creating their own podcasts was a valuable learning experience.

The survey also included an open-ended question that asked students to share their thoughts about the benefits of producing a podcast alone vs. in a group. For those who preferred working alone on the digital storytelling podcasting assignment the most common benefits mentioned were the opportunity to share their personal stories and that working alone allows for greater flexibility and time management:

> *I could talk about something that really happened - so it was just like telling a story and therefore easier for me. Further, I could do it on my own, without meeting with colleagues to discuss and write something down --- more flexible.*

Other students saw a benefit in increased language proficiency due to a higher workload:

> *I prefer to do it alone because it encouraged me to work on my pronunciation.*
> *I think I learned more from the podcast we produced alone because it was harder. We had to produce the whole text, which we were going to record, by ourselves and so we had to spend more time thinking about sentence structure, searching for new words (and learn them) and think about the right grammar.*

For those who preferred the group podcast, many commented that the task helped develop their collaborative, interpersonal learning skills and that they simply enjoyed the opportunity to work with their peers:

> *It was more fun to produce it together because there are more ideas and we had some very funny scenes when we recorded the podcast. (We are still listening to our failed recordings).*

In addition, several students appreciated the opportunity for group members to assist and correct each other:

> *I liked the group podcast because we got a lot of input from the other students and helped each other with the language. We also learned to speak clearly.*

Conclusion and Recommendations

Student podcasting assignments show great promise for fostering language production skills due to the high-level cognitive processes involved in producing podcasts. Podcasting supports multimodal ways of teaching and learning and encourages students to produce authentic language outside of the classroom. In addition, podcasting can be a powerful tool to develop desirable digital storytelling skills (Matthews-Denatale, 2008; Armstrong *et al*., 2009) and a valuable outlet for students to express thoughts and ideas, share viewpoints and perspectives and produce authentic language (Nie et al., 2008; Ng'ambi, 2008; Salmon & Nie, 2008). Overall, the participants in the present study ultimately saw the student-produced podcasts as an effective learning tool. The self-reported learning benefits include increased language confidence, fluency and vocabulary acquisition. The present findings also show that podcasting activities are suitable for less confident students, who tend to be quiet in class,

because it affords them the opportunity to work at their own speed without the stress of real-time interaction.

Despite the high potential, it is important to acknowledge that incorporating new technologies can be challenging for teacher and student alike. Instructors need to be well-versed in the technologies in order to provide adequate guidance in the use of new technologies and evoke student engagement. To this end, instructors need to be competent and pro-active learners themselves, and develop awareness for different Web 2.0 learning tools (Forbes et al., 2009; Stewart & Doolan, 2009). However, many lecturers are reluctant or lack the skills or readiness to adopt new Web 2.0 technologies. In his study on a university-wide pilot project designed to encourage members of staff to use digital audio creatively, Andrew Middleton (2009) found that many teachers expressed initial anxiety and then became frustrated. Many lacked the confidence to overcome the technological hurdle or simply had no personal strategy for learning to use new technology. Some were deterred from taking part in the pilot, and others avoided it all together. Nevertheless, after the initial hiccups, most staff members were eventually successful and "enjoyed the opportunity to creatively consider how audio could be used to enhance their learning" (Middleton, 2009, p. 153). Thus, it is important that institutions provide guidance for the teachers as well, in order to promote the incorporation of new technologies.

Likewise, labelling millennials as "digital natives" can also provoke a false confidence in the technological abilities of the students. As the findings of this study confirm, many digital natives may be adept at consuming digital content, but not nearly as proficient in producing it. Thus, teachers must be prepared to offer guidance and support for the students in their efforts to acquire and refine these new skills. In the present case, even though the task was technologically relatively simple (thanks to recent advances in freely available audio recording software), the students required a fair amount of encouragement and technical support along the way. To this end, individual support was available via the Moodle forum and sample podcasts were made available (also on Moodle) to give the students a better understanding of what makes a podcast effective (e.g. it was pointed out that distractions and background noise should be kept to a minimum). In addition, for those students who did not want to use their own smartphone or portable device to record the podcast, in-class explanations referred students to the user-friendly, open-source software *Vocaroo* or the more advanced sound recording and editing software *Audacity*. Fortunately, the survey results indicate that students can overcome the technological hurdle relatively quickly if given the proper support. It is therefore important that lecturers endeavor to reduce fear and normalize student attitudes towards using technology in the language classroom in order to capitalize on emerging technology (O'Bryan et al., 2007).

Finally, it is important to note that when incorporating student-produced podcast assignments into a course the focus must remain on the actual learning goals and outcomes, rather than the podcasting medium itself. Podcasting is not a panacea for all of the problems of language learning in the digital age, but rather should be viewed as one of many different digital learning tools. Nevertheless, student-produced podcasts can be motivating and engaging for students and can be integrated throughout a course plan (e.g. project reports, personal reflections, peer feedback). Furthermore, depending on the specific learning goals of the assignment, podcasts can be produced either as individual or group activities. Thus, student-produced podcasts offer a highly flexible and engaging option for students and teachers in the digital age.

References

Armstrong, G., Tucker, J. & Massad, V. (2009). Interviewing the Experts: Student Produced Podcasts. *Journal of Information Technology Education: Innovations in Practice, 8*(1), 79–90. https://doi.org/10.28945/174

Ashton-Hay, S., & Brookes, D. (2011). Here's a story: using student podcasts to raise awareness of language learning strategies. *EA Journal*, *26*(2), 15–27.

Asoodar, M., Marandi, S. S., Vaezi, S., & Desmet, P. (2014). Podcasting in a virtual English for academic purposes course: Learner motivation. *Interactive Learning Environments*, *24*(4). https://doi.org/10.1080/10494820.2014.937344

Campbell, G. (2005). There's Something in the Air: Podcasting in Education. *EDUCAUSE Review*, *40*(6), 33–46.

Crow, R. (2009). Student-generated Podcasts as a Strategy for Learning. In I. Gibson, R. Weber, K. McFerrin, R. Carlsen & D.A. Willis (Eds.) *Proceedings of Society for Information Technology & Teacher Education International Conference 2009* (pp. 629–632). Chesapeake, VA: AACE.

Dale, C. (2007). Strategies for using podcasting to support the learning of tourism students. *Journal of Hospitality, Leisure, Sport and Tourism Education, 6*(1), 49–57. https://doi.org/10.3794/johlste.61.155

Dale, C., & Povey, G. (2009). An evaluation of learner-generated content and podcasting. In: *Journal of Hospitality, Leisure, Sport & Tourism Education*, *8*(1), 117–123. https://doi.org/10.3794/johlste.81.214

Fleenor, H.G., & Hodhod, R. (2016). Assessment of Learning and Technology: Computer Science Education. In Wang V. (Ed.) *Handbook of Research on Learning Outcome and Opportunities in the Digital Age* (pp. 51–78). Hershey, PA, IGI Global.

France, D., & Ribchester, C. (2008). Podcasts and feedback. In G. Salmon & P. Edirisingha (Eds.), *Podcasting for learning in universities* (pp. 70–79). New York, NY: Open University Press.

Forbes, D., Khoo, E., & Johnson, E. M. (2012). "It gave me a much more personal connection": Student-generated podcasting and assessment in teacher education. In M. Brown, M. Hartnett & T. Stewart (Eds.), *Future challenges, sustainable future (*326–330). Proceedings ascilite Wellington 2012.

Forbes, D. (2015). Beyond lecture capture: Student-generated podcasts in teacher education. *Waikato Journal of Education*, Special 20th Anniversary Collection 2015, 195–205.

Geoghegan, M., Klass, D. (2005). Podcast Solutions: The Complete Guide to Podcasting. Berkeley, CA: Friends of Ed.

Hsu, H. Y., Wang, S. K., & Comac, L. (2008). Using audioblogs to assist English language learning: An investigation into student perception. *Computer Assisted Language Learning*, *21*, 181–198. https://doi.org/10.1080/09588220801943775

Huang, H. T. D., & Hung, S. T. A. (2010). Implementing electronic speaking portfolios: Perceptions of EFL Students. *British Journal of Educational Technology*, *41*, 84–88. https://doi.org/10.1111/j.1467-8535.2009.00996.x

Kemp, J., Mellor, A., Kotter, R., Oosthoek, J. (2011). Student-Produced Podcasts as an Assessment Tool: An Example from Geomorphology. *Journal of Geography in Higher Education*. *36*(1). 1–14. https://doi.org/10.1080/03098265.2011.576754

Lazzari, M. (2009). Creative uses of podcasting in higher education and its effect on competitive agency. *Computers & Education*, *52*, 27–34. https://doi.org/10.1016/j.compedu.2008.06.002

Lee, M. J. W., & Tynan, B. (2008). Podcasts and distance learning. In G. Salmon & P. Edirisingha (Eds.), *Podcasting for learning in universities* (pp. 92–102). New York, NY: Open University Press.

Lee M., McLoughlin C., & Chan, A. (2008). Talk the talk: Learner-generated podcasts as catalysts for knowledge creation. *British Journal of Educational Technology 39*(3), 501–21. https://doi.org/10.1111/j.1467-8535.2007.00746.x

Lonn, S., & Teasley, S. (2009). Podcasting in higher education: What are the implications for teaching and learning? *Internet and Higher Education*, *12*, 88–92. https://doi.org/10.1016/j.iheduc.2009.06.002

O'Bryan, A. & Hegelheimer, V. (2007). Integrating CALL into the classroom: the role of podcasting in an ESL listening strategies course. *ReCALL, 19*, 162–180.

Matthews-Denatale, G. (2008). Digital Storytelling: Tips and Resources. Simmons College. Boston, MA. Retrieved from http://net.educause.edu/ir/library/pdf/ELI08167B.pdf

McLoughlin, C., Lee, M., Chan, A. (2006). Using student generated podcasts to foster reflection and metacognition. *ACEC Australian Educational Computing, 21*(2), 34–40.

Middleton, A. (2009). Beyond podcasting: creative approaches to designing educational audio. In *Research in Learning Technology*, *17*(2), 143–155. https://doi.org/10.1080/09687760903033082

McMinn, S. (2008). Podcasting Possibilities: Increasing Time and Motivation in The Language Learning Classroom. European Institute for E-Learning. *Learning Forum 2008*, 212-215.

Morris, C., Chikwa, G. (2014). Screencasts: How effective are they and how do students engage with them? *Active learning in higher education*, *15*(1), 25–37. https://doi.org/10.1177/1469787413514654

Ng'ambi, D. (2008). Podcasts for reflective learning. In G. Salmon & P. Edirisingha (Eds.),*Podcasting for learning in universities* (pp. 132–145). New York, NY: Open University Press.

Nie, M., Cashmore, A. & Cane, C. (2008). The educational value of student-generated podcasts. Paper presented at *Association for Learning Technology Annual Conference (ALT-C 2008)*, Leeds, September 9-11.

Prensky, M. (2001). Digital Natives, Digital Immigrants. Part II. Do They Really Think Differently? *Horizon*, *9*(6). https://doi.org/10.1108/10748120110424843

Prensky, M. (2009). H. Sapiens digital: from digital immigrants and digital natives to digital wisdom. *Innovate, 5*, 1–9.

Rothwell, L. (2008). Podcasts and collaborative learning. In G. Salmon & P. Edirisingha (Eds.), *Podcasting for learning in universities* (pp. 121–131). New York, NY: Open University Press.

Stewart, W., Doolan, M.A. (2008). Listen to this: Enhancing the learner experience through the use of audio within the next generation technologies. *Proceedings of Higher Education Academy's fourth Annual Conference*, July 1-3, at the Harrogate International Center.

Phillips, B. (2015). Empowering students: Using technology-enhanced learning to foster learner autonomy. In A. Trink (Ed.) *Pannonia Research Award: regionale und europäische Zukunftsfragen* (pp. 83–94). Graz: Leykam.

Rosell-Aguilar, F. (2007). Top of the pods – In search of a podcasting "podagogy" for language learning. *Computer Assisted Language Learning*, *20*(5), 471–492.

Royer, R. (2009). Educational Blogging: Going Beyond Reporting, Journaling, and Commenting to Make Connections and Support Critical Thinking. In I. Gibson, R. Weber, K. McFerrin, R. Carlsen & D.A. Willis (Eds.), *Proceedings of Society for Information Technology & Teacher Education International Conference 2009* (pp. 507–514). Chesapeake, VA: AACE.

Salmon, G., & Edirisingha, P. (Eds.). (2008). *Podcasting for learning in universities*. New York, NY: Open University Press.

Salmon, G., & Nie, M. (2008). Doubling the life of iPods. In G. Salmon & P. Edirisigha (Eds.). *Podcasting for learning in universities* (pp. 20-32). New York, NY: Open University Press.

Shield L., & Kukulska-Hulme, A. (2008). *Special issue of ReCALL on Mobile Assisted Language Learning*. Cambridge University Press.

Stanley, G. (2006). Podcasting: Audio on the Internet Comes of Age. *TESL-EJ*, *9*(4).

Sun, Y. C. (2009). Voice blog: An exploratory study of language learning. *Language Learning & Technology, 14*(2), 88–103.

Stoltenkamp, J., Mapuva, J., Khumalo Y., & Kies C. (2011). Rolling out Podcasting to Enhance Teaching and Learning: A Case of the University of the Western Cape. In: *International Journal of Instructional Technology and Distance Learning, 8*(1), 1–21.

Sze, P. M, (2006). Developing Students' Listening and Speaking Skills Through ELT Podcasts. *Education Journal*, *34*(2).

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