INSTITUTIONAL MANAGEMENT OF RESEARCH IN HIGHER EDUCATION: STRATEGIES TO IDENTIFY QUALITY CATEGORIES

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ABSTRACT

A worldwide tendency seems consolidated in this new century: the role of scientific research and innovation in the knowledge society. Taking Brazilian Higher Education (HE) into account, this study aims to describe and analyze strategies to identify quality categories of institutional management of research. Generating this kind of knowledge is part of a large inter-institutional research that looks toward quality indicators.

Different strategies were used to identify quality categories: study results, government policies, content analysis of documents of a thematic event and focal discussion. The categories identified involve production of knowledge and result of indicators convergences: institutional policies and decision system; institutional social responsibility; promotion and funding policies and programs; information management and socialization of knowledge; academic and professional qualification and sustainability; academic, social and economic impact of research and technology transfer. The conclusions signaled the recognition of scientific research as a way to improve quality of life and societal relationships. Hopefully all the sources of quality categories indicate the importance of quality criteria rooted in ethics and human respect.

KEYWORDS: Higher Education, Evaluation and Quality, Institutional Research Management,

I. INTRODUCTION

A worldwide tendency seems to be consolidated in this first decade of the new century: the remarkable role of scientific research and innovation in the knowledge society. This tendency is growing together with the phenomena of globalization and the internationalization of Higher Education (HE). The consensual perspectives and convergences concerning this trend, besides being characterized as a facet of HE internationalization, are accompanied by tensions and questions. On the one hand, scientific research is improving quality of life and is used to build better social relationships. On the other hand scientific research is only submitted to economics criteria, guided by the principles of market and goods production.

Considering these aspects and taking into account the character of Brazilian HE institutions this paper aims at describing and analyzing strategies to identify quality categories related to institutional management of research. The study is directed at the generation of knowledge, as part of a large inter-institutional research developed by RIES, Rede Sul Brasileira de Investigadores de Educação Superior- and directed at HE quality1.

The following principles are present throughout the analysis: a) quality has many meanings and connotations because behind it always lies a logic that reflects evaluative postures which impregnate the HE institution in its multiple facets, including management; b) the logic underpinning quality distinguishes principles, guidelines, management strategies and categories (SOBRINHO, J.D. & RISTOFF, D, 2005).

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Inter-institutional research is aimed at developing quality indicators for Brazilian HE, supported by CAPES (Government Agency responsible for Coordination, Improvement and Further Development of Educational Professionals) involving four large public and private Brazilian Universities. RIES develops partnerships to generate, validate and disseminate knowledge through publishing (electronic and press) scientific and technical production.
The management of HE institutions is understood as a part of governance and administration, as well as policies, planning and evaluation. Management involves strategic decisions and reflects models of relationship between institutions/system of HE on the conceptual level (documents) and/or practices of the decision making process which reveal a prevalent rationality. The underlying concept of management involves institutions where education takes place and its purpose(s), comprise assumption about research/ teaching/ extension and principles of organization (FRANCO, 2007). Management requires professional knowledge and, especially, a strong and competent managerial core as a condition of sustainability (CLARK, 2003).

II. STRATEGIES TO IDENTIFY MANAGEMENT QUALITY CATEGORIES

Several studies were used to identify categories for the evaluation of quality of institutional management of research as a way to generate knowledge: results of previous studies; indications of Higher Education and Science and Technology public policies; indications of documents presented in a special session of a specific event on the theme; focal discussion by specialist regarding the results of the content analysis of the documents.

Previous Studies

The previous studies used as a source of quality categories was based on diversified researches including the ones of RIES and GEU (MOROSINI & FRANCO, 2009; TIGHT, 2003; KUH, 2008). Tensions related to quality in university governance and administration at the institutional and system level were identified by FRANCO (2009). The author analyzed international studies, like the ones presented at (EAIR, 2008) as well as Brazilian ones (RIES, 2009). The results showed system tensions linked to international inception, HE expansion through academic mobility, globalization and local identity are key concepts. At the institutional level, tensions are linked to democratic administration, faculty development and work and institutional innovation. They are permeated by public – private questions.

Brazilian Policies on Higher Education Evaluation and Science and Technology

One of the sources of categories to evaluate quality in institutional management of research is government documents and strategies linked to Higher Education evaluation and Science and Technology. The following sources are considered: Inep and SINAES - the documents and strategies of Inep2 - Brazilian National Institute of Research- are an important source to identify quality categories. The priorities under Inep responsibility are the organization and maintenance of the educational information and statistics system; the planning and directions of systems development and projects of educational evaluation aimed at establishing performance indicators for education in the country. It coordinates the evaluation process of undergraduate programs, in accordance with current legislation, defining parameters and proposing criteria and mechanisms for HE, as well as the joint actions of institutional, technical and financial assistance, bilateral and multilateral national, foreign and international cooperation.

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2 Inep -Instituto Nacional de Estudos e Pesquisas Educacionais Anísio Teixeira- A national federal institute connected to the Ministry of Education. Its mission is to promote studies, research and evaluation of the Brazilian Educational System. It is aimed at subsidizing policies for formulation and implementation in the field of education based on standards of quality and equity, as well as at producing reliable information for governance, administrators, researchers, faculty members and the community.
The National System of Higher Education Evaluation (SINAES) is comprised by institutional evaluation (internal and external evaluation every three years), undergraduate programs evaluation (in loco by committees) and Committee of Evaluation. To generate its data and educational studies, Inep collects statistical data and performs evaluative analysis at all levels and modalities of education. Regarding the assessment of knowledge production and research, the SINAES assessment base uses the following indicators: a) consistency between the fundamental commitments of the institution, b) the way research groups are organized in IES, the needs of laboratories, libraries and other basic structures for the promotion of research, d) training policies for teachers and researchers, and the interest in exchanges and cooperation between institutions f) the relationship with industry and other segments of society; g) relationships with regional and international scientific associations.

Technological Innovation Law - In the context of the various government policies and strategies that facilitate the production and assessment of research in HE, the Law of Technological Innovation is a landmark. It regulates the relationship between universities and businesses by encouraging investment in innovation and scientific output by combining industrial activity. This law is essential to HE because it provides an opportunity for the creation of innovation centers and technology, responsible for the development and emergence of companies, product development and patent application, all of which potentially generate processes of change in the academic community and especially in business. The Law on Innovation, allows grants for development process rooted on establishing partnerships between universities and companies to achieve advances in production, technological innovation and acceleration of patents.

CNPq - Brazilian National Council for Research – Two major government actions for the identification of quality categories emerge from the National Council of Research: the Lattes platform and the Brazilian Directory of Research Groups.

The Lattes Platform is a database with free access that provides knowledge on the training and career development process of teachers. Access to curriculum vitae of faculty members, researchers and students provides indicators of scientific and technological production and contributes to the implementation of management policies in HE. The evaluation of graduate Programs is centered on research fields and lines; curricular structure, functioning and infrastructural conditions, faculty members, students and academic production. Production of knowledge has been the decisive evaluation criteria of Graduate Programs. The articulation between the Platform database and other sources allows access to a vast collection of scientific information.

Also with regard to institutional mechanisms for organizing research production at universities, the Directory of Research Groups in Brazil (DGPB), CNPq, plays a crucial role in providing information about research activity in this country. The DGPB maintains a current base, with information updated continuously by the group leaders, researchers, students. The information in this database relates groups constituted by human resources (researchers, students and technicians), research lines and specialized knowledge, sectors involved, scientific, technological and artistic standards of interaction with the productive sector. It allows describing the limits and the profile of scientific-technological research in

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3 SINAES – National System of Educational Evaluation was created an defined by Law n. 10.861 April 14, 2004. Sinaes integrates the main policies on evaluation of higher education of the Ministry of Education.

4 The Technological Innovation Law - Law n. 10.973 December 2, 2004 rules on incentives to innovation and scientific and technological research in the productive environment; it provides other measures, criteria, incentive, innovation, scientific and technological research, cooperation, partnership, university, scientific institution, private enterprise, scientific development, technological development, industrial development.
Brazil and has been used by the scientific and technological community in general and by the CNPq advisory committees, in particular, as a tool to guide their activities.

Documents of an event on Higher Education quality

The documents selected to be analyzed were part of the program of the event “Community Voices” in which several experts from different subject areas and types of HE Institutions present their views concerning Higher Education quality. The event was organized in different sessions directed toward governance and administrative areas of Higher Education Institutions. The areas were selected according to reliable international and Brazilian specialized literature. The event was promoted by three different groups: the RIES 5, – South Brazilian Network of Researchers in Higher Education; the Study Group on University - GEU at the Federal University of Rio Grande do Sul (UFRGS) , and the InovAval Group – Research Group in Innovations and Evaluation (UFRGS). One of the sessions was selected as the source of the documents (papers and analytic comments) to be analyzed: the session on quality in institutional management of research. The methodology applied to identify categories of quality in institutional management of research was content analysis (GRAWITZ, M., 1967) using the central points and thematic convergences to identify categories.

The objective of RIES is to configure higher education as a field of research production at Institutions of Higher Education. It also aims at clarifying academic production in the field of knowledge and developing conditions for production, for consolidating the researcher networks and to identify quality indicators to evaluate Higher Education 6.

Focal Studies on the results of content Analysis

The use of focal groups follows the understanding of Gondim (2002) which means the search as a technique that collects data through Group interactions in discussions about a topic suggested by the researcher. The study came from consecutive meetings with experts to discuss the results identified in the review of previous content analysis of documents on quality of institutional management of research.

The group comprised of five experts from different HE institutions suggested conceptual adjustments and redirected some theoretical and methodological points looking for categorical refinement. Reflections were also stimulated by taking themes based on national and international documents which indicated the adequacy of a development approach seeking new categories. In fact, the focal group acted as a critical peer review and was at the heart of the knowledge generation and validation process.

III. AN OVERVIEW OF QUALITY CATEGORIES RESULTING FROM DIFFERENT STRATEGIES

The categories identified result of convergences of indicators and are sources for development and classification of new ones, as such related to the production of knowledge:

• Institutional Policies and Decision System related to Research:

  5 RIES- founded in 1999. In 2006 it was chosen as a Center of Excellence in Science and Technology of the State of Rio Grande do Sul in Education (Núcleo de Excelência em Ciência e Tecnologia Estado do Rio Grande do Sul na área de Educação) by CNPq-National Council of Research and FAPERGS-Foundation of Research of RS State. In 2007 it was chosen as the CAPES/ INEP Observatory of Education to develop studies on quality indicators in HE.

  6 CNPq – Conselho Nacional de Desenvolvimento Científico e Tecnológico; and CAPES/MEC – Coordenação de Aperfeiçoamento e Capacitação de Pessoal de Nível Superior are the main development agencies for Science, Technology and Innovation in Brazil; and FAPERGS – Fundação de Amparo a Pesquisa do Estado do Rio Grande do Sul performs development at state level. INEP/MEC – Instituto Nacional de Estudos e Pesquisas Educacionais Anísio Teixeira of the Ministry of Education fosters analytic production on education in Brazil.
knowledge as university mission; organizational and structural space for decision making and implementation of decisions including central and units governance and administration with participation of the academic faculty as well non-academic but high specialized professionals (boards, units, departments)."Strengthened steering core"(CLARK, 2003); participation of stakeholders, decision groups on research ethics and technological transfer;

- **Social Responsibility of Higher Education Institution**: culture of research ethics, respecting authorship rights; technology transfer mechanism; policies and institutional activities to know the context - international, national and local; institutional research program oriented towards the community and social problems; innovative research programs to revitalize the HE institution in its social relationships;

- **Policies and programs to improve research** – Financial forecasting; Institutional programs to promote research including policies and strategies to deal with financial constraints, entrepreneurial activities and fundraising programs; scientific initiation program for undergraduate students; diversified funding sources and programs;

- **Information management and knowledge socialization**: means to disseminate information (web sites, periodicals, folders, data bases) on institutional policies and programs, dissemination of national and international pertinent documents, sources of science and technological programs with public and private funding; databases of research approved at institutional level, research receiving funding, scholarships, fellowships, productivity rewards, funded researchers, academic production and mobility.

- **Academic and professional qualification /functional and sustainability**: doctoral degrees, faculty working full time, faculty with time directed to research, number of research groups, distribution of research groups by different fields of knowledge, flexibility to participate in interdepartmental and interdisciplinary research; policies to qualify faculty and other HE professionals; career policies for faculty and professional staff; academic production;

- **Academic, social and economic impact of research and technology transfer**: use of new technologies; building technology transfer mechanisms; outcomes on society; mechanisms to assessment the impact of research on community, businesses, studies for the assessment of impact/outcomes; cooperation and partnerships with different sectors of society.

### IV CONCLUSIONS

The quality of scientific research at HE seems to be influenced by the decisive relationships maintained between scientific practices and practices in the institutional context, such as knowledge transfer, innovation culture and the conditions and mechanisms of social institutions, including government and local and international multilateral agencies.

The following strategies were used as category sources in institutional management of research: results of previous studies; indications of government policies in Higher Education and Science and Technology; content analysis of documents presented by experts in a thematic session of an event and focal discussion by experts on the results of the content analysis of the documents.

The categories identified are related to the production of knowledge and in relation to them indicators could be developed: institutional policies and decision system related to research; social responsibility of HE institution; policies and programs to promote and fund research; management of information and socialization of knowledge; academic and professional qualification/functional sustainability;
academic, social and economic impact of research and technology transfer. Although descriptor statements characterized each category of quality, they simply suggest possible ways as a result of which indicators could be developed and theoretically and methodologically refined. Focal groups, for instance, are considered a means to impregnate the process with critical interlocution, giving a social dimension to the process of knowledge generation. In fact the production of knowledge and scientific research were considered as ceaseless production which gathers social conditions besides theoretical and methodological ones. As such it is not a surprise that categories are viewed as susceptible to change.

It is acknowledged that scientific research is improving quality of life and in some cases it has been used to build better societal relationships. However, all the sources of quality categories, hopefully, pointed out the importance of criteria of quality in management rooted in ethics, justice and respect for people.

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