Preliminary conclusions after the design and implementation of mobile learning apps for professionals

María Dolores Castrillo[1], Elena Bárcena[2], and Antonio Pareja-Lora[3]

Abstract. According to a recent research carried out by Aruba Networks (2014) in the US, the UK, France, Spain, Germany, Sweden, South Africa, Saudi Arabia and UAE, 86% of all respondents have two or more devices that can connect to the internet, and nearly two thirds (64%) already own three or more mobile devices with this feature; another 39% own four or more (p. 4). We live on the move, and this includes mobility, as well as working anytime, anywhere and lifelong learning. Thus, research on language teaching and/or learning should focus on the ways to get adapted to the specific new needs of our modern society (e.g. mobility). Accordingly, for instance, mobile-assisted language learning (MALL) activities should be app-based; "this is not a trend language educators can ignore" (Godwin-Jones, 2011, p. 8). In this paper, we present some preliminary results and conclusions after the design and implementation of some MALL apps carried out by the ATLAS research group. They have been developed in the context of the SO-CALL-ME project, in order to enable the members of ATLAS to explore the way in which students can improve their oral language skills "on the move".

Keywords: MALL, second language, foreign language, languages for special purposes, apps.

1. Facultad de Filología / ATLAS (UNED); mcastrillo@flog.uned.es.

2. Facultad de Filología / ATLAS (UNED); mbarcena@flog.uned.es.

3. Facultad de Informática (UCM) / ATLAS (UNED); aplora@ucm.es.

How to cite this article: Castrillo, M. D., Bárcena, E., & Pareja-Lora, A. (2014). Preliminary conclusions after the design and implementation of mobile learning apps for professionals. In S. Jager, L. Bradley, E. J. Meima, & S. Thouësny (Eds), *CALL Design: Principles and Practice*; *Proceedings of the 2014 EUROCALL Conference, Groningen, The Netherlands* (pp. 40-46). Dublin: Research-publishing.net. doi:10.14705/rpnet.2014.000192

1. Introduction

Recently, Aruba Networks (2014) undertook an analysis of the use of mobile devices in a number of countries from all over the world (USA, Spain, South Africa, Saudi Arabia, etc.), which gave rise to overwhelming data supporting its increase, such as the fact that 86% of all participants have two or more such devices connected to Internet, 64% have three or more, and 39% have four or more (p. 4). The fact is that the majority of us live 'on the move': mobile devices and our own mobility are part of everyday life, which allows us to work, learn, interact with each other and engage in entertaining activities almost anytime, anywhere. Regarding learning in particular, de Waard (2014) pointed out that "[m]obile learning (mLearning) is in perpetual beta" (p. 114). This observation, no doubt, applies to languages, since research on MALL is progressing at a good pace on the best practices around mobile devices as learning tools (Castrillo, Martín-Monje, & Bárcena, 2014; Wong, Chin, Tan, & Liu, 2010). Also, applications (apps) are viewed as an effective language learning formula as they can be used in a highly flexible way (individually or collaboratively), incorporating the user's own preferences and environment into the learning process and capturing their full undivided attention (Godwin-Jones, 2011). Although MALL is far from being mainstream in educational institutions at the moment, the authors agree with Godwin-Jones (2011) in that app-based learning "is not a trend language educators can ignore" (p. 8).

Taking this into account, the purpose of this paper is to present some preliminary results and conclusions driven from the design and implementation of some mobile-assisted language learning apps by the ATLAS research group. All these apps have been developed in the context of the SO-CALL-ME project (see the Acknowledgements). As presented in EUROCALL 2013 (Pareja-Lora et al., 2013), the SO-CALL-ME project was established to explore the way in which students can improve their oral language skills "on the move" by means of the MALL apps designed and developed within the ATLAS group. Hence, we present some initial conclusions following the implementation of some of the apps already developed.

The rest of this paper is divided into four sections: Section 2 outlines a general overview of SO-CALL-ME and the previous work done, presenting the methodological and pedagogical framework applied to develop the apps. Then, the main app features are described in Section 3. Section 4 discusses some relevant implementation details of these mobile learning apps, exploring the issues and problems faced, as well as other remarkable results. Finally, Section 5 provides a brief conclusion and sketches our planned future work.

2. MALL app development: a methodological and pedagogical framework

Previous work of the ATLAS research group, in which a number of English as a Foreign Language (EFL)-teaching apps were evaluated, has identified the need to strengthen the pedagogical framework of this kind of educational resource, that is, MALL apps (Arús, Rodríguez-Arancón, & Calle-Martínez, 2013; Martín-Monje, Arús, Rodríguez-Arancón, & Calle-Martínez, 2013; Pareja-Lora et al., 2013). The research goal of this assessment focused on the examination of the technical features and limitations of the most salient EFL MALL applications available, as well as on the evaluation of their pedagogic suitability.

To that end, a number of rubric-based evaluations of such apps were conducted (Arús et al., 2013). The most remarkable conclusions obtained after these evaluations are that (i) some apps that are attractive to students do not have a sound linguistic content and, hence, should not be used for language learning (or, at least, not autonomously), and (ii) most apps lack theoretical and methodological underpinnings. This represented a challenge that our group decided to face by engaging in the development of second language learning apps that are interesting, attractive and pedagogically sound at the same time.

In this light, the ATLAS group undertook the creation of a number of MALL applications in the broader context of language for specific purposes apps. These apps should (i) not be a mere mobile version of traditional online courses, (ii) provide quality teaching and practice, and thus, (iii) have a sound pedagogical, linguistic and methodological base. Therefore, a suitable methodology had to be chosen for their development. For this purpose, we decided to use the conceptual framework and methodology presented in Kukulska-Hulme (2012). This methodological framework was supplemented from a linguistic and pedagogical point of view with some suitable linguistic theories, such as the Systemic Functional Grammar (Arús, 2008; Halliday & Matthiessen, 2004) or the socio-linguistic theory (Canale & Swain, 1980), with an emphasis on meaning and communication, and a goal to develop learners' communicative competence.

3. Description of some ATLAS MALL apps developed so far

Here, we describe some of the apps developed so far by the ATLAS research group following the methodology presented above, namely (i) ANT, for oral comprehension practice through the news, (ii) FANCLUB, for the same skill, but through audio-books, (iii) Business App, focusing on listening comprehension

and on teaching how to develop and perform successful business presentations, (iv) VIOLIN, for the audiovisual comprehension of videos, (v) VISP, for oral production, and (vi) Eating Out, a teaching resource for listening comprehension and communicative practice.

The following tables summarise the main characteristics of these apps. Firstly, Table 1 contains a brief description of the skills involved in each app. Secondly, Table 2 presents both (i) the resources used within each app in order to present and/or develop its different activities and (ii) the CEFR language level of the target users of the app. Finally, Table 3 shows the activities that each app includes.

Table 1. Skills involved in the use of the ATLAS apps

APP NAME	SKILL INVOLVED				
	Oral comprehension	Reading comprehension	Writing (text production)	Oral production	Other
ANT (Audio News Trainer)	YES	NO	NO	NO	
FANCLUB	YES	NO	NO	NO	
Business App	YES	YES	ADDRESSED	ADDRESSED	Audiovisual
VIOLIN	YES	NO	NO	NO	Audiovisual
VISP (Videoclips for Speaking Production)	YES	NO	YES	YES	Audiovisual

Table 2. Resources used within each ATLAS app and their corresponding CEFR language level

APP NAME	RESOURCES USED	USER'S CEFR LANGUAGE LEVEL
ANT (Audio News Trainer)	News provided by Internet radio issuers through RSS connection	A1-C1
FANCLUB	Prose fiction (free audiobooks) videos	A1-C1
Business App	E-voice simulator / YouTube video links	B1 Business people and students
VIOLIN	Video extracts from the TV-series "Friends" (length of the videos: 1'-3')	B1
VISP (Videoclips for Speaking Production)	Video extracts from the film "Moulin Rouge" (length of the videos: 5''-30'')	B1
Eating Out	Audio clip, performed by some ATLAS group members (length: 4' 20)	A2-B1

Table 3. Brief description of the activities included in each ATLAS app

APP NAME	DESCRIPTION OF ACTIVITIES
ANT (Audio News Trainer)	• Pre-questionnaire • New(s) selection (organized by level) • Listening • Comprehension and technical evaluation questionnaire
FANCLUB	• Audiobook selection • Listening (also fragmentary listening possible) • Comprehension quiz
Business App	• Learning goals specification (includes audio text) • Several activities of listening (several times if required) • Some activities that involve watching audiovisual materials (YouTube videos) • Several comprehension quizzes: "tick what you hear", "fill in the blanks", etc. • Automatically corrected exercises, including feedback

VIOLIN	• Warm-up (intro + open questions and/or new vocabulary to facilitate a better understanding)
	• 3 viewings of each "Friends" video: (1) selective hearing, (2) intensive monitoring, (3) global comprehension.
	• Instructions and activities for the 3 viewings:
	  ◦ Viewing 1: Comprehension questions with 'sample answers' / multiple choice
	  ◦ Viewing 2: Comprehension questions with 'sample answers'
	  ◦ Viewing 3: Self-assessment rubric (meta-cognitive strategies)

VISP (Videoclips for Speaking Production)	• Introduction to audio description + sample video clip + questionnaire with personal data • Instructions + video viewings (as many times as desired) • Audio description of the video clip (scripting + reading recording) • Self-assessment rubric (meta-cognitive strategies)
Eating Out	• Listening comprehension, lexical and grammar-practice activities • Activities are adaptive • All activities automatically corrected by the application, including feedback

4. Results and discussion

As shown in Table 1, Table 2 and Table 3, only two of the applications focus on a particular domain (i.e. Eating Out, Business App), whereas most of them focus on a particular skill, in a domain-independent way. Besides, most of the applications provide some form of self-evaluation activities and focus on oral comprehension. Only some of them address oral and/or written production, for example. This last issue is mainly due to the fact that assessing and/or automatically correcting activities regarding these other skills is much more complicated than assessing oral comprehension. Since mobile apps are intended to provide autonomous learning (at least to some extent), it is important that MALL apps provide this function

(automatic correction and/or evaluation of activities and exercises). This helps the users of the apps be aware of their own learning improvements and, hence, also keep them motivated. However, this does not mean that we are neglecting the production of apps that help practice these other skills with some appropriate self-evaluating and automatically corrected exercises. In fact, some preliminary research is being carried out towards this end. Finally, unfortunately, no statistics about the assessment of these apps by their users can be presented thus far either. Even though the apps have already been tested by the members of the research group, a large-scale evaluation of the apps (by a real set of users) is still pending. This evaluation will be carried shortly and will be published in the near future.

5. Conclusions

In this paper, we have presented some MALL applications developed within the ATLAS research group in the last months, in the context of the SO-CALL-ME project. Unlike most of the MALL applications developed so far by the members of our research group, the ATLAS mobile applications have been designed following solid sociological, pedagogical and linguistic methodologies and theories. We believe this makes these applications most convenient for the practice and learning of the elements (vocabulary, grammar) and skills (mainly oral comprehension) they deal with. However, unfortunately, this issue has not been assessed yet, since a formal evaluation of the apps presented in the paper is still pending (but will be carried out in the coming months). Besides, this set of applications is expected to grow in the future as well, since some research on other potential and supplementary applications is already being undertaken, in order to extend the types of skills covered by the applications developed until now.

Acknowledgements. The research described in this paper has been partly funded by the Spanish Ministry of Science and Innovation, Grant **FFI2011-29829**: **S**ocial **O**ntology-based **C**ognitively **A**ugmented **L**anguage **L**earning **M**obile **E**nvironment (**SO-CALL-ME**). We would like to thank the ATLAS (UNED) research group as well, for their constant inspiration, encouragement and support.

References

Aruba Networks. (2014). *Are you ready for #GenMobile. How a new group is changing the way we work, live and communicate*. Retrieved from http://www.arubanetworks.com/pdf/solutions/GenMobile_Report.pdf

Arús, J. (2008). Teaching modality in context: A sample lesson. *Odense Working Papers in Language and Communication, 29*, 365-380.

Arús, J., Rodríguez-Arancón, P., & Calle-Martínez, C. (2013). A pedagogic assessment of mobile learning applications. *Proceedings of the International Conference UNED – ICDE 2013 – Mobilizing Distance Education for Social Justice and Education* (pp. 630-643). Madrid: Universidad Nacional de Educación a Distancia.

Canale, M., & Swain, M. (1980). Theoretical bases of communicative approaches to second language teaching and testing. *Applied Linguistics, 1*(1), 1-47. doi:10.1093/applin/I.1.1

Castrillo, M. C., Martín-Monje, E., & Bárcena, E. (2014). Mobile-based chatting for meaning negotiation in foreign language learning. *Proceedings of the 10th International Conference on Mobile Learning. International Association for Development of the Information Society* (pp. 49-59).

De Waard, I. I. (2014). Using BYOD, mobile social media, apps, and sensors for meaningful mobile learning. In M. Ally & A. Tsinakos (Eds), *Increasing Access through Mobile Learning* (pp. 113-124). Vancouver: Commonwealth of Learning.

Godwin-Jones, R. (2011). Mobile apps for language learning. *Language Learning & Technology, 15*(2), 2-11. Retrieved from http://llt.msu.edu/issues/june2011/emerging.pdf

Halliday, M. A. K., & Matthiessen, C. M. I. M. (2004). *An introduction to functional grammar* (3rd ed.). London: Arnold.

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

Martín-Monje, E., Arús, J., Rodríguez-Arancón, P., & Calle-Martínez, C. (2013). REALL: rubric for the evaluation of apps in language learning. *Proceedings of ML13*.

Pareja-Lora, A., Arús, J., Martín-Monje, E., Read, T., Pomposo-Yanes, L., Rodríguez-Arancón, P., Calle-Martínez, C., & Bárcena-Madera, E. (2013). Toward mobile assisted language learning apps for professionals that integrate learning into the daily routine. In L. Bradley & S. Thouësny (Eds), *Proceedings of EUROCALL 2013: 20 years of EUROCALL: Learning from the Past, Looking to the Future* (pp. 206-210). Dublin: Research Publishing. doi:10.14705/rpnet.2013.000162

Wong, L.-H., Chin, C.-K., Tan, C. L., & Liu, M. (2010). Students' personal and social meaning making in a Chinese idiom mobile learning environment. *Educational Technology and Society, 13*(4), 15-26.