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Kukulska-Hulme, Agnes (2012). Language learning defined by time and place: A framework for next generation designs. In: Díaz-Vera, Javier E. ed. *Left to My Own Devices: Learner Autonomy and Mobile Assisted Language Learning. Innovation and Leadership in English Language Teaching*, 6. Bingley, UK: Emerald Group Publishing Limited, pp. 1–13.

For guidance on citations see [FAQs](#).

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Version: Version of Record

Link(s) to article on publisher's website:

[http://dx.doi.org/doi:10.1108/S2041-272X\(2012\)0000006004](http://dx.doi.org/doi:10.1108/S2041-272X(2012)0000006004)

<http://www.emeraldinsight.com/products/books/series.htm?id=2041-272x>

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Chapter One

LANGUAGE LEARNING DEFINED BY TIME AND PLACE: A FRAMEWORK FOR NEXT GENERATION DESIGNS

Agnes Kukulska-Hulme

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 chapter is to conceptualize the relation between the focus of language learning and the dimensions of time and place. What if language learning were to be defined by time and place? What would change? The chapter 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 series of studies led by the author, investigating how university students and other 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.

INTRODUCTION

Much time has passed since Microsoft and Toshiba launched the Anytime Anywhere Learning Program in 1996, aiming to improve access to laptop computers in schools across the United States and to demonstrate substantial educational benefits (Microsoft News Center, 1997). The “anytime, anywhere learning” slogan has since been very successful and continues to inspire in the 21st century, in the development of distance education and in applications of mobile technologies in a range of settings (McNeal & van't Hooft, 2006; Milrad & Spikol, 2007; Pea & Maldonado, 2006). Yet 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.

TIME AND PLACE IN MOBILE 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.

EVIDENCE FOR TIME AND PLACE: METHODOLOGY

Over the past decade I have led 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 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. 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 (Kukulska-Hulme & Pettit, 2009).

In 2010, we conducted interviews with thirty volunteers, seventeen male and thirteen female, who were recruited through our institution's intranet, online social networks, email lists, and personal contacts (see also Kukulska-Hulme & de los Arcos, 2011). All were adults, most of whom were at beginner level, learning one or more languages. Half were enrolled in a formal language course, while the others were learning a language only informally on their own time. 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 questions that addressed personal details (nationality, languages studied, personal interests); 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.

The data analysis has included the categorization listed in Table 1. Separately, we have analyzed reported highs and lows in terms of what the interviewees had managed to achieve and any obstacles they encountered (Kukulska-Hulme & de los Arcos, 2011). For the purpose of this chapter, the focus is on findings from the place and time aspects of the analysis ("where" and "when"), in relation to "what" the interviewees were trying to learn and "how." In some cases, interviewees' accounts linked learning activity, time, and place explicitly and directly; in other cases, it is possible to make an implied connection between activity, place and time.

Table 1.1 Aspects of the Analysis.

<p>What What is the interviewee trying to learn?</p> <p>How How is the interviewee doing their learning?</p> <p>Who Who else is involved in the interviewee's learning?</p> <p>Which Which mobile devices support the learning?</p> <p>Why What is the interviewee's motivation or need?</p> <p>Where Locations, favorite places</p> <p>When Times of the day, patterns of use</p>

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.

Focus of Learning (Activity)

Learning activities undertaken by the interviewees were wide-ranging and included both conventional tasks, such as repeating lists of words and phrases or using flashcards and vocabulary games, to more creative endeavors, such as making use of recording and camera features to capture samples of authentic language and letting those samples become the basis of personalized tuition with a teacher. A strong motivator for some people was the challenge of playing a game. For others, it was the challenge of producing something and sometimes sharing it—for example, a spreadsheet on verb conjugation or explaining grammar rules by making a recording. Overall, the data show the importance of both ease and challenge, with mobile learning being perceived as a good way to learn either with ease or with a sense of challenge. Curiosity also figures as a motivator, with learners capturing samples of language that seem interesting.

Resources such as dictionaries, verb conjugation tables, and translation tools were highly regarded, and cost-free options were highlighted. News items were a preferred type of content for many learners. Increased opportunities for both aural and oral practice were also highly valued, as was the ability to check one's pronunciation. Embarrassment could be an obstacle to oral practice if there were other people around; in that respect, mobile technologies offer privacy (e.g., practice in the garden out of earshot), but the potential to practice "anywhere" (e.g., in the gym) may be constrained by what is socially acceptable or by the individual's inhibition. The ability to practice writing was enhanced by easy access to texting, email, or a blog.

A number of interviewees appreciated the experience of learning a language while not being fully focused on it, for example, by simultaneously engaging in another task, and they noted the unobtrusiveness of mobile learning. There was a

sense of wanting to immerse oneself in the target language by listening to it often and getting used to its sounds and intonation. Personalization of learning, such as choosing to listen to news in “slow Spanish,” or conversely, getting used to the fast speed of spoken language, was another highlight for several interviewees. One interviewee set her iPhone interface to the target language so she could get navigation options and directions in that language. Another interviewee changed the language settings on electronic devices around the home to increase interaction in the target language. These are all instances of language learners creating a sense of immersion.

Social interaction was largely limited to participation in online social networks, although there were examples of “just in time” support for conversation abroad and remote interaction with a learning partner in another country. Socially, at dinner, the mobile device could be used to translate menu items; even if this did not immediately result in learning, the trail of this interaction remained on the phone (“I don’t actually remember any of the language but it’s still on the phone”). The mobile device sometimes acted as an explicit memory aid, preserving an activity trail for later revision and enabling photo- and note-taking for later follow-up or as a simple reminder of “stuff to learn or explore later.”

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 (Fig.1.1). Interviewees often reported learning in both of these modes. Regular patterns revolved 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. “Weekends 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. Spontaneous learning could also turn into a routine over time. Interviewees report:

...historically it’s been, it’s been more spontaneous. But now...I only found the BBC Mundo website, the podcasts, a few weeks ago. So now I am starting to make sure I listen to one of those if I do a car journey that’s kind of fifteen minutes or more long. I will try and listen to one of those on the, you know, on the car journey. So I am trying to do that more regularly. (Interviewee 27)

I suppose when it started it was spontaneous, but now I’m conditioned to it really... as I pick up the book to read so I pick up the iPhone. (Interviewee 29)

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 uninterrupted 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.

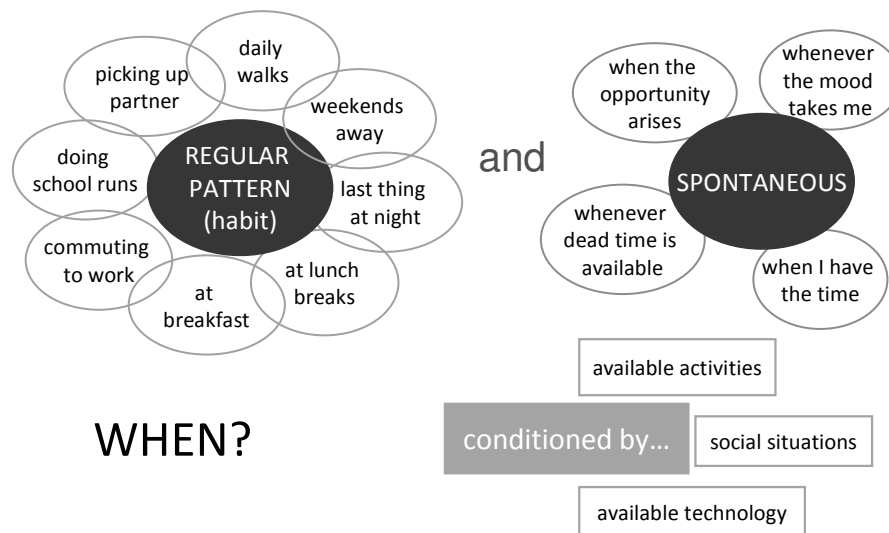


Fig. 1.1 Times when mobile language learning happens

Place

Learning took place at home as well as in many other locations (Fig 1.2). 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 travelling 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.



Fig. 1.2. Places where mobile language learning happens

CONCEPTUAL FRAMEWORK FOR TIME- AND PLACE-BASED LANGUAGE LEARNING

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. Figure 3 brings the findings together by suggesting a framework consisting of sets of questions, mostly in the form of choices that need to be explored when planning or designing new language learning activities, so that they will have a good fit with learners' preferences and habits concerning locations and times for study. Adequate knowledge about the learners is assumed on the part of the teacher or a close partnership with the learners, and is a pre-requisite for mobile learning planning and design for informal settings.

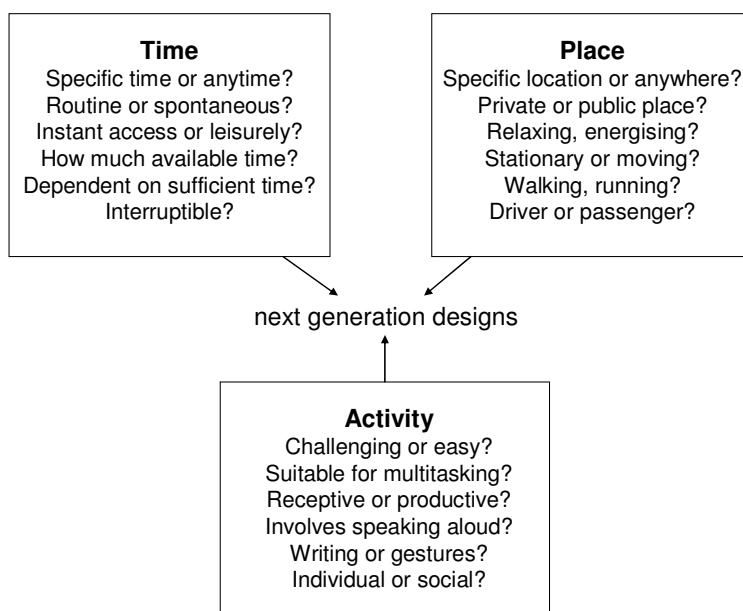


Fig. 1.3. Conceptual framework for next generation designs for mobile-supported language learning in informal settings

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, I consider the implications of this way of approaching language learning. 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.

IMPLICATIONS OF THE FRAMEWORK

Educators and learners can use the conceptual framework 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 conceptual framework proposed in this chapter 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 done by various actors: 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, I have 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.

ACKNOWLEDGMENT

I would like to thank Beatriz de los Arcos for carrying out the interviews reported in this chapter and for her contribution to the visual representations in Figures 1.1 and 1.2.

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