

Help Me Learning the Language! Speech Therapy through Personalized Gaming

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Abstract

Serious games are in expansion among both the research and commercial areas. It is agreed by the majority of authors that the concept refers to the use of computer games without the main purpose of pure entertainment. They are focused on teaching something to users or to develop their skills. Moreover, nowadays, we find therapeutic serious games (theragames) receiving a lot of interest by the healthcare community. Using them, a patient can train specific skills and receive persuasive important information, being motivated and not perceiving them as repetitive therapeutic exercises. They can engage patients and present even more success if taking into account the patient's specific capabilities and needs, presenting a personalization factor. In spite of their relevance, we find only a few relevant studies and evaluations of theragames in the area of speech therapy. This paper focuses on the design and use of personalized theragames in the speech language learning area. We are in the process of studying and developing a general serious games model for this kind of therapy, taking into account elements such as the use of tablets for interaction and patient's specific data, such as clinic history, for personalization and adaptation issues. The first prototype was designed for a tablet PC based on the Android platform, but there will be versions for the remaining. It was developed to support therapeutics activities in aphasia and alexia, the most common speech and language disturbance in stroke traumas. However, the diversity of therapeutic activities, in the form of levels, present in the game allows it to be used for other related disorders. The initial target-population was the elderly, but it will be adaptive to the younger population. The paper describes the rationale, the gameplay description and the main development issues behind this prototype.