Students' representations about quality education: A longitudinal study on nursing and management degrees.

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1. Introduction

In Portugal, the University of Évora, through its Center for Research in Education and Psychology has an ongoing study whose objectives are, among others, the identification of students' representations about teaching quality and the context variables that support those variables: " *From Quality Teaching to the Academic Success: a longitudinal study about the student's perspectives on the relationships between effective quality teaching and academic success*" (FCOMP-01-0124-FEDER-007101) funded by the Foundation for Science and Technology of the Portuguese Ministry of Science, Technology and Higher Education.

We consider that students construct meanings about themselves and the world around them based on representations that allow them to develop a system of constructs for interpreting reality. According to Jodelet (1989), social representations can be considered forms of knowledge developed and socially shared that provide a practical and useful way for constructing a reality common to a community.

That is to say individuals and communities are guided in the light of representations that generate conceptions of reality, not reality itself. Accordingly we assume that students construct meanings about themselves and the world that surrounds them, which can act as facilitators of school learning and their (in)satisfaction with the quality of learning, teachers and school dynamics. Thus, in the school context, students develop a system of personal constructs that serve as paradigms to interpret reality.

As systems of interpretation, the social representations play a regulatory function of our relationship with others and guide our behavior (Cabecinhas, 2004) as well as constitute a universe of opinions and beliefs about a subject shared by individuals. In this way, social representations are important for our research on the quality of education.

The issue of quality of education has been increasingly examined among researchers, as long as higher education institutions has been challenged to establish quality goals in contemporary societies, guided by competitiveness, change, demand and complexity.

The understanding of what it means quality of education is, however, the first hurdle to overcome, since the concept of quality can be analyzed from various perspectives. Since it is a complex phenomenon and involves multiple factors, we identify and analyze a set of common dimensions from different theoretical perspectives.

The definition of quality suggested by the British Standards Institute is repeatedly used and corresponds to the totality of characteristics of a product or service that focuses on their ability to meet any need (McTaggart, 2006). This concept is adequate to the higher education context because these institutions must establish clear purposes in accordance with the community needs. Education programs and research should be appropriate to these purposes. In consequence universities should set their goals clearly, develop appropriate research and teaching and learning programs that could provide benchmarks for evaluating the quality of their work (McTaggart, 2006).

Quality assurance is to define what the product is, what the key activities and what the customers of higher education institution are. The product of education includes the acquisition of knowledge, the value given to knowledge, skills and personal development that is learned (Capelleras & Veciana, 2001). Activities that influence student learning and development imply the teaching methods quality, the student assessment processes, the quality of courses and training programs for teachers. Students are the main and direct "clients" of the service provided, however their participation in the teaching and learning processes is needed because they constitute themselves as active co-producers of an educational service. Other customer groups are potential employers, families, former and prospective students and in the end society as a whole, with whom university has scientific, cultural and social responsibilities.

On the basis of such approaches and theoretical points of view is an input-process-output model, meaning that quality implies the relationship between the inputs (material and human resources), teaching and learning processes (including teaching methods, content and courses administration, competence and training of teachers, evaluation) and the flow of output (student performance, professional work, for example) (Chua, 2004; Tavares & Huet, 2001).

In similar vein Venâncio and Otero (2002) consider factors of greatest importance in institutions quality: human resources, curriculum, planning and material resources. At the same time they consider quality as a function of student development (including cognitive outcomes, expectations, sociability, initiative, decision-making capacity or acquisition of securities they also argue that these skills depend on the teaching and assessment methodologies and the

teaching materials used by teachers when prepared with that intention. From this general framework a questionnaire was developed and validated in the present study in order to identify students representations of quality, so that there could arise relevant proposals to improve teaching and learning processes in the educational institutions involved.

2. Methodology

The broader study from which this article arises is to verify how the representations of students on the quality of education evolve along the cycle of studies, in order to emerge contributions for improvement of the educational system. Here we present the results concerning representations of teaching quality identified in students of Nursing and Management at three establishments of higher education in the Alentejo region (Portugal).

2.1. Participants

In the academic year of 2007/2008, 213 students participated in this part of the study, enrolled in the 1st year of graduate courses in Nursing and Management, from which 121 (56.8%) at the University of Évora, 78 (36.6%) at the Polytechnic Institute of Beja and 14 (6.6%) at the Polytechnic Institute of Portalegre, all institutions of higher education in the Alentejo region. In the present year 167 students participated enrolled in the 3th year of the same graduate courses, from which 70 (42.0%) at the University of Évora, 33 (19.8%) at the Polytechnic Institute of Beja and 64 (38.3%) at the Polytechnic Institute of Portalegre. Sample distribution is shown in Table 1.

Table 1. *Sample distribution by course and year*

Course	Year				Total
	2008		2010		
	F	%	F	%	
Nursing	92	43,2	97	58,1	189
Management	121	56,8	70	41,9	191
Total	213	100,0	167	100,0	**380**

2.2 - Instruments and Procedures

To examine the representations of students about the quality of education, there has been implemented a structured questionnaire, constructed for this purpose, based on literature review, considering various studies based on literature review (OCDE, 1989; Deming, 1996; Ethier, 1989; Bateman & Roberts, 1993; Tribus, 1995; Turner, 1995; Chua, 2004; Saraiva, 2004; Amante, 2005). There were included different dimensions of quality analysis, such as motivation, the commitment of teachers of the course, the teaching materials, the methods of teaching, the methodologies for evaluation, the programs of curricular units (disciplines), the organization of the teaching and learning, adequacy of infrastructure and resources of the organization of higher education, the adequacy of the profile and structure of the course, the degree of satisfaction and academic success.

The questionnaire consists on 62 items, on an answer scale of five points: *completely disagree, disagree, agree, agree completely, I do not know/Not applicable / I am undecided*, seeking to know the representations of education quality that the students are subjected to. The instrument also includes some issues of socio-demographic characteristics, and some questions of free answer: understanding of educational quality, aspects to improve the institution of education, how to improve school results, the number and reasons given for failures and curricular units and the less preferred ones.

The final version was obtained by consensus among members of the research project, being then subjected to a panel of external experts (internal validation), which gave indications that would clarify the language and improve the construction of the items. Data collection occurred in 2008 and 2010 and the questionnaire was applied directly by the team of researchers in the classroom, having previously obtained the necessary authorizations.

2.3 – Data analysis

This study focused on the analysis of the free answer questions related to the understanding of education quality.

The data on these questions were treated by the technique of categorical content analysis (Bardin, 2001). After grouping the registration units, we structured a table of categories, corresponding to the categories defined in the construction and validation of the questionnaire and others that emerged from the analysis.

Students believe that the quality of education is related with categories presented in Table 2.

Table 2 - *Categories of students' quality education definitions*

Provides motivation
High teacher performance
Good pedagogical materials
Effective teaching methodologies
Adequacy of assessment methodologies
Adequacy of the curriculum units
Good teaching/learning process organization
Good infrastructures and resources
Graduates profile's adequacy with the labour market
Meets the needs of students
Provides high academic achievement
Favorable educational environment
Achieve learning with excellence

3. Results

The methods used revealed a diversity of opinions regarding the factorsinvolved in defining education quality and allowed usto obtain a simplified representation of the concept in question.

The representations that these students have on education qualityfocuses mainly on aspects related to "good infrastructures and resources", "high teacher performance", "achieve learning with excellence" and "good teaching/learning process organization" in both courses and in 2008 and 2010.

The nursing students refer, in the 1st year of the course, "achieve learning with excellence" (18.7%) in the first place, then "good infrastructures and resources" (16.17%), "good teaching/learning process organization" (14.4%) and in fourth "high teacher performance" (13.8%). In 2010, in the 3th year, they consider "achieve learning with excellence" (27.9%) in the first place, then "good infrastructures and resources" (15.4%), in third they change to "graduates profile's adequacy with the labour market" (13.2%), showing a major concern with the future and their employability, and in fourth "high teacher performance" (10.3%).

These students consider individual reasons as most important; they value the infrastructures of the institution and their resources, the organization and the quality of teachers' performance. They maintain this point of view two years later but they now mention adequacy with the labour market with more emphasis.

However, the differences are not very significant in most of the categories, as we can see in Figure 1.
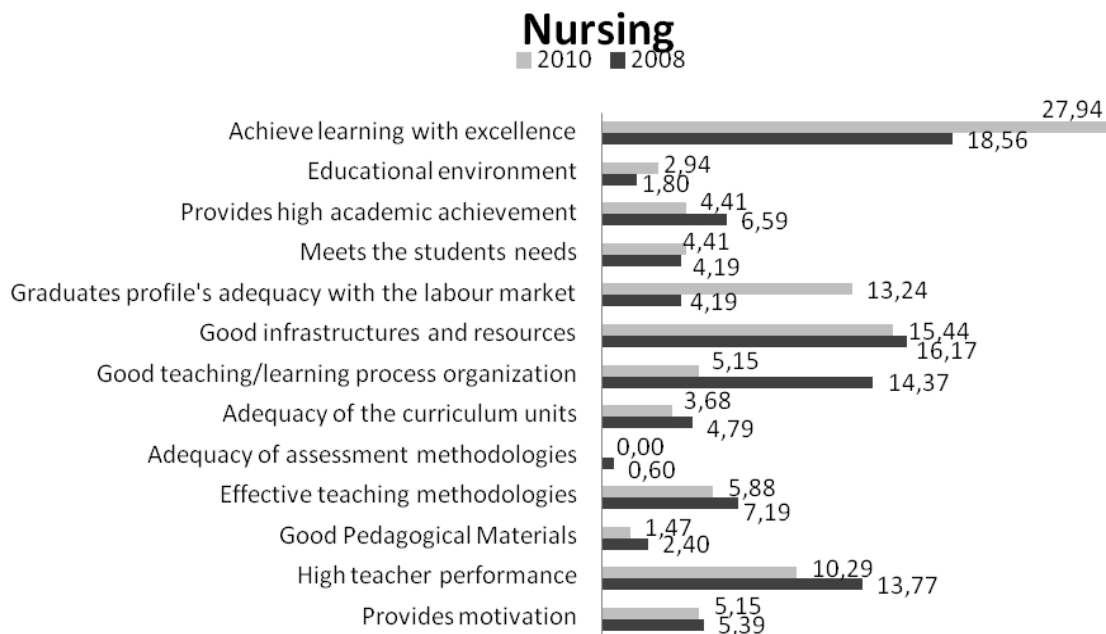
Figure 1. Categories of students' quality education definitions for Nursing in 2008 and in 2010 (in % of records)

Management students refer, in the 1st year of the course, "good infrastructures and resources" (21.1 %) in the first place, "high teacher performance" (19.3%) in second, "good teaching/learning process organization" (11.7%) in third and "achieve learning with excellence" (8.9%) in fourth. In 2010, in the 3th year, they consider "good infrastructures and resources" (24.8 %) in the first place, "high teacher performance" (22.1%) in second, "achieve learning with excellence" (10.6%) comes up to the third place and in fourth they focus "effective teaching methodologies" (8,9%) (Figure 2).

In contrast with nursing students, these prefer external reasons to define quality. They elect infrastructures, resources, teachers and organization as the most important factors in quality. In 2010 they maintain their opinion and reinforce teachers' responsibility.

This group has a low score for "graduates profile's adequacy with the labour market" when compared to the former (7,0% in 2008 and 6,2% in 2010).

As this study seeks to identify the representations of quality of students involved particularly in relation to their academic success, we observed differences between nursing students - who have better performances - and management students - less successful performers.
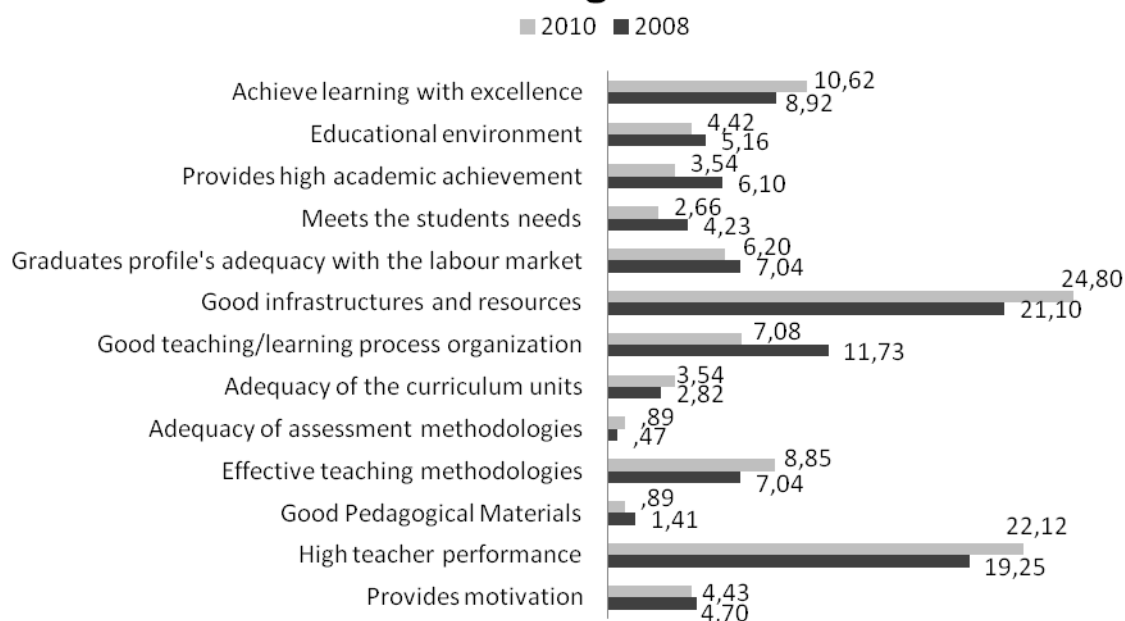
Management

■ 2010 ■ 2008

Category	2010	2008
Achieve learning with excellence	10,62	8,92
Educational environment	4,42	5,16
Provides high academic achievement	3,54	6,10
Meets the students needs	2,66	4,23
Graduates profile's adequacy with the labour market	6,20	7,04
Good infrastructures and resources	24,80	21,10
Good teaching/learning process organization	7,08	11,73
Adequacy of the curriculum units	3,54	2,82
Adequacy of assessment methodologies	,89	,47
Effective teaching methodologies	8,85	7,04
Good Pedagogical Materials	,89	1,41
High teacher performance	22,12	19,25
Provides motivation	4,43	4,70

Figure 2. Categories of students' quality education definitions for Management in 2008 and in 2010 (in % of records)

4. Conclusion

The results shown allow us to conclude that for students in the analyzed sample, from the nursing and management courses, in the three organizations of higher education studied, the representation that they showed regarding quality of education values factors regarding *Infrastructures and resources*, teachers performance, learning achievement, organization of the teaching and learning processes and adequacy of the course with the labour market.

From all categories only "achieve learning with excellence" had higher scores in 2010 than in 2008, in the two courses. In a longitudinal perspective we can conclude that this is considered an indicator of success. In other words, quality education will depend in good part on the orientation of education to achieve quality of learning and under appropriate conditions. It is interesting that all of these reasons involve mainly the role played by teachers and educational institutions, being virtually ignored the role of motivation and ability of the students themselves.

The most representative categories present slight variations in the percentage of emphasis throughout the course, except for *Achieve learning with excellence*, 18,56%[2008], to 27,94[2010], an 9,38% variation at the Nursing Course. These results seem to indicate that these students, during their training, will give more importance to the quality of learning, which they referred several times as "good learning". Confirming this analysis is the fact that the category Graduates profile's adequacy with the labour market also present an increase of

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9.05%(4,19%[2008]; 13,24%[2010]). Thus, students recognize that their professional future involves the acquisition of learning, with excellence, appropriate to the profile of licensee required by the job market. For this it is necessary that teachers have a good performance (13,77%[2008]; 10,29%[2010]), and that teaching takes place in modern and comfortable facilities, with plenty of resources (16,17%[2008]; 15,44%[2010]).

It is also interesting to note that at the category Good teaching/learning process organization there is a decrease of 9,22% (14,37%[2008]; 5,15%[2010]), it is justified, we believe, by the fact that students gain experience during the course, getting more information about concrete aspects of their experiences, which will mirror at other categories. In the course of Management, is also observed this decrease, although less intensive, 4,65% (11,73%2008; 7,08%2010)

in fact, in this course, the results did not vary much over time, but differ in relation to Nursing course, since in this case the category considered more important was Good infrastructures and resources (21,10%[2008]; 7,08%[2010]), 9% higher than their colleagues, and High teacher performance, (19,25%2008; 22,12%2010) 12% more valued than his colleagues. One explanation that we find for these results, derives from the late contact between Management students and the labour market, only at the end of the course, other hand in the precocity of this contact at the Nursing course, early in the second year. This way the nursing students feel, still during the course, whether they are being well prepared for the labour market or not.

The category with the lower score was "adequacy of assessment methodologies", considered less important to define quality in education, revealing that students believe that having a good assessment process is not necessarily synonymous of good education. We can thus conclude that for students inquired the determinant aspects of quality of education are related to two types of factors: human and institutional. The variables related to qualification of teachers are very important and significantly influences the success of the students (Ferguson, 1991; Bressoux, 1994).

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