

CAN A NEW TEACHING METHODOLOGY IMPROVE STUDENT'S RESULTS?

A MICROECONOMETRIC EVALUATION FROM A PORTUGUESE POLYTECHNIC SCHOOL

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Abstract

During the academic year of 2004/2005, due to institutional reasons, a new teaching methodology, in one of the nine undergraduate programmes offered by the School of Technology and Management of Bragança (Portugal), was implemented. The undergraduate programme exposed to a teaching philosophy inspired in the Bologna's Treated was "Informática de Gestão".

The undergraduate students of "Informática de Gestão" started to be followed up systematically by the teachers of the different courses' in order to understand how could the student's scholar progress be improved. The methodological supervision by the teachers was extended mainly to the evaluation – a continuous evaluation of knowledge and skills acquisition was imposed. To the students was required the participation in classes, this is, participation became compulsory.

The aim of the new teaching philosophy, which we will call in the future as the treatment, was to increase the positive results for the students, concerning the acquisition of knowledge and skills. But can the students exposed to the treatment have bigger rates of positive results than their undergraduate colleagues? And, are the positive results of treated students better than those of the non-treated ones?

One year after the implementation of the treatment is possible to evaluate their results and the above questions can be answered.

To expose one undergraduate programme, and consequently their students, to a treatment without expose the others created the conditions to a process of microeconomic evaluation "quasi-experimental" that aims to quantify the causal effect of the exposition to the treatment. Following the lessons of the microeconomic evaluation literature, the present paper adopts a Propensity Score Matching Methodology choosing as the interest parameter the average treatment on the treated (ATT). Intuitively appealing, the matching

methodology matches treated students to non-treated ones, in terms of their observable characteristics, so the difference between their results could be imputed to the only thing that distinguishes them – the participation on the treatment.

To compare only what is comparable, the evaluation was carried out on those subjects that were common among all the undergraduate programmes, like mathematics or statistics, or subjects that were common among the undergraduate programmes in the management's scientific area, like economics, accounting or marketing.

Preliminary results show a positive effect of the treatment on those students who had been exposed to a teaching philosophy which heart is the student's mandatory participation in classes, a higher follow-up, by the teacher, of the student's scholar progress and a continuous evaluation of their results. Indeed the treated students seem to show a bigger percentage of positive grades comparing with the non treated colleagues, in all the evaluated subjects. However, the results in terms of the grades' quality are less obvious. Even if the treated students achieve a positive grade, this grade is often smaller than the grade achieved by the non-treated students.

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