

The importance of student's collaboration in the improvement of new learning environments

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1. Summary

In face of the geographic distribution of its premises within the city of Porto and to its decentralized model of governance, U.Porto developed a strategy to reinforce cohesion, the sharing of resources and services. Information and Communication Technologies (ICT) plays a major role on this strategy. The need to create new and innovative places where students and faculty can socialize and engage in studying activities, promoting the interdisciplinary, exchange of knowledge and experience is one of the successful aspect of the strategy.

The contribution of the e-learning café of U.Porto and the successful implementation of its program, focused on diverse pedagogical and cultural activities, to the acquisition of students' attitudes and skills essential to handle professional relationships and to facilitate learning, personal development and entrepreneurship, is now of main importance for many higher education students.

We intend to present the successes of the outcomes of student's involvement to solve a specific problem, having in mind the offer of a better service to the users of the e-learning café and facilitate the work of the students' team that work at the space.

2. UNIVERSITY OF PORTO AND ITS E-LEARNING CAFÉ

University of Porto (U.Porto) is a centenary public research higher education institution in Portugal. Its mission is linked to the generation of scientific, cultural and artistic knowledge, the high level education strongly anchored in research, the economic and social value of knowledge and the active participation in the progress of communities in which it operates.

In 2006 U.Porto started a strategic research program that aimed to offer to the academic community a set of integrated environments, providing new spaces where social and learning activities are combined and where the whole academic community can meet, exchange knowledge, share experiences and work more effectively in groups, thus promoting interdisciplinary, innovation and entrepreneurship.(1) These hybrid spaces are designed to be dynamic, flexible and rich in technology. The first space of this kind (the e-learning café of Asprela) was opened in 2008 and a new one (the e-learning café of the Botanical Garden) is now being built.

Since the e-learning café of Asprela opened, we have been observing and ascertaining that a very positive and enriched environment has naturally been created. Students are the main users of the space and they feel the space is theirs. As a reflection of this "ownership" they are very careful and respectful. A very positive and relaxed environment is naturally perceived; students have a high level of engagement and take advantage of the facilities the University offers. At the e-learning cafe learning happens in many ways and naturally happens. (2)

The space has very flexible opening hours. The regular hours are from 8am until 2am. However, when there are more than 10 users in the space it stays open. Actually, during school time, the

space is usually open 24 hours a day, 7 days a week.

A team of 9 students is responsible for the support of the space, helping the users, mainly other students that are using the e-learning café. The support runs from 10am until 2am. Students work in shifts of 4 hours ensuring the well-being of the users and guaranteeing the check-out of all the equipment available for users' request: laptops, extension electrical cords, mobile chargers, individual lamps, lockers, among other equipment useful for the students.

3. THE NEED OF A NEW SYSTEM FOR CHECK-OUT

The process of requesting a tool may become bothersome to both the student and the collaborator if it demands large amounts of information or if it involves many steps. In order to aid in this process a web application was developed that simplifies the overall procedure of requisition.

Since the e-learning café opened we have been having different processes of checking-out equipment. We start with paper, and fast we moved to a spreadsheet in Google docs, were information was easily stored and access by all the students collaborators.

As the process was still slow for the collaborator, and more improvements could be implemented to increase the usability of the process, a student from the team of collaborators volunteered to develop a web application and that way simplify the process of creating or closing requisitions, as well as store important information for statistics and reports

4. WHAT ARE THE PRINCIPLES BEHIND THE IDEA/DEVELOPMENT

The main objective was to create an application that is user friendly and reduces the time spent in the task of creating or closing a requisition.

The developer of the web application was a student collaborator at the e-learning café and this made the process of collecting requirements for the system less complicated because, by having firsthand knowledge of how the process of requisition of a tool works, it was easy to spot its limitations and possible ways of improvement.

The system developed, called e-learning café SI, aims to solve the problems that the previous approaches had, mainly the repetition of information and the visualization of that same information. The creation of a dedicated database allowed for a better separation of information without incurring on unnecessary repetition, for example, instead of having to ask for all of the student information every time he requests some tool, now the information of the student is separated from that of the requisition. This means that after the student is registered in the system the data is saved for the future.

As soon as the system was implemented, we quickly realized that further improvements were possible. As all the users have to have a student ID card to check out any equipment, it would be easier if the web application could get the information from the student information system SIGARRA. So the student information is automatically integrated to the e-learning café SI. This will reduce the amount of time the student spends in each check-out. U.Porto student's cards use a MIFARE technology and a reader for this system was acquired. Currently all the equipment for check-out is being equipped with MIFARE stickers or key-chains and all the information about each equipment will be introduced in the web service system.

The objective of the system is to have the collaborator scanning the card on the reader and the equipment, when a student asks for specific equipment, associating both on the web system.

As the e-learning café is open to higher education students from all institutions, and not all of them have the same system of ID cards, the possibility of manually creating a user in the web information system will also be available.

5. HOW DOES IT HELP THE TEAM

The team of collaborators, that uses the system reports that it made the process more user-friendly because it makes the tasks of creating and closing requisitions faster and also because it is less intrusive for the student. The collaborators also report that since the implementation of the system more students come to request tools more frequently, thus not only the application improved the usability for the collaborator but also for the student.