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## Introduction

Theoretically, a more integrative vision of quality management (QM) practices is being proposed (Manatos, Sarrico, & Rosa, 2015), and universities seem to be in the process of following a path towards a stronger integration of their QM practices (Rosa & Amaral, 2007; Sousa & Voss, 2002; Srikanthan & Dalrymple, 2002, 2007).

Our aim is to understand whether the QM policies of universities approach their different processes in an integrated way, i.e. whether there are articulated policies, goals, strategies for teaching and learning, for research and scholarship, for the third mission and for the support processes, or whether they are somewhat fragmented. We also aim to understand whether the QM policies integrate the different organisational levels, i.e. whether the programmes, the basic units and the institution as a whole are called to participate and are involved in the QM policies. Finally, we aim to understand whether universities integrate in their QM policies the different QM principles (as stated in ISO, 2012).

In addition, we aim to understand to what extent QM is integrated in the broader management and governance framework of universities. Particularly, the goal is to comprehend whether: (i) QM is part of the global strategy of the universities; (ii) those responsible for the QM structures are articulated with the top management and governance bodies of the universities; and (iii) QM is a tool for strategic management.

The empirical base of the study rests with three paradigmatic cases in Portugal. We believe that it is interesting to understand how the more advanced universities in terms of the development of internal QM systems behave regarding the integration of QM policies, considering their main processes and mission, their different organisational levels, the QM principles, as well as in terms of the integration of these policies in their overall management and governance systems.

## Literature review

### The integration of quality management in higher education

Universities are traditionally fragmented and loosely coupled organisations (Cohen, March, & Olsen, 1972; Deem, 1998; Orton & Weick, 1990; Weick, 1976). In fact, as Orton and Weick (1990: 207) emphasise, universities have a fragmented internal and external environment, motivated by the existence of “dispersed stimuli or incompatible expectations”, and consequently, are loosely-coupled systems and can be seen as “organised anarchies” (Cohen, et al., 1972; Deem, 1998; Frølich, Huisman, Slipersæter, Stensaker, & Bótas, 2013; Orton & Weick, 1990).

However, there are indications that universities are increasingly interested in integrating their main processes – research and scholarship, teaching and learning, third mission and support processes - and consequently their management practices (Duque, 2013; Manatos, et al., 2015; Rodman, Biloslavo, & Bratož, 2013; Rosa, Saraiva, & Diz, 2001, 2003; Van Vught & Westerheijden, 2010). Moreover, the management context of universities seems to be more and more integrated, leading to the centralisation of power in a small number of decision-making and governance bodies (Melo, Sarrico, & Radnor, 2010).

The literature also seems to be concerned with the development of QM frameworks in a holistic way, combining different aspects of quality. This tendency for holistic approaches appears to be connected with the discussion and development of QM frameworks (Rosa, et al., 2001, 2003; Srikanthan & Dalrymple, 2002, 2007), which have been imported and adapted from industry; and also with the implementation of national models, internal and external quality models, or accreditation systems (Doherty, 2008; Rosa, Cardoso, Dias, & Alberto, 2011).

We understand integration as the development of QM practices within organisations which are part of their global management systems, covering different processes, organisational levels and QM principles.

As processes, we consider not only the three main processes of universities (teaching and learning, research and scholarship and the third mission), but also support processes (Barnett, 1990). Teaching and learning, together with research and scholarship, are core activities in universities. The third mission reflects the engagement of universities in business-related activities, local and regional development, economic growth and societal development in general (Laredo, 2007). The support processes cover all sorts of services and processes, ranging from administrative services to other support processes and activities (Yeo & Li, 2014).

The organisational levels were divided into programme, basic unit (department, faculty or other basic unit of the university), and institution (Brennan and Shah, 2000).

As QM principles, we considered customer focus, leadership, involvement of people, process approach, system approach, continual improvement, factual approach to decision making and mutually beneficial supplier relationships (ISO, 2012). Customer focus means the concern of universities with customer identification, their needs and expectations. Leadership is related with the role of management bodies of universities, with respect to the definition of the mission, the values and the goals of the universities, the promotion of a quality culture and the promotion of the involvement of people and in quality management. The involvement of people is translated into the efforts to involve the people working in universities (academic and non-academic staff and students) in the quality management process. Process approach has to do with the management of the different missions of universities (teaching and learning, research and scholarship, third mission and support processes) as processes, i.e., as a set of inter-related activities which turn inputs into outputs. System approach is related with the management of the different processes, units and services of universities in an integrated way. Continuous improvement translates the efforts of universities to continually improve their quality. Factual approach to decision making, as the name suggests, means that decisions in universities are based in the analysis of data and information provided by different sources. Mutually beneficial supplier relationships are translated into the concern of universities to develop relationships with suppliers, or, at a broader sense, and as we understand it for the purposes of this study, with their external stakeholders, such as parents, secondary schools, future employers, local community and the society as a whole, similarly to what is being proposed in the new version of the standards (ISO, 2015).

### The role of national accreditation agencies

The European policy for higher education and the national assessment and accreditation agencies have been crucial to firmly establish quality assurance policies and practices in European universities (Sarrico, Veiga, & Amaral, 2013; Veiga & Sarrico, 2014). The European higher education quality landscape has evolved quite rapidly, and by 2010 almost all European universities had implemented some form of national quality assurance procedures (Kohoutek & Westerheijden, 2014). This evolution has been boosted by European entities, which have been encouraging the quality debate in the European higher education area and attempting to create a common understanding of the principles and procedures associated with internal and external quality assurance (ENQA, 2009; Kohoutek & Westerheijden, 2014; Veiga & Sarrico, 2014). In this context, the Standards and Guidelines for Quality Assurance in the European Higher Education Area ESG (for internal quality assurance), developed in response to the demands from the Berlin Communiqué (2003), were crucial to the promotion and the development of internal QM systems in universities (ENQA, 2009).

The national accreditation agencies have also played a role in this process, making universities more aware of internationalisation and of the European exigencies (Rosa & Sarrico, 2012).

Some of these agencies, namely in Portugal, Spain, Finland, Norway and Austria, have already started to audit, certify and accredit the internal QM systems of universities. The original goal was to provide guidance for universities to develop their QM systems, but it also acts towards the reinforcement of integrative QM systems in institutions. This practice is not yet common to all the countries of the European higher education area, but it appears to be growing.

In Portugal, the Agency for Assessment and Accreditation of Higher Education (A3ES), in parallel with its assessment and accreditation activities of study programmes, promotes the implementation and certification of institutional internal QM systems. In 2011, the A3ES adopted a model for auditing internal systems of QM systems with a view to their certification, which includes eight main dimensions: institutional quality policy: goals, functions, actors, documentation; effectiveness of procedures and structures in the main missions of university; teaching and learning; research and scholarship; collaboration with the community; human resources policies; support services; internationalisation; articulation between the QM system and the management bodies of the university; participation of external stakeholders; information system (collection, analysis and divulgation of information); public information; monitoring, assessment and continuous improvement; and QM system as whole (A3ES, 2013b). The aim was to provide guidelines to assist institutions in the design and development of their internal quality assurance systems according to the profile and specific requirements of each institution (A3ES, 2013a). As a consequence, A3ES, by promoting the certification of internal QM systems, is favouring the implementation of QM policies (Rosa & Amaral, 2014).

Despite the decisive role of the European and the national developments, it is worth pointing out that the responsibility for developing QM systems and practices lies ultimately with the universities, as stated in the Berlin Communiqué (2003). The institutional level, i.e. the university, has a preponderant influence in the way the internal QM systems are being set up.

## Methodology

The empirical evidence is based on a multiple case study strategy in three Portuguese universities (Yin, 2013). These universities were the first universities in Portugal with an internal QM system being certified by the A3ES (in 2013, for a period of 6 years). These cases can be defined as paradigmatic (Flyvbjerg, 2006) or extreme cases, which “corresponds to a case that is considered to be prototypical or paradigmatic of some phenomena of interest (...) ideal types” (Gerring, 2007). These universities can be considered prototypical or paradigmatic regarding the development of certified QM systems. Consequently, in comparison to other Portuguese universities, they should have the most developed QM policies. We believe that it is interesting to analyse whether these most developed QM systems are integrated QM systems, considering the above mentioned levels and dimensions.

In the sample, there are one engineering and technology school (University A) and two universities, all different in terms of size and location (University B and C). This choice ensured a diversified sample, able to empirically base the research.

Since our goal is to understand the QM policy of the universities, our analysis is based on the content analysis of their internal documents. We will analyse strategic documents, such as: strategic and activity plans, procedure manuals and accountability documents (QUAR, framework for evaluation and accountability of public bodies); documents more directed linked with the QM policy, such as: quality manuals and plans and self-evaluation reports submitted to A3ES; as well as external reports from external review entities, such as: the follow-up evaluation reports from the European University Association (EUA) and the reports from the auditing teams of A3ES. We believe that this joint analysis of strategic documents, quality related documents and external quality reports can give us a good overview of how the

universities are developing their QM policies and whether the QM policies are becoming part of their strategic management.

The content analysis is based on the aforementioned dimensions where we look for integration: the strategy for quality management; processes, organisational, QM principles levels; and finally QM as part of the broader management and governance framework of the university (see Table 1). The content analysis was developed using the NVivo software for qualitative data analysis.

Table 1. Levels of analysis

Levels of analysis	Dimensions
Quality Management	Strategy for quality
Processes level	Teaching and learning Research and scholarship Third mission Support processes
Organisational level	Programme Basic unit Institution
Quality management principles level	Customer focus Leadership Involvement of people Process approach System approach Continuous improvement Factual approach Mutually beneficial supplier relationships
QM as part of the management and governance framework	QM as a strategic area Articulation between those responsible for QM and top management bodies QM as a tool for strategic management

## Results

### The strategy for quality management

The policies more strictly linked with the quality of the institutions are mainly described in the quality manuals and/or in quality plans and also in documents describing the programme of the universities concerning quality policies, and reporting the activities of the quality offices of the universities. Regarding external documents, the institutional self-evaluation reports submitted to external review entities, such as the EUA or the A3ES have also relevant information about the QM policy. In addition, documents as statutes, strategic plans, activities' plans and manual of procedures are also important, in order to understand how QM is articulated with the strategy of the universities and how it is integrated in their wider management and governance framework.

In the three universities, the concern with QM started in the 90's but it was after 2000 and mainly after 2010, that this concern was more deeply formalised into QM systems as they exist nowadays.

In University A, the strategy for quality is formally established in the Strategic Plan, the Activities' Plan, the Quality Manual and the Framework for Evaluation and Accountability of

Public Bodies which define actions, methodologies, goals, monitoring elements, timing, responsibilities and the competencies from the different bodies, services and agents.

In University B, the QM system is based on three main documents: Strategic Plan, Quality Manual and Quality Plan. Besides, a clear compromise of the university with quality and QM is present in its Statutes.

In University C, the actors in the QM system are defined in the Statutes of the university, but in practical terms, the specific competencies, responsibilities and functions of the system are defined in the Quality Manual.

Overall, QM is defined as a strategic area by the universities. In University A, quality is one of the focus areas defined in its Strategic Plan. University B also assumes an institutional commitment to quality, as a key vector for its operation and development, as highlighted in the statutes themselves. In University C, QM is defined as one of its “strategic axes” and the “the implementation and monitoring of the quality assurance system is a mission” of the university since 2000.

## Processes in higher education: the focus on teaching and learning

### Teaching and learning

Concerning the processes level, the policies behind the QM systems of the three universities are mostly focused on teaching and learning. This focus is acknowledged in the different documents. The QM system of University A has a particular “focus on the strategy and mechanisms for the evaluation and improvement of learning”. The QM of the programmes is a central element of the QM system and its main goal is to monitor the functioning of each programme and to promote the continuous improvement of teaching and learning. In University B, the Quality Manual admits the “special attention that is being paid to teaching and learning”, which is justified with the “complexity of the teaching and learning process”. Also University C acknowledges the focus of the QM policy in teaching and learning.

The QM process for teaching and learning is similar in the three universities. Teaching and learning activities are assessed mainly through the results of the surveys answered by students about academics and courses; the reports developed by academics individually about their courses; the reports developed by programme directors about their programme; the reports developed by unit directors about their unit; and analysis by institutional bodies, such as pedagogic and the scientific councils, with regard to the course, the programme, the department, the school and the institution.

### Research and scholarship

Regarding research and scholarship, in University A, one of the goals defined in its Strategic Plan is “to improve the conditions for conducting research activities, based on modern research infrastructure, anchored in a growing policy of multi-disciplinary and cutting edge projects”. The Strategic Plan states also that one of the main action lines regarding quality is “the development of assessment processes at research units’ level”. University A recognises that the assessment of research centres has been exclusively developed by an external entity, the Portuguese research funding council. However, it is now starting to internally develop the evaluation of researchers and research centres.

In University B, each research unit should write an annual report, with the indicators contemplated in the Quality Plan, as well as the indicators related to the level of research activity, of scientific production and of knowledge enhancement. The Scientific Council of each unit discusses the reports of its research units, and then writes a summary report, which analyses: the quality of the research of the research units; the adequacy of the results with the goals established in the Quality Plan; the strong and weak points of the research of each unit;

and draws a global plan with improvement suggestions for the research units. Then, the Scientific Commission of the Senate analyses the reports, as well as the assessment results of the scientific projects and indicates measures to improve the research activities.

In University C, the body responsible for research supports the research activities of the university and seeks to: “assure the quality of the work of the research units; assure the evaluation of the scientific production; articulate the scientific activity with the teaching and advanced training system, namely, the third cycles and the international masters”. The university has also a body responsible for research and research projects, which supports research and development, national and international cooperation and provision of services of the university. Notwithstanding, according to the A3ES report, the approach to QM of research and scholarship is not consistently integrated in the QM system and there is not an evident monitoring of the process, in order to implement improvement actions.

As we can see, in University C, research and scholarship are still not entirely part of the QM system and of the universities and in, University A, this process is only now starting to be internally developed.

### Third mission

Concerning third mission, University A has created an office responsible for technology transfer, which regulates and monitors the activities based on the links between the university and society. The Strategic Plan defines “four main action lines” related to the third mission: “reinforce the links with industry, improve the career services, enhance the valorisation of the intellectual property, and strengthen the entrepreneurial mind-set”.

In University B, the relationship with the community is a concern contemplated in the Quality Plan, in the Quality Manual, and is part of the assessment reports from the various units in the university. The university interacts with the exterior through specific structures. The annual self-assessment reports from the basic units promote the analysis of the results concerning the inter-institutional collaboration and interaction with society. The basic units which actively participate in cooperation relationships with the community, as well as the cultural units, develop annual reports with the indicators and the goals contemplated in the Quality Plan, concerning the interaction with the community.

University C has developed a body responsible for the relationships with society in two areas: one responsible for mobility and international relations, which develop and support all the activities related to the development of international relations and cooperation; and another responsible for projects, which supports the activities of research and development, cooperation and service provision.

Regarding third mission, it seems evident the concern of universities with this process, but it is less evident, mainly in University C, its inclusion in the QM policy and the QM system as a whole.

### Support processes

In University A, support processes are described in the Manual of Procedures. Moreover, the operational body for quality develops systematic internal audits of the different services, in order to monitor, control and promote their efficiency. In 2011, the university has developed a pilot experiment integrated in the QM system, which is based on customer satisfaction surveys of the different services of the university.

In University B, the Strategic Plan and the Action Plans of each service are built taking into account the Quality Plan of the university. Then, the annual self-assessment reports from the different support services analyse if the proposed goals were achieved and reflect on those results and develop a SWOT analysis of the services with suggestions for improvement.



In University C, it is established that opinion polls to users of different services of the university must be developed, namely opinion polls to students regarding the conditions and services offered by the university, and to teachers regarding their working conditions and the functioning of the university. However, these goals are not yet part of the QM system.

It is also worth noting the emphasis on internationalisation, which is also a support process stressed by the A3ES standards. All the universities created specific structures responsible for the development and support of all the activities related to the development of international relations and cooperation.

Similarly to what happens with third mission and even research and scholarship, the support processes do not seem to be entirely integrated in the overall QM system, particularly in University C. However, QM policies seem to be boosting this integration.

### Organisational level: from the course to the institution

With regard to the different levels and units of the universities, the definition of the QM policy is mostly developed by top management and governance bodies of the institution, and consequently the lowest levels are rarely involved in the process. Instead they are only called to participate in the QM implementation process. Thus, concerning the quality planning, the universities follow a top-down logic.

In practice, if we analyse how the QM systems of the universities assess the courses and the programmes, we observe that they follow a bottom-up strategy, since the assessment starts at the course level and ends at the institutional level. As we have seen above, the process is rather similar in the three universities, and all the levels intervene: i) first the course level, through the results of the surveys answered by students and then through the reports developed by academics about the courses; ii) then the programme level, through the reports developed by programme directors; iii) then the basic unit level, through the reports developed by unit directors about their unit; iv) and finally the institutional level, through the analysis done by institutional bodies, such as pedagogic and the scientific councils, with regard to the course, the programme, the basic units and the institution.

In this respect, the different organisational dimensions seem to be articulated, mainly concerning the teaching and learning process. Here, the different roles for the different organisational levels with regard to the assessment of courses and programmes are well defined in the different documents, mainly in the quality manuals.

Universities do not exclude the possibility of certain levels, units and services implement their own systems or complementary systems for QM, provided that they are articulated with the quality plans, in order to avoid the unnecessary duplication of procedures.

### Quality management principles: the integration of different principles

The QM policies integrate the QM principles, some more clearly than others, though.

The three institutions acknowledge their **focus on students**. The main costumers are the students and the policy of the universities aims to identify their expectations and needs.

The top management bodies have a crucial role in the definition of the QM policy of the universities and in the promotion of a quality culture. **Leaders** in the three universities are the driving forces of the QM policies. For example, in University C, and similarly in the other universities, those responsible for QM at the top management level, are “responsible for the definition and communication of the strategic planning of the activities, for the presentation of the program for quality, the creation of structures and procedures for continuous improvement, for the definition of responsibilities for the promotion of quality, and for the



integration of the quality processes in the strategic plan of the university”, in order to assure the involvement of all the academic community in the QM process.

The policy for QM promotes the *involvement of people* in the QM processes of the university. The need of the involvement of the different internal stakeholders is highlighted in different documents. The policy for QM in the three universities emphasises the participation of the most relevant internal stakeholders (teaching and non-teaching staff, and students) in its processes of strategic planning. Globally, they participate in government and advisory boards and also in different evaluation exercises, as the evaluation of the teaching and learning processes and of the services to support students, in the case of the students; or self-evaluation and pedagogic evaluation, in the case of the teaching staff.

The activities and related resources of the universities seem to be managed as *processes*. For example, University A clearly defines its different processes and the interaction between them. It defines the “macro processes (government, teaching, R&D, social responsibility, internationalisation and resources), the nuclear processes (teaching, research and technology transfer) and the support and management processes, which are directly connected with the management, and support the macro and the nuclear processes”. Moreover, one of the focus area highlighted in the Strategic Plan is the one related with “processes and quality”. In this context, University A, but also the others, systematically define the activities necessary to obtain a desired result; analyse and measure of the capability of their key activities; identify the resources and mechanisms that will improve their activities; and evaluate the role of internal and external stakeholders.

Overall, the universities seem manage their quality in an integrated way regarding the quality management principles, despite the specific policies and procedures of some of the basic units in particular aspects. However, since the different processes are integrated differently, we cannot state that the universities are managed as a *system*. As we have stated before, teaching and learning is the most developed process and the other processes, despite being important, are less developed and less integrated in the QM system.

The QM policies of the three universities are clearly based on the *continuous improvement* principle. The QM policy in University A highlights that the QM system calls for cyclical revisions of the results concerning, not only teaching and learning but also the institution as a whole, in order to control the accomplishment of its main goals. University C defines the QM policy as “a continuous process of evaluation moments from the institution, and its different units, programmes and people, aiming at the identification of the areas which need intervention, and at the continuous improvement”. Moreover, University C highlights the role of the operational and the strategic QM bodies, namely in monitoring “the level of development of the quality procedures in the different units and in the university as a whole; the effectiveness of the information system and the surveys; the accomplishment of the deadlines; the reports produced by the units and the services”.

The universities define that the different QM structures must be important information sources for *decision making*, supporting the decision making process of management bodies. The QM policy of University B, like the others, states that the systematic collection of perceptions of various actors not only through surveys, but also through practices of structured reflection enables the collection of quantitative and qualitative indicators essential for reflection and continuous improvement throughout the university. Also the different reports and the subsequent analysis, evaluation and discussion developed by the different units and services, have data which is used to inform decision making, and to adapt, correct and improve practices inside the universities.

The policy for QM emphasises the participation of the most relevant *external stakeholders* for the university in its processes of strategic planning. However, it is not clear that these relationships are monitored by the QM system.

Globally, all the QM principles seem to be included in the QM policy of the universities, with the exception of the principle of system approach and the principle of mutually beneficial supplier relationships.

### Integration of quality management in the global management context

QM seems to be, in the three universities, integrated in the broader management and governance framework of the university. QM is defined as part of the global strategy of the universities. There seems to be an articulation between the QM bodies and the top management bodies of the universities, mainly through the presence of top managers in the QM bodies. In addition, the QM policy emphasises that the results from the QM system should be used as tools for strategic management of the universities to insure that the results of the assessment in the different processes and areas of the universities are important tools to inform the decision making process.

In University A, QM is part of the strategy of the university since it is defined in the Strategic Plan as one of its main areas, and the Activities' Plan defines actions, methodologies, goals, monitoring elements and competencies for the different bodies and services, in order to promote the quality of the different areas and services of the university. The QM bodies are also articulated with the top management representatives.

In University B, the Quality Manual states that the QM system is interconnected with the governance and coordinating bodies, since the relationship between them is essential to assure that the QM system has the ability to function satisfactorily and to facilitate the QM processes, while ensuring adequate support to strategic planning at various levels of responsibility. Moreover, the information produced by the QM system is a tool for strategic management, since through the reports of the different units, the responsible at the institutional level can analyse whether the goals of the Quality Plan are being achieved and whether it is necessary to adapt the strategic and operational goals.

In University C, the importance of quality and of its integration into the management processes is emphasised in the Activities' Plan, which is by its turn articulated with the QM system of the university. In addition, the management and governance structures are engaged in the definition of the QM policy and in assuring that all the internal stakeholders are committed to the goals for QM. In this context, and as observed above, the Rector is responsible for the presentation of the program for quality, the creation of structures and procedures for continuous improvement, the definition of responsibilities for the promotion of quality, and the integration of the quality processes in the strategic plan of the university.

## Conclusions

Our research aimed to understand whether the QM policies of universities are integrating their main processes, their organisational levels and the different QM principles, and ultimately whether they are being integrated in the broader management and governance framework of the universities. To answer our research questions, we analysed different documents of three Portuguese universities. These universities are paradigmatic cases, since they were the first to have an internal QM system certified by A3ES.

The results show that, globally, the universities have an integrative policy for QM. Furthermore, QM seems to be part of the overall management and governance framework of the universities. Thus, our case studies, analysed from the perspective of their QM policies, seem to follow to a large extent the trend for integration of QM in higher education

emphasised in the literature (Manatos, et al., 2015; Rosa & Amaral, 2007; Srikanthan & Dalrymple, 2002, 2007).

There are not significant differences between the three universities. They naturally present singularities regarding their QM policies, but they are generally similar, concerning the levels analysed here. We cannot forget that these universities have applied for the certification of their QM systems, following similar patterns, standards and guidelines. It is not surprising that the universities are developing their QM integrating these levels and dimensions, since most of them are those they must fulfil in order to have their QM systems certified by A3ES, and benefit from a light-touch review of their study programmes (Cardoso, Rosa & Teixeira, 2015).

Notwithstanding, it is worth underlining the underdevelopment of the QM policies of University C, mainly regarding the processes level and the weak integration of research and scholarship, third mission and support processes in the QM system. This underdevelopment seems to be linked, according to the A3ES report, with the absence of the Pedagogical Councils, which are statutorily established bodies responsible for the vertical coordination of the system regarding teaching and learning. This vulnerability in the Pedagogic Councils seems to be an important obstacle to the effectiveness of the QM system.

Several efforts are being made to develop QM systems in compliance with national and European standards. In this respect, universities created operational bodies responsible for the coordination of their QM systems, as well as strategic bodies more directly linked with strategic management. This is in line with previous studies based on the analysis of both self-assessment and external reports on the internal QM systems of universities in Portugal (Cardoso, et al., 2015; Tavares, Sin & Amaral, 2015). One of the most important strengths of internal QM systems is related to aspects such as the existence of a policy, structures, regulations and tools for QM, denoting more concern with structural elements and formal procedures (Tavares, et al., 2015).

However, there are levels and particular dimensions still in partial or even insufficient stage of development. This is also not surprising since all the QM systems are relatively recent and were only certified by A3ES in 2012.

Regarding the processes level, the QM policies of universities have a particular emphasis on teaching and learning, putting the other processes in second place. In fact, the universities have proper structures to assess research and scholarship, third mission and support processes but it is not always evident that these different structures are integrated in the QM system. Notwithstanding, the audit model of A3ES which includes all the processes of higher education seems to be playing a major role in driving universities to gradually integrate research and scholarship, third mission and support processes in their QM systems.

With regard to the different levels and units of the universities, the definition of the QM policy follows a top-down logic, being mostly assured by top management and governance bodies of the institutions. The procedures for the assessment and monitoring of the different processes follow in turn a bottom-up strategy, starting at the course level and ending in the institutional level. Moreover, there seems to be a good articulation between the different organisational levels mainly regarding the QM policy for teaching and learning.

According to the A3ES reports, the bottom-up approach enables the continuous analysis of the results and the decision making process, and consequently the improvement of the different levels of the organisational structure. The analysis of the results by different basic units (departments and schools) also enables them to identify the needs for improvement or reinforcement of the standards and integrate them in their activity plans. In addition, the bottom-up approach, where each organisational level rule and act on the reports which are produced by the previous levels, may mitigate situations which only aim to be in conformity with established procedures and foster a proper reflection on the processes under review.

Regarding the QM principles, the QM policies of universities seem to approach most of them. Nevertheless, some principles are less integrated. The principle of system approach, assuming an articulated and holistic approach to the different processes of the universities, is compromised since the QM policy is mostly focused on teaching and learning and less on the other processes. Regarding the principle of mutually beneficial supplier relationships, the universities emphasise the importance of the relationships with external stakeholders but seem to fail to document the monitoring of those relationships and to integrate them in the QM system. The study which analyses the external reports about the internal QM systems of Portuguese universities also reaches the same conclusion, signalling the participation of external stakeholders as a weakness of those systems (Tavares, et al., 2015).

Analysing our results in the light of the new QM principles (ISO, 2015), we may state that the gap related to the principle of system approach disappears, since the new QM principles do not consider it. However, the new principle of process approach states that the activities of the organisations should be understood and managed as interrelated processes that function as a coherent system (ISO, 2015). Thus, in the light of the new QM principles, the gap regarding the idea of a holistic and integrated system remains.

The next stage of our research will analyse QM practices in universities, based on the data collected in interviews with some of their key actors. Thus, after understanding how universities are developing their QM policies, we must understand how these policies are being implemented and whether there are gaps between the QM policy and practice. The research presented here is part of a wider research project where we intend to study how QM is actually being implemented in universities, by interviewing academics, non-academics and students from different scientific areas, with different involvement levels in the internal QM systems and with different hierarchical positions in the organisational structure of the universities.

In future work, it would also be interesting to understand what is happening in other Portuguese universities, since this work presents the results from three paradigmatic cases only.

The experience of the studied three paradigmatic cases can inform the development of quality policies in those universities where QM might be less developed. In addition, for the studied universities, the identification of possible shortcomings in their QM systems may help them overcome them.

**Keywords:** Quality management, Integration, Higher Education, Quality Policy

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