

## Mobile-facilitated Time and Place among Iranian EFL Learners

**Mona Khabiri**

Department of English, Science and Research Branch, Islamic Azad University, Tehran, Iran  
and

**Mohammad Bagher Khatibi**

Department of English, Science and Research Branch, Islamic Azad University, Tehran, Iran  
bagherkhatibi2000@yahoo.com

### Abstract

Language learning is changing in a mobile technology-rich landscape and under the influence of new learner practices stemming from personal perspectives on the best places for learning and from evolving uses of available time. The key aim of this study is to conceptualize the relation between the focus of language learning and the dimensions of time and place among Iranian EFL learners. The study aims to assess what effect this might have on language learning in terms of curriculum or the design of learning activities. It draws on a survey study led by the authors, investigating how Iranian EFL learners use mobile technologies to support their learning, and particularly on interview data from the most recent project, which has focused on learners' experiences with the use of mobile devices to support language learning. Learning activities undertaken by the interviewees were wide-ranging, with evidence of the importance of both easy learning and challenge. Specific findings relating to time and place of learning are reported. As mobile technology developments and the availability of mobile services and applications accelerate, educators and researchers need conceptual frameworks to enable them to interpret emerging learner practices. New language learning activities and services can be designed on the basis of this understanding. By reviewing individual learner experiences in learner-determined contexts, researchers and the language teaching community can work together to build up a picture of emergent practices and formulate the implications for the design of language teaching and learning now and in the future.

**Keywords:** Mobile-assisted language learning, Self-directed learning, EFL learners, Mobile-facilitated time, Mobile-facilitated place

### Introduction

The idea that people can learn effectively with personal technologies at any time and in any location has not been examined in detail, perhaps on the assumption that time and place of study outside an institutional setting are largely individual, perhaps idiosyncratic, choices. Even a report entitled "Harvesting Fragments of Time" (Roberts, Beke, Janzen, Mercer, & Soetaert, 2003), which described a PDA-based project among college students, did not address how or where they spent their time, focusing instead on access to learning content, services, and applications. Special consideration may occasionally be given to the specifics of time and place when learner choices impact on social spaces or what is legally or socially permissible within a particular environment. Otherwise, it is left to learners to decide what is best for them. However, widespread use of handheld technologies such as mobile phones, smart phones, and mp3 players for informal and work-related learning is challenging existing perceptions of appropriate time and place for study.

Pockets of time available at certain times of day can become profitable moments of learning, and places that were previously dedicated to one purpose can assume a different role. Oblinger (2006) notes that today's students are united by a lack of time due to widespread part-time working;

and against this background, technology-rich learning spaces become change agents that can have a significant impact on teaching and learning, by stimulating interaction with distributed peers, providing easy access to international expertise, or opening up opportunities for remote exploration. We could say that learning space is thus augmented or expanded and becomes a means of looking outwards and making connections. A focus on a person's immediate physical environment can have a similar effect of expanding learning space. In this vein, Sharples, Taylor, and Vavoula (2005) have argued that we must seek to understand how people engage with their surroundings to create "impromptu sites of learning" which Luckin, Clark, Garnett, Whitborth, et al. (2010) also conceive as contexts generated by learners marshalling available resources to create an ecology that meets their needs. Smidts, Hordijk, and Huizenga (2008) describe the advent of playful and creative use of GPS to turn the world into a learning environment; and for Pachler, Bachmair, and Cook (2010), mobile learning is partly about "understanding and knowing how to utilize our everyday life-worlds as learning spaces" (p. 6). Time and space thus converge to create the right conditions for learning, and available technology ensures both ready access to remote resources and utilization of the information and potential contacts available in a particular place.

These observations about the value of mobile learning are congruent with the spirit of continuous inquiry about language-in-use and the frequent informal practice that is required when learning a foreign language, although how this should now be organized by and for learners, given the growth of new tools, services, and resources, remains a barely answered question. Looking beyond the "anytime, anywhere learning" mantra, those of us involved with language teaching and curriculum need to examine how language learning is changing in a mobile technology-rich landscape and under the influence of new learner practices stemming from their personal perspectives on the best places for learning and evolving uses of available time. The key aim of this chapter is to conceptualize the relations between the focus of language learning (content and interactions) and the dimensions of time and place. By reviewing learner experiences in terms of time- and place-based opportunities and choices, language educators can build up a picture of emergent practices and formulate the implications for the design of language teaching and learning now and in the future. This results in a suggested framework for next generation designs for mobile-supported language learning, which should become context-aware with respect to learner practices.

### **Mobile-facilitated time and place in language learning**

Language learning has moved to the forefront of developments in mobile learning, accelerated by the availability of an abundance of free and inexpensive mobile apps (applications) in dedicated online stores operated by Apple, BlackBerry, Google, Nokia, and others. It has also been bolstered by significant worldwide demand from developing economies where learning a language is seen as a means to improved employment and trade. A taxi driver in India, for instance, might have time while waiting in a taxi queue to use a mobile device to acquire conversational skills in English that will improve his earnings through better tips (Dey, 2009). This example highlights an opportune convergence of place and time, with an impetus to focus on matching available learning content and interaction to the learner's need, or else identifying a gap that is yet to be filled with new activities or a different way to structure learning.

Several projects have developed the provision of personalized and contextualized access to language learning resources (Chen, Li, & Chen, 2007; Ogata & Yano, 2004; Ogata, Yin, El-Bishouty, & Yano, 2010; Petersen, Markiewicz, & Bjørnebekk, 2009; Stockwell, 2007). These projects operate in structured, researcher- or teacher-led environments, using advanced technology. Mobile technologies can deliver time-, location-, and person-relevant learning materials, with little

input from the learner, although these are not yet large-scale or widely accessible implementations. Even without these types of system-recommended resources, learners can be the driving force behind selections of content and interactions that fit in with the patterns of their personal preferences, movements, and daily habits (Pettit & Kukulska-Hulme, 2007), simply by choosing what they would like to study, when, and where. To focus on location is to think in terms of situated learning (Lave and Wenger, 1991) or perhaps place-based learning (Sobel, 2004) but paradoxically, devices that support location-relevant learning are usually also suited to location-independent learning, so these two types of learning may complement each another in situ. Location-independent language learning may or may not be scheduled in advance, for it can be bolstered by an unexpected period of free time or a sudden reason to pursue a learning goal. Song and Fox (2008) report how student learners of English used mobile devices to support incidental learning at every opportunity, driven by a shared long-term goal to learn new vocabulary in English. By contrast, Levy and Kennedy (2005) describe the use of SMS for implementation of specific time intervals as a way to reinforce the learning of Italian. Another strong theme is connecting places, people, and the activities they engage in: Underwood, Luckin, & Winters' (2010) stated objective is to help users take charge of their language learning and to connect it across different settings, times, and locations.

Time and place are also strongly associated with the redefinition and acting out of personal identity through the process of learning a foreign language and adopting and rehearsing aspects of a different culture with its particular ways of thinking and interacting. Evidence from recent studies suggests that mobile technology can facilitate a social practices approach "in which the learner uses a variety of locations to enact and rehearse a personal voice" (Ros i Solé, Calic, & Neijmann, 2010, p. 51). Other authors have similarly claimed that mobile technologies have a role in emotional forming and restructuring of identity (Fortunati, 2002; Ito, Matsuda & Okabe, 2005; Elliott, 2010). Language practice on a mobile device can also be seen as a stepping stone towards more authentic communication, through having to respond quickly, "on the spot," without the usual supports available in the classroom or in the home (Demouy & Kukulska-Hulme, 2010).

Time and place are thus important dimensions in context-aware mobile computing, in emerging learner practices, and in innovative mobile language learning designs. However, to date there has not been an effort to examine the possible synchronicity effects of learner practices and habits coming together with mobile technology features and available language learning resources to create opportunities for learning that can substantially change the way languages are learned in the future. Furthermore, the effect this could or should have on language learning curricula has remained unexplored.

### **Methodology**

Over the past decade, there have been a number of projects investigating how university students and other adult learners use mobile technologies to support their learning, with particular emphasis on self-directed learning (Kukulska-Hulme & de los Arcos, 2011; Kukulska-Hulme et al., 2009; Kukulska-Hulme & Pettit, 2009; Kukulska-Hulme & Shield, 2008; Pettit & Kukulska-Hulme, 2007; Kukulska-Hulme, 2005; Waycott & Kukulska-Hulme, 2003). In recent projects, the emphasis has been on tracking the evolution of mobile-assisted language learning and examining ways in which language learners are using mobile phones, media players, and other portable devices. The current research uses interviews and surveys to collect data concerning details of learner practices and their perspectives on the use of mobile devices for learning, including informal learning among Iranian EFL learners. Through this work, we have discovered how the function of a portable device can change for the user (for example, an mp3 player that could be used anytime individually was

also used at specific times in social ways, with the addition of speakers, to play mp3 files to others). Activities can also change; for example, note-taking or mind-mapping performed in situations involving mobility could change the nature of what was noted and how. It is clear that if educators want to use mobile devices to exploit learners' commuting time, they need to examine its patterns carefully not only periods of actual travel, but unexpected delays, waiting for connecting flights, or time spent waiting for buses and trains to arrive. We have seen repeatedly in our research that learners want to use time productively while waiting, and that they will try to find ways of adapting learning materials to suit their particular lifestyle needs (Kukulka-Hulme & Pettit, 2009).

In 2012, we conducted interviews with fifty volunteers, twenty seven male and twenty three female, who were recruited through our institution's intranet, online social networks, email lists, and personal contacts. Participants, in our research, were drawn from among those TEFL graduate students who are the members of Teaching English Language and Literature Society of Iran (TELLSI), to be interviewed. All were adults, most of whom were at upper-intermediate level, learning English. More than half were TEFL graduate students, while the others were English major student at BA level. Each person completed a short online questionnaire and was interviewed individually, face-to-face, via Skype® or telephone for about one hour; the interviews were recorded and transcribed. The interviews were semi-structured, based around past experience of language learning; present use of mobile devices; informal language learning with a mobile device (personal motives, circumstances, detailed accounts of experience); constraints, difficulties and frustrations encountered; reflections on how language learning is changing; and how the interviewees envisaged the future of informal language learning with mobile technologies.

### **Findings**

Interviewees described and reflected on the learning activities they undertook at particular times of the day, week, or year, or in relation to indoor and outdoor locations where the activities usually took place. By examining in turn the focus of learning, how time was used, and the role of place, we can arrive at a holistic view of the relationships between these dimensions, which form the basis of a conceptual framework that can guide future designs for mobile language learning.

#### ***Time***

There were two modes of using mobile devices to support informal mobile language learning: (I) as a regular, habitual pattern of activity, and (II) in a spontaneous, unplanned way (Table 1). Interviewees often reported learning in both of these modes. Regular patterns evolved mainly around opportunities in daily routines, such as at breakfast or lunch; last thing at night; and during predictable regular movements such as commuting to work, doing school runs, taking daily walks, and picking up a partner from the bus stop. "Home away" were also associated with learning that could be planned in advance. Spontaneous learning was influenced by available time, recognizing an opportunity to learn, or the individual's mood and readiness for learning. Instant access was important for spontaneity, with one interviewee preferring to listen to the radio rather than having to preload mp3 files.

Both regular and spontaneous learning were conditioned by certain external factors, especially other available activities (e.g., television programs in the evening, household chores), social situations (e.g., wishing to impress a friend), and the availability of technology (e.g., a good internet connection, a pen to write things down).

Fifteen or twenty minutes were often mentioned as typical periods of time available for learning. But for some people, perceptions of sufficient time also governed learning choices; for example, a sufficiently long car or train journey, sufficient time to get to the next level in a game, or uninter-

rupted time after children had gone to bed. Available and sufficient time are partly subjective notions, but could be important from the point of view of defining a satisfying or rewarding learning experience that fits in with the learner's life.

**Table 1. Times when mobile language learning happens.**

<b>Planned time</b>	1. Daily walks
	2. Weekends away
	3. Last thing at night
	4. At lunch breaks
	5. At breakfast
	6. Commuting to work
	7. Doing school runs
	8. Picking up partner
<b>Unplanned time</b>	9. When the opportunity arises
	10. Whenever the mood takes me
	11. When I have the time
	12. Whenever dead time is available

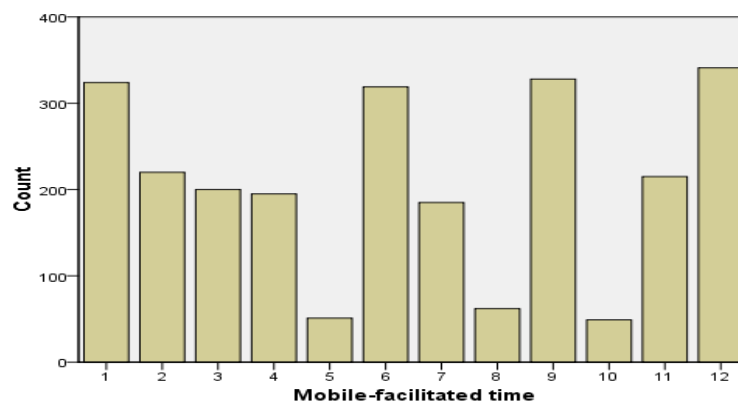
Times when mobile language learning happens are conditioned by three main factors including available activities, social situation, and available technology. Students didn't sometimes have an access to some activities like online social networking. Sometimes they were in some situations in which there were no access to Internet. Sometimes, they had enough time to focus on mobile-assisted activities but the situation was not appropriate to do so. For example it was so crowded and noisy to focus on any sorts of activities. Sometimes, they had enough time and the situation was suitable, but they didn't have the target technology. For example one of the learners wanted to listen to an English podcast but he forgot to bring his headphone.

Then, these items of mobile-facilitated time, listed in table 1, were presented to all 50 respondents in order to be prioritized from the most frequent items to the least frequent ones based on their usability and applicability in the respondents' MALL experience. Actually, these subjects were provided with the list of items and asked to score each item from number 1 (Never true for me) to number 7 (Always true for me). 50 subjects scored the items on a scale from 1 to 7. Therefore, the perfect score for an individual item is 350. The aim was to find out which items were the most and least frequent ones. The results of the survey is illustrated in Figure 1.

As it can be seen in the figure, items 1, 6, 9, and 12 are the most frequent uses of mobile-facilitated time available to Iranian EFL learners. The first rank, among the most frequent uses, goes to item 12 (whenever dead time is available). Majority of the interviewees in this study asserted that they were too busy to have a specified time of their self-directed and informal English learning, so dead time, occurring to them, was so vital to have mobile learning. Some examples of dead time given by our interviewees are: (a) the time that learners are on time but their teacher is a little late; (b) the time of giving tests to the learners: teachers focus on their mobile learning while their students are taking the test; (c) some respondents have to participate in some formal/official lectures and conferences. Being bored with lectures, they amused with their mobile learning; and lots of other examples. The second item, among the most frequent uses, is item 9 (when the opportunity arises). Talking to some of the learners in the interview session, I came to know that lots of them carry

their mobile devices like tablets and smart phones wherever they go in order to have an access to them whenever and wherever an opportunity arises. Examples of this use include: (a) interviewees were given a test in the class and the teacher told them they were free to focus on their own favorite activities, because the teacher wanted to correct the papers in the classroom; (b) teaching in an institute, the interviewee, as a teacher, was told to take a break in the office, because a city official wanted to talk to their learners in the class; (c) the flight was delayed and the airway company took the passengers to a cafeteria at the airport. The interviewees were enjoying drinking and working with their mobile-assisted language learning experience. They think, using these opportunities which were unplanned, they the most out of their time. The other two items, among the most frequent uses of mobile-facilitated time, are item 6 (commuting to work) and item 1 (daily walks). These two items are the ones the interviewees plan for them regularly. Most of them, using their mobile devices for language learning during their daily walk and commuting to work, had a pleasurable time in a way that these opportunities turned out to be the ones the practitioners had the most useful learning experiences.

Items 5, 8, and 10 are the least frequent uses of mobile-facilitated time available to Iranian EFL learners. Majority of the respondents had their breakfast so quickly that they didn't even have enough time to have a full meal. Few learners focused on their mobile learning while having breakfast. Most of the respondents stated they prefer to do mobile learning individually, when they can have a silent time with their smart gadgets. Iranian EFL learners didn't take 'mood' as a key factor in their mobile learning. They were always willing to be with their mobile devices to take the lead in their self-directed learning and to take the most out of the available time. Some of them said that mobile devices put them on the mood for learning, regardless of the time available to them, since these gadgets provide them with multimedia resources to practice their English.



**Figure 1. Frequency of uses for the items of mobile-facilitated time.**

### *Place*

Learning took place at home as well as in many other locations (Table 2). Home presented opportunities to multitask, particularly for learning while preparing food, eating, and watching television, or while doing household tasks in the house and garden. Out and about, learning took place mainly on public and private transport, with some activity in leisure spaces such as a café, a park, a gym, a sports complex, and a beach on holiday. Waiting for people and transport was a frequent reason for taking the opportunity to use a mobile device for learning. To a much lesser extent, mobile learning took place at work\_ at the desk, or while walking between buildings at work\_ or while tra-

velling abroad for work. Place could be associated with comfort or a relaxed state of mind, with some interviewees reporting that they liked to learn in bed, on their bed, or in the bath. Learning while sitting in front of the television also suggests a comfortable setting. A train was a place where some people felt they could relax. A preference for wandering about the house while learning was also satisfied by the use of mobile technology. Place-related comments also alluded to changes in thought-habits over time: for example, a comfortable place to study (with books and a pen) being transformed by a realization that “the space comes with me,” so that learning can take place anywhere, in the house or outside.

On the negative side, place was subject to some constraints. It might be considered not safe to use an mp3 player when driving. Personal safety concerns meant that possibilities of mobile learning on the bus or on the underground (subway) were sometimes discounted. The underground also caused loss of signal, which interrupted learning. Costs associated with connectivity, particularly abroad, were an area of concern. Social issues included forgoing the opportunity to learn in a gym because of the need to say things out loud.

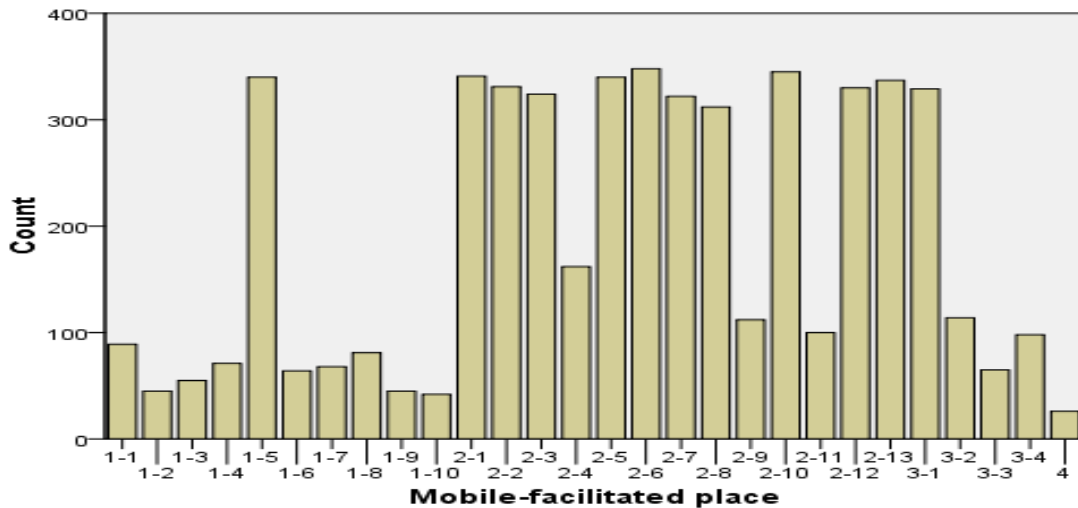
**Table 2. Places where mobile language learning happens**

<b>1. At home</b>	1. Cooking	<b>2. Out and about</b>	1. Cycling
	2. Watching TV		2. In the car
	3. At the breakfast table		3. On the subway
	4. In bed		4. On a plane
	5. In the garden		5. At a café
	6. Making sandwiches		6. On the bus
	7. Washing up		7. On the train
	8. Vacuuming		8. At the gym
	9. On the bed		9. Abroad
	10. In the bath		10. Walking
<b>3. Waiting for</b>	1. The bus	11. On holiday	
	2. The car to get repaired	12. On the beach	
	3. People	13. Sitting in the park	
	4. An appointment		
<b>4. At work desk</b>			

Then, these items of mobile-facilitated place, listed in table 2, were presented to all 50 respondents in order to be prioritized from the most frequent items to the least frequent ones based on their usability and applicability in the respondents' MALL experience. Actually, these subjects were provided with the list of items and asked to score each item from number 1 (Never true for me) to number 7 (Always true for me). 50 subjects scored the items on a scale from 1 to 7. Therefore, the perfect score for an individual item is 350. The aim was to find out which items were the most and least frequent ones. The results of the survey is illustrated in Figure 2. Items 1-1 to 1-10 are related to the category of 'At home'. Items 2-1 to 2-13 are related to the category of 'Out and about'. Finally, items 3-1 to 3-4 are related to the category of 'Waiting for'. The individual item 5 goes to the category of 'At work desk'. Numbering is done based on the numbers in table 2.

As it can be seen in figure 2., among 28 items of mobile facilitated place, 12 items are the most frequent ones: one item from the category of 'At home'; ten items from the category of 'Out

and about'; and one item from the category of 'Waiting for'. Generally speaking, Iranian EFL learners learn and practice English by their mobile gadgets out of their homes and work places. Two main categories of 'At home' and 'Waiting for' are not their favorite places for mobile-assisted language learning.



**Figure 2. Frequency of uses for the items of mobile-facilitated places.**

### Discussion

As mobile technology developments and the availability of mobile services and apps accelerate, researchers and educators need to adapt or develop relevant conceptual frameworks to enable them to understand and interpret learner practices, and to plan new educational interventions (Park, 2011; Vavoula, Pachler, & Kukulska-Hulme, 2009). Furthermore, learner-initiated or learner-managed activity, which might complement formal lessons, requires an approach that is more context-aware with respect to learners' circumstances on the ground, that is, learning in relation to their daily lives. Learners are increasingly in a position to play an active role in assessing the appropriateness of mobile learning activities in relation to when and where they are attempting to learn. The above interview findings, together with previous research in this area, make it possible to consider the relations between the nature of the language learning activity and the dimensions of time and place.

The research findings have exposed how learning habits evolve during adoption of mobile technology, so that learning can become either less or more spontaneous. Learning might also change from being time- or place-specific to an activity that is carried out anywhere or any time, once a learner realizes that there is no need to stay in one place or to carve out a substantial amount of time dedicated to studying. Or the opposite could happen: an activity initially carried out at different times can become a time-bound habit, something to be done each morning at breakfast or on the way to work. Thus, it is important to stay in touch with evolving practices once emerging practices have been identified.

In the next section, the implications of this way of approaching language learning are considered. What if language learning were to be defined by time and place? What would change? Use of the time-place framework would impact on how activities are planned and designed. Other effects



can be foreseen in terms of rethinking language learning curricula to take greater account of where and when learning takes place.

### **Implication of the study**

Educators and learners can use the results of the study to reflect on their planning and design practices, extending or adapting them as necessary. Practices that have arisen haphazardly can be better justified and understood, which should also make them more shareable. The interviews which colleagues and I conducted sometimes indicated little prior reflection on why certain resources or ways of using mobile devices had been adopted, suggesting that more opportunity for structured reflection could potentially lead to further development of current practices.

Future mobile language learning services, personal and community-based, can be designed on the basis of this understanding, ensuring a better match between learning activities (including materials, resources, and human connections), and the circumstances of their use. Use scenarios can be explicit about place and time, even if these dimensions are fluid and not everything can be specified in advance. The goal is to move learning progressively closer to what learners require. The landscape in which learners operate is in itself changing (e.g., in terms of 3G coverage, Wi-Fi hotspots, public spaces designed for mobile users), so a commitment to regular review of the situation is also necessary.

Last but not least, it is important to consider the extent to which language learning may be defined by time and place. There are several ways of approaching this. First, sociolinguistic competence refers to a speaker's (or writer's) knowledge of what constitutes an appropriate utterance according to a specific social context (Blyth, 2004), which implies an appreciation of time and place as well as interlocutors. However, the social context remains an abstract concept until the learner is in a situation that requires acting in accordance with that context. At that moment in time, in that place, or perhaps in a nearby place just moments before, a mobile device can support language learners in their interactions, but only if relevant support can be obtained spontaneously, instantly. The unfolding situation may yield new discoveries about personal expression, or about language in use\_ including deictic words and gestures that only make sense in situ\_ which can be captured and used to enrich the repertoire for future language learning. Second, the vocabulary and phraseology of negotiating human encounters and movements (such as when and where to take the opportunity to meet up, the suitability of a meeting place, unexpected changes to meeting arrangements, options for travel to a new location, etc.) are likely to become a more prominent feature of language learning content, as an increasingly mobile culture imposes "perpetual contact" (Katz & Aakhus, 2002) and more opportunities for ad hoc arrangements arise, in social life and at work. Third, language learning can escape the traditional constraints of time and place that partly determine existing curricula, which focus largely on what can be achieved and tested at home or in the classroom. Given the chance to practice speaking and listening skills on the go, a foreign language curriculum can become oriented toward developing more spoken communication (Demouy & Kukulska-Hulme, 2010). Mobile technologies are by no means a total solution to all language learning requirements, but their impact is growing and that impact needs to be understood.

The findings of the study is derived from learners' own practices, with consideration of their reported use of time and space. As such, it provides a complementary approach to Luckin's (2008) argument, in relation to more traditional educational settings, that "we need a framework that helps us design educational experiences that match the available resources to each learner's needs" (p. 451). Increasingly, through the adoption of mobile technologies, learners are able to participate in the design of their learning experiences, so that in future this matching may be one by various ac-

tors: teachers, software agents, learners. Time and place dimensions are sure to be of key importance in the matching decisions that will have to be made.

### Conclusion

On the basis of research with learners who are using their mobile devices to learn languages informally, It is established that time and place are becoming more prominent in shaping the landscape of language learning as learning intertwines with other daily life activity and work. I have sought to look beyond the “anytime, anywhere” mantra to discover the specifics of time and place, enabling the formulation of some key questions and choices that can be used to interrogate and develop future designs for mobile language learning. Parry (2011) argues that we need to improve our understanding of the “new sense of space,” since we have not yet become fully aware of the degree to which geo-location and the mobile Web will change our daily practices. He believes that Web services which enable layering of information on top of the physical world will substantially alter how we can interact with space “in an increasingly complex, data-rich landscape.” For language teachers and learners, this forecasts a new connection between language and the physical environment, where words will increasingly appear on top of objects (e.g., as augmented reality viewed on the screen of a mobile phone), either as commentary or in the manner of a visual dictionary. This introduces potentially new opportunities for practice, reminders of what was previously learned in a particular location, and positive reinforcement through enjoyable experience of time and place.

### References

- Blyth, C. S. (2004). Sociolinguistic competence. In M. Byram (ed.), *Routledge encyclopedia of language teaching and learning* (pp. 553-555). London: Routledge.
- Chen, C.-M., Li, Y.-L., & Chen, M.-C. (2007, July). Personalized context-aware ubiquitous-learning system for supporting effective English vocabulary learning. Paper presented at the 7<sup>th</sup> International Conference on Advanced Learning Technologies (ICALT 2007), Niigata, Japan.
- Demouy, V., & Kukulska-Hulme, A. (2010). On the spot: using mobile devices for listening and speaking practice on a French language program. *Open Learning*, 25(3), 217-232.
- Dey, S. (2009). English via mobiles: Potential m-learners amongst Indian students and drivers. In D. Metcalf, A. Hamilton, & C. Graffeo (eds.), *Proceedings of 8<sup>th</sup> World Conference on Mobile and Contextual Learning* (pp. 174-178). Orlando, FL: University of Central Florida.
- Elliott, A. (2010). *Mobile lives, digital emotions*. Paper presented at the Birkbeck Institute for Social Research, 8 November 2010. London: Backdoor Broadcasting Company archive. Retrieved on April 9, 2011 from <http://backdoorbroadcasting.net/2010/11/anthony-elliott-mobile-lives-digital-emotions/>.
- Fortunati, L. (2002). The mobile phone: Towards new categories and social relations. *Information, Communication & Society*, 5(4), 513-528.
- Ito, M., Matsuda, M., & Okabe, D. (eds.) (2005). *Personal, portable, pedestrian: Mobile phones in Japanese life*. Cambridge, MA: The MIT Press.
- Katz, J. E., & Aakhus, M. (eds.) (2002). *Perpetual contact: Mobile communication, private talk, public performance*. Cambridge: Cambridge University Press.
- Kukulska-Hulme, A. (2005). Reading course materials in e-book form and on mobile devices. In A. Kukulska-Hulme & J. Traxler (eds.), *Mobile learning: A handbook for educators and trainers* (pp. 125-132). Open & Flexible Learning Series. Abingdon: Routledge.
- Kukulska-Hulme, A., & de los Arcos, B. (2011, April). Triumphs and frustrations of self-motivated language learners using mobile devices. CAL Conference 2011-Learning Futures: Educa-

tion, Technology & Sustainability, Manchester Metropolitan University, 13-15 April 2011, Manchester.

Kukulka-Hulme, A., & Pettit, J. (2009). Practitioners as innovators: Emergent practice in personal mobile teaching, learning, work and leisure. In M. Ally (ed.), *Mobile learning: Transforming the delivery of education and training* (pp. 135-155). Issues in Distance Education. Athabasca: Athabasca University Press.

Kukulka-Hulme, A., Pettit, J., Bradley, L., Carvalho, A. A., Herrington, A., Kennedy, D., & Walker, A. (2009). An international survey of mature students' uses of mobile devices in life and learning. In D. Metcalf, A. Hamilton, & C. Graffeo (eds.), *Proceedings of 8<sup>th</sup> World Conference on Mobile and Contextual Learning* (p. 143). Orlando, FL: University of Central Florida.

Kukulka-Hulme, A., & Shield, L. (2008). An overview of mobile assisted language learning: From content delivery to supported collaboration and interaction. *ReCALL*, 20(3), 271-289.

Lave, J., & Wenger, E. (1991). *Situated learning. Legitimate peripheral participation*. Cambridge: University of Cambridge Press.

Levy, M., & Kennedy, C. (2005). Learning Italian via mobile SMS. In A. Kukulka-Hulme & J. Traxler (eds.), *Mobile learning: A handbook for educators and trainers* (pp. 76-83). London: Taylor & Francis.

Luckin, R. (2008). The learner centric ecology of resources: A framework for using technology to scaffold learning. *Computers & Education*, 50(2), 449-462.

Luckin, R., Clark, W., Garnett, F., Whitworth, A., Akass, J., Cook, J., Day, P., Ecclesfield, N., Hamilton, T., & Robertson, J. (2010). Learner-generated contexts: A framework to support the effective use of technology for learning. In M. J. W. Lee & C. McLoughlin (eds.), *Web 2.0-based e-learning: Applying social informatics for tertiary teaching* (pp. 70-84). Hershey: PA: IGI Global.

McNeal, T., & van't Hooft, M. (2006). Anytime, anywhere: Using mobile phones for learning. *Journal of the Research Center for Educational Technology*, 2(2), 23-31.

Microsoft News Center (1997). More than 20,000 students and teachers nationwide use laptops to learn anytime anywhere. Press Release. Retrieved on April 9, 2011 from <http://www.microsoft.com/presspass/press/1997/nov97/laptoppr.mspx>.

Milrad, M., & Spikol, D. (2007). Anytime, anywhere learning supported by smart phones: Experiences and results from the MUSIS Project. *Journal of Educational Technology & Society*, 10(4), 62-70.

Oblinger, D. G. (2006). Space as a change agent. In D. G. Oblinger (ed.), *Learning spaces. EDUCAUSE e-book* (pp. 1-3). Retrieved on April 9, 2011 from <http://www.educause.edu/LearningSpaces>.

Ogata, H. & Yano, Y. (2004). Context-aware support for computer-supported ubiquitous learning. In J. Roschelle, T.-W. Chan, Kinshuk, & S. J. H. Yang (eds.), *Proceedings of IEEE International Workshop on Wireless and Mobile Technologies in Education* (pp. 27-34). Washington, DC: IEEE Computer Society.

Ogata, H., Yin, C., El-Bishouty, M. M., & Yano, Y. (2010). Computer supported ubiquitous learning environment for vocabulary learning. *International Journal of Learning Technology*, 5(1), 5-24.

Pachler, N., Bachmair, B., & Cook, J. (2010). *Mobile learning: Structures, agency, practices*. London: Springer.

Park, Y. (2011). A pedagogical framework for mobile learning: Categorizing educational applications of mobile technologies into four types. *The International Review of Research in Open and Distance Learning*, 12(2), 78-102.

Parry, D. (2011). Mobile perspectives: On teaching mobile literacy. *EDUCAUSE* March/April 2011 (pp. 14-18). Retrieved on April 9, 2011 from <http://www.educause.edu/EDUCAUSE+Review/EDUCAUSEReviewMagazineVolume46/iMobilePerspectivesOnTeaching/226160>.

Pea, R. D., & Maldonado, H. (2006). WILD for learning: Interacting through new computing devices anytime, anywhere. In K. Sawyer (ed.), *The Cambridge handbook of the learning sciences* (pp. 427-441). New York: Cambridge University Press.

Petersen, S. A., Markiewicz, J-K., & Bjørnebekk, S. S. (2009). Personalized and contextualized language learning: Choose when, where and what. *Research and Practice in Technology Enhanced Learning*, 4(1), 33-60.

Pettit, J., & Kukulska-Hulme, A. (2007). Going with the grain: Mobile devices in practice. *Australasian Journal of Educational Technology*, 23(1), 17-33.

Roberts, J., Beke, N., Janzen, K., Mercer, D., & Soetaert, E. (2003). Harvesting fragments of time: Mobile learning pilot project. mLearning Consortium Final Report, May 2003. Retrieved on April 9, 2011 from <http://www.mcgrawhill.ca/college/mllearning/>.

Ros i Solé, C., Calic, J., & Neijmann, D. (2010). A social and self-reflective approach to-MALL. *ReCALL*, 22, 39-52.

Sharples, M., Taylor, J., & Vavoula, G. (2005). Towards a theory of mobile learning. In H. van der Merwe & T. Brown (eds.), *Mobile technology: The future of learning in your hands*, mLearn 2005, 4<sup>th</sup> World Conference on mLearning, Cape Town, 25-28 October 2005. Cape Town: mLearn 2005. Retrieved on April 9, 2011 from <http://www.mlearn.org.za/CD/papers/Sharples-%20Theory%20of%20Mobile.pdf>.

Smidts, M., Hordijk, R., & Huizenga, J. (2008). *The world as a learning environment: Playful and creative use of GPS and mobile technology in education*. Online document. Retrieved on April 9, 2011 from [http://www.mobieleonderwijsdienst.nl/attachments/1765201/World\\_as\\_learning\\_environment.pdf](http://www.mobieleonderwijsdienst.nl/attachments/1765201/World_as_learning_environment.pdf).

Sobel, D. (2004). *Place-based education: Connecting classrooms and communities*. Great Barrington, MA: The Orion Society.

Song, Y., & Fox, R. (2008). Uses of the PDA for undergraduate students' incidental vocabulary learning of English. *ReCALL*, 20(3), 290-314.

Stockwell, G. (2007). Vocabulary on the move: Investigating an intelligent mobile phone-based vocabulary tutor. *Computer Assisted Language Learning*, 20(4), 365-383.

Underwood, J., Luckin, R., & Winters, N. (2010, September). Managing resource ecologies for mobile, personal and collaborative self-directed language learning, EUROCALL conference, 8-11 September 2010, Bordeaux, France.

Vavoula, G., Pachler, N., & Kukulska-Hulme, A. (eds.) (2009). *Researching mobile learning: Frameworks, tools and research designs*. Oxford: Peter Lang Verlag.

Waycott, J., & Kukulska-Hulme, A. (2003). Students' experiences with PDAs for reading course materials. *Personal and Ubiquitous Computing*, 7(1), 30-43.