

A SYSTEM OF STUDENT-SPECIFIC ACTIVITIES OF STATISTICS ON THE INTERNET

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INTRODUCTION

The authors, members of *Statmedia group*, a team of professors of the Department of Statistics at the University of Barcelona (UB), are intended to develop new tools to assist in the teaching of statistics. Our ultimate goal is to improve our students' academic performance and to enhance motivation towards statistics. In developing the European Space for Higher Education, particularly when working with large groups of students, it is helpful to use automated tools to monitor academic performance and allowing the development of work outside the classroom.

ASSUMPTIONS AND DEVELOPMENT OF THE PROJECT

Our project is based on some important assumptions: case based learning, continuous assessment of knowledge, follow-up of student's attendance, possibility of making different parts of the course away from the classrooms but under teacher's supervision and independence of any commercial software.

Those requirements have materialized in a system of design, publication and management by Internet of different sets of activities of statistics with student-specific data sets for every scholar of the course. Activities can be practical sessions developing a case, lists of problems, tests or similar. The system is very flexible and can be adapted to courses of different features. Teachers can also specify the allowed schedule for the different activities and other specific parameters like for instance the allowed IP address.

Customization of data is the most notable achievement of the project since we consider it as an essential requirement to allow students not to be present in the classroom. It also expands the possibility of discussion since different students may have different results on different data sets under similar assumptions. Even different questions may be generated depending on the data sets.

The framework of the project is based on three elements: JSP pages, databases on a web server and applets and servlets of java language.

A Java language statistical tool to help in computations has been developed by our team. The format is that of a statistical calculator that is called by a button control. It appears as an independent window offering all the statistical computations required by the practical sessions. Since the whole system has been developed in Java it is possible for the calculator to interact directly with the JSP pages. In this way different data sets can be automatically loaded in the calculator by means of a load button. Student's time and mistakes can be substantially reduced.

RECENT RESULTS

In recent years over 700 students per year in four different first and second cycle studies have used our material with a good global satisfaction index (7.4 over 10) obtained from different surveys. We shall show a comparative study of a time series of academic results obtained by students before and after the implementation of our methodology.

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