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目录

Going Mobile: Language Learning With an iPod Touch in Intermediate French and German Classes

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摘要: Mobile devices are becoming more and more pervasive in today's world for both personal use and educational purposes. Specific to the field of languages, mobile? assisted language learning, derived from m-learning and computer-assisted language learning (CALL), differs from CALL in that it makes use of a personal portable device to enhance learning and give it the "anytime, anyplace" feature. Our study focused on both the learner and the mobile tool. We specifically investigated how students use mobile devices, specifically the iPod Touch, while noting differences in both personal and academic use. Using ecological constructivism as a theoretical framework, we examined the affordances of the mobile devices that encourage interaction with the target language and culture and explored a range of tasks using a mobile device. [PUBLICATION ABSTRACT]

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Abstract: Mobile devices are becoming more and more pervasive in today's world for both personal use and educational purposes. Specific to the field of languages, mobile? assisted language learning, derived from m-learning and computer-assisted language learning (CALL), differs from CALL in that it makes use of a personal portable device to enhance learning and give it the "anytime, anyplace" feature. Our study focused on both the learner and the mobile tool. We specifically investigated how students use mobile devices, specifically the iPod Touch, while noting differences in both personal and academic use. Using ecological constructivism as a theoretical framework, we examined the affordances of the mobile devices that encourage interaction with the target language and culture and explored a range of tasks using a mobile device.

Key words: ecological constructivism, iPod Touch, m-learning, mobile assisted language learning, mobile devices

Introduction

Mobile devices are becoming more and more pervasive in today's world, both for personal use and for educational purposes. Currently, 67% of U.S. college students are smartphone users, and eMarketer (2012, n.p.) predicted that by the year 2016, 91.4% of U.S. college students will own a smartphone. However, this practice begins long before college: Croy (2012) indicated that one third of American high school students own an iPhone. The impact of mobile technology is apparent in many aspects of society, including art, employment, language, commerce, crime, and learning (Traxler, 2009a).

In addition to the growing use of mobile devices in these domains, the application of such devices to classroom practice is generating more attention. In educational settings, learning and teaching using mobile devices is referred to as m-learning, or more specifically-"the provision of education and training on PDAs/palmtops/handhelds, smartphones and mobile phones" (Traxler, 2009b, p. 2). Mobile learning, including mobile-assisted language learning (MALL), originally focused on the use of mobile technologies to facilitate learning. More recently, however, researchers have also begun to focus on the mobility of the learner (Sharples, 2006). Using mobile devices, both instructors and learners are able to "transcend the boundaries of the structural stasis of classrooms and lecture halls and their associated modes of communication-they do not have to be confined to one particular place in order to be effective" (El-Hussein &Cronje, 2010, p. 13).

The study reported here focused on both the learner and the mobile tool and specifically investigated how students used the iPod Touch for both personal and academic purposes. An iPod Touch is similar to an iPhone and plays music, videos, and games and downloads apps; it also connects wirelessly to the Internet. It is not,

however, a smartphone. Using ecological constructivism as the theoretical framework, this study considered the features of mobile devices that encouraged interaction with the target language and culture and explored the range of tasks for which learners used a mobile device.

Review of Literature

Mobile Learning

Mobile learning (m-learning) has been defined as using "handheld technologies, together with wireless and mobile phone networks, to facilitate, support, enhance and extend the reach of teaching and learning" (Attewell, Savill-Smith, &Douch, 2009, p. 1). These handheld technologies can include cell phones, PDAs, iPods, and iPads. Mobile tools are small, ubiquitous, and functional, which makes them attractive and easy for students to use and for facilitating sociocultural opportunities for learning (Pachler, Cook, &Bradley, 2009). Chinnery (2006) described mobile learning as taking place in environments that could be "face-to-face, distance, or online; further, they may be self-paced or calendar-based" (p. 9); in other words, devices can be used both within and outside the classroom and can reduce the cognitive load by providing less information at one time (Koole, 2009). Specifically related to language learning, MALL, which is derived from both m- learning and computer-assisted language learning (CALL), differs from CALL in that it makes use of a personal portable device to enhance learning and give it the "anytime, anyplace" feature (Geddes, 2004, p. 1). Kukulska-Hulme (2009) noted that MALL is more spontaneous than CALL because it allows for "new ways of learning, emphasizing continuity or spontaneity of access and interaction across different contexts of use" (p. 162) and also places learning more directly in the hands of the student, although guidance is still necessary.

Both students' positive attitude toward, and widespread use of, mobile phones have played a major factor in the growing use of and interest in MALL (Burston, 2011). Perhaps the largest area of research has investigated the use of mobile phone devices (Pe& cherzewska &Knot, 2007). For language learners, mobile phone devices can impact the learning of grammar, as noted by Baleghizadeh and Oladrostam (2010), who found that English as a foreign language students who had access to mobile phones scored better on a posttest than those in the group without access to a mobile phone. Comas-Quinn, Mardomingo, and Valentine (2009) described the use of mobile phone devices to help students engage with the target community and to share and comment on cultural experiences in a blog. In a three-year study of 175 participants in Tokyo, Stockwell (2010) found that 60% of learners never used the mobile phone to complete vocabulary-related exercises, while only three learners used a mobile phone device to complete all of the activities. Although students claimed that it took longer to complete the activities on mobile phones than on a computer, Stockwell noted that learners did improve in speed and scores over time when using either platform. He also found that more students in the third year of the project used mobile phones than in the first year.

In addition to studies on the use of mobile phones, researchers have also investigated the use of a variety of mobile devices in educational contexts. Hoven and Palalas (2011) examined mobility with an iPod Touch in a university-level blended course in English for accounting. Twelve participants employed mobile devices to view and respond to podcasts and to engage in mobile blogging. The study reported high levels of student satisfaction with this mobile device and reported that the mobile listening option was superior to text-based resources. Kondo et al. (2012) investigated mobile practices with pocket gamers (Nintendo DS mobile) to see if the use of such devices would foster a self-regulated style of learning. Using pre- and post-assessment results and course evaluations from 88 first-year students in a university in Japan, they found that MALL encouraged study without instructor intervention and resulted in increases in time spent on learning tasks, levels of satisfaction from the tasks, and self- measured achievement.

Several studies have examined attitudes toward MALL. Beres's (2011) data from a long-term survey of 349 university-level second language students suggested that students viewed the process of language learning as extending beyond the traditional four walls of the classroom and indicated that students responded positively to MALL. Nah, White, and Sussex (2008) reported that students enjoyed being able to listen any where and at any

time; their research also suggested that learning became more student-centered and collaborative because students could communicate with peers whenever they needed help. Additional benefits of mobile learning include increased access to authentic materials, opportunities to interact within and beyond the learning community (Comas-Quinn et al., 2009), access to comprehensible and extralinguistic input (McQuillan, 2006), and opportunities for additional language practice beyond classroom space and time (Hoven &Palalas, 2011). Mobile devices also allow students to document study abroad experiences (Comas-Quinn et al., 2009) and to take and share pictures (Wong, Chin, Tan, &Liu, 2010). In summary, Burston (2011) emphasized that students' perception of the "anywhere and anytime" convenience is overwhelmingly favorable. As illustrated by these studies, MALL offers numerous benefits, and the mobile context is ideal for supporting learner interaction and collaboration and the co-construction of knowledge.

Researchers have also documented new challenges raised by the use of MALL. Stockwell (2012) suggested that the small screen size, the restricted ways to access input, and the limited types of tasks that may be performed could influence the amount of information provided to learners. Sharples (2009), for example, noted that there is little published research on the impact of MALL on learners' opportunities to speak and listen to the language, and research has shown that students and instructors do not make full use of the "anytime, anyplace" (Geddes, 2004, p. 1) capabilities. There are also psychological barriers to using MALL, which can include finding the balance between private time and study time, as well as challenges associated with studying in public venues or when using public transportation (Stockwell, 2012). Other researchers (Ducate &Lomicka, 2009; Stockwell, 2008) have pointed out that students do not always choose to use a mobile device when they have access to a computer. Because MALL is relatively new, researchers and users of these devices must keep these concerns in mind.

Because of these conflicting findings, Stockwell (2008) called for more studies on students' use of mobile devices outside of the classroom. Sharples (2009) emphasized that MALL remains in its infancy, and not until recently did MALL activities go beyond simply mirroring early CALL activities (electronic quizzes, grammar drills, and vocabulary lists). The challenge for mobile learning, then, is to build a deeper and more pedagogically solid understanding of the ways in which learners use a variety of mobile devices and the effectiveness of these devices in offering learning opportunities that are not limited to simple vocabulary or grammar practice activities and quizzes.

Furthermore, research into the use of MALL must take into consideration a variety of methodological concerns. First, as the devices are not always the property of the researcher or are loaned to the learners for the duration of the project, the researcher has less control over how and when they are used, which can make it more difficult to control the variables associated with their use (Pachler, 2009; Sharples, 2009). There are also privacy issues associated with tracking students' use of these devices, as they are accessed by students for both learning and personal business (Van 'T Hooft, 2009); thus, user data must be supported by information from student questionnaires in order to gain a more complete picture of how devices were employed (Isomursu, Kuutti, &Väinämö, 2004; Trinder, Scott, &Magill, 2009). Wali, Oliver, and Winters (2009), for example, had students complete questionnaires about how they used mobile devices in formal and informal settings, observed learners using the devices, and installed system-monitoring software on students' laptops to reveal what they were doing, thus allowing the researchers to triangulate data from several sources.

Thus, although most research has addressed the use of mobile phone devices, more recent research has begun to investigate the use of iPods, iPod Touches, and Nintendo or gaming devices in educational contexts. The examples discussed above highlight a variety of perceived benefits of using mobile devices, such as increased opportunities for input and language practice beyond the classroom as well as increased opportunities for learners to engage in interaction and collaboration and the co-construction of knowledge. Research has also pointed to three types of challenges to the use of mobile devices for learning, including (1) pedagogical concerns that involve limited access to input as well as types of tasks; (2) psychological limitations,

such as use of devices in public and private contexts; and (3) methodological concerns, such as issues related to control and privacy.

Ecological Constructivism

Blyth (2008) described four theoretical approaches to research on second language learning: technological, psycholinguistic, sociocultural, and ecological. Technological studies address the process by which new technologies move from being used in society at large to their use for, and impact on, specific educational purposes. Psycholinguistic studies take as a point of departure the interaction and noticing hypotheses, while sociocultural research is based on Vygotsky's theories of social learning and mediation. Ecological studies consider the interactions among various aspects of an intervention, including the students, teachers, environment, and technological tools, in order to determine how they work together to influence the teaching and learning process. Thus, the ecological constructivist approach allows the researcher to examine both the individual process of learning and how the student mediates interactions with other learners and other learning tools (Hoven &Palalas, 2011) and "stresses the interactivity of humans and their environments in the process of socialization and development" (Lam &Kramsch, 2003, p. 6). Blyth (2008) has suggested that, while each of these four research approaches provides a valuable window into second language teaching and learning, sociocultural and ecological approaches to research are becoming more prevalent, perhaps because these approaches "provide insights into how languages are learned and how these insights can be used to address practical linguistic issues" (Lafford, 2009, p. 692). Lafford specifically noted the importance of language educators considering interactions among, for example, learners' attitudes and abilities, including linguistic, cultural, pragmatic, and affective (such as self-confidence) elements in virtual environments as well as when students use Web 2.0 technologies to interact and share information.

心理语言学的研究作为一个起点交互和注意假设

When describing the ecological perspective for language learning, van Lier argued that it is necessary to consider the context when investigating the learning activity because the learner "acts and interacts within and with his environment" (2004, p. 246). Part of this interaction is mediated by "affordances" (Gibson, 1979) -that is, sources of support that are available in the environment that the learner may use to reach various goals. Depending on the user, an affordance can be manipulated in various ways. In language learning, for example, "if the language learner is active and engaged, she will perceive linguistic affordances and use them for linguistic action" (van Lier, 2000, p. 252). A more motivated student, or a student with more guidance, will more easily identify appropriate affordances, such as opportunities for interaction, then engage in or with them and thereby learn from them. In contrast, students who are less engaged or motivated may not recognize all available sources of support or take advantage of potentials for interaction in and with the target language. However, in order to make use of all available resources and sources of support, the learner must first be made aware of these affordances and their potential (van Lier, 2004). The existence of the affordance alone does not necessarily encourage action (van Lier, 2004). For example, in an intercultural synchronous computer-mediated communication exchange between native and nonnative speakers, Darhower (2008) noted that, while many linguistic affordances were available to the learners, the learners did not always notice and use them to their fullest potential. Some learners ignored corrections by the native speakers, while the majority merely acknowledged the reformulation but did not integrate it into their own language use. As many of the corrections were implicit, Darhower concluded that the learners either did not notice the reformulation or did not understand its importance in the conversation. According to van Lier (2004), it is the responsibility of the instructor and other interlocutors to help make the affordances available and accessible to learners so that they notice and can use them to their learning benefit.

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With regard to language learning with mobile technology, Hoven and Palalas (2011) and Lafford (2009) suggested that learners' use of technological affordances to facilitate learning can be encouraged and managed by the instructor, other interlocutors, or the task design. In their study on mobile technology, Hoven and Palalas (2011) noted four features of tasks that can support learning within mobile contexts: the tasks (1) must contain

linguistic content that is relevant to a variety of learner types; (2) should be designed so that learners actively search for the linguistic material to fully engage with it; 3) should require interaction with another learner, instructor, or instructions to provide guidance for completion of the task; and (4) should encourage mediation and thereby provide a form of scaffolding by means of interactions with other learners or with resources obtained through mobile devices. Thus, learners learn to process meaning through a fl uid system of mediated verbal and nonverbal relationships that are contingent on affordances in their context and environment. These relationships may be mediated by other learners, more sophisticated users of the language, signs and nuances in the context, technology-based resources, and the technological tools themselves. Language is therefore emergent and dynamic, as learners use and create authentic language, both purposefully and incidentally, on the basis of their perceptions of, interactions with, and action upon affordances found in their learning and language environment (Hoven &Palalas, 2011, p. 702).

Therefore, according to ecological constructivism, learning cannot be looked at only as taking place within the individual; research on learning should also incorporate into the analysis the role of the environment, available tools and resources, instructors, instructions, and other learners and interlocutors.

While previous research on MALL has focused on students' use of and attitudes toward MALL or on particular types of materials and activities that may be accessed using mobile devices (Kukulska-Hulme &Shield, 2008), few studies have examined the types of tasks or types of communication in which students are engaged, nor have studies investigated the extent to which learners have taken advantage of the "anytime, anywhere affordances" of mobile devices (p. 280). The current study seeks to add to the growing body of research on communication and "anytime, anywhere" learning with MALL. Based on previous research on MALL and situated within the framework of ecological constructivism, this study investigated students'"anytime, anywhere" use of the iPod Touch and considered how instructors integrated the iPod Touch into learning and how students reacted to using the iPod Touch to access learning materials at their own convenience and to suit their own needs, both within and beyond the classroom. Specifically, the study addressed the following questions:

1. Which affordances of the mobile device did students use and with what frequency?
2. To what extent were different affordances used for personal and academic purposes?
3. To what extent did use of the mobile device provide students with increased exposure to the target culture and opportunities for communicating in the target language?
4. How did students perceive the use of the mobile devices?

Methods

Participants

Thirty-nine students in two intermediate- level (4th semester) foreign language classes at a large southern university were involved in the semester-long study. There were 20 students in the French course and 19 students in the German course. The participants were between 18 and 22 years old; 22 were male and 17 were female. Twenty-four had used an iPod Touch before; 11 were familiar with one but had not used one before, and only four had never seen one.

Procedures

Pre-Survey

At the beginning of the semester, a pre- survey (see Appendix A) was administered using surveymonkey.com to gauge students' interest in the project and to assess their level of experience using iPod Touches.

Training

Students either checked out an iPod Touch from the Foreign Language Learning Center at the university for the duration of the project or used their own iPod Touch. Students were also allowed to use a smartphone if the device provided access to applications that were similar to those on the iPod Touch. Twenty-seven students checked out an iPod Touch; two German students and one French student opted to use their own mobile device or smartphone, and the remaining students used their own iPod Touch. As all students had access to the same

applications and other tools, such as cameras, on their devices, data from all students were included in this study. An initial in-class training session was provided, although it was not necessary because most students were familiar with the devices. Devices were not locked down or pre- loaded; rather, students could freely load devices with additional music, movies, and apps of their choice and use the devices for their own purposes outside of class. Devices were reformatted at the end of the semester.

Logs

As it was not possible to track students' use of the iPod Touches because some of the devices were owned by the students, students were given time in class biweekly to complete a user's log on surveymonkey. com to record the types of affordances that they used on the mobile devices for both personal and academic purposes (see Appendix B).

Tasks

At the beginning of the semester, students received a list of French or German applications (apps) that they were encouraged to download; new applications were added as necessary throughout the semester (see Appendix C). Throughout the project, students engaged in weekly in-class tasks, weekly homework assignments, and four larger out-of-class tasks.

In-Class Tasks

Examples of in-class tasks included (1) searches about cities, people, political parties, and historical events; (2) information- gap tasks on political parties, paintings, and historical information; (3) exploring newspaper headlines; (4) searching travel apps; (5) comparing television commercials; (6) navigating Google Maps; (7) viewing YouTube videos in the target language; (8) referencing dictionary and grammar apps; (9) researching and comparing weather; and (10) searching and listening to French and German music. Students used the information they found using their devices in class or group discussions about the target culture. For example, after students read a text that took place in Berlin, students were able to follow the characters from place to place using the Google Maps app to help them visualize the characters' journey and to get to know areas around Berlin. To gain historical background on a novel they read that took place in former East Germany, different groups researched various historical events and terms such as Stasi (secret police), Freie Deutsche Jugend (similar to Girl/Boy Scouts), and the Berlin Wall and then shared the information that they had found. When studying various cities in German-speaking countries, students surveyed the headlines of the city's newspaper and conducted Web searches of popular destinations and upcoming events in the city to help them gain an image of the city and think about where they might enjoy visiting. To complement a textbook chapter on media, students used the TéléPub app to watch French television commercials and then made comparisons between the home and target cultures. YouTube was also a useful source of videos about various German- or French-speaking cities, movie trailers, music videos, and informational videos about aspects of culture, such as regional dishes. This culturally rich information served as a basis for discussions about products, practices, and perspectives of culture as well as for making cultural comparisons.

Homework Assignments

Each week for homework, students composed three tweets on Twitter for classmates to read and to which classmates were required to respond. At least two of the tweets were required to be in the target language, and one could be in English. The topics were open, and the goal of the tweets was to allow students to express themselves using the target language in a relaxed manner without the pressure of writing a large amount of text (posts are limited to 140 characters). Tweeting also served to build community within the classroom and, by tweeting about their daily lives, thoughts, and concerns, classmates learned more about each other, their hobbies, and interests. Students were graded simply for completing their three tweets and responses, rather than on the accuracy, complexity, or content of the messages.

Out-of-Class Tasks

In addition to the tasks described above, students completed four formal out-of-class projects that included a

video or photo component using their devices. These projects are described in more detail below.
*Project 1: About Me (Individual task). Create a short video (2--3 minutes) where you discuss an interest you particularly enjoy. How did the interest come about? How much time do you spend doing it? Why do you enjoy it? About 10--30 seconds of the video should show your actual interest.
*Project 2: My Dorm/Apartment (Individual task). Create a photo collage (using for example http://www.photovisi.com/) of your dorm room or things/people in your dorm room. Write about why you chose those pictures, why they are meaningful, and what they tell about you.
*Project 3: Welcome to Our City (Collaborative task). Create a 2- to 3-minute video with a partner showing visitors a place you want to take them to in Columbia [South Carolina]. Give a bit of history/background about the area you chose. Give directions from campus to the location you chose and talk about the hours you can visit. Perhaps there is even a link to the Web site that you can include.
*Project 4: Exploring Stereotypes (Individual task). Interview three people about what stereotypes they think of when they think about France/Germany and French/ German people. From the list of topics you were given in your interview, choose one to explore. Then research the actual facts associated with that stereotype. For example, if the stereotype is that all French people smoke, look up statistics on how many French people actually smoke, including the ages of the smokers. Describe the stereotype you chose and provide evidence for or against the stereotype (include a link to your sources on your post).
The four projects asked students to present themselves, talk about their living accommodations, explore a favorite spot in town, and discuss stereotypes. The projects were evenly spaced throughout the semester, approximately every three weeks. Students posted each project with a short description to the group Facebook page, which was set up as a discussion forum to serve as a repository for the assignments, including a link, when appropriate, to their video, which was uploaded to the class YouTube channel. Facebook was chosen because students were already familiar with it and visited it regularly, thus making it a logical and easy place to post information; however, any course management tool could be used. The posts were required to be at least 50 words and written in the target language (see Appendix D for the grading rubric). Students received one point extra credit if they replied to another student. During the course of the project, students in the French class also communicated with French students from Paris who would be visiting the following semester; thus, they were not only introducing themselves and their city to their classmates but also to their future French friends. The outside audience for the German students was a group of elementary school teachers from Saxony-Anhalt, Germany who would be visiting at the end of the semester; thus, these students also had a larger audience than just their classmates. Because the courses needed to accommodate partner classes who were not enrolled at the institution, Facebook was most appropriate for posting the projects.

Post-Surveys

At the end of the project, a post-survey on surveymonkey.com was administered that asked similar questions to those in the biweekly logs about students' use of the devices; it also assessed students' opinions about the use of the devices in their French/ German class over the semester (see Appendix E). Only 30 students responded to the final survey, so there are fewer post-survey responses than from the pre-survey.

Analysis

The surveys and the out-of-class homework assignments were the main sources of data used to address the research questions. The pre- and post-survey information was aggregated, and data from the logs were summarized for each question. For the short-answer questions, the researchers read students' responses, then organized them by topic and theme.

Results

When asked in the pre-survey how they thought iPod Touches could be useful in the foreign language class, the majority of students suggested the use of German or French applications (100%), sharing information (82%), navigating the Internet (95%), viewing videos (80%), listening to music (64%), building community (82%), and

communicating with classmates or the professor (80%). Although only two students mentioned prior use of iPod Touches in an academic setting, 33 out of 39 students (85%) responded that they were excited to use the devices during the semester and thus most began with a positive attitude toward the project.

Research Question #1-Which affordances of the mobile device did students use and with what frequency?

The survey results indicated that students used their devices for a variety of activities. Figure 1 indicates the number of students who used each application or tool. Data in Figure 1 show that students did indeed take advantage of a variety of affordances offered by the mobile devices. When comparing the logs from the beginning to the end of the semester, the researchers found no major change in apps that were accessed, and it appeared that students generally used the same apps throughout the period under consideration unless a new app was presented by the instructors and/or required to complete a particular assignment.

Research Question #2-Were different affordances used for personal and academic purposes?

For academic purposes, students' logs indicated that they mainly used the mobile device for apps, the dictionary, searching, and tweeting (Figure 2). For personal use, students gravitated toward Facebook, music, searches, and apps (Figure 3). When asked whether they used the devices more frequently for personal purposes or for language learning, students responded from their logs in an even split (15/15).

Research Question #3-To what extent did use of the mobile device provide students with increased exposure to the target culture and opportunities for communicating in the target language?

As mentioned above, students used the device both in and out of class. Ninety percent of the students indicated (27/30) that they gained more exposure to the target language outside of the classroom due to the device's mobility (13%) and the fact that the assignments required its use (33%). One student remarked: "The exposure was right at our fingertips. The iPod Touch made it easier and more accessible to learn French." Another echoed, "It was a constant reminder to practice the language and think about things in French." A student in the German section reported, "Previously, I never would have even thought about German outside the classroom, but this semester, I was more exposed because of the fact that I was always looking at German on Facebook and Twitter." Only a small number of students did not feel that the mobility aspect was important. One reported no gain in exposure outside of class and clearly preferred a computer: "I did not really use my iPod Touch for language purposes outside of class. I would use my computer."

The out-of-class tasks allowed students the opportunity to create videos where they practiced presentational skills to communicate in the target language through writing and speaking, as is evident in Table 1. Through the in-class assignments, in which students worked with target culture apps, explored authentic Web sites, or watched authentic videos, they employed their interpretive communication skills and were exposed to target culture products, practices, and perspectives. Survey results indicated that, because students had constant access to the iPod Touches, they also explored the target language and culture on their own in ways not connected to or required by their classes.

Research Question #4-How did students perceive the use of the mobile devices?

Ninety-three percent of the students (28/30) felt that their learning increased as a result of having access to an iPod Touch throughout the semester due to the mobility of the device and accessibility of the apps and other features. When asked about why they felt that they learned more, one student replied, "It forced us to think in French more, and do less translation in our heads," while another mentioned that "it was super easy to access French." Another student responded, "I was able to read German news by using different apps." Yet another replied, "Yes, I was able to find words I wanted to know anywhere."

When asked about whether they enjoyed their devices, 87% of the students replied that they did (26/30). Two students only somewhat enjoyed them, and two did not enjoy having them for the semester. Nine (23%) were fearful of losing them, damaging them, or breaking them. Of the 39 devices "loaned" out, all were returned with exception of one that was stolen. Students' favorite aspects were having a portable dictionary (18%), writing Twitter posts (15%), and being able to work on the go and look up information anytime and anywhere (21%).

One student commented, "A lot of the apps allowed me to solve basic issues with my grammar, also it helped a lot as an English-to-French dictionary to reference." Another likened it to having a computer in class: "It was like using a personal computer in class. We could research artists and culture. I also could look up words in the dictionary when speaking." Yet another stated, "It integrated technology into learning, which is a very progressive approach to teaching the language that held my attention." Fifty-six percent of the students agreed that it made learning more portable and convenient, and 54% stated that it helped make them more motivated to learn German or French. Students' preferences for tasks in future semesters included producing videos, using the devices for tweeting, and communicating with classmates or native speakers via Skype or Facetime.

To summarize, students took advantage of a variety of affordances when using their mobile device or iPod Touch. According to the survey, searching, tweeting, and Facebook were among the most popular tools. For personal use, students tended to take advantage of the social media and music features most frequently, while for academic use, they explored apps, dictionaries, and search tools. Finally, students overwhelmingly enjoyed being able to use a device as part of their language class, and a main advantage they reported was the exposure to the target language and culture outside of the classroom.

Discussion

As shown by the survey results, the benefits of using iPod Touches in the foreign language classroom were clearly recognized by the participants in this study. iPod Touches are easy to use on the go, can facilitate autonomy and increased exposure to the foreign language, and offer access to authentic materials and resources and to the target language and culture. The following sections comment further on each of these aspects.

Ease of Use and Mobility

Two of the most cited advantages offered by the iPod Touch in the post-survey were ease of use and mobility (see also El-Hussein &Cronje, 2010; Sharples, 2006; Traxler, 2007). Similar to Burston's findings (2011), the simplicity of the iPod Touch and ability to access it any where and any time stood out as a major bene fi t for the students. As noted by Traxler (2007), the mobility, ease of use, and access to the device allow learners to "exploit small amounts of time and space for learning" (p. 8). The obtrusiveness of bringing laptops in the classroom vs. the flexibility of being able to quickly access an iPod Touch speaks to another benefit of the mobile devices. While some of the tasks in which students engaged might be possible to accomplish using a laptop, students did not necessarily have at their disposal a laptop or, if they did have access, they did not routinely bring the device and use it for research during class. In addition, on a laptop, the necessary apps and video/digital camera features were less readily available.

From a pedagogical perspective, their simplicity and mobility made the devices quite useful in the classroom for reference, research, and completing jigsaw tasks. Rather than having to go to the computer lab, students could easily access their mobile devices to gather information or complete a short task and then put them away when the task was complete. As all students had access to a mobile device, it made it easier to complete video projects, which required students to use the language outside of class, and in some cases to interact with other native speakers. One caveat to using the devices in the classroom was that it was sometimes difficult to ascertain whether students were using them for academic or personal use. While they were readily available for reference at any time during class, it was not always obvious if students were looking up a word or checking Facebook.

Autonomy and Increased Exposure

Students' comments on the surveys showed that the easy access to affordances on these devices also played a large role in providing opportunities for increased exposure to the target language and culture. To help students make best use of affordances available to them, and as recommended by van Lier (2004), students were provided with a list of possible applications and were able to choose whichappstousebothwithinandoutsideof class. Students acknowledged that they enjoyed being able to explore and use apps, such as Anki, Leo, Twitter,

word reference, and translate on their own and benefitted from the flexibility and freedom to use the devices in ways that corresponded with their needs and interests. Kukulska-Hulme and Pettit (2009) confirmed these same findings. Their study, involving graduates of the Institute of Educational Technology at the Open University who used mobile devices, found that mobile learning "gives individuals the capacity to make use of electronic resources and tools in flexible ways that suit their circumstances and lifestyles" (p. 152). Being given the time and affordances that were necessary to guide their own learning allowed students in the current study to "stumble and learn" (Comas-Quinn et al., 2009, p. 101) and thereby discover new information they had not necessarily planned to find using the devices in ways that guided their own learning.

As evidenced by students' comments and logs, they had the time, autonomy, and affordances to explore the target language and culture in ways related to their classes, which ultimately provided them with more exposure to the target language and culture on the topics and in the ways that most interested them. Students also reported spending increased time listening to and reading in the target language thanks to having the device, which also increased their exposure to the language outside of class. Each student could work at his or her own pace to explore topics of interest. The autonomy and flexibility of the devices could be one reason why students felt that their learning increased with the use of the iPod Touches.

Access to Authentic Materials and Target Language and Culture

In addition to ease of use and mobility and increased exposure and autonomy, students could more easily access authentic materials of the target language and culture with the iPod Touch. Students accomplished this both on their own as they explored various apps and through the more structured tasks that they were required to complete, including the weekly in-class tasks, weekly homework assignments, and four larger out- of-class tasks. As noted by Hoven and Palalas (2011), use of the affordances offered by the iPod Touches had multiple benefits: (1) students were exposed to various types of linguistic content; (2) tasks were designed to encourage students to engage with this linguistic material; (3) in order to fulfill the guidelines of the tasks, students had to interact with another student or at minimum, engage with the instructions of the task; and (4) students were encouraged to interact with the resources available through the device and their fellow classmates. As recommended by Lafford (2009), using the iPod Touch to complete assignments also allowed students to more effortlessly and quickly engage in real-world tasks, such as conducting an interview, completing online searches, and describing themselves and their city. Although not everything they did on the device related to the target language, it was encouraging to see from the logs and short-answer questions that students did make an effort to engage with the target language so as to manage their own learning and discover items of personal interest both in and outside of the classroom.

Opportunities for Standards-Based Learning

Thanks to the availability of the iPod Touches, students' greater access to authentic materials and increased opportunities for communication allowed them to meet each of the 5 C's that are outlined in the Standards for Foreign Language Learning (National Standards, 1999). First, use of the iPod Touch greatly enhanced students' opportunities to engage in all three communicative modes: students met Standard 1.1 by using the language to communicate with each other in the target language through Twitter and Facebook, they met Standard 1.2 when they interpreted authentic listening and reading passages from online sources, and they met Standard 1.3 when creating projects for their classmates to read and view. Through using apps and visiting authentic Web sites created by and for the people of the target culture, students gained insights into the products, practices, and perspectives of the target cultures (Standards 2.1 and 2.2) and made extensive comparisons with their own language and culture (Standards 4.1 and 4.2). Using the iPod Touch to gather information on topics such as art and artists, geography, historical events, and political systems, students easily reinforced their existing knowledge in other disciplines while also learning new information and acquiring new points of view (Standards 3.1 and 3.2). By communicating with their classmates and, more important, with the native French and German speakers who had personal and meaningful reasons to read and react to students' work through Twitter and

Facebook, students became part of vibrant language communities (Standard 5.1). Finally, it is hoped that by engaging in authentic tasks, participating in live-time discovery, and sharing information in the target language with peers and authentic audiences, students will become motivated to continue language study and thus become lifelong learners (Standard 5.2).

Limitations and Suggestions for Future Research

Although it could be difficult to replicate this study due to the small sample size, the reliance on self-reported data from surveys and logs, and the ever-changing nature of mobile technology and the possibilities it offers, there are several recommendations for future explorations. First, as more and more students acquire smartphones, providing a mobile device may no longer be needed because students may be able to use their own devices rather than using a device on loan. Further research could also track students' devices to monitor more precisely the sites, the apps, and the language used in order to have a clearer picture of how students use devices both personally and for academic purposes. In addition, there is a need for longitudinal studies on MALL that explore the many advantages of the social and mobile nature of the devices for out-of-class use.

Conclusion

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This study offered a preliminary look at MALL, most particularly how students used a mobile device " on the go " both within and beyond the language classroom, at times and places that best accommodated their schedules and learning goals. The findings suggested that intermediate language students who are offered the use of mobile devices will take advantage of the affordances for personal and academic uses, thereby allowing increases in the amount of time allocated to language learning and thus greater exposure to the target language and culture. As one student summarized, "I could think about the language anywhere and anytime." When iPod Touches were put into the hands of learners, the range of activities and live-time access to authentic materials, resources, and support transformed learning, offering students unlimited access to resources, opportunities to communicate using the language in important and meaningful ways, mobility, convenience, and opportunities for learning anywhere and at any time.

Footnote

Note

1. As the vast majority of devices used in this study were iPod Touches, we refer to the devices as such throughout the article.

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Appendix
APPENDIX A
iPod Touch Pre-Survey

1. What are the last 4 digits of your id#-
2. What is your age-
17 or younger 18-19 20-21 21-22 over 22
3. What is your gender?
male female
4. What language are you taking?
French German
5. Do you own an iPhone?
Yes No
6. What is your prior experience with the iPod Touch?
I own an iPod Touch
I regularly use an iPod Touch but do not own it
I have seen an iPod Touch but not used it
I have no experience with an iPod Touch
7. Please indicate which of the following features of the iPod touch you think would be useful in learning languages. Check as many as you like. Being able to:
o use French/German apps
o have instantaneous communication
o share information
o use the Internet
o watch videos
o listen to music
o build community with classmates
o use language with classmates outside of contact time
o communicate with professor outside of class
8. Are you excited about using an iPod Touch in French/German class this semester?
Yes No No opinion
9. How do you think an iPod Touch would help with language learning?
10. Have you used an iPod Touch in any academic classes before this one?
Yes No
APPENDIX B
iPod Touch Biweekly Log
1. What is your name?
2. What language are you taking?
German French
3. What weeks are you reporting on?
Weeks 1: September 5-16
Weeks 2: September 19-30
Weeks 3: October 3-14
Weeks 4: October 17-28
Weeks 5: October 31-November 11
Weeks 6: November 14-December 2
4. How often did you use your iPod Touch during the past two weeks for academic purposes?
1 time 2 times 3 times 4 times 5 times More than 5 times
5. For what academic purposes did you use your iPod Touch during the past two weeks?
* Listening to music

* Searching online

APPENDIX C

List of Applications Students Were Encouraged to Download Applications for French

* iTranslate
* YouTubestream
* Free French tutor
* French Gender
* Word Reference for French
* Skype
* Twitter
* Facebook
* Google Earth
* iTalk recorder
* Télépub
* France24
* CultureClic
* TeleLoisirs
* Instagram
* Frenchradio
* RATPlite
* Le Monde.fr
* Musée du Louvre
* 100 Fromages de France
* iPadio

Applications for German

* City walks with explanations-Salzburg, Munich, Cologne, Hannover, Leipzig, Berlin
* Salzburg Woche
* Mozarts Geburtshaus (description of the rooms)
* Ski Unlimited resort info in Austria
* Street map for various German cities
* Tootie AT (soccer in Austria)
* Volkskultur (Austrian culture)
* Salzburg 24.at (news app)
* Energy.at (Austrian radio stations)
* Austria-tourist info
* Germany Travel Guide by Triposo
* Weather for Germany
* Oktoberfest
* Flags EU
* I love Germany European Cup 2012
* German flag and anthem
* German football
* German geography quiz
* Berlin street map offline
* Travel guides for many cities
* The Berlin Wall

* Berlin Black Book City Guide
* Berlin Wall Gallery
* Deutschland Tweets (twitter feeds from different cities)
* Witze DE (German jokes in different categories)
* Fussballgott EM 2012 Deutschland (EM sounds)
* F.A.Z-Frankfurter Allgemeine Zeitung
* NZZ.ch-Swiss news
* MVG Fahrinfo Muenchen/Berlin-subway and train guides
* LEO dictionary
* Top 100 German radio stations
* McDonalds Deutschland
* I love Germany Euromeisterschaft2012
* Holidays Germany

APPENDIX D

APPENDIX E

Post-Survey for iPod Touch

1. What is your name?

2. What language are you taking?

German French

3. How often did you use your iPod Touch during the past two weeks for academic purposes?

1 time 2 times 3 times 4 times 5 times More than 5 times

4. For what academic purposes did you use your iPod Touch during the past two weeks?

* Listening to music
* Searching online
* Using an app
* Using a dictionary
* Watching YouTube
* Chatting
* Using Facetime
* Taking pictures
* Taking videos
* Writing e-mails
* Reading newspapers/magazines
* Reading a book
* Skyping
* Using Facebook
* Tweeting
* Playing games
* Other

5. For what personal purposes did you use your iPod Touch during the past two weeks?

* Listening to music
* Searching online
* Using an app
* Using a dictionary
* Watching YouTube
* Chatting

* Using Facetime
* Taking pictures
* Taking videos
* Writing e-mails
* Reading newspapers/magazines
* Reading a book
* Skyping
* Using Facebook
* Tweeting
* Playing games
* Other

6. What percentage of time that you were using your iPod Touch were you listening to German/French during the past two weeks?

0-20% 20-40% 40-60% 60-80% 80-100%

7. What percentage of time that you were using your iPod Touch were you reading in German/French during the past two weeks?

0-20% 20-40% 40-60% 60-80% 80-100%

8. What percentage of time that you were you using the iPod Touch did you use it for class projects?

0-20% 20-40% 40-60% 60-80% 80-100%

9. What percentage of time were you using the iPod Touch in German/French for something not connected to your class?

0-20% 20-40% 40-60% 60-80% 80-100%

10. Which of the following features of the iPod Touch did you find useful for learning German/French this semester? Check all that apply.

* Listening to music
* Searching online
* Using an app
* Using a dictionary
* Watching YouTube
* Chatting
* Using Facetime
* Taking pictures
* Taking videos
* Writing e-mails
* Reading newspapers/magazines
* Reading a book
* Skyping
* Using Facebook
* Tweeting
* Playing games
* Other

11. Which application did you use the most this semester in relation to your French/German class?

12. Did you use your iPod Touch more for personal use or for language learning? personal use language learning

13. Did you enjoy using the iPod Touch in your German/French class this semester?

Very much Yes Somewhat No Not at all

14. What was your favorite part about having the use of the iPod Touch for your German/French class this semester?
15. What was your least favorite part about having the iPod Touch in your French/German class this semester?
16. What was your favorite activity that we did this semester with the iPod Touch? individual video projects group video project online searches in class homework with a specific application working in class with a specific application tweeting photo collage project
17. What types of activities would you like to do next semester with the iPod Touch?
18. Do you feel that you were exposed to German/French outside of class more often than in previous semesters because you had the use of the iPod Touch this semester? Explain why or why not.
19. Do you feel that having the iPod Touch helped you learn more French/German this semester? Why or why not?
20. Do you think having the iPod Touch made you more motivated to learn French/German this semester? Why or why not?
21. Did having the iPod Touch make language learning easier because it was more portable/ mobile/accessible this semester? Why/why not?
22. How could you make better use of the iPod Touch for learning German/French next semester, or did you do as much as you could this semester?

主题: Foreign language learning; Digital audio players; Smartphones; Wireless communications; Mobile communications networks;

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