

SIMOLA: Helping Language Learners Bridge the Gap

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Abstract

Mobile and ubiquitous learning technologies provide the opportunity for students of foreign languages living in a target language country to bridge the gap between classroom teaching and experience of using language in context. These technologies can be used in the contexts in which the language learner needs to apply his/her language skills for producing or interpreting language. The SIMOLA (Situating Mobile Language Learning) project, funded by the EU Lifelong Learning Programme, is developing a mobile phone application that enables students to collect, annotate, and tag interesting or puzzling language- and culture-related content found in everyday life, including text, images, and other media, and to upload these content items to a repository. From the repository, the information can be syndicated, e.g. via RSS feeds/widgets integrated into websites, blogs and profile pages, and alerts to subscribing mobile phones. The mobile application is complemented by a Web interface more appropriate for extensive editing and extensive text-based communication, thus combining the affordances of the two platforms. In this paper we describe the thinking behind the project, which is being evaluated with a) higher education students and b) adult immigrants, in six European countries and in Japan.

1. Introduction

The transformation of mobile phones from simple voice and text-based communication devices into powerful handheld mini-computers makes the smart phone an increasingly attractive platform for informal and situated learning. Smart phone facilities such as online reference tools, multimedia capture and display, social networking and GPS all have the potential to be used alone or in combination to contribute to an effective learning tool, as students see taught material reflected in the outside world and vice versa, enabling them to relate classroom material to lived reality and vice-versa, thereby deepening their understanding and engaging them emotionally. Language teachers are particularly attuned to the need for students to transfer their learning to real life settings. Language learners can use their own mobile devices in the contexts in which they need to apply their language skills for generating or interpreting language. The potential of mobile learning in language learning has been appreciated for some time. Early initiatives in mobile language learning included delivering web materials via mobile devices, podcasting of language learning materials and vocabulary teaching to mobile phone subscribers (Kukulska-Hulme & Shield, 2007; Collins, 2005; Levy & Kennedy, 2005; McCarty, 2005; Morita, 2003; Pincas, 2004; Thornton & Houser, 2005; Trifanova et al, 2004). However, more radical initiatives involve learners not only downloading information on their mobile devices, but also contributing their own discoveries. Petersen and Divitini (2004) and Kukulska-Hulme et al. (2007) pointed to the potential of such approaches, while Ishikawa et al (2009) work on encouraging language students to create their own photographic and video content to illustrate linguistic items.

While each learner's needs and experiences will be different, there will also be many occasions when one learner's experience may be of help or interest to another, especially when learners find themselves in similar contexts, e.g. students at a foreign language University or immigrants to a

country. Lave and Wenger (1990) suggest that learning in a community of practice is more effective than individual learning as learners (practitioners) negotiate meaning in the community and collaboratively construct new knowledge. At the same time, there is evidence that knowledge acquired in authentic and detail-rich contexts is more easily transferred to new situations. A further step, therefore, is to integrate social networking facilities into any app developed for mobile language learning. With JISC and EU funding we have been developing a mobile language learning app that makes this bridging of learning contexts possible, with language learners capturing examples of interesting target language use to share and discuss in class (Pemberton et al, 2009; 2010).

Mobile phones have a number of characteristics that can be exploited for language learning. They are personal, in the sense that they are carried wherever the user goes and are always ready to hand. Mobiles are also used in many contexts, indoor and outdoor, and are constant companions even when users are consuming other media via digital technologies such as PC and TV [Fallahkhair et al, 2005]. Mobile learning services therefore have the potential to tap into a very wide range of contexts. Mobiles are also part of everyday life, rather than classroom settings, which suggests that they should lend themselves well to use in informal learning as well as more formal educational settings. The communication aspects of mobile phones point to two additional powerful trends that can be exploited by language learners, i.e. social networking and user created content. The SIMOLA project is an attempt to combine the characteristics of personal use, contextual use, informal learning, Web 2.0 ideas of user-generated content, content syndication and social networks.

In this paper we describe the rationale and features of the app, which will be evaluated over the next year in six European countries and in Japan. The project, known as SIMOLA (Situating Mobile Language Learning) transfers Web 2.0 concepts of user-generated content, content syndication and social networks to the mobile domain to support informal, situated, community-based language learning driven by international students sharing their discoveries in everyday life. The project aims to support students in this situation to share and build their collective knowledge using mobile phone technology that is ready to hand. In particular, the project aims to design, build and evaluate a lightweight mobile- and web-based system (branded as LingoBee) for Android phones that enables international students in the UK to pool and negotiate their knowledge and understanding of the local language and culture.

The aim of the app is to support international students and immigrants further their knowledge and understanding of local UK language and culture. Although international students and immigrants may already have a high level of competence in English language, and may not feel the need to enrol on formal language courses, they are still concerned with improving their facility in the language and with the native culture. The goal of the project is to provide an easy and engaging way for students in this situation to share and build their collective knowledge.

2. Design and Development Methodology

The project was developed according to a learner-centred design approach, on the basis of use cases, which built on focus group findings about language learning preferences of the target learner group (Norman & Draper, 1986; Pemberton et al, 2005). Our key use case is as follows:

Khalil is a Jordanian student in Brighton. He is in the Student Union watching a football game with some English friends. A goal is scored and there is much hilarity over the goalkeeper being nutmegged. Khalil cannot make sense of this: there's not much connection with the nutmegs of his experience, which are used in cooking. He asks his UK friends, who explain that it means the striker played the ball through the keeper's legs. Khalil thinks other non-native speakers may be interested in this new nugget of knowledge. He gets out his Android G1 phone, starts the CloudBank app and keys in "to nutmeg: in football: to play through an opponent's legs", tagging the entry with "nutmeg" and

"football". For good measure he also records an English friend pronouncing the word, and adds the recording to the entry, before sending it to the CloudBank cloud.

This same evening, Keichi, a Japanese student, learns about the term to nutmeg through the CloudBank RSS feed on his profile page. By chance he's just been watching a video clip of the goal from tonight's match. He logs onto the CloudBank community portal, searches for the nutmeg entry, and adds a reference to the video clip, so that others can get a better understanding of what it means to be nutmegged. (Pemberton et al, 2009)

The detailed functionality and interaction/interface design of the system was developed in conjunction with a group of potential users drawn from international students at the University of Brighton, using a participatory design approach.

3. System Facilities

The system allows students to collect, annotate and tag interesting or puzzling language- and culture-related content found in everyday life, including text, images and other media, and to upload these content items to a repository.

From the repository, the information is automatically made available to other users who are enrolled in the same user group. Users can swap between user groups in three clicks, as we anticipate that there will be a demand to see what users in other groups deem interesting.

In addition to syndication, the repository will offer a web interface:

- a) to allow adding, editing, annotating, tagging and discussion of content items
- b) to provide a central point around which a community of practice can crystallise.

The interface is sketched in Figure 1.

The first screen shows the overall interface for the app. The second displays a section of the list of items contributed by members of the English for All group. The third screen shows the detailed screen for the idiom "red tape." It includes a number of features. Firstly it shows the photo of the user who has uploaded the item, together with a link to their profile. This user has provided an explanation of the term and a photo taken from the Web. He could also have added a voice recording and a web link: he may add this later if he wants. A text to speech function provides a rough pronunciation. This item has been read by other readers, who have collectively recommended it with a 3 star rating. This is the first definition of two: the second definition has been added by a different user, who has contributed a slightly different explanation. Over time, the recommendation mechanism will cause the preferred items (or versions of items) to rise to the top, while less popular items will "sink" into invisibility.



Figure 1: LingoBee Interface

4. Research Questions

As the research is concerned with developing an effective language learning application that takes advantage of the ubiquity and technical capabilities of modern smartphones, the research questions relate to both design and learning aspects of the project:

RQ1: Do learners adopt the system, and if so, how do they use it? Although we assume that students will adopt and use the system to improve their language skills, we have not yet established this in field studies. Furthermore, finding out how exactly the system is used helps to understand usage patterns and by extension informs future design decisions (Jones & Issroff, 2007)

RQ2: Does the system help language learners improve their knowledge and understanding of the local language and culture? Answering this question is fundamental as it represents the rationale for the system. It is anticipated that mobile, informal learning is difficult to measure, which is why the development of suitable evaluation instruments is one of the key objectives in the project.

RQ3: What design guidelines can be drawn from the project to inform the development of effective mobile learning applications? The development of design guidelines based on the experiences gained in developing and evaluating a mobile language learning application is essential in order to make a contribution to the field of Human Computer Interaction (Luchini et al, 2004).

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