

INTEGRATION OF MOBILE DEVICES' RESOURCES AND FUNCTIONALITIES WITH TELEDUC LEARNING ENVIRONMENT

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Abstract

With the popularization of mobile devices is expected to using them in teaching and learning process (m-learning). e-Learning environments, applications developed since the end of the 90s, use Web resources to support teaching and learning activities and must evolve to support multi devices. We believe that these environments should be integrated with mobile devices in a process that consider the particularities and the way of use of each technology in an approach focused on user experience.

Key words: mobile devices, e-learning environment, m-learning.

Introduction

The learning process using mobile devices (such as cellphones, smartphones, PDA and tablets) is known as **Mobile Learning** (m-learning)¹, allowing activities to happen in **anywhere** and **anytime**. Nowadays, mobiles devices are used not just to phone calls, but also to browse in the Web, send instant messages, organize agenda, take photos, record and reproduce audio and video.

This project aims to integrate resources and functionalities available on mobile phones with the TelEduc e-learning environment² considering the way of use of mobile devices and the functionalities available on e-learning environments. This developing approach differs from previous works³ since they focus on providing access the e-learning environment's interface on the mobile devices.

Results and Discussion

Based on a questionnaire answered by 73 students of the ProFIS course (UNICAMP) in the first semester of 2015 to know which TelEduc tools the students would like to have access by mobile devices, most of all chose Support Material (78.0%), Portfolio (86.0%), Activities (78.0%) and Mail (74.0%). To have a better comprehension of this data, we analyzed the used tools by students and teachers in this ProFIS course. We observed that most of the teachers and students used the Agenda (89.0%), Mail (89.0%), Activities (65.5%), Support Material (65.5%) and Portfolio (37.5%). In the same time, we are doing Brainstorming sessions to record ideas of integration between mobile devices' resources and TelEduc environment. One example is the integration between the TelEduc notifications function and the Notification Manager component of the Android operating system, as shown in Figure 1.

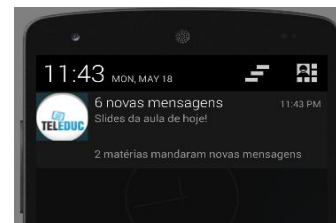


Figure 1. Example of integration between push notifications of mobile device and TelEduc environment.

Conclusions

We observed a relation between desired functionalities by students (questionnaire answers) and the TelEduc tools used by the teachers in the course. These results, with the advisors' experience in using learning environments and the comprehension of the way of use the mobile devices, guide the integration in progress.

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¹SUNG, M.; GIPS, J.; EAGLE, N.; MADAN, A.; CANEEL, R.; DEVAUL, R.; BONSEN, J.; PEBTLAND, A. *Mobile-IT Education (MIT. EDU): m-learning applications for classroom settings*. Journal of Computer Assisted Learning, vol. 21, p. 229–237, 2005.

²TELEDUC COMMUNITY (2015) TelEduc Environment. Available at: <<http://www.teleduc.org.br>>. Accessed in: July 2015.

³SILVA, A. C. DA; FREIRE, F. M. P.; ROCHA, H. V. Identifying Cross-Platform and Cross-Modality Interaction Problems in e-Learning Environments. In: INTERNATIONAL CONFERENCE ON ADVANCES IN COMPUTER-HUMAN INTERACTIONS (ACHI), 6th, 2013, Nice, France. Proceedings... IARIA, 2013. p. 243-249.