

MALL Technology: Use of Academic Podcasting in the Foreign Language Classroom

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Abstract

Integrating Mobile Assisted Language Learning (MALL) technology (personal multimedia players, cell phones, and handheld devices) into the foreign language curriculum is becoming commonplace in many secondary and higher education institutions. Current research has identified both pedagogically sound applications and important benefits to students. In this paper, we present the results of an initial study which compares the academic benefits of integrating podcasts into the curriculum against using them as a supplemental/review tool. The study's findings indicate that when instructors use podcasts for multiple instructional purposes (e.g., to critique student projects and exams, for student video presentations, for student paired interviews, to complete specific assignments, dictations, in roundtable discussions, or for guest lectures), students are more likely to use this technology and to report academic benefits. While the study is limited by small sample sizes and by some within-group variation in instructional techniques, the study provides initial evidence that podcast technology has the potential to provide greater benefits if it is used more than simply as a tool for reviewing. The study's positive findings indicate that additional research to examine the effects of specific instructional uses of podcast technology is merited.

Keywords: Academic podcasting, portability, mobile assisted learning, learner-centered, instructional tool

1 Introduction

At the risk of overstating the obvious, technology is reshaping teaching and learning by supporting, expanding, and enhancing course content, learning activities, and teacher-student interactions. A new wave of “enabled wifi” personal multimedia players is expanding students’ access and mobility and is providing opportunities for them to time-shift their learning activities. MALL is gaining popularity as it is integrated into the foreign language curriculum, providing new learning tools to the “net generation” (Oblinger & Oblinger, 2005). For this new generation of students who have been encouraged to “to take control of what they learn” (Kukulska-Hulme & Shield, 2007) MALL, and particularly podcasting, can play a key role by providing them with instructional materials and low-cost tools as they work toward developing language proficiency. As an audio/video content delivery approach based on web syndication protocols (RSS and/or Atom, see Figure 1), podcasting provides increased flexibility and portability, and allows for time-shifting and multitasking (Thorne & Payne, 2005). In this regard, it should be emphasized that syndication is the cornerstone of podcasting. By allowing subscription and notification, this XML-based protocol shifts audio/video file handling from a static and manual mode to a dynamic and automated mode.

Time constraints are often a major factor in the completion of course assignments for the working and/or the commuting student. The academic use of podcasting allows for constant accessibility to the teaching and learning experience, while enabling the on-demand learner to control and personalize the learning process (Lee & Chan, 2007). Academic podcasting gives student learners “on-demand deliverability” (Donnelly & Berge, 2006), and allows them to organize their studying into “manageable chunks” (Chinnery, 2006). It also allows teachers to restructure classroom time and to convert the popular *iPod* and other MP3/MP4 players into multi-purpose teaching and learning tools to enable students to review lectures, to expand their vocabulary, and to build oral and aural skills (Facer, Abdous & Camarena, 2009).

Interaction is critical in language learning. It links all the necessary conditions for successful language learning: quality input, feedback, and opportunities for practice

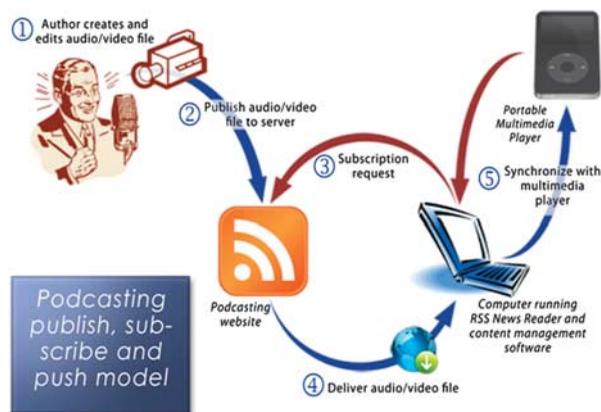


Fig. 1. Podcasting publish, subscribe, and push model

(Gass, 2003; Gass & Mackey, 2007). Synchronous and asynchronous media are needed to facilitate the different functions of interaction (Zhao *et al.*, 2005), but the use of different media might be even more important in fostering the development of different language skills (Zhao, Alvarez-Torres, Smith & Tan, 2004). Oral synchronous interactions are thought to be the most effective approach for building oral proficiency, particularly for novice learners (Wang, 2004). Frequent and timely feedback from instructors is also important in building language proficiency (Sawatpanit, Suthers & Fleming, 2004; Thurmond, Wambach, Connors & Frey, 2002). Moreover, foreign language instruction should be somewhat fluid and instructors should address the linguistic problems and needs that emerge during instructional activities in a timely manner, rather than strictly follow a sequence of pedagogical tasks or learning activities (Reynard, 2003). Providing various types of learning activities and pedagogical tasks, assignments (e.g., individual and group; written and oral), and assessments (e.g., individual tests, group projects, oral interviews or presentations) provides variability and flexibility that enables instructors to better respond to students' needs (Sawatpanit *et al.*, 2004).

Podcasts have generally been used as a supplemental resource (Bongey, Cizadlo & Kalnbach, 2006; Huntsberger & Stavitsky, 2007) to support textbook materials (Stanley, 2006) and to engage students (Edirisingha and Salmon, 2007). The most commonly reported use of podcasting has been to increase students' preparedness and readiness for exams and to complete assignments (Copley, 2007; Evans, 2008). Kurtz, Fenwick and Ellsworth (2007) report that students who received podcasts of classroom lectures for review received higher course grades than students who only listened to class lectures while in their classrooms. While these are useful benefits, additional benefits may be provided as a result of other, more innovative, uses of podcasting technology. Prior research indicates that the technology is most effective when it is thoughtfully integrated into course curricula, with a clear purpose and rationale for its instructional use (Copley, 2007; Herrington & Kervin, 2007).

Prior studies, including a recent study conducted by the authors, provide evidence that podcasting technology promotes second language learning; however, prior studies have not examined the effectiveness of different instructional uses of podcasts in language acquisition. In the light of this, this study attempts to examine the differential effectiveness of various instructional uses of podcasting in student language acquisition.

2 Background

The Department of Foreign Languages and Literatures at Old Dominion University (ODU) began podcasting in the Fall semester of 2006 as part of a project supported by a University Faculty Innovator Grant. This initial grant allowed faculty to begin to adapt podcasting technology for instructional purposes. This pilot project laid the foundation for a larger, follow-up project, supported by a grant from the National Endowment for the Humanities (NEH). The NEH grant allowed more faculty members in the Foreign Language Department at ODU to develop podcasts and to use them for a variety of instructional purposes in different language courses and as data to be collected from a larger sample of classes taught during the 2007–2008 academic year.

Because of variations in course content, learning objectives, teaching styles and student language proficiency, faculty members were not limited in how they integrated podcasting technology in their courses. It was expected that they would adapt the technology both to help them achieve their course objectives and to meet their students' needs. While the primary focus of the NEH study was to examine the effects of podcasting on second language acquisition (i.e., oral and aural skills), the initial analyses of the data collected during the Fall 2007 semester indicated that there were noteworthy differences in students' learning that resulted from the different ways that teachers used the podcasts.

The sample of classes for this study included eight foreign language classes taught during the Fall 2007 semester. Given the relatively small number of faculty and classes participating in the study, only a limited number of comparisons could be made among the various instructional methods that faculty employed.

The study focused on the effects of the supplemental use of podcasting (Podcasts as Supplemental Material, PSM courses) and contrasted them with the integrated use of podcasting (Podcasts Integrated into Curriculum, PIC courses), comparing the instructional benefits of each method. Supplemental use is defined primarily as the unplanned use of podcasting, in which faculty members provide students with recorded lectures for later use and review. Integrated use is defined as the planned integration of podcasting into a variety of instructional activities, which include recorded critiques of student projects and exams, student video presentations, student interviews, recorded lectures, dictations, roundtable discussions, and guest lectures.

Faculty members were provided with the latest recording hardware and software and with any technical assistance needed to help them record, edit, upload, and download podcasts. All podcasts were uploaded to iTunes, enabling students to access, browse, search, subscribe, and synchronize their classes' podcast lists. Assistance with the use of the podcasts was also provided to students.

The classes that comprised the sample for the NEH podcasting study included upper level grammar and literature courses: one German, one French, one Japanese, three Spanish, and one world literature course, conducted in English (see Tables 1 and 2 for a complete list of the classes included in the study). The total enrollment for the semester in all eight classes was 128 students. The Japanese and Spanish course instructors developed podcasts of student presentations and interviews accompanied by instructor commentary and corrections. The French, German, and Spanish course instructors recorded class meetings as lectures for review. One Spanish instructor recorded student roundtable literature discussions, as well as student presentations, as vodcasts (video podcasts). The world literature instructor made podcast recordings of instructor lectures, class discussions, student presentations, and guest lectures. A detailed description of how the various instructors used podcasts for their classes is contained in Tables 1 and 2.

3 Methodology

A post-test design was used: (1) to evaluate the effects of the use of podcasts for instructional purposes on student language skill acquisition; and (2) to compare the effects on student learning when the technology was integrated into the curriculum

Table 1 *Classes that pedagogically integrated podcasts into their curricula (Fall 2007)*

Language	Course	Student Enrollment	Class Meeting	Podcasting Activity	Activity Description	Technology Employed	Software Application
English	FLET 100 (Foreign Literature in English Translation): Understanding World Literature	34	MWF 50 min.	<ol style="list-style-type: none"> Lecture Group discussion Student presentations Guest lectures 	<ol style="list-style-type: none"> Instructor's lecture (10–15 min) outlining the author, text, and cultural content Discussion by students and instructor of the literary text (10 min) Student presentations of author and text in preparation for class discussion and lecture (5–10 min) Special guest lectures by faculty experts on the topic and/or language (20–30 min) 	M-Audio Sony wireless microphone	GarageBand
French	FR 407/507: Advanced Grammar & Syntax	13	MWF 50 min.	<ol style="list-style-type: none"> Lecture Dictations 	<ol style="list-style-type: none"> Lectures of a formal study of grammatical rules and their application in a more practical context Graded in-class dictations by instructor for student outside-of-class review and corrections 	M-Audio	GarageBand
Japanese	JAPN 311: Advanced Japanese Language and Culture	20	MWF 50 min.	<ol style="list-style-type: none"> Student presentations Student oral exam interview 	<ol style="list-style-type: none"> Student presentations (2–5 minutes) during class. Instructor listened to recordings and added corrections and feedback to presentation at the end of each recording. Instructor conducted an oral exam interview with student outside of class. Instructor 	M-Audio Sony wireless microphone	GarageBand Audacity

Table 1 *Continued*

Spanish	SPAN 311: Communicative Competence: Listening and Speaking	12	MWF 50 min.	1.	Student paired interviews	1.	Students submitted a recorded paired interview outside of class (5 min). Instructor listened to recorded interview and provided voiceover feedback and commentary to be graded. Podcasts were used for peer review critique	Logitech USB desktop microphone	GarageBand Audacity
Spanish	SPAN 496/596: Digital Latin American Poetics	8	M 2hrs, 40 min.	1. 2.	Roundtable discussions Student presentations (vodcasts)	1. 2.	2-4 student roundtable discussions (15-20 min) of required weekly reading material, including author, text, theory, movement or theme. This research was intended to encourage enthusiastic class discussions. Student video presentations (vodcasts) were made based on an analysis of the poetry studied for that particular week (20 min).	M-Audio CLT Video production	GarageBand

Table 2 *Classes that used podcasts as supplemental material (Fall 2007)*

Language	Course	Student Enrollment	Class Meeting	Podcasting Activity	Activity Description	Technology Employed	Software Application
French	FR 333: French Literary Forms- Poetry	16	TTH 75 min.	1. Lecture	1. Selection of French poetry from the Middle Ages to today	M-Audio	GarageBand
German	GER 380: German Literature from Sturm und Drang to Jugendstil	10	TH 75 min.	1. Lecture	1. Lectures by instructor of literary works and historical documents	M-Audio	GarageBand
Spanish	SPAN 495/595: Sex and Religion in the Middle Ages	15	T 2hrs-40 min.	1. Lecture 2. Group discussion	1. Lectures by instructor on how religion and sex have influenced the narrative of medieval Spain (30–40 min) 2. Discussion of texts and critical texts with student participation	M-Audio Sony wireless microphone	GarageBand

(PIC) versus when it was used as supplemental material (PSM). The study sample consisted of language classes taught by instructors who were willing to experiment with podcasts for instructional purposes. The study relied on survey and interview techniques to collect data from instructors and students. Survey data collection methods were used because of their efficiency and their simple administrative procedures.

A survey instrument (see Appendix B) developed during a pilot study was used to collect data from students. The survey included twenty multiple-choice questions about students' academic performance; study habits; time devoted to studying and completing assignments for their language class; access to computers, *iPods*, and MP3 players; skills in using new technology (e.g. PCs, *iPods*, downloading materials from one medium to another); use of podcasts developed for their language class (i.e., frequency and ways used); perceived usefulness of the podcasts for improving language skills; and the effects of the podcasts on the students' language skill development. In an effort to ensure that students provided honest responses, the survey was anonymous; no information that could result in the identification of a student was requested on the questionnaire.

3.1 Data collection

The student survey was administered to each student enrolled in the participating language classes at the end of the semester. With the permission of the instructors, a member of the evaluation team visited each class during the final weeks of the semester to administer the survey. Students were advised that their participation was voluntary, that the survey was anonymous, and that there would be no adverse consequences if they declined to participate. In order to ensure confidentiality, the survey forms were distributed to students at the end of class and were collected before they left the classroom.

3.2 Data analysis

Completed surveys were obtained from 113 of the students enrolled in the eight language classes that participated in the study. The survey data were compiled into an SPSS data file for analysis, and then frequency counts and per centiles were calculated. The sample of students was divided into sub-groups consisting of: (a) those enrolled in classes in which podcasts were integrated into the curricula (PIC), and (b) those enrolled in classes in which podcasts were used as supplementary material (PSM). The purpose for these comparisons was to examine potential differences in the two groups' use of podcasting and any resulting effects on their learning and/or their acquisition of language skills. Frequency counts and per centiles were calculated for each student sub-group, so that their responses could be compared to determine whether different instructional uses of podcasts had differential effects on student learning and on their acquisition of language skills. The results of these analyses are summarized in the following section.

4 Results

Prior studies indicate that the use of academic podcasting is most effective when it is integrated into course curricula, and when podcasts are linked to specific

instructional objectives (Copley, 2007; Herrington & Kervin, 2007). In a prior study, the authors found that the use of podcasts contributes to the acquisition of language skills, especially oral and aural skills (Facer, Abdous & Camarena, 2009). In this study, we examined the effects of podcasting on language skill acquisition in classes in which podcasts were used for different instructional purposes (PIC vs. PSM), in order to try to determine whether there were any notable differences in learning. The analyses compared the effects of podcasting on the learning of students in foreign language classes in which podcasts were integrated into the curriculum using clear instructional objectives with the learning of students in classes in which podcasts were simply used to supplement the textbook.

4.1 Use of different devices to access podcasts

Although the technology is now relatively inexpensive, students living on limited budgets may not be able to afford to purchase an iPod or MP3 player in order to access podcasts developed for their courses. In a prior study, Facer, Abdous and Camarena (2009) found that some students used their personal computers to download and listen to podcasts. Almost all students who participated in the current study reported that they owned a personal computer (either a desktop or laptop model) and the majority (77 per cent) also owned an iPod or an MP3 player (see Table 3). Almost all students (94 per cent) reported that they used their personal computers for academic work often, while only about a third of them (31 per cent) reported that they used an iPod or MP3 player sometimes to listen to course material, and only 16 per cent used an iPod/MP3 player often for academic work (see Table 4). It appears that some students prefer to use a device which they already own

Table 3 Percentage of students who own and use new devices

Device	Students who own device (n)	Students who use it regularly (n)
Personal computer (desktop or laptop)	96.3% (79)	97.6% (80)
iPod/MP3	70.7% (58)	65.9% (54)
Handheld computer or PDA	14.6% (12)	14.6% (12)

Table 4 Frequency of students' use of new devices for academic purposes

Use of new device	Frequency of Use		
	Never/rarely (n)	Sometimes (n)	Often (n)
Personal computer for assignments/projects	1.2% (1)	4.9% (4)	93.9% (77)
iPod/MP3 to listen to course materials	52.5% (42)	31.3% (25)	16.3% (13)
Computer for other electronic resources for research (i.e., internet searches)	4.9% (4)	3.7% (3)	91.5% (75)

(i.e., a personal computer) to download media, such as podcasts, rather than to purchase another device for use as a study tool.

4.2 Reasons for not using iPod/MP3 players

Thirty-five per cent of the students who were surveyed reported that they had never downloaded any of the podcasts for their language course, and an additional forty per cent reported that they had downloaded them less frequently than once a week. Students who used the podcasts less frequently than once a week were asked why they did not use the podcasts (see Table 5). The most common reason given by students was that they did not have time to download and use them. Eighteen per cent of the students who either did not use the podcasts or used them infrequently said that they did not use them because they did not think that the podcasts would help them with their studies. While only a small proportion of students (11%) reported that they did not use the podcasts because they did not know how to download them, students' technical capabilities may have had a greater effect on their use of the podcasts than their responses to this question indicate. Students' self-assessment of their technical skills indicated that they had much less confidence in their ability to download podcasts or to handle the interactive features of web-based instruction than they had in their ability to use personal computers for completing assignments or searching for information on the internet (see Table 6). Lack of confidence in their use of iPod technology might have affected students' perceptions about the difficulty of downloading and using podcasts. If students thought that they would

Table 5 *Reasons reported by students for not using podcasts*

Rationale	% of Students (n) ¹
I didn't have a PC, iPod, or MP3 player to listen to them.	8.5% (7)
I don't know how to download them.	11.0% (9)
I didn't think they would help me.	18.3% (15)
I don't have time to download and use them.	32.9% (27)

¹Total number of respondents in Tables 5–12 may vary from total number of respondents in Tables 1 and 2 because some respondents did not use the podcasts.

Table 6 *Students' confidence in their technical capabilities*

Technical capabilities	Level of confidence		
	Very little	Average	Great deal
Using the internet or library search engine for research	0.0% (0)	11.0% (9)	89.1% (73)
Using PC software to complete class assignments	3.7% (3)	6.1% (5)	90.2% (72)
Downloading course material to my PC/iPod/MP3 player	34.1% (28)	13.4% (11)	52.5% (43)
Completing interactive lessons using wireless access	36.6% (30)	19.5% (16)	43.9% (36)

have to spend time learning how to download podcasts, in addition to downloading and using them, they may have felt that it was not worth spending the time to use them. Comments made by students in the focus groups at the end of the semester indicated that they still felt that they were not proficient in the use of podcast technology. To promote greater use of podcasts and to justify the time and costs involved in developing them, their usefulness as a learning tool will need to be made known to faculty and students. In-class training about how to subscribe, download, and save podcasts may need to be provided to students.

4.3 Frequency of podcast use by course type

Sixty-five per cent of the students who completed the survey (73 of 113 students) reported that they had downloaded the podcasts that had been developed for their language course at least once. In general, the students enrolled in the classes in which podcasting was integrated into the course curriculum (PIC classes) used the podcasts more often than those enrolled in classes in which podcasts were used simply as a supplemental resource (PSM classes). Slightly more than half of the students in the latter group reported that they had never used the podcasts (see Table 7). Twenty per cent of the students in the PIC classes reported that they had downloaded recorded class material once or twice during the semester, an additional twenty per cent reported that they had downloaded the podcasts at least once a week, and almost eight per cent reported that they had downloaded podcasts several times a week or more. In the PSM classes, only fifteen per cent of the students downloaded recorded class material once or twice during the semester. Another fifteen per cent of students in the PSM group downloaded the podcasts at least once a week, but none of the students in the PSM group reported downloading podcasts more than once a week.

A prior study (Facer, Abdous & Camarena, 2009) found that students who did not own or were not familiar with iPods or MP3 players were not likely to use them, and that if students did not think that the podcasts would help them study, they would not take the time to use them. Again, many students reported that they did not use the podcasts because they did not think that they would be helpful or did not have time to download them, but those taking classes in which the instructors integrated the use of podcasts into instructional practices and classroom activities (the PIC

Table 7 Frequency of students' downloading podcasted classes to PC/iPod/MP3

Frequency	Percentage of students (n)	
	PIC Courses	PSM Courses
Never	27.5% (22)	54.5% (18)
Once or twice this semester	20.0% (16)	15.2% (5)
Once or twice a month	20.0% (16)	15.2% (5)
Once or twice a week	25.0% (20)	15.2% (5)
Several times a week or more	7.5% (6)	0.0% (0)
TOTAL (n)=	80	33

classes) were more likely to take the time to learn how to download them and to use them than were students in the PSM classes. Almost two-thirds of the students in the PIC group reported that they would be more likely to take a language course if podcasts were available for the course (see Table 8). From students' survey responses, it appears that if instructors take the time to carefully plan and to develop creative instructional uses for podcasts, as did the instructors of the PIC classes, their students will begin to see the podcasts' value and will be more likely to use them. Slightly more than half of the students in the PSM classes reported that they would be more likely to take a language course if podcasts were available, which indicates that students do see some value in podcasts even if they are only used as a supplemental resource.

4.4 Effects of podcast use on learning and study habits

In addition to being asked about their use of podcasts, students were asked about how the use of podcasts had affected their study habits. Overall, a substantial number of students reported that the use of the podcasts had had positive effects on their study habits and that the podcasts had proven to be a very helpful learning tool. There were some large differences in how students enrolled in the classes in which podcasting was integrated into the course curriculum (PIC) rated the podcasts, versus how students enrolled in classes in which podcasts were just used as a supplemental study tool (PSM) rated them (see Tables 9 and 10). A larger proportion of

Table 8 Influence of podcast availability on course enrollment decisions

Course enrollment decision	Percentage of students (n)	
	PIC Courses	PSM Courses
Student would enroll if podcasts were available for course	65.0% (52)	54.5% (18)
Availability of podcasts would not affect decision to enroll in course	13.8% (11)	12.1% (4)
Student not sure or undecided	21.3% (17)	33.3% (11)
TOTAL (n)=	80	33

Table 9 Effects of podcasts on study habits of students in PIC courses

Study habits/activities	Student ratings (n)			
	Little/very little	Moderate amount	Much/great deal	TOTAL (n)
Make learning the material for this course easier	37.5% (30)	20.0% (16)	42.6% (34)	80
Make it easier to complete assignments	43.8% (35)	12.5% (10)	43.8% (35)	80
Make it easier to get feedback from teachers	40.5% (33)	16.5% (13)	43.1% (34)	80

Table 10 *Effect of podcasts on study habits of students in PSM courses*

Study habits/activities	Student ratings (n)			
	Little/very little	Moderate amount	Much/great deal	TOTAL (n)
Make learning the material for this course easier	45.2% (14)	22.6% (7)	32.2% (10)	31
Make it easier to complete assignments	51.6% (16)	25.8% (8)	22.6% (7)	31
Make it easier to get feedback from teachers	63.3% (20)	30.0% (9)	6.7% (2)	31

Table 11 *Effects of podcast use on language skills development in PIC courses*

Language skill	Student Ratings (n)			
	Little/very little	Moderate amount	Much/great deal	TOTAL (n)
Reading in a foreign language	57.1% (28)	16.3% (8)	26.5% (13)	49
Writing in a foreign language	51.0% (25)	18.4% (9)	30.6% (15)	49
Listening and understanding in a foreign language	24.5% (12)	26.5% (13)	49.0% (24)	49
Speaking a foreign language (i.e., conversing)	28.6% (14)	34.7% (17)	36.7% (18)	49
Vocabulary knowledge	28.6% (14)	26.5% (13)	44.9% (22)	49
Knowledge of grammatical rules	44.9% (22)	20.4% (10)	34.7% (17)	49

students in PIC classes than in PSM classes reported that podcasting made learning course material, completing assignments, and obtaining instructor feedback much easier. Twice as many students in PIC classes as in PSM classes indicated that the use of podcasts made completing their assignments much easier, and 43 per cent of them reported that the use of podcasts made it much easier to get feedback from instructors, versus seven per cent of the students in the PSM classes. These findings indicate that podcasting can be an effective study tool which facilitates the completion and evaluation of assignments in foreign language classes (see Tables 11 and 12 for a complete summary of survey responses).

4.5 *Effect of podcast use on acquisition of language skills*

Students were asked to assess the extent to which the use of podcasts had helped them to develop their language skills. In general, the students reported that the podcasts had helped them to improve their language skills. As was found in a prior study (Facer, Abdous & Camarena, 2009), students reported that the podcasts were most useful for improving their oral and aural language skills, as well as for improving their knowledge of vocabulary. (See Tables 7 and 8 for a complete

Table 12 *Effects of podcast use on language skills development in PSM courses*

Language skill	Student Ratings (n)			
	Little/very little	Moderate amount	Much/great deal	TOTAL (n)
Reading in a foreign language	71.9% (23)	9.4% (3)	18.8% (6)	32
Writing in a foreign language	59.4% (19)	15.6% (5)	25.0% (8)	32
Listening and understanding in a foreign language	43.8% (14)	12.5% (4)	43.8% (14)	32
Speaking a foreign language (i.e., conversing)	53.1% (17)	15.6% (5)	31.3% (10)	32
Vocabulary knowledge	50.0% (16)	15.6% (5)	34.4% (11)	32
Knowledge of grammatical rules	68.8% (22)	12.5% (4)	18.8% (6)	32

summary of survey responses.) More students enrolled in the classes in which podcasting was integrated into the course curriculum gave the podcasts high ratings as useful tools – both for improving their oral and aural skills and for building their vocabulary and knowledge of grammatical rules – than did students who used podcasts simply as a supplemental study tool. A substantial proportion of students in both the PIC and PSM classes rated the podcasts highly as a useful tool for improving their aural and comprehension skills.

Another notable difference between the two groups of students was that a much larger proportion of students enrolled in the PIC classes gave the podcasts high ratings for helping them build their vocabulary and knowledge of grammatical rules than did students in the PSM classes. Ten per cent more students in PIC classes indicated that use of the podcasts improved their vocabulary than did students in the PSM classes, and almost twice as many in the PIC classes as in the PSM classes reported that the use of podcasts improved their knowledge of grammatical skills. This probably reflects the fact that their instructors used the podcasts for a variety of different instructional purposes, both in and out of the classroom. These findings indicate that, on the basis of student perceptions, podcasting can effectively promote the acquisition of a number of different language skills if instructors adapt and use the technology for a variety of instructional purposes.

5 Conclusion

Mobile Assisted Language Learning is progressively changing the way that foreign languages are taught and the way that students study. Instructors are beginning to rethink how they conduct their classes and how they use classroom time. This study shows the perceived benefits that the use of technology can provide to foreign language instructors and students. Because podcasting requires little technical support and because iPods and MP3 players are relatively inexpensive, podcasting can be a very cost-effective instructional tool. It also offers the advantage of being portable and accessible whenever needed, a factor which is important for today's highly mobile students.

The variation that resulted from allowing instructors to decide how they would use podcast technology allowed us to examine whether this variation would result in differential effects on student learning. While this study indicates that how instructors choose to use podcast technology affects their students' perceived learning gains, more rigorously designed studies which control how instructors use the technology are needed, in order to determine whether the differential effects are significant and to identify which instructional uses produce the largest learning gains.

As research begins to document the instructional benefits of podcasting, the initial reluctance of instructors to use this new technology should continue to decline. More and more instructional uses will be found for this technology as instructors begin to experiment with its use. Follow-up studies, which will examine the use of podcasting as a tool to help students prepare for and enrich their Study Abroad experience, are already being planned. Additionally, further studies examining the impact of podcasting and mobile devices on student learning styles should be beneficial. With recent US Federal initiatives that have provided funding for university projects designed to adapt iPods, MP3 players, cell phones, and PDAs for instructional uses, it is likely that these technologies will eventually be incorporated into classes in all academic departments at colleges and universities.

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Appendix A: ODU Department of Foreign Languages and Literatures Student Survey about Podcasting Use Fall 2007 & Spring 2008

INSTRUCTIONS

Faculty in ODU's Foreign Languages and Literatures Department are beginning to experiment with the use of iPods, MP3 players, and podcasting in foreign language courses. You can help them learn more about the use of these new tools and technologies for instructional purposes in college classrooms by completing this survey. Your participation is voluntary and your course grade will not be affected if you do not participate in the survey.

In addition to requesting your participation in this survey, we would like to obtain your final grade for this course and your oral proficiency score from the course instructor. Student grades and oral proficiency scores will be used to evaluate the effects of podcasting on academic performance. If you complete this survey, it will be assumed that you agree to let us obtain this information from the instructor. All of the performance data provided by your instructor will remain confidential.

The information you provide will remain confidential. Your individual responses WILL NOT be shared with the instructor of this course or anyone in the Foreign Language Department. The survey responses of students will be aggregated and only a summary of all survey responses will be reported. The results of the survey will be used only for research purposes to determine whether podcasting is an effective method of promoting language learning among college students.

Please provide as accurate an answer as possible to each question. If there is a question that you do not know the answer to or do not wish to answer, skip it and go on to the next question.

Please return the completed survey form as instructed.

1. Fill in the name of this course: _____
2. What is your academic year? (*Check one*)
 - Freshman
 - Sophomore
 - Junior
 - Senior
 - Other (specify: _____).
3. What is your major? (*Check one*)
 - Arts & Letters
 - Business & Public Administration
 - Education
 - Engineering & Technology
 - Sciences
 - Health Sciences
 - Other (specify: _____)
4. What is your age group? (*Check one*)
 - 18 years or under
 - 19 to 20 years
 - 21 to 25 years
 - 26 to 29 years
 - 30 years or older

5. Are you? (*Check one*) Male Female
6. How many other college-level foreign language/literature courses have you taken before this course? (*Fill in number and include courses taken at other schools*)
_____ courses
7. What is your primary reason for taking this course? (*Check one*)
- Fulfillment of general education requirement
 - Requirement for graduation in my major
 - Preparation for graduate school
 - Recommendation of advisor or other faculty
 - Personal interest in subject
 - Other (specify: _____)
8. Compared to other courses you are taking this semester, how much time do you spend on this course? (*Check one*)
- Much less time
 - Somewhat less time
 - Same amount of time
 - Somewhat more time
 - Much more time
 - I'm not taking any other courses
9. Which of the following technologies do you own? (*Check all that apply*)
- Personal computer (desk top or laptop)
 - Handheld computer or PDA
 - iPod/MP3
 - Word processing software (e.g., Word)
 - Business or database software (e.g., Excel, Access, Microsoft Office)
 - Statistical analysis software (e.g., SPSS, SAS)
10. Which of the following technologies have you used on a regular basis before taking this course? (*Check all that apply*)
- Personal computer
 - Handheld computer or PDA
 - Internet
 - iPod/MP3
 - Word processing software
 - Business or database software
 - Statistical analysis software
11. How often do you use the following technologies for school assignments or other academic work? (*Check all that apply*)
- | | Never | Rarely | Some-
times | Often |
|---|-------|--------|----------------|-------|
| a. Personal computer for assignments, projects | 1 | 2 | 3 | 4 |
| b. Handheld computer or PDA for assignments, projects, or presentations | 1 | 2 | 3 | 4 |
| c. iPod/MP3 for listening to course materials | 1 | 2 | 3 | 4 |
| d. Internet for finding information or research | 1 | 2 | 3 | 4 |
| e. Word processing software (e.g., Word) | 1 | 2 | 3 | 4 |
| f. Business, database, statistical analysis software | 1 | 2 | 3 | 4 |
| g. Use a computer or other electronic resources for research (i.e., to look things up for school) | 1 | 2 | 3 | 4 |
| h. Use a computer to collect, analyze or display data | 1 | 2 | 3 | 4 |

12. Please rate your confidence in the following areas. (Circle one number for each)

- | | <i>Very Little</i> | | | | <i>A great Deal</i> |
|---|--------------------|---|---|---|---------------------|
| | 1 | 2 | 3 | 4 | 5 |
| a. Using the internet or library search engine for research | 1 | 2 | 3 | 4 | 5 |
| b. Using a hand-held PC or laptop to take class notes | 1 | 2 | 3 | 4 | 5 |
| c. Using PC software to complete class assignments | 1 | 2 | 3 | 4 | 5 |
| d. Downloading course material to my PC/iPod/MP3 player | 1 | 2 | 3 | 4 | 5 |
| e. Completing interactive lessons using wireless access | 1 | 2 | 3 | 4 | 5 |

13. How much time do you devote to each of the following activities for this course? (Fill in a number for each activity)

- a. Completing written assignments: _____ hours per week outside of class
- b. Reading: _____ hours per week outside of class
- c. Memorizing material: _____ hours per week outside of class
- f. Practicing conversational skills with others: _____ hours per week
- e. Listening to taped recordings: _____ hours per week outside of class

14. Since the beginning of the semester, how often have you downloaded recorded lessons or other course material to a computer or iPod/MP3 to study for this course? (Check one)

- Never
- Once or twice this semester
- Once or twice a month
- Once or twice a week
- Several times a week or more

15. If you used the podcasts for this course **less than once a week**, what were the reasons that you didn't use them more often? (Check all that apply)

- I didn't have a PC, iPod, or MP3 player to listen to them.
- I don't know how to download them.
- I didn't think they would help me.
- I don't have time to download and use them.
- Other (specify: _____)

16. Would you be more likely to enroll in a language course if podcasts of class lectures and other course materials were available for the class? (Check one)

- YES
- NO
- Not sure/Don't know

17. To what extent did the availability of podcasts of class lectures and other course materials affect the following things? (Circle one number for each item)

- | | <i>Very little</i> | | | | <i>A great deal</i> |
|--|--------------------|---|---|---|---------------------|
| | 1 | 2 | 3 | 4 | 5 |
| a. Increase the amount of time you studied for this course | 1 | 2 | 3 | 4 | 5 |
| b. Decrease the amount of time you studied for this course | 1 | 2 | 3 | 4 | 5 |
| c. Make learning the material for this course easier | 1 | 2 | 3 | 4 | 5 |
| d. Make it easier to complete assignments | 1 | 2 | 3 | 4 | 5 |
| e. Make it easier to get feedback from teachers | 1 | 2 | 3 | 4 | 5 |

18. How much has this course helped you to improve in each of the following skill areas?

(Circle one number for each item)

	<i>Very little</i>				<i>A great deal</i>
a. Reading in a foreign language	1	2	3	4	5
b. Writing in a foreign language	1	2	3	4	5
c. Listening and understanding a foreign language	1	2	3	4	5
d. Speaking a foreign language (i.e., having a conversation)	1	2	3	4	5
e. Vocabulary knowledge	1	2	3	4	5
f. Knowledge of grammatical rules	1	2	3	4	5

19. To what extent has the use of an iPod/MP3 or computer as a study tool (i.e., to review lectures, build listening and speaking skills) helped you to improve in the following skill areas? (Circle one number for each item)

	<i>Very little</i>				<i>A great deal</i>
a. Reading in a foreign language	1	2	3	4	5
b. Writing in a foreign language	1	2	3	4	5
c. Listening and understanding a foreign language	1	2	3	4	5
d. Speaking a foreign language (i.e., having a conversation)	1	2	3	4	5
e. Vocabulary knowledge	1	2	3	4	5
f. Knowledge of grammatical rules	1	2	3	4	5

20. What grade do you expect to receive in this course? (Check one)

- A/A-
- B+/B/B-
- C+/C/C-
- D or F
- Other (specify: _____)

21. Can you suggest other uses for iPods/MP3s and podcasting technology that will help students improve their foreign language skills?

THANK YOU FOR COMPLETING THE SURVEY.
PLEASE RETURN IT AS INSTRUCTED.