

FINGERPRINT MODULE IN SECURITY SERVICES OF LEARNING MANAGEMENT SYSTEM

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Blended learning (b-learning) has allowed a new way of convergence between distance, on-line and on-site class education. The convergence is going through the mixed model education that has a different percentage of any kind of methodology depending on the student or learner approach.

UNED as university for distance education has to resolve more problems than others. For example, how to offer the practical (experimental) knowledge for some subjects or how to monitor the students' improvement. Solutions like web labs or search engines can give us an opportunity to control and back up students' knowledge using educational platforms.

Although all these tools were used to control or monitor the students' improvement, in the end every learning process must have tests in order to complete the evaluation. How to do that in Higher Education? It will depend on the context where tests take place. Inside Higher Education there are traditional, mixed and distance University. So the way of evaluation must be almost the same to these kinds of Universities.

We are developing a scenario that can speed up evaluation process as well as make easier the process itself. In this way we try to go on converging through all the new techniques and learning models.

In the E-learning framework there are many solutions to manage and display theoretical content for workers or students. This content is displayed in an organized and controlled way (content packets, modules, user profiles) usually under a learning management system being implemented under solutions that have third-party developed, such as WebCT-Blackboard, Moodle, .LRN, etc. DotLRN allows developers to create new packages and applications modules. So, a university or organization can use and modify a new package that has been created by another organization because it is possible to know how the package has been programmed. Although we can use security services in DotLRN it is insufficient to assure the real identity of a user. This is very important when the contents that are used are restricted for specific persons. Any person can get other password to access a banned area. One possibility for a better (more secure) solution is the use of identification technology incorporated in our DotLRN architecture. In our project, we will use biometric technology, specifically fingerprint recognition.

For this task it is necessary to develop a new DotLRN package or to add new functional qualities to the security services existing. Thus, every course will use OpenACS Permission; Basic Authentication or other service included in Security module. Then when the contents or area are important this security module will use the new facilities (identification by fingerprint). So that, this new identification module will have new interaction between PostgreSQL database and Application module of a course, where we will be able to ask for user name, password and for a new fingerprint sample.