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Urban explorations for language learning: a gamified approach to teaching Italian in a university context

Koula Charitonos¹, Luca Morini², Sylvester Arnab³,
Tiziana Cervi-Wilson⁴, and Billy Brick⁵

Abstract. The recent technological developments and widespread use of mobile technologies challenge traditional knowledge and skills, with language learning increasingly taking place beyond the language classroom in learners' own environments. The paper presents the ImparApp study that focuses on a pervasive and gamified approach to language teaching and learning. The study investigated language learning with mobile devices as an approach to augmenting language learning by taking learning outside the classroom into the real-world context. The paper reports on the design, development and testing of an introductory Italian Language Learning game, i.e. ImparApp, that is developed with the use of MIT's TaleBlazer authoring tool. Preliminary findings of the pre-pilot of the game prototype are drawing on data collected through participant observation of a play-test session followed by a focus group interview. The paper contributes to the field of mobile-assisted language learning with insights on pervasive and gamified approaches to teaching and learning a foreign language.

Keywords: mobile-assisted language learning, MALL, pervasive learning, game-based learning, higher education, Italian.

1. Introduction

Recent developments in mobile and web technologies bring great potential for innovation in teaching and learning, and inevitably influence language learning

1. Disruptive Media Learning Lab, Coventry University, Coventry, United Kingdom; koula.charitonos@coventry.ac.uk
2. Disruptive Media Learning Lab, Coventry University, Coventry, United Kingdom; luca.morini@coventry.ac.uk
3. Disruptive Media Learning Lab, Coventry University, Coventry, United Kingdom; s.arnab@coventry.ac.uk
4. Language Centre, Coventry University, Coventry, United Kingdom; tiziana.cervi-wilson@coventry.ac.uk
5. Language Centre, Coventry University, Coventry, United Kingdom; billy.brick@coventry.ac.uk

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arguing for the need to rethink practices. The paper presents a pervasive and gamified approach to teaching and learning Italian in a university context with an aim of engaging students towards a more enhanced learning experience. The study blends activities traditionally taking place in the classroom with activities enabled by the technology and draw inspiration on the built environment of a city, and utilises opportunities offered by location-based services that allow for narratives/activities to evolve via a learner's location. The paper examines this approach by outlining the development of ImparApp — a prototype mobile game for learners of Italian language.

2. Context

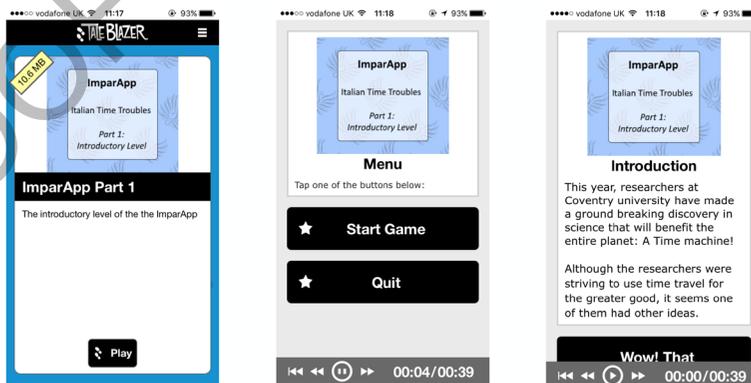
2.1. Language learning at Coventry University

Students at Coventry University can learn a foreign language by attending an Add+vantage module. These modules are credit bearing and aim to develop students' employability skills. The participants were attending an Italian Language Add+vantage module.

2.2. ImparApp mobile game app

The ImparApp prototype game was developed with Tale Blazer, which is an open-source authoring tool, developed by MIT, for pervasive gaming to allow users to develop location-based augmented reality games (see Figure 1).

Figure 1. Screenshots of the ImparApp prototype game (Part 1)



The ImparApp game engages learners in a range of experiences and interactions as they move around their real physical location seeking to solve a time travel mystery. Specific tasks are triggered by learners' Global Positioning System (GPS) coordinates, which prompt the users to explore the city of Coventry by providing information about its history and heritage. The tasks focus on the four language skills of listening, speaking, reading and writing. Importantly, the app allows the learners and tutors to monitor progress via a leaderboard. The design of the app and game mechanics are discussed in detail in [Morini et al. \(in press\)](#), where it is noted that a key aspect of the design approach is that it allows its users to experience their everyday living contexts and their course's content in a new and playful way.

2.3. Content and learning objectives

The ImparApp is designed to be used in a blended mode: learners spend one week in the classroom with a tutor, and the following week completing challenges and tasks with the app in a self-guided mode. Through the targeted use of this app in a beginners' module a student will have opportunities to practice speaking and writing short passages using appropriate grammatical structures for the task and the level. Further to this, a student should be in a position to recognise information and understand short texts with simple familiar words and phrases about themselves, their family, and concrete situations they know well.

In its current form, the ImparApp prototype game consists of four parts. Text in Part 1 is in English (see [Figure 1](#)) while Part 2 makes use of English and includes translation in Italian in brackets. Part 3 is in Italian and includes translation in English in brackets and finally Part 4 is in Italian. The four parts cover the following topics: yourself and others; work and family; routines, free time, leisure activities; and food and drinks. The app also embeds content that aims at raising students' awareness of the Italian culture.

3. Method

The development of the ImparApp aims to investigate the crossings of game-based learning and pervasive learning in support of language teaching and learning and, further, to empirically evaluate the consistency of a holistic and modular design model as a tool to guide the design process, as suggested by [Arnab et al. \(2015\)](#) (see [Figure 2](#)).

Figure 2. Holistic and modular approach (Arnab et al., 2015, p. 454)

Layer 4: Technology	Interfaces	Media	Analytics	Communication	Content
Layer 3: Game design	Mechanics		Narratives	Aesthetics	UX/EX
Layer 2: Context of learning	Mode	Location	Activities	Assessment	
Layer 1: Learning needs	Learners	Lesson path	Pedagogy	Learning objectives	Measures

Drawing on this model, the research team designed a pre-pilot play-test session to inform the development of the ImparApp prototype. This pre-pilot study took place in the Spring semester of 2016.

The pre-pilot play-test session involved testing Part 1 of the game. The participants were seven students (N=7) attending a Lower Intermediate Level Italian Language module at Coventry University (Common European Framework of Reference for languages Level A2). The students were selected as their knowledge of the Italian language was seen as allowing them to focus on usability and engagement aspects of the game (Layer 2/Layer 3 in Figure 2). Members of the research team accompanied the students, who were split in three groups (Figure 3).

Figure 3. Play-test session in the city of Coventry



Data was collected through a number of open-ended questions posed to the participants at the beginning (e.g. Why did you accept taking part in this testing?; How competent do you feel in Italian/in using tech/in games?) and at the end of the play-test session (e.g. What would you change?; How do you see language learning 'working' within this app?); participant observation was conducted using a semi-structured observation sheet and a focus group interview that took place right after the session involving participants, tutors and researchers.

4. Findings and discussion

All students appeared positive regarding the use of the ImparApp for language learning. The following comment by one participant is indicative: "I haven't seen this before. Usually is only dictionaries, translations... This is more interactive instead of sitting on a desk/with a book". One observation made by the research team during the play-test session was that the participants had limited interactions in the language-in-focus. This is seen as being largely associated with the design of Part 1 (i.e. introduction of the game, learning Italian phonetics and pronunciation), hence tests of Part 2 to Part 4 are currently planned with an aim to examine this observation further (Layer 2 - Activities, Figure 2). Additionally, most interactions in the groups were related to finding their orientation, an aspect that is seen associated with their game experience (Layer 3 - Mechanics, Figure 2). Future iterations will allow for more interactions among the users (Layer 1 - Pedagogy, Layer 2 - Activities, Figure 2), and with their built environment. Indications of incidental, non-language related learning, also emerged in the data (Layer 1 - In/non-formal, Figure 2). For example, a participant referred to a historic pub in Coventry: "Whitefriars Pub... I didn't know anything about the pub and the little alley behind the cathedral".

Furthermore in the focus group interview, students made a few suggestions (e.g. audio, video in Italian; Italian music; zoom map), which informed the development of the four parts of the app (also see Morini et al., in press) (Layer 2 - Mode, Figure 2). During the development process the team also responded to students' comments regarding the use of English and Italian, hence the language-in-focus is gradually introduced in the game's descriptions and instructions (see section *Content and learning objectives*).

Finally, issues of assessment were raised in the focus group interview (Layer 2, Figure 2). Students shared some concerns and expressed a preference for traditional methods of assessment. For example a participant said "you can go off the app and

do the assessment... checking answers on a laptop. So, still you [teachers] need to do assessment in the class”.

5. Conclusions

The paper described a pre-pilot study **focusing** on new possibilities that emerge in language learning and teaching when pervasive approaches to learning are combined with game-based techniques. Initial findings show that the ImparApp game was positively perceived by a group of students, as it allowed them to experience their course’s content in a new and playful way. Limited interactions in language-in-focus were observed, whilst indications of incidental, non-language related learning were noted. Comments on the mode of communication of the content, along with issues related to assessment were raised by the participants. Future developments include another pre-pilot blind-test study of the four parts of the app (Autumn 2016) to inform the next iteration of the app, and a pilot implementation of the ImparApp in the Absolute Beginners Italian Course in the university (Winter 2017). To conclude, the study prompts us to rethink the design and organisation of a university language course in terms of learner’s experience, with an emphasis on context, learner’s movement and interactions of the physical and virtual worlds that the learners find themselves in.

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