RES LOGICA MAGISTER: TESTING WITH TEACHERS A GAMIFICATION-BASED TABLET APP FOR LANGUAGE LEARNING

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Abstract

The school system is progressively adopting digital technologies as a support for teaching and learning activities. On one hand, new generations of Millennials, digital natives, Gen Z, and iGen are growing with a pervasive and transparent relationship with interactive devices and platforms. On the other, teachers are facing this revolution with a digital migrant background. Touch, streaming, multitasking, messaging, chatting, real-time feedback, free access, peer relations and social interactions worldwide are the basis of a technology-mediated relationship with the world, with tools and between people natural and spontaneous for students.

Teachers, on the opposite, are more connected with a world of in-presence and monotasking learning activities, with printed books, frontal lessons and periodical tests to verify if notions and concepts have been learned and understood.

The "Res Logica" app for tablet – presented at the ICERI 2015 conference – is aimed to teach (Italian) grammar to students age 11-14 years. It proposes a way to use digital technologies, based both on a gamification approach and on the dynamics of social interaction among peers typical of social networks and web 2.0 era. In the first phase of the research project (2012-15) it has been prototyped and tested with students to evaluate and assess the original hypothesis.

The second research phase (2016-17) a spin-off has been developed. This aside app is explicitly addressed to teachers has been designed, prototyped and tested to understand how they react to digital innovation and mobile technologies as teaching support.

Res-Logica Magister – the tablet app targeted on theaters – implements some new features to manage and organize the classrooms and to monitor improvements and results made by individuals along the learning process. Besides, it gives the teacher tools to create new exercises and homework activities to update and enrich the online database in a very intuitive way.

A new prototype has been developed using HTML5 and CSS3 (the original version was implemented as an eBook using Adobe Digital Publishing Suite and .folio format to produce an enhanced pdf) for a mobile open and cross-platform e cross-device result. Then it has been tested with subjects belonging to three different "personas" according to Cooper's methodology. The first group, the "traditionals", was composed by teachers older than 50 years; the second one, "innovators" was made by teachers (30-50); and "digital animator" a new school professional figure aimed to introduce students and colleagues to digital technologies.

Users involved in the experiment were asked to make some basics tasks such as: create a class or set up and publish a new exercise using the features implemented in the Res Logica Magister version, using the thinking aloud protocol.

Time of execution and main and minor errors have been traced, compared and ranked to understand the principal usability and experience problems and to fix them in an iterative redesign phase.

Then the subject involved in the research, have been interviewed to understand, according to a qualitative research approach, if they would be interested in adopting the digital app or, in case of adverse answers, why they do not consider this digital tool as pedagogy support.

The paper presents and discuss the findings and compare them with the previous experimental highlights emerged in 2015 from the students' evaluation. It finally proposes some best practices and critical aspects of bringing ICT in the learning process.

Keywords: Digital technology in education, gamification approach to design, digital tool to teach grammar.

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