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LEADERSHIP AND KNOWLEDGE MANAGEMENT: ORGANIZATIONAL CHALLENGES OF THE GRADUATE AND RESEARCH IN A BRAZILIAN FEDERAL UNIVERSITY

LIDERANÇA E GESTÃO DO CONHECIMENTO: DESAFIOS ORGANIZACIONAIS DA PÓS-GRADUAÇÃO E PESQUISA EM UMA UNIVERSIDADE FEDERAL BRASILEIRA

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ABSTRACT

This paper presents a hermeneutic and applied case study carried out to understand the main challenges experienced by administrators of the Pro-Rectory of Graduate Studies and Research of the Federal University of São João del-Rei (UFSJ), in their efforts to consolidate master and doctoral programs. The results showed that main challenges are the absence of actions aimed at the functional qualification of professor holding the position of coordinator of master and doctoral programs, and the lack of regional business support to the research developed in these programs. The data collected suggest that practice of leadership within the organizational unit studied has been driven more by uncertainties and perplexities on the part of these managers than by plans and strategies, which indicates these professionals currently have a more reactive rather than proactive managerial profile.

Keywords: Higher Education Institutions. Challenges of Graduate and Research. University Leadership.

RESUMO

Este artigo apresenta um estudo de caso de caráter hermenêutico e aplicado, realizado com o objetivo de compreender quais são os principais desafios vivenciados pelos gestores da Pró-Reitoria de Pesquisa e Pós-Graduação da Universidade Federal de São João del-Rei (PROPE/UFSJ) em seus esforços de consolidação dos programas de pós-graduação stricto sensu. Os resultados mostraram que os principais desafios são a ausência de ações voltadas à qualificação funcional de docentes para o exercício do cargo de coordenador de programas de mestrado e de doutorado e a falta de apoio empresarial regional à pesquisa desenvolvida nesses programas. Os dados colhidos sugerem que a prática da liderança no âmbito da unidade organizacional estudada vem sendo impulsionada mais em razão de problemas e dúvidas por parte dos gestores do que em razão de planejamentos e estratégias, o que indica que esses profissionais tem atualmente um perfil gerencial mais reativo do que proativo.

Palavras-chave: Instituições de Educação Superior. Desafios da Pós-Graduação e Pesquisa. Liderança Universitária.

1 INTRODUCTION

The main challenges of university management nowadays can be attributed to the growing tension between collegialism and managerialism as models of governance in these organizations (BLASCHKE; FROSTE; HATTKE, 2014; BRADSHAW; FREDETTE, 2009) as well as due to the recent phenomena of massive access to higher education and university entrepreneurship, especially in graduate domain (BERNHEIM, CHAUÍ, 2008; MIDDLEHURST, 2001; YOKOYAMA, 2006).

In this sphere, there is growing pressure for Higher Education Institutions (HEIs) to become what literature (ETZKOWITZ, 2004; GUERRERO; CUNNINGHAM; URBANO, 2015) denominates "entrepreneurial universities", for which these institutions are required to establish partnerships with governments and companies, to ensure an effective transfer of knowledge and technology produced in academia to society and thus a direct contribution to economic and social development.

This fostering of entrepreneurship by governments and companies has encouraged academic competitiveness, both that which occurs between researchers, universities and national systems of higher education, in the expectation that this academic dispute of various dimensions results in the largest number of partnerships between universities, companies and governments and, from this, in research findings with greater impact potential on the economic and political life of nations (IPIRANGA; FREITAS; PAIVA, 2010; YOKOYAMA, 2006).

Academic competitiveness has been underpinned by a flourishing managerialism in university organizations (TINOCO, 2013). The literature (DOUGHERTY, 2016; HICKS, 2012) identifies that the increasing incorporation of performance-based research funding systems adds evidence to the finding that there is, in process, an international movement of deepening academic competitiveness between people, university organizations and countries.

In line with challenges observed worldwide in contemporary university management (MIDDLEHURST, 2001; 2009), there are also some that singular to each HEI and which emerge from unique local demands. With the UFSJ, one of the main objectives that this university organization has at present is to consolidate graduate programs (UFSJ, 2014).

This article proceeds as follows. The next section shows how the literature has addressed issues that is related to the institutional logics (BLASCHKE; FROSTE; HATTKE, 2014) embedded in the organizational structure and on leadership practices existing in both

public and private university organizations and describe the methodological procedures used. The following section analyses the data collected. The last section discusses the implications of our findings and outlines directions for future research.

2 UNIVERSITY ORGANIZATION: COLLEGIALISM AND DEPARTMENTALISM

According to Macfarlane (2016), collegiate organizations can be characterized as those in which their operation is based on consensus as a legitimating criterion both for decision making, power-sharing, and collective accountability. In these organizations, it attenuates the differences in status between employees within the organizational culture and, therefore, they interact relatively equal, sharing aspirations and commitments.

As pointed out by Macfarlane (2007, 2016), such standards contribute to performing the so-called "academic citizenship", defined by him as the set of tasks, responsibilities and academic virtues of teachers and researchers that exist beyond the regular teaching and research activities, such as the actions of evaluation of academic products of co-workers and peers, the participation in examining boards, the orientation of students, etc., which reflect the common obligations of academic professionals around the world to the community that surrounds them, activities that contribute decisively to the consolidation and maintenance of the framework of academic life.

In the Brazilian higher education scenario, an essential characteristic of public university organizations managed by Brazilian federal government and which makes up one of their institutional logic is the so-called "departmentalization" that has shaped the organizational structure of most Federal Higher Education Institutions since the 1968 university reform (MACEDO et al., 2005), dictating how to organize the different university functions and how to conduct the administrative and academic work.

Since its legalization as a university organizational structure in Brazil, the departmentalization has been promoting significant literature on its suitability as an instrument to achieve the traditional purposes of universities, such as academic freedom and the searching for human knowledge unity (GRACIANI, 1982).

According to Fávero (2006), the Brazilian university department has become a space for bureaucratic-administrative allocation of university professors and resulting in an inhibition process to the collective work of knowledge production, resulting in the macroinstitutional focus of the university being left aside in favor of the quest for specific

departmental demands (BORGES; ARAÚJO, 2001).

3 MANAGERIALISM AND KNOWLEDGE MANAGEMENT IN UNIVERSITY ORGANIZATIONS

Neo-liberal reforms implemented around the world over the past four decades have stimulated the growth of studies over the past twenty years on how management practiced in HEIs works (MIDDLEHURST, 2001).

These reforms, whose essential characteristic has been the inoculation of business styles of management and leadership (business-like leadership styles) coming from the corporate world in the governance of universities, have since generated a problem both practical, for the professionals who manage these organizations, and theoretical, by those conducting research on university management.

Given that universities have traditionally been subject to the collegiality in their decision-making processes, literature (BLASCHKE; FROSTE; HATTKE, 2014) points out that the institutionalization of the business-like ideology or typical entrepreneurial administration in universities poses a challenge to the managers of these organizations: to align supposedly opposing principles of governance and collegialism on the one hand, and managerialism and leaderism¹ on the other.

In the Brazilian context, according to Luiz Carlos Bresser-Pereira², the managerialist reformulation of the national higher education system did not occur, at least not because of intentional political activity implemented by the Brazilian federal government (LEITE, 2014). Despite this affirmation of the most important policy maker of Brazilian public management, the literature (SGUISSARDI, 2006; TOURINHO; PALHA, 2014) points out that the clout of New Public Management is a concrete and notorious fact in Brazilian HEIs since 1997, when public universities have had the academic products of their masters and doctoral programs assessed by the Brazilian Ministry of Education (MEC).

Through this evaluation, productivity indexes, benchmarking and ranking criteria among HEIs were merged, thus ensuring the conditions to measure these university

¹ According to Ekman et al. (2018), leaderism refers to any organizational actions focused on developing organizational change agents with a capacity to define agendas and solutions, unify divergent interests, meet the needs of clients and citizens, generate enthusiasm and share values in a HEI.

² Luiz Carlos Bresser-Pereira is a former Brazilian public administrator responsible for the official introduction of managerialist reforms in the country during the first mandate of Fernando Henrique Cardoso's first term as President of Federative Republic of Brazil (1995-1998).

organizations performances and, also, to base their manager's accountability (which was induced in Brazil by the political-administrative influence of the New Public Management)

and by its advocacy of evaluation, audit, accreditation and inspection instruments deployed by

business organizations.

A management tool studied within university management is the so-called "Knowledge Management" (KM), highlighted in the literature (FULLWOOD; ROWLEY; DELBRIDGE, 2013; RAMACHANDRAN; WONG; CHONG, 2013) as a management instrument with a capacity to improve the integration between administrative and academic tasks within HEIs, and to increase the level of researchers integration and to improve the relationship between research centers and the industrial sector.

Sunalai and Beyerlein (2015) state that the literature on Knowledge Management within HEIs shows that implementing formal initiatives in knowledge management contribute to enhance collaboration in research activities, to increase the number of research projects in a university, to improve communication between researchers, and thus to facilitate insights and new ideas regarding possible future research.

According to Dalkir (2005), an adequate definition for the so-called "Knowledge Management" is the following

Knowledge Management is the deliberate and systematic coordination of an organization's people, technologies and processes in order to add value through reuse and innovation. This coordination is achieved through creating, sharing and applying knowledge, as well as through feeding the valuable lessons learned and best practices into corporate memory in order to foster continued organizational learning (DALKIR, 2005, p. 3).

Regarding the theme of coordination and synchronization of the work developed in HEIs, the literature (FULLWOOD; ROWLEY; DELBRIDGE, 2013; RAMACHANDRAN; WONG; CHONG; 2013) notes that, to ensure effective collaboration between employees, it is up to an organization to promote practices and situations that bring them closer daily and, thus, facilitate mutual trust, respect and sharing of information and knowledge relevant to the organization.

4 LEADERISM IN UNIVERSITY ORGANIZATIONS

The literature (BERGAMINI, 1994; NORTHOUSE, 2013) points out that leadership is a relevant phenomenon in the Administrative Sciences, as it is noticed in all processes of organizational change, decision making processes, strategy definitions, communications

between the employees, in delegation, in the convocation of organizational responsibilities, etc.

The differentiation between the concepts of "manager" and "leader" is object of frequent quarrel in the literature. According to Kotter (1990 apud NORTHOUSE, 2013), the management functions differ from the leadership functions: while the primary function of the former is to reduce chaos in organizations producing order and consistency in their dynamics, the leadership function is to produce organizational changes through establish new goals, directions to the organization and also to align efforts, as a driving force to ensure the effective occurrence of these changes.

In knowledge-based and knowledge-intensive organizations such as university organizations, in which knowledge is both their main asset and their main organizational's input and output, the practice of leadership poses a complex challenge, since produce knowledge (via research), transfer knowledge (via teaching) and the provide social services based on research and teaching (via extension projects) makes up the fundamental mission of this class of organization, being the university administrator, therefore, a manager of peculiar assets (MIDDLEHURST; GOREHAM; WOODFIELD, 2009).

This challenge implies additional difficulty for the traditional hierarchical horizontalization that constitutes the typical pattern of relationship between academics (ADRIANO; RAMOS, 2015; BLASCHKE; FROSTE; HATTKE, 2014), which implies that teachers and researchers, from a functional point of view, are been theorized as making up a kind of "community" (CLARK, 1986). That is the reason several authors (ANDRADE; RAMOS, 2015) characterize the figure of the Rector (University President) as a "first among equals" (primus inter pares).

As a result of the high level of freedom and autonomy that academic professionals have in their professional practice in universities, this hierarchical horizontality makes the phenomenon of leadership in university environments not an a priori organizational property, since it doesn't exist in universities fixed or stable roles of both leader and led in the functional relationship of academia professionals1, as opposed to what happens in business organizations (BRADSHAW; FREDETTE, 2009).

In the university context, besides horizontal institutional relationships, decision-making structures that present this same quality also predominate in academia, in the form of the various consultative and deliberative councils existing there (BLASCHKE; FROSTE;

HATTKE, 2014; BRADSHAW; FREDETTE, 2009), which, together with the departmentalization, compete to restrict opportunities for individual limelight, and to distribute throughout the organization the practice of leadership among the multiple administrative-academic units (JONES et al, 2012, 2014), an evidence that makes very complex the nexus between leadership, governance and day-to-day management of these organizations (BLASCHKE; FROSTE; HATTKE, 2014).

According to Orzano et al. (2008), the openness to new ideas and organizational perspectives, the full consciousness about how the work of a collaborator affects that of the others within the organization and the omnipresence of a precise communication, timely and able to accommodate conflicts and simplify feedbacks are initiatives that act as enabling factors of KM and can be termed "organizational leadership".

5 METHODOLOGICAL PROCEDURES

Based on a documentary research that grounded the interview scripts used to guide the getting of information about the managerial experiences of administrators of graduate programs in the University of São João del-Rei (UFSJ), referring their beliefs, values and expectations in relation to the challenges of consolidation these programs, along with the conceptual-theoretical framework outlined in the last section, we developed a single case study, focused on the following research question: What are the main challenges faced by UFSJ managers in their efforts to strengthen Master and PhD programs and how can Knowledge Management contribute to this?

Regarding the sampling applied to this study, we used the so-called "non-probabilistic method of sampling by judgment" (COUTINHO, 2013), in which the elements of the population component of a sample relies on the intentional judgment of the researcher, in a direct relation with the research objectives (FONTANELLA; RICAS; TURATO, 2008).

All "administrative" managers directly linked to the Projects and Qualification Division at the Pro-Rectory of Graduate Studies and Research /UFSJ were interviewed. As for the "academic" managers, we interviewed 16 out of 27 coordinators of graduate programs (*stricto sensu*).

The closure of primary data collected from the group of academic managers occurred in the quality of "sample closure by theoretical saturation" (FONTANELLA; RICAS; TURATO, 2008). That is, at a certain point, the relevant information on the purposes of the

research became redundant, since the collected narratives were highlighting, throughout the process, a common core of fundamental meanings (perceptions, ideas, expectations, beliefs, values, opinions) that the administrators interviewed attribute to the management phenomena, which were enough to answer the specific objectives of the research and, thus, led to the decision to decree the end of the data collection.

6 FINDINGS AND DISCUSSION

This section presents the main themes implied in the set of interviews conducted through the technique of data interpretation called "thematic analysis of content". To illustrate, excerpts from the interviewees' reports were included and coded according to the time order we conducted the interviews.

The narratives collected suggest that UFSJ's professors, when they assume the role of Coordinator of graduate programs, experience a great feeling of doubt about how to manage an organizational unit focused on the specialization of human resources, on the master and doctoral students, and on scientific and technological knowledge.

Several reports collected show that the Coordinators, even those who have already undergone over one evaluation experience by The Ministry of Education still has many doubts about the attributions of the position of master and doctoral program's Coordinator, regarding how to use the information system through which federal master and doctoral programs in Brazil render their accounts, the so-called "Sucupira Platform"³.

The excerpts from the report below, which address issues related to the production of data and information on the programs by academic managers, illustrate how this seems to reflect among them a general feeling of doubt about how to manage a task of paramount importance on duty of accountability placed on these managers by The Ministry of Education, even among those with experience in the function:

[...] Not only me, but the colleagues right here, in the meetings, talk about doubts regarding filling Sucupira Platform. It is something that generates doubts we have to solve alone, by trial and error. It is tough, because we are subject to errors that may even compromise evaluating the master programme, so we feel often apprehensive to do what we need to do [Interviewed no 06].

[...] There was a meeting sponsored by Pro-Rectory of Graduate a few days ago and

^{3 &}quot;Sucupira Platform" is the name of the information system created by the Brazilian federal government to collect data and perform analyses and evaluations on master and doctoral programs in Brazil. The Sucupira Platform is the reference base of the Brazilian National Graduate System.

some issues, in terms of doubt that I had, I could see that not necessarily this has to do with inexperience, like mine, but it also has to do with the great dynamism of the graduate area, with the great amount of changes in norms and with the new policies that are emerging and that are intertwined, mixing, and this caused doubt in the minds of some people and from their speeches it was perceived that they were very sagacious and experienced people, but that even so they were caught in certain bureaucratic entanglements, because it is all very intertwined [Interviewed no 10].

This last excerpt, particularly, is in line with the theoretical justifications commonly found in the literature on Knowledge Management (KM), specially regarding the relevance of formal initiatives in KM within the scope of public administration bodies and entities. For example, Samiotis et al. (2014) seek to justify this relevance by mentioning a series of organizational properties characteristic of public organizations: the fact that this type of organization depends, to work properly, on a series of laws, rules, regulations and judicial decisions; the fact that these organizations need to process am extremely large amount of data and information coming from different governmental document sources; the fact that the application and interpretation of a country's laws is a non-trivial and ambiguous task for public administrators in general, so that a constant updating of knowledge by these managers, to deal with such political-administrative circumstances, represents a condition of effectiveness for any type of national public administration organization, including university organizations (SUNALAI; BEYERLEIN, 2015).

Ramachandran et al. (2013) point out that a strategy for implementing initiatives in CG in the administrative vision of the university management summit seems to contribute to strengthening the willingness of academic professionals to collaborate and share ideas regarding their common activities and responsibilities. This initiative is essential to ensure the necessary conditions for a permanent interactivity between administrative and academic managers, which will contribute to reduce and, at some point, to annul the state of doubt, perplexity and of managerial paralysis that, according to reports, affects many of the academic administrators of the UFSJ in the daily management duties on graduate programs.

The absence of formal training initiatives for academic managers reported from some interviewees allow inferring that there is an insufficient internal communication within the Coordination offices. In addition, the lack of a more careful management attention on the transition processes among Coordinators, given the rotational nature of the position and the brevity of its mandate, has resulted in administrative-academic damage to the graduate programs of UFSJ. The excerpt below illustrates this perception, which is also general among the Coordinators:

[...] I had a certain difficulty when I assumed the Coordination and when I assumed the Vice- Coordination because both I and my colleague who assumed the Coordination at the time had difficulty to have access to situations or processes that were in progress by the former Coordinator. So this transition process, if people are not close, is very complicated [Interviewed no 14].

The literature on university management (BATISTA, 2006; CRANFIELD; TAYLOR, 2008; MIDDLEHURST, 2001) identifies that the typical profile of university managers is that of a qualified professional with training and capabilities in diverse areas. However, such professionals beginning their work in university administrative positions without already having managerial knowledge, when they acquire such knowledge empirically and in a chaotic manner or, in other words, in a non-structured manner. Thus, recurrently in the daily professional lives of these managers, the effective search to determine a direction to master and doctoral programs, as well as to establish changes in the way the programs are conducted, seems to be a provision that always emerges situationally (BOLDEN; PETROV; GOSLING, 2009), from difficulties that arise "suddenly", instead of guided by plans and strategies that establish a previously clear and rational course of managerial action.

From the interviews, we also infer that the theory that attributes to the practice of leadership in educational organizational environments a "distributed" character (BOLDEN; PETROV; GOSLING, 2009) applies to the administrative relationships present in the case studied, the UFSJ's Pro-Rectory of Graduate Studies and Research, given the great autonomy that academic managers interviewed believe to have in the academic management of graduate programs.

This great autonomy of academic management seems to indicate that the organizational conditions that typically structure the university management of most IFES in Brazil, specifically the departmentalism of academic units and the collegialism of academic decision-making processes, contribute to reinforce what we could call "distributivism" of the phenomenon of organizational leadership within UFSJ's graduate programs and its linked units.

The leadership practiced in UFSJ's Pro-Rectory of Graduate Studies and Research seems to be characterized even by what we could call a "distribution by problems" given the practice of leadership seems to arise in the management interactions from chaotic administrative situations experienced in the daily coordination.

The reports shows, therefore, that the relationship between the administrative

managers and academics in the organization studied (UFSJ's Pro-Rectory of Graduate Studies and Research) is not a limelight by a single individual or even of a specific group. The reports suggest seems to be a wide diversity of different interests at stake in each master and doctoral programs existing, each one of them assigning a specific value to certain dimensions of the performance subject to federal government evaluation, such as the intellectual production of researchers and students, the social impact of the master and doctoral programs, etc.

The issue related to the subjective tension between collegialism and managerialism in university organizations, widely addressed and discussed in the literature (ADRIANO; RAMOS, 2015), seems not to make much sense to understand the relationships between administrative managers and academics who work in graduate and research of UFSJ, since restrictions to managerialist practices were not manifested throughout the interviews.

Some situations reported shows, in the sphere of intention and expectation, a concrete yearning for other managerial actions typical of the business sector (i.e., for "managerialist" practices), with evidence in this sense through collect of secondary data. We could see, for example, that a FAQ (Frequently Asked Questions) is under construction on UFSJ's Pro-Rectory of Graduate and Research website to disseminate administrative-academic knowledge to the internal and external community, which is a typical KM tool, showing that there is already a some level of KM provision in this organizational unit.

For this reason, we propose in the following two paragraphs some KM tools whose application can contribute to reduce the generalized state of doubt and managerial perplexity that daily crosses the state of mind of the managers interviewed and to reverse the reactive logic of leadership that predominates in their practices (towards a proactive logic) and, hence, to promote the leadership capabilities of these managers.

"Coaching" actions (a typical KM tool) can confer organizational usefulness to the know-how held by administrative managers and used to, whenever necessary, advise academic managers of UFSJ either of new graduate programs or of old, contribute to the sharing of tacit managerial knowledge that may be decisive to improve the management capacity of graduate programs by the coordinators.

Another KM tool used for the same purpose is the "storytelling⁴", which acts to convert tacit knowledge into explicit knowledge (DALKIR, 2005), a means by which

⁴ According to Dalkir (2005), the so-called "storytelling" is an organizational narrative in which reports of personal experiences experienced by employees who have already worked in certain activities, tasks or processes of interest to the organization are transferred to other members of the organization.

managers of graduate programs can share administrative-academic⁵ knowledge, at once, simultaneously, to several novice managers or beginners in the position of Coordinator of these programs, contributing to reduce uncertainties and perplexities in daily professional lives of the coordinators of these programs.

However, not only have organizational issues been challenging them, political-economic adversities have also placed barriers to the development of programs and achieve their goals and consolidation objectives, with regard to their social inclusion:

[...] We have a very serious problem in Brazil, of companies in Brazil: they do not believe in the research done in the academy. Petrobras has this culture, it has its research center in Rio de Janeiro. So, when you demonstrate knowledge and mastery, they disposes to collaborate and make partnerships with you. Other researchers of the program that already looked for other companies for partnerships had the dissatisfaction of the companies not believing, of not being willing to collaborate, neither with equipment maintenance, nor with bags. The most we have achieved with partnerships with companies is the donation of consumer material. But to buy equipment and finance scholarships is something we could not do with the private initiative [Interviewed no 4].

[...] Much was believed in EMBRAPA, but EMBRAPA, as our partner here, in my case contributed nothing. Even in cereals, I see none contribution. They earn more than they donate. They have been guiding our people who work in their programs, so they are profiting from it. EMBRAPA finances nothing here [Interviewed no 15].

The above reports allow inferring that the experience of some program managers dealing with technological research shows that a necessary condition for the possibility of university entrepreneurship (ETZKOWITZ, 2004), i.e., valuing the processes of construction or creation of scientific knowledge, technological knowledge and innovation, are not yet a reality in the organizational culture of companies that operate around the UFSJ campuses. It seems that the interest of these companies in collaborative arrangements focus solely on results, with no business availability to take part in the process that produces such results.

Regarding promote a support culture on sharing administrative and academic knowledge, the managers of these programs could implement CG tools aimed at them about experiences already experienced in attempts to establish negotiations aimed at collaborations with companies located around the UFSJ, such as, for example, the tools called "storytelling" and "post-action analysis⁶", as well as tools for sharing of economic, administrative and

⁵ Throughout this paper, we have used the term "administrative-academic knowledge" for designate all knowledge related to common activities and processes within graduate program functionalities in Brazilian public HEIs.

⁶ According to Almeida (2016), the so-called "post-action analysis" is a meeting between employees with the purpose of discussing and analyzing some organizational experience to detect failures to be avoided in similar

political knowledge with business leaders in the region, such as the "brainstorming". This tool could be applied during events in which regional business leaders would be invited to share beliefs and expectations in relation to collaboration with the university with a view to common development and is an action that would also contribute, in parallel, to deepening the social insertion of programs, contributing to the consolidation of their quality and great performance.

7 CONCLUSIONS

The general objective of this case study was to understand the main challenges of the managers of UFSJ in the efforts to consolidate graduate programs and, from this, propose formal initiatives in Knowledge Management that can contribute to assist these managers to deal more with such challenges.

The findings of the case study reported here also showed that the managers of UFSJ's Pro-Rectory of Graduate Studies and Research and Research, in particular the academic managers (i.e., the Coordinators of masters and doctoral programs), have many concerns and difficulties regarding how to deal adequately with the challenges identified by them regarding the management of those programs.

In line with theories available in the international literature on university management (JONES et al., 2012, 2014), the results also suggest that the leadership capacity of UFSJ's administrative managers and academic managers can be developed and improved from the involvement and participation in KM initiatives.

Regarding the limitations of the empirical-theoretical contributions brought by this study, based on the enabling dimensions in the frameworks on KM (BATISTA, 2006; HEISIG, 2009), we can affirm that a notorious insufficiency of it is its failure to address the so-called "technological dimension" identified in these theoretical frameworks, since we deliberately explore only the "organizational", "cultural" and "personal" dimensions of factors that this specific literature considers as enabling successful initiatives in KM.

Thus, we suggest as a domain for conducting future research studies aimed at understanding the technological conditions necessary to ensure, enable and facilitate data and information management initiatives in Brazilian university environments in general and in the

future experiences.

⁷ According to Dalkir (2005), a "brainstorming" is a kind of meeting based on the purpose of fostering insights and on the free generation of new ideas in the culture of an organization.

UFSJ particularly, given the recurring reports regarding the difficulty of data and information management related to graduate programs.

Still within the paradigm this case study is affiliated, it is suggested the relevance of "reflective" or "interpretative" studies that discuss, based on evidence, the narratives that present the managerialism as a villain in studies on administration of academic life, which are common in the Brazilian literature (RIBEIRO; LEDA, 2016), although it is possible to notice studies in the opposite perspective (FALQUETO; FARIAS, 2013).

Initiatives like this could also compete to increase the managerial focus on primary processes of university management (TEELKEN, 2011) and to increase the academic knowledge on leadership capabilities and on university entrepreneurship among managers of HEIs, something vital to enhance the performance of an organization which is expected an increasing articulation with companies, governments and society (GUERRERO; CUNNINGHAM; URBAN, 2015; GIBB; HANNON, 2006; YOKOYAMA, 2006).

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