

Mobile apps to support and assess foreign language learning

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Abstract. In the last two decades there have been many attempts to integrate all kinds of mobile devices and apps to support formal as well as informal learning processes. However, most of the available apps still support mainly individual learning, using mobile devices to deliver content rather than providing learners with the opportunity to interact with each other. To address this we have designed an app based on a highly interactive, ubiquitous and constructive learning approach. The app is called *Guess it! Language Trainer* and allows learners to share, assess and co-construct their foreign language knowledge. Learning contents are no longer delivered but integrated into versatile tasks. Even though these tasks are being performed individually by each player, the players' interaction with the app performed affects the whole community of learners. The current research paper presents the first results of an ongoing research project using mobile apps to enhance the Foreign Language Learning in a compulsory German language course at a Spanish University. In our paper we will firstly describe a specific app (*Guess it! Language Trainer*) which has been used to support students' independent language learning outside the classroom. Secondly, we will describe how the app encouraged students to get actively involved in their own learning processes and thirdly, how the teacher can use the information stored in the system to retrace and assess students' language learning.

Keywords: MALL, assessment, foreign language learning, gamified learning.

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How to cite this article: Berns, A., Palomo-Duarte, M., Dodero, J. M., Ruiz-Ladrón, J. M., & Calderón Márquez, A. (2015). Mobile apps to support and assess foreign language learning. In F. Helm, L. Bradley, M. Guarda, & S. Thoušný (Eds), *Critical CALL – Proceedings of the 2015 EUROCALL Conference, Padova, Italy* (pp. 51-56). Dublin: Research-publishing.net. <http://dx.doi.org/10.14705/rpnet.2015.000309>

1. Introduction

Despite the enormous efforts foreign language teachers make every day to provide their students with the maximum possible language input, we all know that students rarely get the language input and practice they would need to acquire the competences they are expected to have at the end of the course. Amongst some of the most common reasons are that language courses are often based on an extremely low percentage of classroom teaching, coupled with an extremely high percentage of independent and out-of-class learning. This makes it difficult to provide learners with sufficient language practice within the classroom as well as attend to their individual learning needs. Therefore, many teachers have started integrating blended teaching practices into their course syllabus, thus providing students with additional learning resources and tools to enhance their out-of-class learning. Virtual learning environments such as Social Network Sites, wikis, virtual worlds and others have been popular teaching and learning tools for many years. Some of the reasons for this is that they enable learners and teachers (with access to the internet) to firstly, access much easier learning materials, and secondly, to create highly interactive and collaborative learning environments (Berns & Palomo-Duarte, 2015).

The increasing availability of mobile technologies such as smartphones and tablets which provide access to multimedia resources and tools (audio, video and chat) undoubtedly holds further potential to support students' language learning (Kukulska-Hulme & Shield, 2008; Stockwell & Hubbard, 2013). This, coupled with the fact that mobile data connection has become more affordable, allows for distributed learning anytime and anywhere (Palomo-Duarte, Berns, Doderó, & Cejas, 2014). The purpose of the current project is to explore some of the possibilities of integrating smartphones in blended teaching practices to make independent learning processes both more dynamic and easier to monitor. With this purpose in mind, we have designed an app called *Guess it! Language Trainer*. The app allows learners to acquire new language input as well as to create new language learning contents and share these with other users.

2. Method

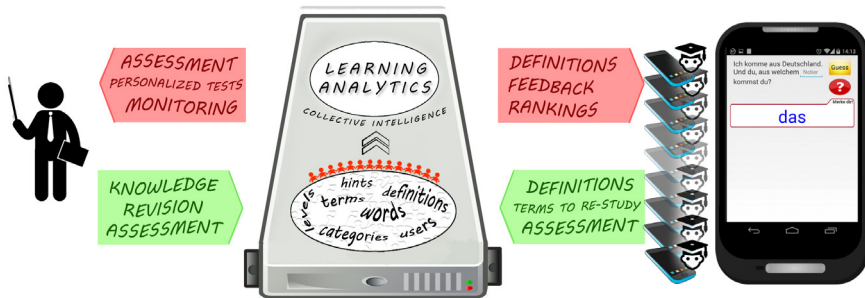
2.1. Learning design and architecture

In the following we will offer some insight into the app architecture we designed for the current project and tested with a group of more than 100 students from the University of Cádiz (Spain). The participating students were mainly Spanish

native speakers and enrolled in a compulsory German Language course at A1 level from the Common European Framework of References for Languages (CEFR).

The system follows a client-server architecture (see Figure 1), where a server coordinates many smartphones or tablets. The system allows us to identify students' interaction with the app by connecting with the server through the Internet. Furthermore it provides students and teachers with a highly interactive and dynamic learning environment, in which they can access, evaluate and report already existing learning content, consult their learning statistics, etc. (Palomo-Duarte et al., 2014).

Figure 1. System architecture



With regard to the game dynamic, players get first the opportunity to play a number of definitions based on the main vocabulary items defined by the CEFR for the A1 level. Vocabulary items have been divided into different categories (freetime, sports, professions, places, etc.) and levels. However, the app can easily be implemented in terms of content, levels, as well as other foreign languages.

In order to play the app, students first have to guess and then assess the definition they have previously been assigned and played, deciding whether the provided definition is correct (in terms of grammar as well as content), precise (understandable or ambiguous), difficult to guess or, even politically incorrect. Once the students have played and assessed a certain number of definitions, they are allowed to create and enter their own definitions. Thus, for every twenty definitions a student has played, the system automatically provides them with a term they are then allowed to create a new definition for. This is then added to the server knowledge base. In this way the knowledge base of our app is

constantly being increased and reviewed by the users themselves. As a result of this process, the server will contain different definitions and grades for each of the terms defined. Those definitions that receive higher grades will be displayed more often and vice versa. Nonetheless, all definitions will be displayed (more or less frequently) and constantly be re-assessed by the players. So, if a good definition should unfairly receive some lower grades and hence become scarcely used, it may sooner or later be played again, assessed with a higher grade and become a more “popular” definition. This allows a very dynamic game ecosystem in which students become directly involved in the design process according to their learning preferences and needs (Berns, Palomo-Duarte, Garrido Guerrero, & Páez Piña, 2015).

2.2. Assessing student’s foreign language learning

With regard to the assessment of students’ foreign language learning, it is worth mentioning that the server programme stores different kinds of data which aim to help teachers evaluate students’ learning processes and outcomes. The data which is stored by the server is the following: the definitions available for each term, the definitions each student guessed or failed as well as the assessment of each definition played. Additionally, in order to monitor and assess students’ learning processes the course coordinator can access different learning analytics.

As mentioned in Palomo-Duarte et al. (2014), the analytics could provide information on the use each student has made of the app (the number and frequency with which the different levels, words and categories have been played), the number and definitions each player has entered in the app, the evaluation of their definitions (according to the terms that have been guessed and the evaluation their definitions have been given), as well as the evaluation each student gave to the definition entered by other players. Thus, a report of the low-graded definitions can provide insights into the difficulties a particular student (or a group of them) might have regarding the target language. Another report with those definitions that wrongly received high grades can identify those students who are unable to detect mistakes in the target language.

3. Discussion

The results of the game-experience were in general very positive as students increased their vocabulary knowledge in only four weeks (Palomo-Duarte et al., 2014). A comparison between the results from the pre-test and post-test 3 underlines the app’s impact on students’ vocabulary learning. There is an average

of 5,35 points of difference in a range from 0 to 10. Secondly, students reported that by playing and creating definitions themselves they significantly improved their writing skills, getting much more confident in the target language. Only 17 of the 107 students interviewed were not very app acceptant. Some of the reasons for this were the following: students with an iPhone could not install the app on their smartphones, since they were not compatible with the Android operating system the app was designed for. Therefore some students relied on using the devices of other classmates, which allowed them only restricted access to the app. Additionally the version we used in the first year contained several technical mistakes, which sometimes hindered students' learning processes, but which have been adjusted in the more recent version of the app.

4. Conclusions

Language learning in traditional classroom settings has often proved to be lacking in terms of the language practice students need to get the proficiency they are expected to have at the end of the course, especially when the number of students increases. Hence, our proposal focuses on using computer systems to increase students' exposure to the target language providing them with multiple opportunities to obtain as well as to produce new meaningful language input. Unlike virtual worlds, which usually need a powerful server to run and PCs on which to be played, we propose using apps for smartphones (or tablets), since they need a simple server software and light app for widely-spread Android devices. The app we have designed for the present study differs from other already available apps, since it provides learners as well as teachers with new opportunities in terms of learning and assessment.

Even though the designed app needs to be tested with a much larger sample size and for a much longer period, the current experience sheds some light on the possibilities of using mobile apps to facilitate learning as well as assessment processes.

5. Acknowledgements

This work has been funded by the University of Cadiz program for Researching and Innovation in Education (sol-201400047372-tra) as well as by the European Union under the OpenDiscoverySpace (CIP-ICT-PSP-2011-5) and UBICamp (526843_LLP-1-2012 Es-Erasmus-ESMO) projects. Many thanks also to all students who participated in the experience and especially to Alberto Cejas Sánchez for the software development.

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Published by Research-publishing.net, not-for-profit association
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Critical CALL – Proceedings of the 2015 EUROCALL Conference, Padova, Italy
Edited by Francesca Helm, Linda Bradley, Marta Guarda, and Sylvie Thouéšny

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ISBN13: 978-1-908416-29-2 (Ebook, PDF, colour)
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Legal deposit, United Kingdom: The British Library.
British Library Cataloguing-in-Publication Data.
A cataloguing record for this book is available from the British Library.

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