

Title

Development of multidisciplinary practical lessons through Research- Action methodology in the Faculties of Computer Science and Educational Psychology

Abstract

Computer science studies possess a strong multidisciplinary vocation; most graduates do their professional work elsewhere of a computing environment, in collaboration with professionals from many different areas. However, the training offered in computer science studies lacks that multidisciplinary, focusing more on purely technical aspects.

The campus, a place where studies of very different nature exist side by side, may constitute an excellent basis for conducting multidisciplinary training without underestimating higher education rigor. The aim of the universities is to train their students in the skills demanded by businesses and companies. According to experts, students need to develop more the skills called generic in which can be found the interpersonal skills.

This paper presents a good example where computer studies and educational psychology find out a common ground and realistic working through laboratory practices.

Specifically, the work enables to students of computer science education the development of diagnosis support systems, with artificial intelligence techniques, that could then be used for future educational psychologists. The applications developed by computer science students is the creation of a model for the diagnosis of pervasive developmental disorders (PDD), sometimes also commonly called the autism spectrum disorders (ASD). The complexity of this diagnosis, not only by the exclusive characteristics of every person who suffer it but also by the large numbers of variables involved in it, requires a very strong and closed interdisciplinary participation. Moreover, for the enhancement of this software (and especially for the collection and creation of the database) it has been required the creation of a working framework which involves doctors and families, as well as those students of computer science and educational psychology already mentioned. The final purpose of this tool for the diagnosis is its applicability in primary schools to increase the early detection and diagnosis.

Meanwhile, students of educational psychology incorporate their knowledge to adjust the computer application successfully, incorporating it the qualitative and quantitative information needed for verification. As a result of this synergy, a good interdisciplinary teamwork has emerged, closer to the real world than the university and which all would be enriched.

In this sense, this work demonstrates that it is possible to intervene in a curricular perspective, in the university, to promote the development of interpersonal skills. It can be shown, in this way, a methodology for interdisciplinary practices design and a guide for monitoring and evaluation.