

A Fuzzy Measure of Satisfaction for University Education as a Key for Employment¹

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Summary. In this paper, we propose a fuzzy approach to measure the degree of satisfaction of graduates on the suitability of university education for working purposes. The indicators proposed come from two factors: the importance attributed to six aspects of university education and the quality of the service perceived by graduates. We use these indices to evaluate the first results of a telephone survey on a sample group of graduates at the University of Foggia. Using factor analysis, we show that all the aspects of university education can be summarised in just one dimension.

Keywords: Fuzzy indicators, Customer satisfaction, Graduates, University of Foggia.

1. Introduction

The evaluation of *customer satisfaction* implies the collection of one or more marks allotted to a service by its users. The allotment of these scores requires subjective evaluations, which may be thought of as values on an ideal continuum and may be suitably summarised.

In this paper, we propose a *fuzzy* method to measure the satisfaction of graduates for their university education in terms of preparation for the labour market. Thus, we evaluate *ex post* the university education in order to improve the formative offer according to labour market needs.

¹ This paper is the result of the joint research of the two authors. C. Crocetta was responsible for the final editing of Sections from 1 to 4, 6 and 7, whereas G. Delvecchio was responsible for Sections 3 and 5.

Indeed, the didactic autonomy of universities imposes serious thoughts about the objectives and contents of the educational pathways through which the competences develop.

2. The survey

The University of Foggia has recently started the monitoring of placement and satisfaction of its graduates with respect to the effectiveness of the education received for preparing their insertion into work.

We will use the database formed through the integration of the data available in the archives of Student secretariat of the University of Foggia and that obtained from an *ad hoc* telephone survey.

Because of some difficulties in interviewing graduates by telephone (some of them graduated seven years before), we had to undergo some limitations in the data collection design. The initial purpose was to contact all graduates of the University of Foggia. We made up to seven attempts to contact the students at different hours before considering them unreachable. We carried out the 2,133 interviews from April 28th to May 26th, 2003. The percentage of completed interviews reached the 72.9% of the eligible population.

The questionnaire is composed of four parts: the first one is dedicated to graduates who worked before graduation, the second to those who are still seeking employment, the third to current or past professional experiences and the last to graduate satisfaction with services received, considering both the job searching and professional experiences.

In this paper, we will focus on the evaluation of graduate satisfaction with respect to the services received.

In order to measure the importance that each person assigns to the different aspects of university education and the quality of the teaching offered by each faculty, the interviewees were asked to give a score from 0 to 100 to both, importance and quality of service, with respect to the following aspects:

- basic teaching,
- specialist teaching,
- practical activity (practice, laboratories, job placement, etc.),
- use of equipment for improving expertise and research,
- *forma mentis*,
- methods and techniques learned during the course.

The answers to this part of the questionnaire required particular commitment from the interviewers because many interviewees found it difficult to answer the questions properly and required the interviewer to explain the exact meaning of questions. We chose a 0-100 scale in order to have a wide range of scores, thus providing greater accuracy without using decimal numbers.