STATISTICS ASSESSMENT IN HIGHER EDUCATION

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In this work, the psychometric properties of a multiple choice questions test are used to assess skills on Statistics in the Master of Management and Industrial Engineering of the University of Minho. Data has been collected from two consecutive academic years, 2006/2007 and 2007/2008, involving 158 students.

The results show the importance of measuring the quality of the instruments to a fair assessment of the students. The Bologna Declaration brought reforms into higher education that implies changes both on learning and teaching approaches and in methods for assessment. In this sense, multiple choice tests in combination with other learning assessment methods are an alternative for the practical implementation of a continuous assessment and thus, framing the student learning.

The approach that is being used is the Item Response Models (IRM) (Birnbaum, 1968; Hambleton, Swaminathan and Rogers, 1991; Costa and Ferrão, 2005). The statistics that have been considered are: estimates for item parameters that represent item difficulty and item discrimination, information function of the test and the respective standard error of measurement. Results include the development of a common metric which allows the comparison of student results on consecutive years, assuming that each set of students are independent samples of the same population. In addition there are presented the contribution of each item for the total information of the test and the identification of potential poor items.

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