

A new method predicts dropping out of university

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A new method predicts the rate of students dropping out of university. Credit: SINC

Researchers from the University of Granada (UGR) and the University of Jaén (UJA) in Spain are creating a statistical model to calculate the probability of university students dropping out and to help in the drawing up of strategic plans to reduce the number of students who give up their studies.

According to the CYD 2008 report, the high [university](#) drop-out rate ranges from 30% to 50% and is regarded as one of the greatest problems currently hanging over Spanish universities.

This pioneering research which has recently been published in the *Computer and Education* magazine analyzes the databases of the students

enrolled at the University of Granada and their academic records from 1992 until today, by means of a model of logistic regression which allows the calculation of the drop-out probability of a student who is beginning his or her studies or who is currently enrolled.

The researchers analyzed the enrolment data of 10,844 Computer Science students, 25,745 Economics and Business Science students and 39,241 Philosophy and Arts students. The drop-out rate in the first two subjects studied is higher than 40% and greater than 60% in the case of Philosophy and Arts.

Inmaculada Roldán is the author of the study and a researcher from the Department of Statistics and Operative Research at the University of Jaén. "Nowadays they are many universities which are introducing Tutorial Action Plans (TAP) to guide their students. If each university calculated the number of students with the greatest drop-out risk, the TAP could be more effective", she explained to SINC.

The students who have a low entrance mark or who begin their studies after the age of 25 display a greater probability of dropping out; in fact, the students who end up dropping out of a degree course tend to begin their studies when they are over 20.

Of the three faculties analyzed, that of Philosophy and Arts displays the highest starting age, the lowest entrance mark and the highest percentage of students who enter by passing the tests for people over 25 of age (14.4%), while the figures stands at around 10% for the other two faculties.

The studies of fathers, mothers and tutors are regarded as a determinant factor in dropping out of higher education. "A great deal of research has found that the influence of the family is a trigger, as it puts very strong pressure on the [students](#) which they cannot handle, leading them to drop

out", the experts affirm.

Of the 23 variables studied, performance, success and average mark are highly associated with dropping out and show that "the lesser the level of performance and success, the greater the probability of dropping out". Sex and geographical origin are those which have the least relationship with dropping out. "None of the models obtained uses them to explain potential drop-outs", indicated Roldán.

Source: FECYT - Spanish Foundation for Science and Technology

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