

*Dalliane Vanessa Pires Andrade,  
Jamerson Viegas Queiroz,  
Fernanda Cristina Barbosa Pereira Queiroz,  
Gustavo Henrique Silva de Souza,  
Nilton Cesar Lima,  
Jamil Ramsi Farkat Diógenes*  
Brazil

## **The Importance of Total Quality Management Systems for Managers of Brazilian Universities**

### **Abstract**

The purpose of this paper is to analyse from the perspective of the manager, the importance of the use of tools and concepts of quality management in the Brazilian federal universities. It was identified that the managers of these universities consider it as very important to use administrative practices contained in quality management systems as efficient and effective methodology to conduct the management of these institutions. The research serves as a statement for the other 172 university managers to be supporters of quality practices contained in management systems in question to achieve better results and better grades in rankings series.

*Keywords: Total Quality Management, awareness of quality, Brazilian federal universities*

### **Introduction**

The problem of quality has affected the Brazilian education system. The waste, the disconnection with reality, the inadequacy of the curricula and forms of internal actions, combined with the lack of motivation for the Administration, are the main weaknesses that afflict the country's universities. According to Ven-

turini (2010), a public university in our country faces the question of the quality of its activities and the way it has employed the resources that society puts at its disposal.

In this scenario, debates have been encouraged about quality in higher education and according to Sayeda et al. (2010), quality management initiatives have made their way to higher education. With the certification bodies, the concept of internationalization and competitiveness in these institutions has reached new dimensions (Mizikaci, 2006).

In this sense, quality management systems in universities are being defended as a necessary instrument to raise institutional qualification, promoting the improvement of teaching, research, and extension of management. These systems play an important role in increasing the levels of quality, safety, efficiency, reliability, satisfaction, productivity and work, as well as cost reduction (Al-Rawahi & Bashir, 2011).

However, according to the data from INMETRO (2012), the presence of quality management systems in the academic sector is endless, as well as the research done by Fowler et al. (2011) on the use of the *Gespública*. The reasons for the lack of adhesion of the IES are the most varied. While some do not care for quality programs depending on the complexity of their applications, others are unaware of their existence or even their applicability in industry (Fowler et al., 2011).

The presented study aims to analyze from the perspective of the manager, the importance of the use of tools and concepts of quality management in federal universities.

The article is organized as follows: in addition to this introductory section, section 2 presents the theoretical principles of quality management systems in educational organizations. Section 3 deals with the methodology of this article; section 4 contains analysis of data; section 5 presents the final considerations of the paper.

## **Quality management systems in educational organizations**

If public universities face a bureaucratic dilemma, private institutions – with more autonomy to make decisions - experience structural issues. In general, higher education institutions are dedicated to meeting the most pressing needs, such as tax evasion and, in particular, the certification and the Brazilian Ministry of Education (MEC) evaluations. However, these issues can be prevented or even excluded from the adoption of a quality management system (Baroni, 2010).

A quality management system consists of policies, procedures, plans, resources, processes and demarcation of responsibility and authority, all of which are deliberately aimed at achieving products or quality levels compatible with customer satisfaction and the goals of the organization. When these policies, procedures, plans, etc., are taken together, they define how the organization works and how quality is managed (Al-Rawahi & Bashir, 2011).

For Marques (2008), a quality management system enables the university to manage more efficiently the social spending, guide students for better employment opportunities and develop an education compatible with a society in constant development.

The theoretical foundation is presented with the objective to support the research and a better understanding of the concepts of quality in university organizations and the importance of quality management systems as an instrument necessary for continuous improvement.

For Oliveira et al. (2010), the system of quality management in educational organizations is to ensure the interest in the product, process or in business, namely, the need to consider the expectations, not only of the internal or external customers, but anyone interested in business, who are the stakeholders (shareholders, customers, employees, suppliers and society). In addition to gaining visibility in the market, it provides the integration of three basic factors for the success of the educational organization: effective strategy; effective technology and effective management.

Both, the board of directors and top management should provide evidence of commitment and ensuring the availability of resources. In synthesis, they must ensure customer satisfaction and continuous improvement.

The senior management consists of a person or a group of people who runs the educational organization at the highest hierarchical level (Oliveira, Corrêa & Pereira, 2010). Only those who have the authority to approve changes in processes, applications of financial resources, changes in the personnel and technology changes, may lead management systems effectively.

It is important to emphasize that these quality programs have been shown to meet tools deployed and that can be applied in higher education, as a means of continuous improvement, whereas quality management systems are necessary instruments to raise institutional qualifications.

## **ISO 9001**

The ISO 9001 is an international standard in the ISO 9000 series that defines a set of minimum requirements for the implementation of the SGQ (Goetsch & Davis, 2005). The acronym “ISO” is a reference to the Greek word ISO, which means equality (Oliveira et al., 2010). International Organization for Standardization signifies Organização Internacional de Normalização. It is a non-governmental organization, founded in Geneva – Switzerland in 1947, today present in several countries.

The ISO standard is a generic management system which, although originally applied to industrial environments, is also being adopted in large and small, commercial and service (Walker & Johnson, 2009; Psomas et al., 2013), public and private organizations (Gamboa & Melão, 2012; Wittmann, 2011).

According to the data of INMETRO (2012), 33,764 certificates have been issued in Brazil, today this number is only 156 business units with standard ISO 9001: 2000 standard and ISO standard 9001: 2008, 5,235 of this total may be affirmed that there are 280 educational institutions with certifications ISO 9001 granted: 2000 and ISO 9001: 2008, where only 8 are of higher education in the universe of 2,377 public and private institutions of higher education.

According to Thonhauser and Passmore (2006), recent times have seen the growing interest of educational institutions in the implementation of ISO 9000, however, there is little empirical research about that (Gamboa & Melão, 2012). Some authors (Peters, 1999; Labaree, 2000) question the relevance of the series ISO 9000 for education. Others (Stimson, 2003; Bae, 2007; Daud, Abd, Wahab, Muslim, Sidek & Suradi, 2012) argue that ISO helps improve student achievement. There are many studies (Moreland & Clark, 1998; Karapetrovic, Rajamani & Willborn, 1998; Karapetrovic, 2002; Sohail, Rajadurai & Rahman, 2003) examining its application in education, but most of them refer to the 1994 version of the standard rather than the 2000 version that is substantially different and more in line with TQM (Martinez-Costa et al., 2009).

Some exceptions are Singh and Sareen (2006) and Thonhauser and Passmore (2006), who investigate empirically the impact of ISO 9001: 2000 in educational institutions. This literature confirms that further research is needed to assess fully the consequences of the adoption of ISO 9000 in educational institutions, including the identification of the factors that affect their success.

The implementation of a quality management system represents the optimization of processes within the organization and the continuous improvement of products and services provided. In 2006, the Brazilian standard NBR 15419

was originated, which has guidelines for the application of NBR ISO 9001 in educational organizations, which can represent a breakthrough for the Brazilian institutions of higher education (Oliveira, Corrêa & Pereira, 2010).

## **Methodology**

Taking into consideration the goals of the research, it was exploratory and descriptive in type, considering the technical procedures used in the research, a literature search was conducted, with a quantitative approach, using a survey method.

The technique involves the standardization of data collection instruments (questionnaires and interviews) that are applied directly to a specific population, whose behavior and characteristics are to be studied. It is suitable for testing hypotheses, models and theoretically substantiated propositions (Forza, 2002).

The study comprised the Deans of federal universities classified among the first 20 places in the College Rankings Sheet – (RUF) in the year 2013, available at: <[ruf.folha.uol.com.br](http://ruf.folha.uol.com.br)>. The RUF measured the quality of 192 institutions according to five indicators: research, innovation, internationalization, and market education.

Data collection was carried out initially through virtual contact, where the respondents received an electronic invitation (email), registered on googledocs <<http://googledocs.com/>>. However, due to the eventful agenda surveyed, it was necessary to also implement the questionnaires by phone. Data collection took place from September 5<sup>th</sup> to October 15<sup>th</sup>, 2013.

16 close-ended questions were used, modeled on a 5-point Likert scale. The questionnaire was prepared by the authors based on the theoretical construct presented in this study. The data from the questionnaires were analyzed with the aid of statistical program Statistical Package for the Social Sciences (SPSS).

## **Results**

The managers were asked 16 questions presented in the table below (Table 1). To these, between the options of answers (not important, unimportant, indifferent, important and very important), most gave the following answers:

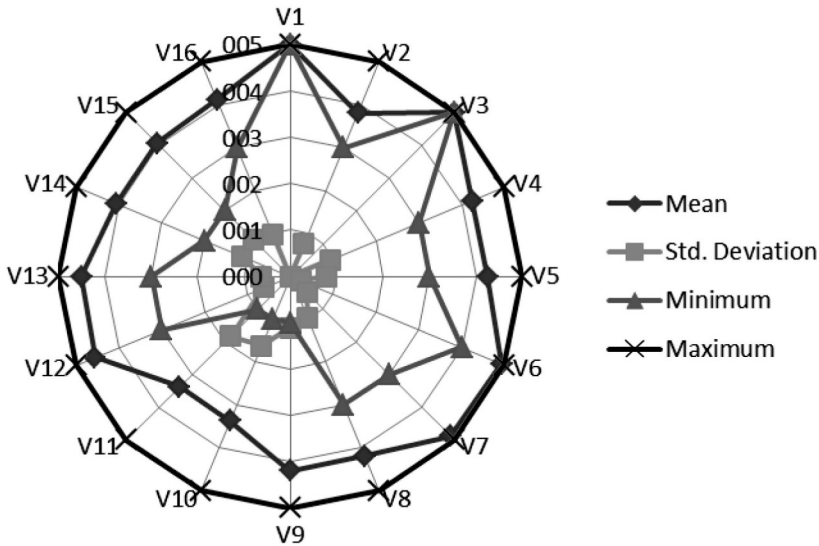
In sum, it appears that only one variable was considered “Important”, and all the others considered “Very important”. The managers generally consider it as

**Table 1.** Analysis summary

Affirmatives	Answers
V1 – Quality practice in the academic sector is important	Very important
V2 – Improvements in the hierarchical structure of the institution are important	Important
V3 – Continuous improvement in the management of institutional processes is important	Very important
V4 – It is important to provide resources for the promotion of related activities to “Quality” in the University	Very important
V5 – Information about the customers’ perception of the university as to their requirements and needs is important	Very important
V6 – Projection of consistent indicators and measurement of clear targets and service cost in university is important	Very important
V7 – Establishment of a model of planning and distribution of tasks with results evaluation in university is important	Very important
V8 – It is important to have managers with innovative profile at the university	Very important
V9 – Organizational simplification of the university is important	Very important
V10 – The use of quality systems in universities, such as 5s, Seis sigma, ISO 9001, NBR 15419: 2006, Gespública, MEG, among others, is important	Very important
V11 – It is important to stimulate within the institution the inconformity with current quality levels	Very important
V12 – It is important to eliminate communication barriers within the university	Very important
V13 – Human resources are the crucial factor for the success of any policy of improvement at the university	Very important
V14 – Disclosure of quality programs at the university is important	Very important
V15 – It is important to make the university partner of quality programs	Very important
V16 – He fact that the university is “Knowledge Manager” is a FACILITATOR of accession of quality programs	Very important

very important to use tools and concepts of quality management in their institutions.

However when analysis was made of mean values and standard deviation (Picture 1), it was found out that not all the managers who considered the quality practice in the academic sector as very important agreed that it was important to use quality systems and management practices in their institutions, which are geared to meet the requirements of the Brazilian Ministry of Education (MEC).



Picture 1. Affirmatives Frequency

It is observed that variables V9, V10, V11 were considered unimportant by some managers, as shown in Figure 2:0 pm their minimum values. And variables V2, V10 and V11 obtained less average in the affirmative.

## Conclusions

Quality management systems in scientific academic sectors have been considered as a necessary instrument to raise institutional qualifications, promoting the improvement of teaching, research, and extension of management, however, the presence of managerial systems of this type in the Brazilian academic sector is still irrelevant.

The results of this research contribute to the question of the use of total quality management systems in Brazilian universities and managers' awareness of the importance of quality practices in the achievement of the best results.

Therefore, it becomes possible to plan the implementation of these systems in environments of work coordinated by them. And having as parameter that most managers of the 20 best universities in the country (according to the RUF Rank-

ing) have a positive opinions on the adoption of these systems, stimulates the remaining 172 managers of universities listed in the Ranking to be too adept at applying the quality management systems in their academic units.

As a recommendation for future work, there is a need to conduct an evaluation of the importance of a new quality in the perception of the manager, in a more comprehensive way, addressing all of the institutions cited in the RUF Ranking, assuring that Brazilian university managers are adept at the use of quality management systems in their institutions.

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