Involving the End-Users in the Development of Language Learning Material

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ABSTRACT

Printed and digital learning materials are usually developed separately. Therefore, little notice has been given to the possibilities of combining the two. This study introduces a new concept that combines printed and digital materials. A user-centric approach was chosen to develop a “hybrid book”, a combination of a traditional schoolbook and a mobile phone. Learning materials were combined into one entity by enabling access to the digital material through images in the book. The user groups of interest were 11- and 12-year-old pupils, their teachers, and parents. The concept was tested with materials for English as a foreign language (EFL). After a human-centred design process, the final application was given to one class for actual use and evaluation for a period of three weeks. Many potential benefits of using mobile phones for learning purposes were recognized, as they facilitated utilization of the digital content both inside and outside the classroom.

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INTRODUCTION

New digital media applications are continuously being developed and brought into use in educational contexts. In the case of language learning, interesting studies have recently been reported, for example an application that uses mobile phones to improve pronunciation (Ally & Tin, 2009).

A number of projects related to mobile learning have found that mobile technologies can support different parts of the learning experience and interweave into the learners’ personal knowledge, interests, and learning needs (Kukulska-Hulme, Sharples, Milrad, Arnedillo-Sánchez, & Vavoula, 2009). Experiments have shown that the opportunity to study whenever and wherever has generally increased the motivation to study (Leino, Turunen, Ahonen, & Levonen, 2002). New technology offers children and adults the opportunity to communicate with teachers and fellow learners around the world, interact with rich learning resources and simulated environments, call on information and knowledge when they are needed to solve problems and satisfy curiosity, and create “personal learning narratives” through an extended process of capturing and organizing a situated activity (Sharples, 2000).

So far, books and other printed material are rarely taken into consideration in digital applications. The role of books in the school environment is still strong, even indisputable, in the foreseeable future. More convenient ways of merging the essential digital content, such as listening tasks, into everyday studies are needed (Seisto, Federley, Aarnisalo, & Oittinen, 2009). During the course of this study, we have become aware of the fact that printed learning material and digital material for elementary school children are often developed separately. Digital material is seldom used regularly, as it cannot be assumed that every child has access to a computer at home, and the number of computers at schools is limited. There is therefore a clear need for a combined development of printed and digital material as well as an easy way to access digital material. The field we believe will gain the most obvious benefits from using printed and digital media side by side is language studies. A few additional features are needed for a printed schoolbook with which it is possible to communicate and that will adapt to proper level of knowledge. This has been the starting point for our study.

We aimed at game-like solutions for elementary school English education. Games or game-like features have great potential to enhance learning. This is because they have the ability to motivate and engage people (Bogost, 2007). People have an intrinsic curiosity (Malone, 1980) that makes them want to try to master challenges.

This paper describes the development process of a hybrid school book, in which a traditional printed school book and a mobile phone were combined into one entity. The study was based on a human-centered design approach in which the elementary school pupils and teachers, as well as the parents of the children, were used as informants. Our goal was to find out how the hybrid book would function in everyday use, where it would be used, and what kinds of benefits the use of the hybrid book could bring compared with traditional printed schoolbooks. The process consisted of four separate phases that were carried out in an iterative manner, all of them aiming at the same goal but from a different viewpoint. As human-centered design had a key role in the development process, attention was especially paid to using technology in a way that would be meaningful and easy for the main focus groups, the pupils and the teachers. Pedagogical aspects were included in each phase through interviews with the teachers and learning material publishers. This paper summarizes the main results of the whole development process.
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