Innovation in Teaching Applied Mathematics at the University of Granada

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This work tries to summarize the global experience obtained along the different projects of educational innovation, in which the author was involved in successive courses.

These projects have involved many other colleagues of the Dept. and have had to deal so much in the way of presentation and development of the classes, as in the way the professors evaluate the pupils.

An important feature is also the use of different additional technological tools of managing and of calculation in the classes, mainly for practices with computers and also for the resolution of different types of problems.
Actions and innovation projects developed and already implemented

- Development of numerous computer practices of Mathematics in different technical careers and qualifications, and publication of many educational books, from 1994 until now.
- Program of “Innovación sobre acción tutorial” implemented in the Escuela Técnica Superior de Ingenieros de Caminos, Canales y Puertos for first year’s pupils (Academic year 2004-05).
- “Aula Interactiva para las Prácticas con Ordenador (AIPO)”. Presented in 2005.
«A.I.P.O.» and «R.E.Q.U.E.N.A.»

- They have been designed to aid the professor to solve the pupils’ questions during practical classes in the big computer rooms.
S.A.G.D.
(Automatic system of Teaching Management)

• Our own automatic teaching management system, developed thanks to a project of educational innovation of the UGR.

• It consists of different sections of management (pupils, teachers, courses, subjects, information, exercises, exams, etc.).

• It also provides a personal area (both for teachers and pupils) where they all can store their own educational material.

• We also highlight fundamentally the possibility of self-assessment on the part of the pupils and the automatic generation of exams controlled by the teacher, both in PDF or in HTML formats, using the appropriate LaTeX compilers.
Conclusions and future work

• We have set up an integrated system that not only performs the usual management tasks included in every standard teaching platform.

• We have made an special emphasis on the possibility of having a complete collection of mathematical questions.

• We think that this is just the principal novelty of our system, because many other teaching management platforms do not include this possibility yet.

• All these questions are well arranged in the database, according to its type, level of difficulty, the subjects for which they can be randomly eligible, etc.
• The system can generate, semi-automatically, the exams configured by the teachers, both in PDF or in HTML format.

• The online test exams, can also be automatically corrected and stored, with the appropriate mark, in order to be consulted later by the teacher and the students.

• In that manner, not only a valuable time for the teacher has been saved, but the system can also be used as a mean for the auto-evaluation of the students as a former preparation for the final exams that can be proposed later by the teacher.

• Our system continue its development and now we are integrating all of these features in a more convenient Moodle environment.
BIENVENIDO A ESTE SITIO

Este sitio nace a partir de un proyecto de innovación docente de la Universidad de Granada

ACCEDER

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