

A User Created Content Approach to Mobile Knowledge Sharing for Advanced Language learners

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ABSTRACT

Mobile and ubiquitous learning technologies hold out great promise for students of foreign languages who are resident in a target language country, since they can be used in the contexts in which the language learner needs to use his/her language skills for deploying or interpreting language. The CloudBank project aims to integrate a user created content paradigm with mobile learning technologies so that language learners can upload, share and comment on interesting language items they encounter in everyday life in the target language culture. 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.

Author Keywords

Collaboration, Computer Support for Collaborative Learning, Mobile Learning, Informal Learning, Language Learning

INTRODUCTION

Mobile and ubiquitous learning technologies hold out great promise for students of foreign languages since they can be used on the “front line,” i.e. in the very contexts in which the language learner needs to use his/her language skills for deploying or interpreting language. Kukulska-Hulme and Shield (2007) report on a variety of initiatives to deliver web materials via mobile devices, podcasting of language learning materials and vocabulary teaching to mobile phone subscribers (Collins, 2005; Levy & Kennedy, 2005; McCarty, 2005; Morita, 2003; Pincas, 2004; Thornton & Houser, 2005; Trifanova et al, 2004). More radical initiatives that have been mooted involve learners not merely downloading information on their mobile devices, but also contributing their own discoveries. Petersen and Divitini (2004) and Kukulska-Hulme et al (2007) point to the potential of such approaches, while Ishikawa et al (2009) have been working for several years 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. Learners in situations like these may not be enrolled in formal language classes. International students, for instance, will typically have a high level of competence in English language, and may not feel the need to attend face to face classes. However, they will still be concerned with improving their facility in the language and their understanding of the native culture. In this work in progress paper we sketch the user centred design of a mobile phone application, CloudBank, that combines social networking and user creation features with mobile phone communication and information retrieval functionality to create a collaborative tool to support a community of language learners.

SCENARIO BASED DESIGN

The general impetus for the CloudBank system was to develop a system allowing students to collect, annotate and tag interesting or intriguing language and culture-related content found in everyday life, including text, images and other media, and to upload these content items to a repository for sharing, and also for editing and discussion via a Web interface. The overall architecture of the system initially envisaged is shown in Figure 1.

In order to ground the design of the system in the reality of its potential users, a scenario based process was used (Rosson & Carroll, 2002; Pemberton et al, 2005). The first stage in this process was to obtain a solid understanding of our user group, in this case International students at our home institution. We set up two user groups, a larger group (11 participants), who are consulted approximately every six weeks on issues of functionality, terminology and so on, and a core group of a further six users, who are consulted more frequently on issues of detailed interaction design. The participants were recruited by email and via the tutor for a pre-sessional English class. Between them the groups consist

of eight postgraduate and nine undergraduate students, with ten different first languages. There are seven female and ten male participants.

From meetings and questionnaire study with the student groups, we developed four personas, to represent the user population throughout the design. As far as possible, characteristics that might influence attitudes to and take up of the proposed system were integrated into the persona design, summarised in Table 1.

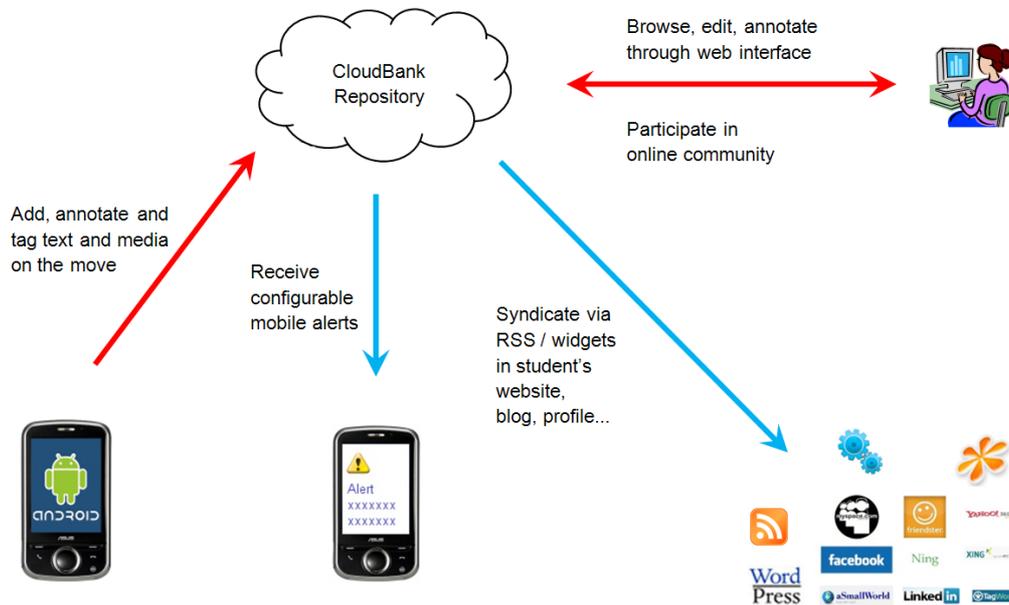


Figure 1: System architecture

Manuela	Brazilian, female, art history, undergraduate student, moderate use of English language social networking sites, moderate phone user
Khalil	Jordanian, male, masters student, engineering student, high use of English language social networking sites, high end phone user
“Maggie”	(anglicised chosen name), Chinese, undergraduate, interior design student, uses Chinese social networking site, basic phone user
Keichi	Japanese, male, masters student, international marketing studies, does not use social networking sites, high end phone user.

Table One: Personas with selection of features

On the basis of these personas, user scenarios were constructed to illustrate the possible uses to which the system might be put in different contexts, e.g. social, academic, outdoor. User scenarios have a number of uses in the design process. They can simply be used as a representation of the system for the design and development team, to ensure they share the vision of the system. They are also useful in communicating this vision to potential users, as for instance in our user group sessions, where they can make concrete what might otherwise appear to be a rather nebulous set of concepts. In this way, users can feel confident about commenting on proposed functionality and suggesting refinements and additions.

The use of the scenarios is an evolving process within the project. An initial version was devised simply to ground the design, without direct user consultation.

Khalil is Jordanian student at the University of 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 what it means to be nutmegged. They 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, reads the new item 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.

This first scenario, once agreed by the design team and funders, was then used to present some of the proposed functionality to the student users, whose comments gave the material for developing personas and then further scenarios for different personas and contexts. For instance, other users, rather than uploading a known phrase and recording, might type in a phrase they don't understand, photograph an interesting bit of signage, record an unusual local accent or video an interesting interaction. Using multiple scenarios rather than a single one can be effective in widening the appeal of the system to a range of users. For instance, one of our users stated that they could not imagine themselves in a scenario that involved watching football in a pub. However, this did appeal to other participants. Providing a range of scenarios gives a greater chance that each user will find a situation to identify with. An interesting and rather challenging initial finding has been that scenarios illustrating information retrieval aspects of the system, i.e. looking up a word or phrase that someone else has contributed, are much more readily grasped than scenarios in which users contribute to a common knowledge base.

FUTURE WORK

The application is currently approaching its first working prototype stage. The prototype, designed for Google Android phones, will be trialled by members of the core user group, who will be asked to upload and comment on language items over several weeks. Their feedback will be used to design an enhanced version of the software. If the short term project is successful we would expect it to be incorporated into the local learning environment (a Blackboard/Elgg construct) and for it to become part of the learning experience of all ESL students. The application will be trialled in our home institution in the UK, but clearly has the potential to become used on a national basis. Given the connectedness of the modern student, it would be unusual and disappointing if this spread to other campuses were not to happen naturally. Its use could be extended to other languages, to learners "listening in" from their own countries or to other shorter term settings where people need to be able to share knowledge about specialised language. For instance, conferences, University induction weeks and other such occasions might be situations where sharing knowledge in this way via mobile devices would be of use.

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