

Exploring Integration Issues in A Blended Mobile Learning Model context oriented applied to a Requirement Engineering course – Mobility, Context And Cloud

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Abstract

The teaching is undergoing an evolution that goes from the traditional lecture classroom, through distance learning (e_Learning), to the combination of the two forms – Blended Learning (b_Learning). In this context, and given past experiences of teaching evolution and more specifically teaching-learning process in institutions of higher education is moving from a traditional model to a Blended Mobile Learning (BML) model. Problems of space and sharing of documents has become a reality facilitated through the use of a cloud, particularly, Software as a Service (SaaS).

The teaching-learning process based on a BML Oriented Context (BML-OC) model, whatever their field of knowledge, on one hand, leads to the (1) necessity of the existence of applications for mobile and fixed devices, and (2) the study of learning context, i.e., when? where? and why? a student intends to study with the support of a mobile device. On the other hand, since the introduction of mobile devices and cloud computing in teaching-learning process, a large number of software applications for different domains have been identified, however it must be selected and driven for specific learning activities.

The research intends to a set of tools to the BML-OC model that allow supporting the teaching-learning process in a Requirements Engineering (RE) course. Particularly, identify requirements is an arduous task for a student in an initial phase of his studies.

In this way, we identified Mobile Google Docs (MGD) as a good system to learn and experience this topic. MGD serves as a collaborative tool for editing documents so that they can be shared, opened, and edited by multiple users at the same time in order to obtain a correct and complete requirements catalogue.

We propose to follow a technique that allows being aware of the other user's cursor position and whether they have selected a text fragment or not, that text represents a catalog of requirements. Thus, when a remote user is writing other users can observe it in real-time. Additionally, if the user selects some text, it is highlighted by marking it with the user's color. MGD shows a list of participants that are editing simultaneously the same document. By using this list, users can communicate with each other by using a chat.

These techniques also expressing information about authorship/about the past are used to make available to the users the history of changes carried out. They have been implemented by MGD by using a revision history. It allows the system to keep track of all the changes made by the users to the different types of documents being edited. In addition, if the change made is a deletion, then the text will be also in strikethrough style. In this context we intend to use the system capabilities to identify and write requirements in a collaborative way.

After the requirements identification phase, it is proposed that a teacher creates a form with Google forms where he/she can measure the degree of knowledge/skills acquired in the

learning activities. In this way it is proposed an approach to support the model presented earlier (see Figure 1).

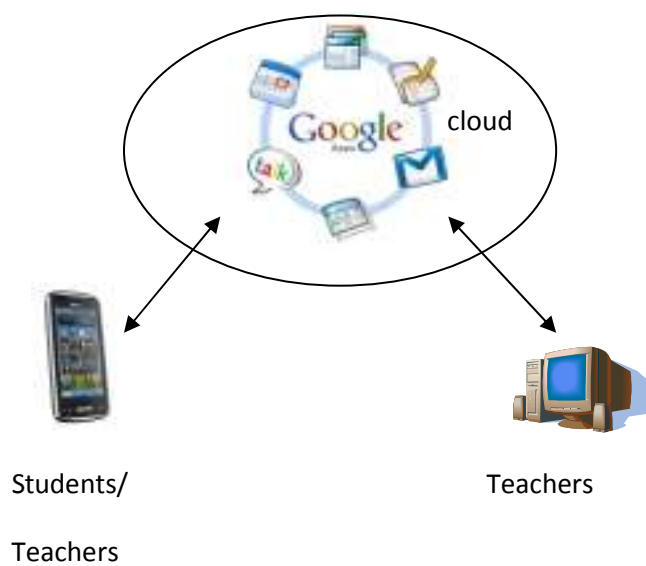


Figure 1 – Proposed approach.