

5<sup>th</sup> World Conference on Educational Sciences - WCES 2013

## Assessment of research quality in higher education: contribution for an institutional framework

Ana Paula Cabral \*, Isabel Huet

*Research Centre "Didactics and Technology in Education of Trainers" - CIDTFF*

*Laboratory for the Evaluation of Educational Quality*

*Department of Education*

*Universidade de Aveiro, 3800-193 Aveiro, Portugal*

---

### Abstract

The past twenty years have seen a remarkable rise in the measurement of the impact/ cost-benefit and value-for money of research outcomes. The implications for knowledge construction, higher education institutions and researchers are massive. This paper presents a proposal for addressing the question —*how can institutions* evaluate and monitor the quality of research in order to promote research excellence? The present study combines a strong documental analysis of major reference frameworks that are/were used across European higher education institutions with data analysis of a case study developed in the UK about the perceptions and recommendations of the main intervenients in the last Research Assessment Exercise (RAE). The dimensions and indicators identified in this study will contribute for the design of the *Institutional Research Quality Assessment Framework that will* be used in a research centre at the University of Aveiro. We provide examples of processes and practices of how institutions can develop internal evaluation exercises. We argue for an integrated/integrative approach where the basic principles of quality are identified, openly discussed and developed in order to reinforce the identity and promote the *empowerment and engagement* of researchers in the process of research assessment.

© 2013 The Authors. Published by Elsevier Ltd. Open access under [CC BY-NC-ND license](https://creativecommons.org/licenses/by-nc-nd/4.0/).

Selection and/or peer-review under responsibility of Academic World Education and Research Center.

*Keywords:* research quality; assessment; frameworks;

---

### INTRODUCTION

With the arrival of the Bologna process and the Lisbon Agenda, higher education has seen the introduction of more market-type mechanisms and types of governance based on concepts as accountability or governance gradually replacing the traditional focus on state control and academic collegial governance.

Institutions are willing to increase their capacity and engage in the production of useful knowledge through consumer driven competition and greater institutional autonomy although state control has assumed new means of system oversight and performance-based steering. Additionally, new funding arrangements at the institutional level

---

\* Corresponding author. Tel.: +351 234 370 353/234 370 352; fax: +351 234 370 640/234 370 219  
*E-mail address:* [apcabral@ua.pt](mailto:apcabral@ua.pt).

have changed the way higher education institutions perceive, produce and assess their value (Cabral & Huet 2011, Cabral & Huet 2012). Brew & Lucas (2009, p.16) have even argued that “the cumulative effect of these changes, conceptual and practical, has been to promote the reintegration of ‘academic work’ (...) by dissolving the conventional distinctions between research, teaching and the other elements within the missions of universities”.

These reforms are in general in line with attempts to strengthen the strategic capabilities of higher education institutions in order to cope with the demands of highly complex and demanding processes for assessing the quality of their mission: to be excellent and relevant (in teaching and research), entrepreneurial and caring (in the approach to students and communities), competitive and collegial (in dealing with other knowledge providers) and local and international in focus (in teaching and research)(ESF 2010). Research in particular, has become one of the most rigorously and consistently evaluated sectors. However, determining the criteria for assessing quality requires a deep understanding of the context, its characteristics, limitations, constraints and implications, and implies the design of well sustained frameworks referred as ‘référentialisation’ (Figari & Tourmen 2006) embed in theoretical, normative or even empirical studies (Huet, Cabral & Costa 2012).

At an institutional level, there is a need to design flexible and efficient tools to adapt to the different higher education contexts and to the growing complexity of disciplinary approaches to research to evaluate, monitor and promote the quality of research (Moed 2011). Furthermore, we intend to portray the development of a case study based on the following guiding question: What are the dimensions/criteria/indicators for assessing quality at an institutional level? The aim is to build an evaluation framework to be tested and implemented at the *Research Centre Didactics and Technology in Education of Trainers* (CIDTFF - University of Aveiro, Portugal).

#### ***Multidimensional Research Assessment Matrix: a reference framework in the European context***

In response to the demand to assess the quality of research produced across Europe, and taking into account this diversity, the *Multidimensional Research Assessment Matrix* (AUBR 2010) describes the objectives, procedures and steps for the development of a multidimensional methodology to enable institutional benchmarking, contribute for the improvement of research quality and for the development of a comparative assessment of European institutions. The intention was to capture more dimensions of academic work and identify the types of measurements of the quality of university-based research, take stock of the main methodologies in use and identify data requirements for a new multidimensional approach. Its aims are associated with allocating resources, driving research mission differentiation, increasing regional/ community engagement, improving research performance, assessing value-for-money or cost- benefit of research, encouraging international co-operation and increasing multi-disciplinary research (AUBR 2010). In the scope of the present study, this multi-dimensionality, emphasis on diversity, flexibility and place for complexities of institutions and dimensions of academics' work were the key factors used for designing our conceptual reference framework.

#### ***Research Assessment Exercise (UK): a reference research assessment system in Europe***

One of the international research assessment systems that has been able to “find a way of assessing the quality of research and then linking that quality judgment to funding in a way that commands the confidence of the higher education sector” (AUBR 2010, p.126) is the UK’s *Research Assessment Exercise* (RAE). Many in-depth analyses of the evolution of the UK’s national research evaluation system have led to the conclusion that “it represents one of the most institutionalised forms of research evaluation in the OECD economies” (Barker 2007, p. 3).

The system has been restructured over the last three decades and tends to be open and most of the aspects of the methodology are in the public domain and under constant consultation and discussion. It is an ex-post informed peer review system and its main purpose is to produce quality profiles based on: clarity, consistency, continuity, credibility, efficiency, neutrality, parity and transparency (HEFCE 2008). It was constructed around three quality

criteria: rigour, originality and significance, and peer review reading-based evaluation is its key characteristic. According to the European Commission's Expert Group on Assessment of University-Based Research about the UK's system, to "find a way of assessing the quality of research and then linking that quality judgment to funding in a way that commands the confidence of the higher education sector" (AUBR 2010, p. 126).

We intend to review some of the data collected so far to work as the background for the development of a case study based on the development of reference criteria, quality indicators and monitoring tools for assessing and promoting quality at an institutional level. The outcome of this study will allow the development of strategies, the identification of the research profile and research mission, stimulate productivity and innovation, create a quality culture, allocate resources, promote international cooperation and multidisciplinary research. The guiding question is: What are the dimensions/criteria/indicators for assessing quality at an institutional level?

## METHODOLOGY

This study has drawn on two different sets of data: documental analysis (reference literature on the topic, European and international guidelines, research assessment matrices and frameworks), already presented in the two previous points and a case study developed in the UK about the *Research Assessment Exercise* (RAE) (case study 1) concerning its structure from the perspective of, literature review and critique and the auscultation of the perspectives of the subjects based on their experiences and perceptions. The sources of the empirical data for the development of this case study were semi-directed interviews conducted with two members from the UK's last RAE panels (2008), two institutional representatives (a world-leading research-intensive and research-led teaching approach institution (education and social sciences) and a teaching-led /research informed institution) and two senior researchers (experts in the area of educational research). The respondents were chosen according to their profile aiming to include different types of roles in the assessment system and different types of institutions with different research drive approaches and research performances. The data collected allowed the design of a set of good practices and recommendations to be used at an institutional level.

## Data and discussion

The data analysis was achieved through the combination of the matrix multiple wide-scope dimensions of intervention with the individual approaches, bearing in mind the contextual characteristics of the UK's national system. The major outcomes of this empirical study (case study 1) allowed the collection of a set of good practice/recommendations at several levels of intervention.

The development of this analysis also allowed the definition of the general dimensions and indicators to be considered in the study:

- Research Engagement: to develop tools to identify the researchers'/ research teams' profiles (habits, motivations and expectations, publication behaviours and productivity); to engage researchers and the academic community in a common effort to achieve excellence.
- Institutional Culture: to promote a strong *research culture* and invest in building research capacity and reinforce identity building and participation of researchers in decision-taking.
- Performance, Productivity and Innovation: to define the conceptions and forms of research outputs; create research portfolios, institutional repositories and internal databases for the collection of outputs/ publications, *bibliometric* data, and information about projects, patents, spin-offs, partnerships; to promote collaboration/partnerships and multi/inter-disciplinary (nationally/ internationally).
- Quality, Merit and Impact: to promote a constant and open debate about what constitutes international research, the constraints associated with research communication language as well as the notions of impact and significance; to recognize merit and reward with funding and rely, not only on ranking and benchmarking tools, but also on its research capacity and impact on policy and practice and future developments.

- Resources: to plan *strategically* at all levels in the institution (definition of its research identity and areas of strength/differentiation); to use peer review as a mechanism for quality control and the basis for the development of internal assessment where all the intervenients contribute for the regulation and control of the system; to create dedicated structures to invest in rigour, promote moderation and prevent “game playing”; to develop tools and communication channels to enhance innovation and creativity.

- Sustainability and Support: to promote the *highest quality of research*, with a clear emphasis on training (research skills, publication and peer review); to invest and support young researchers and make the research career attractive.

### Further work

The general guidelines presented above will be the starting point for the development of ‘case study 2’ based on an institutional approach at the *Research Centre Didactics and Technology in Education of Trainers* (CIDTFF, University of Aveiro, Portugal). The ultimate aim is to build an evaluation framework at an institutional level to be tested and implemented. The main goal is to identify the specific guidelines for an internal monitoring and assessment of quality among researchers from the same research centre and enhance the quality of research by using appropriate and contextualized tools and approaches. The design of this framework will contribute for a deeper understanding and conceptualization of research quality bearing in mind different perspectives and putting institution managers and researchers on the centre of the process of quality development. The engagement of the different stakeholders is then essential to promote a ‘quality culture’ inside institutions. We argue for an integrated/integrative approach where the basic principles of quality are identified, openly discussed and developed in order to reinforce the identity and promote the *empowerment and engagement* of researchers in the process of research assessment. We hoped to bring some insights about institutional intervention and stimulate further research inside institutions and researchers.

### Acknowledgements

This research study was supported by a post doctoral grant (SFRH/ BPD/ 69489/2020) from Fundação para a Ciência e a Tecnologia (FCT Portugal). In addition, we would like to thank the support of Research Centre “Didactics and Technology in Education of Trainers” – CIDTFF (Laboratory for the Evaluation of Educational Quality – LAQE, Department of Education - University of Aveiro, Portugal).

### References

- AUBR (2010). *Assessing Europe’s University-Based Research*. European Commission - Expert Group on the Assessment of University-Based Research – DG Research.  
<http://ec.europa.eu/research/era/docs/en/areas-of-actions-universities-assessing-europe-university-based-research-2010-en.pdf>
- Brew, A. & Lucas, L. (2009). *Academic Research and Researchers*. Society for Research in Higher Education/Open University Press.
- Cabral, A.P. & Huet, I. (2012). Contributions for innovative institutional research quality assessment practices and processes. *Procedia - Social and Behavioral Sciences*, 47, 1109-1114. doi: 10.1016/j.sbspro.2012.06.787
- Cabral, A.P. & Huet, I. (2011). Research in Higher Education: the role of teaching and student learning. *Procedia - Social and Behavioral Sciences*, 29, 91-97. doi:10.1016/j.sbspro.2011.11.211
- ESF - European Science Foundation (2010). *EuroHESC Higher Education and Social Change*. Strasbourg: European Science Foundation.
- Figari, G. & Tourmen, C. (2006). La référentialisation: une façon de modéliser l’évaluation de programme, entre théorie et pratique. Vers une comparaison des approches en France et au Québec. *Mesure et Evaluation en Education*, 29, 5-25.
- Higher Education Funding Council for England (HEFCE) (2008). *Research Assessment Exercise 2008: the outcome*. Bristol: HEFCE.

- Huet, I., Cabral, A.P. & Costa, N. (2012). Evaluation as a process to enhance the quality of teaching, learning and research in higher education. In M<sup>a</sup> Teresa Ramiro, M<sup>a</sup> Paz Bermúdez & Inmaculada Teva (Comps.) *Evaluación de la Calidad de la Investigación y de la Educación Superior*. Santiago de Compostela: Asociación Española de Psicología Conductual (AEPC) (in press)
- Moed, H. (2011). Research Assessment 101: An introduction. *Research Trends*, 23.