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Contract inspecting of outsourced service: challenges for public universities

Fiscalização de contratos de serviços terceirizados: desafios para a universidade pública

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Abstract: Contract inspecting in public management, though essential for the functioning operation of projects and programs, have not been given the same care and support other bidding procedures have. The contract inspectors are not an organically-structured group, and this hinders the utilization of conventional training. The role of contract inspectors in public universities requires heterogeneous skills and knowledge, including thorough knowledge of legislation and operational practices of maintaining efficient management policies that satisfy the public interest. This paper investigates the challenges faced by these professionals and analyzes the learning mechanisms associated to the inspecting activity. The methodological tool is based on the case study strategy, making use of structured interviews and document analysis. The results point to the existence of weaknesses in the inspection process, confirming the need to hone and develop the skills of public agents assigned to the monitoring of outsourced service contracts in the university in question.

Keywords: Knowledge management; Organizational learning; Public administration.

Resumo: *A fiscalização de contratos na administração pública, conquanto fundamental para o bom funcionamento dos projetos e programas, não tem merecido o mesmo cuidado e suporte dispensado aos processos licitatórios. Os fiscais de contrato não constituem propriamente um grupo organicamente estruturado e isso dificulta a utilização do treinamento convencional. O papel do fiscal de contratos nas universidades públicas requer habilidades e conhecimentos heterogêneos, incluindo o domínio da legislação e práticas operacionais voltadas à manutenção de uma política de gestão eficiente que satisfaça o interesse público. Este artigo investiga os desafios enfrentados pelos profissionais e analisa os mecanismos de aprendizagem associados à atividade fiscalizatória. A ferramenta metodológica está baseada na estratégia do estudo de caso, utilizando entrevista estruturada e análise documental. Os resultados apontam a existência de fragilidades no processo de fiscalização, evidenciando a necessidade de aperfeiçoamento e desenvolvimento de competências dos agentes públicos designados a monitorar os contratos de serviços terceirizados na universidade pesquisada.*

Palavras-chave: *Gestão do conhecimento; Aprendizagem organizacional.; Administração pública.*

1 Introduction

Brazilian public universities have been going through an unprecedented process of expansion since 2007. This expansion has brought challenges to internal sectors connected to the planning, execution and contracting of continuous services which, as a general rule, involve a large number of outsourced workers. The contracting of these services through the Public Administration constitutes an especially complex task from the monitoring and inspection point of view, whether due to the inspection activity executed in the adjustment phase, or due to compliance to legislation and worker's rights, non compliance to which may result in subsidiary liability for the receiving end of the service (Vieira et al., 2010). These factors lead to a reflection on the need of development and maintenance of an efficient contract management policy, based on variables that satisfy and follow the dynamism currently demanded by the public sector.

Legislation determines that the contracts established include the appointment of a servant

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with the responsibility of inspecting the execution of the terms, making the public entity accountable for the appropriate qualification, technology and political-organizational environment to meet the skill improvement demands of this professional. (Almeida, 2009). To develop action which promotes the technical capacity of inspectors is a priority from the operational efficiency point of view, especially at this moment of expansion in which Brazilian public universities find themselves.

Aiming for full compliance and execution of the accordances listed, it is the role of the organization to propose and foster the utilization of innovative practice in order to aid the control and inspection of the contractual instrument (Battaglio & Ledvinka, 2009). Under this perspective, the monitoring of the terms currently represents one of the main challenges of the public sector, since information registry and knowledge management, which are considered as support elements of the construction of an interactive and innovative environment, are still rarely adopted among public agents assigned to perform the tasks. Thus, it becomes essential that the organization implements action toward the conversion of knowledge in order to achieve effective organizational learning and to improve efficiency in adjustment monitoring.

In the light of what has been mentioned, the present study, aiming to build on the debate around this still underexplored theme which significantly impacts operational results within universities, seeks to investigate the main challenges and difficulties which interfere in the performance of contract inspectors, emphasizing the need of development of professional skills and identifying learning mechanisms associated to the inspecting activity.

2 Outsourced service contracts in the Public Administration

The public sector formalized the indirect execution of continuous service through the establishment of administrative contracts which constitute the guiding legal instrument for regulating agreements of will between parts. It is, therefore, a contractual adjustment established between the public entity and its service providers, requiring clear and objective provisions which are able to define the object, rights, duties, burdens and responsibilities of the parts.

The outsourcing of services in the Brazilian public sector has been expanding since the 90's, after the approval of the Directive Plan of the State Reform onset in the administration of the Federal President Fernando Henrique Cardoso. The administrative reform aimed to, among other aspects, reduce the size of the State, keeping only presumably typical and exclusive activities, transferring the accessory activities of the State to private companies (Freitas & Maldonado, 2013).

Presently, the outsourcing process is a reality in Public Administration, and in order to obtain success in this management model is it important to have effective monitoring and inspecting of contracts signed between partners, with the intention of fostering effective control and guaranteeing greater quality of the services provided (Gonçalves, 2006; Pinto, 2009; Almeida, 2009; Vieira et al., 2010).

2.1 Management and inspecting of administrative contracts

The public sector is responsible for inspecting and monitoring of outsourced service providing, since the contractual monitoring at the operational level to the compliance assessment by the contracted company, of the workers', pensionists' and inspectors' rights resulting from the execution of the contract.

According to Vieira et al. (2010), inspection has as its base the physical monitoring of the contract, which must be conducted daily, *in loco.* In a wider context, the authors define contract management as the monitoring of legal norms, contractual alteration feasibility (through renegotiation, economic-financial rebalancing); as well as the checking of support documents for regular status along INSS and FGTS, with the intention of avoiding subsidiary liabilities for the public management due to noncompliance of work obligations by the outsourced company.

A similar approach is presented by Alves (2004) through the characterization that management action should not be taken for inspecting actions, because management is concerned with the formal aspects of contracting, while inspecting is concerned with the monitoring of the execution of the contractual object.

Therefore, management is the service of administering the accordances which can be exercised by a servant or a sector; the inspecting however, is exercised necessarily by an appointed public agent who will be responsible for each contract individually. In an ideal world, it is advisable to segregate tasks, avoiding attributions and expertises to be executed by the same individual, even though such exceptionality is not prevented by law (TCE-MT, 2015).

As Law 8.666/93 (Brasil, 1993) states - the Bidding and Contracts Act - the public body and the outsourced company must appoint representatives with the appropriate profiles to perform the attributions inherent to the activities of monitoring and execution of the contractual term. While the public entity appoints a contract inspector, the contracted company appoints an agent. The agent is the person to whom the inspector will report, forwarding any and all irregularities observed and recommending the remedying measures

for the noncompliance identified during the effective period of the contractual instrument.

3 Attributions of the administrative contract inspector

Poor inspection or the lack of it and routinely reported as the main cause for losses to the correct operationalization of bidding and administrative contracts, which underscores the relevance of the issue and strengthens the need of acting along with agents who monitor the contractual execution. The difficulty in maintaining appropriately-skilled professionals to develop all prerogatives demanded by legislation as well as the lack of structure in different administrative units make the issue of inspection the most vulnerable point of administrative contracts and contribute to an increasingly less efficient conduct by public agents.

With the objective of regulating and aiding the inspection of contractual instruments, the Ministry of Planning, Budget and Management published Normative Instruction nº. 02/2008 (Brasil, 2008) and later alterations which regulate the contracting of continuous service or the lack of it in Public Management. The norms establish important guidelines for the monitoring of contracts signed between the public sector and outsourced companies, aiming to guarantee better inspection quality for service providers.

The actions of the inspectors are mainly operational, although it has strong cognitive content, where the representative of Public Management must be constantly attentive to various situations to immediately take coercive measures, which highlights the need of criterious monitoring based on objective parameters which may aid in the full execution of the contract (Gonçalves, 2006).

The scenery signals towards the need for intervention, and invites us to reflect upon the responsibilities associated to contract inspection professionals. The range of inspecting attributions demands development of individual and specific skills for the full performance of the job, and for the improvement of results. Under this light, the utilization of learning concepts may create opportunity for disseminating knowledge and favoring skill development of contract inspectors.

4 Importance of knowledge in skill development

Knowledge is treated as a paramount resource faculty for the creation of institutional value, enabling results like strategy, innovation and performance (Cherman & Rocha-Pinto, 2016). It can be pointed out as the main cornerstone of essential skills in an organization, requiring the adoption of compatible managerial practices which also stimulate creativity and individual learning. On the other hand, the concept of skill can be defined as a set of tacit and explicit knowledge, fruit of various interactions existent in the organizational environment and in the learning process, thus becoming a reference for organizational strategy (Vera & Crossan, 2005; Santos et al., 2012).

Several authors have added to the body of work on the theoretical debate on the theme, and have thus expanded the scope of discussions. Durand (1998) stresses that skill development happens through individual and collective learning, with the simultaneous involvement of three dimensions, which are knowledge, skills and attitudes. These interdependent dimensions are classified as the three pillars of skill.

Fleury & Fleury (2001) also defend a model which combines individual and organizational aspects. They point out that organizations, while rooted in a strongly competitive environment, plans their strategies and, in parallel, the necessary skills to realize them, which must be based on the permanent learning process of their professionals.

Lopes et al. (2010) point out that, in order to fulfill strategic objectives, organizations must concern themselves with the management of their intellectual capital, in the sense of raising and utilizing all the knowledge and skills of their collaborators. Oftentimes these skills can be physically dispersed, although present in the imagination of specific worker categories within what has been called practice communities. Brown & Duguid (1991) outline the knowledge interpretation character which such communities represent. According to them, "[...] it is through the continuous development of these communities that common meanings to interpret complex activities are formed, transformed and conveyed". Serenko & Bontis (2016) add that the effectiveness of knowledge sharing depends on previous conditions which guide the purposes of exchange, or the negotiation conditions, of reciprocity or cooperation.

A variety of approaches can be inferred from the specialists, characterized under different levels of comprehension, which points to the existence of theoretical schools which relate the development of skills to a set of connotations, emphasis and contexts experienced by the individual in the labour environment. To face challenges, the professional is faced with the need of knowing how to control the organizational dynamics and unexpected situations, how to act responsibly by effectively applying their knowledge, experience and learning acquired in order to perform their activities with quality and creativity.

Considering that organizational learning, according to Choo (2006), represents, along with the ambiguity and uncertainty management, one of the three pillars of knowledge management, the implementation of practices that guarantee routine improvement and professional qualification becomes indispensable, through the use of knowledge transferring resources

(Marinho & Andrade, 2013b; Lemos et al. 2012). In this perspective, Andrade et al. (2010) add that these organizations need to manage the knowledge utilized in their processes in an effective and efficient way in order to promote organizational learning and to preserve their intellectual capital. Picoli & Takahashi (2016) understand that learning plays a key role in the absorption of knowledge into organizations.

Figueiredo (2009) stresses the importance of examining the relations among mechanisms which support learning. According to the author, recombining and reconfiguring knowledge assets contributes to the supporting innovation and organizational performance. Chart 1 describes the characteristics of the processes, also entitled intra-organizational learning mechanisms.

The learning processes are listed in two distinct moments: acquisition and conversion of knowledge. The processes of knowledge acquisition favor the individual sphere, allowing the formation of the so-called tacit knowledge present in the minds of professionals. On the other hand, the knowledge conversion processes are especially related to the organizational sphere by its evaluation of how knowledge is spread in the institutional context.

To achieve effective organizational learning it is necessary to foster integration between learning mechanisms, and for that, it becomes essential for organizations to implement action towards management of acquisition and knowledge conversion processes. The use of knowledge management tools becomes an important strategic resource, on one hand allowing an appreciation of professional knowledge, and on the other, enabling the establishment of new work routines and practices in various sectors of organizations which require restructuring, and finally, when occurring in an outsourced environment, producing more integration between contracted and contractor, facilitating qualification actions (Marinho & Andrade, 2013a; Christopher & Tanwar, 2012).

Nevertheless, some authors have noted that the bottleneck for applying knowledge management practices in the relationship between outsourced companies resides often in the poor qualification of these towards knowledge management (KM), including the creation, imparting, integration and use of knowledge (Liu & Deng, 2015; Easterby-Smith & Prieto, 2008). To Oliveira & Villardi (2012) the issue of learning poses extra challenges of significant depth and urgency when addressing public organizations, as they require faster adaptation to the context of social, political, economic and cultural change, in response to the pressure exercised by the State and by its own legitimacy towards society. Along with this, it is demanded from these entities to systematically and continuously devise learning processes which implicate the institutionalization of knowledge and skill development of their agents (Finger & Brand, 2001; Figueiredo, 2009; Marinho & Andrade, 2013c).

Predisposition to cultural change, based on knowledge management and appreciation of human capital make up important aspects in the modernization and innovation processes of organizations. These demands are posed for organizations of the private and public natures, the latter finding opportunity to renew its work processes and transfer knowledge to teams (Rodriguez, 2010; Carvalho & Gomes, 2012).

Knowledge management practices have been implemented by different bodies and entities of the Brazilian Public Administration in the attempt of achieving greater efficiency and improvement in the quality of the services provided to society. However, this reality is not yet hegemoneous among public entities, according to studies conducted by the Instituto de Pesquisa Econômica Aplicada – IPEA (Batista, 2006). Batista (2006) has investigated the situation of knowledge management practices in

Chart 1. Processes/ intra-organizational learning mechanisms.

Processes/ intra-organizational learning mechanisms		**Characteristics**
Knowledge acquisition	**External acquisition**	Mechanisms through which professionals acquire tacit and/or codified knowledge outside the company. Ex: training abroad
	Internal acquisition	Mechanisms through which professionals acquire tacit knowledge by performing different activities within the company. Ex: performing routine tasks or optimizing processes
Knowledge conversion	**Socialization**	Mechanisms through which professionals share their tacit knowledge. Ex: observations, meetings, joint solution of assignments, training.
	Codification	Mechanisms through which the individual tacit knowledge is expressed in explicit concepts in an organized and accessible manner, making it more easily understood. Ex: standardization of methods, documentation, internal seminars.

Source: Adapted from Figueiredo (2009).

Higher Education Federal institutions (IFES) and has found that the theme is still at its first stages, not having been classified as a priority for most administrative and planning fields of the institutions analyzed. Changing the current scenery poses a challenge, but it should also be faced as a proposal for modernization for the public institutions which seek to incorporate mechanisms capable of promoting knowledge dissemination among professionals.

The modernization of the public sphere, however, almost always motivated by the need of performance improvement, cannot be conducted with no regard to cultural, political and motivational aspects of the dimensions of the work and production organization. The OECD Document on modernization of the public sector reminds us of the importance of considering countless factors, aside from the behavioral ones, which need to be previously diagnosed, such as leadership, strategic planning, management, the budget issue, and evaluation policies (OECD, 2004). Among the public activities which require modernizing intervention, the inspection of outsourced contracts in universities is underscored. To make knowledge management techniques available to meet the standards of inspection teams represents a feasible way of achieving the proper monitoring of contracts, as well as improving skills, motivating commitment levels among professionals, and establishing a dynamic and interactive institutional environment. In this context, it is up to the public administrators of IFES to intensify the development of an internal policy for effectively structured knowledge management in order to mitigate the deficiencies that exist in the field of inspection, and to foster significant change in the organizational culture.

5 Methodology

The research conducted adopts, as its form, a predominantly qualitative approach (Vergara, 2007). As for the delineation, the case study strategy was utilized, based on multiple sources of investigation (Yin, 2005). The data was collected from the consulting of internal management reports, electronic registries, experiences observed in the everyday life of the institution analyzed, and a semistructured questionnaire. The applied and typically field-like study allowed for the identification of the main weaknesses and challenges associated to the activity of contract inspection in public universities.

The access to the target group was made individually through visits to the work environment of inspectors. The choice of participants was made through the census procedure, to which the population-forming criteria was whether the individual was performing the function of contract inspector for outsourced services in the institution. The population consisted in nine professionals and among these, only one inspector did not demonstrate interest in collaborating with the research, thereby reaching a significant return rate of 89%.

In the data collection stage, after the analysis of the perception of inspections towards their everyday attributions, the study used a response scale based on the Likert model, consisting in five points, varying between (1) Never, (2) Rarely, (3) Sometimes, (4) Often and (5) Always.

Afterwards, in order to measure those actions considered to be essential and relevant which should make up the array of skills of these professionals, the variables were classified according to two Likert scales, following the methodological proposition developed by Borges-Andrade & Lima (1983).

This method allowed the mapping of the gap between skills, establishing a relation between mastery (by the professional) of a certain skill and the importance of such skill to the occupational role (Carbone et al., 2009). In this way, it was possible to draw a diagnosis of learning needs from the identification of the skill gap, through the following equation 1:

$$\mathbf{IPT} = \mathbf{IMP}\left(\mathbf{4} - \mathbf{DOM}\right) \quad (1)$$

where:

IPT: training priority index (learning need = gap)

IMP = variable which measures the importance of specific skills - varying from 0 (unimportant) to 4 (extremely important).

DOM = variable which measures the skill mastery level - varying from 0 (no mastery of the skill) to 4 (full mastery of the skill).

According to the equation, the gap may vary from 0 to 16, where the larger the gap, the greater the need for investing in the skill being evaluated. Therefore, the study sought to identify the skills with the greatest deficiency and establish priorities for qualification and training of these professionals.

In order to tabulate the data collected through field research, the Excel Microsoft Office application resources were used. Afterwards, the data was exported to the SPSS (*Statistical Package for Social Sciences*) statistics program version 13.0 for Windows, making use of descriptive statistical concepts for interpreting and analyzing the phenomena in question.

Through the collecting, treating and compiling of the data, the relevant information was extracted for initiating the analysis phase, in which the researched scenery is described and the current situation diagnosed. Once the organizational learning issue was identified as the core weakness of the inspection system, the structured investigation of the learning mechanisms proposed by Figueiredo (2009) was adopted in order to map the current conditions of institutional qualification.

6 Result analysis and discussion

6.1 Overview and characterization of the researched institution

The setting of the present research was a Federal Higher Education Institution located in the state of Minas Gerais. It is a public university which, aside from stimulating tenuring of its teaching staff, also prioritizes the training and education of its students. The quality of its learning is of national renown, a fact proved by the good results obtained in evaluation processes recently conducted by the Ministry of Education and Culture (MEC).

The institutional growth in the last few years is notable, registering an increase in the quantity of students due to expansion and the creation of openings in new courses. According to constant information in the administrative reports of the institution, it is clear that in the period between 2007 and 2013, the number of openings offered in graduation went from 2115 to 3855, which adds up to an increase of approximately 80%. In response to the guidelines of the expansion process, improvements were made in infrastructure, as well as the renovation and construction of academic spaces, including classrooms, laboratories and libraries, seeking the continuous strengthening of teaching, research and extension activities.

Despite the major restructuring interposed in the academic area, its technical-administrative staff, as in most public universities, has not kept up with the increasing institutional growth. Considering the restrictions to the opening of public selection processes for effective positions, the unit in analysis intensified its outsourcing process, stimulating the establishment of continuous service contracts, complying to demands set out the regulatory bodies.

Being aware of the accountability towards the compliance with several legal mechanisms in the attempt of maintaining a support group to inspection activities, the institution created in late 2006 a specific sector for monitoring contracts. The execution of the contractual object, done *in loco*, is accountable to the contract inspectors, who perform the job with dedication, serenity and diligence, in spite of showing some limitations and difficulties in performing the activity and of the strict legislation that regulates the subject matter.

6.2 Established outsourced service contracts

Due to the creation of the contract sector being formally created in the end of 2006, the year of 2007 was assigned as the timeframe for information collection, which were obtained through documental research involving administrative reports and available electronic archives. Table 1 describes the established outsourced services and the quantitative evolution of outsourced employees between 2007 and 2013.

By analyzing Table 1, an increase in the number of outsourced employees can be noticed, from 476 in 2007 to 793 in 2013, which represents a 66% increase. In order to conduct a detailed study on the workforce present in the institution, the number of outsourced employees was compared to the quantity of effective technical-administrative servants, having the month of December/2013 as a reference point. Table 2 presents the proportion between the study categories:

The data reveals a significant relation between the work categories, where 62% are active technical-administrative servants and 38% comprise outsourced employees. In this comparison it is evident that more than a third of the institution's workforce consists in outsourced employees. The result found suggests the need of developing efficient methods for

Table 1. Outsourcing service categories contracted per year and amount of outsourced employees - timeframe 2007 – 2013.

Outsourced Service	Year						
	2007	2008	2009	2010	2011	2012	2013
Building Maintenance			X	X	X	X	X
Operational administrative support				X	X	X	X
Guard	X	X	X	X	X	X	X
Technical support to cultural activity				X	X	X	X
Conservation and cleaning	X	X	X	X	X	X	X
Technical and administrative support			X	X	X	X	X
Armed guard	X	X	X	X	X	X	X
Drivers and vehicle washing		X	X	X	X	X	X
Entrance control and inspection		X	X	X	X	X	X
Food services	X	X	X				
Library services	X	X					
Technical support in informatics	X	X					
Nº. of outsourced employees / year	**476**	**481**	**488**	**563**	**582**	**731**	**793**

Source: Administrative reports of the institution.

improving monitoring and inspection of the contracts established with outsourced companies.

6.3 Respondent profile

The first part of the questionnaire sought to identify the profile of its respondents, characterizing them through the following variables: gender, level of education and experience as an inspector, as Table 3 illustrates:

One important piece of information extracted from Table 3 refers to the experience on the job, where 61% of the survey participants reported to have been working with inspector for over 04 years. The result indicates that the professionals had already been employed at the time of the IN 02/2008 publication, which established rules and procedures for the contracting of continuous service in the public sphere. The remaining 39%, while assigned to the job, started their work under the umbrella of the effective legislation, not having been surprised by the change in normative instruction.

6.4 Perception of the inspectors towards operational weaknesses

Aiming to measure possible operational weaknesses which may have occurred in the monitoring of the execution of the contracts, a few of the main attributions of the contract inspectors were analyzed, as this study's Section 3 presents. The most expressive results of the research are described in detail in the subsections 6.4.1 and 6.4.2.

6.4.1 Facing attributions A1 and A2

Figure 1 and Figure 2 reflect the percentages ascertained for the A1 and A2 variables, which sought to evaluate the action of inspectors concerning incident registry and diligence remarks during the performance of the function:

From the analysis of the A1 variable, it can be inferred that the inspectors present difficulty in keeping up with the level of quality of the service provided by outsourced companies, either due to the lack of systematic registry, or due to the absence of efficient tools to aid them in the contractual execution. Variable A1 confirms that only 12.5% of the respondents practice this attribution frequently.

The poor registry of activities monitored by inspectors was also identified in the A2 variable, where many professionals expressed the lack of habit of formally reporting to the company agent when observing flaws or incidents verified through diligence. Oftentimes, the problems are conveyed verbally, and therefore lack the due documentation. This practice inhibits efficient action of the public entity towards the contracted company, since only through incident registration can irregularities be attested to, deadlines for solving appointed problems be established, and reprimand or suitable penalties be justified.

By analyzing the two variables, the weakness in incident registry or in diligence remarks made by contract inspectors becomes evident. In order to revert this situation, it is essential to develop action towards the development of learning mechanisms to guarantee more control over the adjustments established with outsourced companies, so as facilitate the work of inspectors.

6.4.2 Facing Attributions A3 and A4

While observing the vulnerability in the effective monitoring of contracts, the study has then sought to analyze the behavior of inspectors in specific situations related to the outsourced employees. Figures 3 and 4 reflect the percentage measured for the A3 and A4 variables, specified as such:

The monitoring of the regularity of salary, bonuses and benefits payments to outsourced employees stands as an important action attributed to inspectors. The non

Table 2. Ratio between categories: Technical-administrative assets x Outsourced.

Category	Amount	Percentage
Active technical-administrative servants	1.293	62%
Outsourced employees	793	38%
Total:	**2.086**	**100,00%**

Source: Internal registry of the institution collected for the month of December 2013.

Table 3. Profile of Research Participants.

Sex	Level of Education	Experience as inspector
Predominantly male (65%) against 35% female	87% possess specialization courses and 13% possess basic education	61% have performed the activity for over 4 years and 39% for less than 4 years.

Source: Research results.

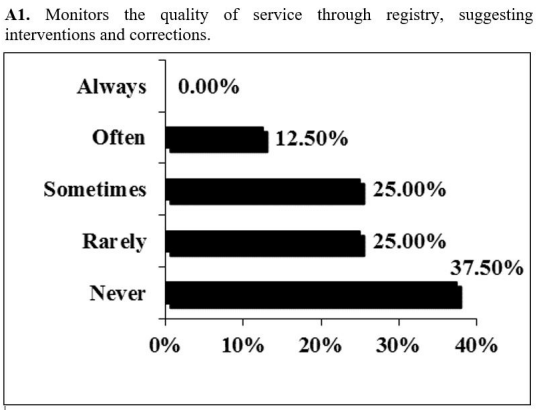

Figure 1. Frequency of the A1 variable.
Source: Research results.

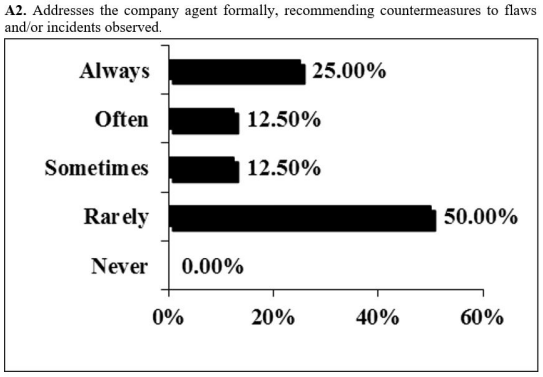

Figure 2. Frequency of the A2 variable.
Source: Research results.

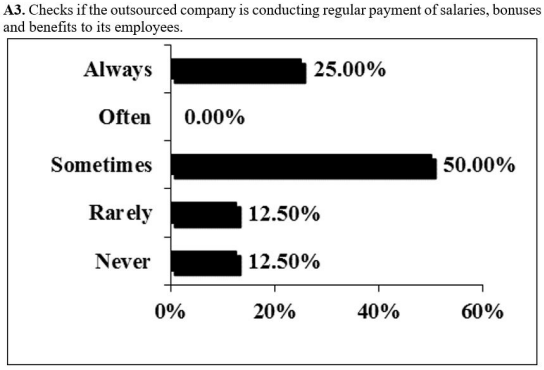

Figure 3. Frequency of the A3 variable.
Source: Research results.

Figure 4. Frequency of the A4 variable.
Source: Research results.

compliance to legislation and work regulations may result in subsidiary accountability for the Public Administration and the administrative accountability of the inspector. As such, this procedure represents one of the most relevant actions which must be monitored by public agents. From the analysis of the A3 variable, it can be noticed that only 25% of the professionals monitor the regularity of the outsourced employees' payments, a fact which reveals weakness in the monitoring process and the unpreparedness of the inspectors for their own attributions.

If on one hand legislation is strict towards the monitoring of work obligations, on the other hand it prohibits any sort of interference by public agents on the outsourced workers. Such activity falls fully to the agent of the contracted company. Aiming to verify the degree of interference by the contract inspectors on aspects related to alterations in the services' hours, location and time off of the outsourced workers, the A4 variable was analysed, hoping to evaluate the frequency of such action. Despite the impropriety of assigning the applicable work alterations to the outsourced workers directly, most inspectors state that they practice such diligence frequently. This context expresses the importance of qualifying professionals in order to inhibit the practice of certain procedures which may result in liabilities for the outsourcing process in Public Administration.

6.5 Priority check in learning

In the effort of achieving a more in-depth analysis of the inspectors' work routine, the study has sought to evaluate the learning priorities for the function's best performance. The respondents were divided in two groups in order to identify differences in behavior between public agents who were recently assigned to the job from those who have been performing it for longer, and in this way, establish a comparison between the level of knowledge of these professionals and the recommendations for it found in legislation. The groups are described as follows:

► Group A – inspectors with less than 4 years on the job, 3 participants, and

► Group B – inspectors with more than 4 years on the job, 5 participants

The 4 year span is justified by the IN 02/2008 publication - an important regulatory mark which defined rules and guidelines for the contracting of continuous service in the public sphere. It is important to state that after publication of these results, further normative instructions and decrees were published, seeking to implement the aforementioned legal instrument, however, in the light of the expressiveness of constant action in the legislation concerning contract inspection, IN 02/2008 is taken as the main timeframe for the analysis of this research.

The skills addressed were measured by inspectors through two Likert judgement scales, varying from 0 to 4, as per the methodological procedures section.

By crossing results between the importance criteria and the mastery of the skills, it was possible to ascertain the Training Priority Index (IPT), for identifying the skills with the largest gap.

Table 4 presents the following values: mean (μ), average (Md), mode (Mo) and standard deviation (σ), under the "Importance" criteria considering the two study groups:

By analyzing the values attributed to the central trend measurements on Table 4, it can be inferred that all respondents, either in group A or B, acknowledge the importance of the skills listed, as all attributes, μ, Md and Mo reached values over 3.0 (very important). Variability also registered very low values, confirming the convergence of opinions among most respondents.

After presenting the perception of the inspectors on the importance criteria, the study turned to the relationship with the mastery of these skills. Table 5 represents the mean (μ), average (Md), mode (Mo) and standard deviation (σ) variable values, under the "Mastery" criteria, considering both study groups.

Unlike the values found in the importance criteria, Table 5 registers much lower values to the central trend measurements in the mastery criteria. In both groups the average value of the variables are under 3.0, oscillating between $\mu = 1.0$ and $\mu = 2.8$ (average mastery of the skill). The result of the research reveals that while the actions' importance is acknowledged, there is deficiency in the mastery of the skills.

Specially concerning the mode, Table 5 registers an "amodal" value to three skills in the A Group. Such occurrence is justified by the fact that this group consists in only three inspectors, and each attributed a different value to the analyzed skill, and thereby not resulting in a mode value for the item in question.

By utilizing the ascertained mean values in the importance and mastery tables, it was possible to devise a diagnostic for the learning requirements, from the identification of the skill gap, in order to evaluate the necessity of training for skills which are considered essential for the performance of the contract inspector activity.

Table 6 presents the mean indexes for the training level in each skill studied, and lists the ranking of the attributions which require the most qualification. The skill that shows the largest IPT average indicates the largest gap, which qualifies it as 1st in the ranking column, and so on.

Considering the fact that the IPT average varies from 0 to 16, it was established that the variables which present averages larger than 8.00 correspond to those with the highest learning and training priority. Chart 2 identifies the skills that require improvement in each group, as follows:

Table 4. Statistical Summary: Mean, Average, Mode, Standard Deviation - Importance criteria per group.

IMPORTANCE OF SKILLS				
Skill description	**Mean μ**	**Average Md**	**Mode Mo**	**Standard Deviation σ**
C1. Have knowledge of the legal norms which regulate public contracting and inspection of outsourcing contracts				
Group A	3.67	4	4	0.577
Group B	3.80	4	4	0.447
C2. Have knowledge of the attributions and responsibilities inherent to the function of contract inspector.				
Group A	3.67	4	4	0.577
Group B	3.80	4	4	0.447
C3. Have detailed knowledge of the contract under their supervision as well as of the provisions established in it.				
Group A	3.33	3	3	0.577
Group B	4.00	4	4	0.000
C4. Register in proper documentation the irregularities found and established measures resulting from the non compliance to obligations agreed upon in the contract.				
Group A	3.67	4	4	0.577
Group B	3.80	4	4	0.447
C5. Utilize control mechanisms (standard documents) to aid contract monitoring.				
Group A	3.33	4	4	1.155
Group B	3.80	4	4	0.447

Source: Research results.

Table 5. Statistical Summary: Mean, Average, Mode, Standard Deviation - Importance criteria per group.

SKILL MASTERY				
Skill description	**Mean μ**	**Average Md**	**Mode Mo**	**Standard Deviation σ**
C1. Have knowledge of the legal norms which regulate public contracting and inspection of outsourcing contracts				
Group A	1.67	2	2	0.577
Group B	2.20	2	3	0.837
C2. Have knowledge of the attributions and responsibilities inherent to the function of contract inspector.				
Group A	2.00	2	Amodal	1.000
Group B	1.80	2	1	0.837
C3. Have detailed knowledge of the contract under their supervision as well as of the provisions established in it.				
Group A	2.33	2	2	0.577
Group B	2.80	3	2	0.837
C4. Register in proper documentation the irregularities found and established measures resulting from the non compliance to obligations agreed upon in the contract.				
Group A	1.00	1	Amodal	1.000
Group B	2.20	2	2	1.483
C5. Utilize control mechanisms (standard documents) to aid contract monitoring.				
Group A	1.00	1	Amodal	1.000
Group B	1.40	2	2	0.894

Source: Research results.

Table 6. Training Priority Index and Ranking of qualification priorities per group.

GROUP A		**TRAINING PRIORITY INDEX (IPT)**	**GROUP B**	
Ranking	**Avegare IPT(μ_A)**	**SKILLS**	**Average IPT(μ_B)**	***Ranking***
3º	8.67	C1. Have knowledge of the legal norms which regulate public contracting and inspection of outsourcing contracts	6.60	4º
4º	7.67	C2. Have knowledge of the attributions and responsibilities inherent to the function of contract inspector.	8.40	2º
5º	5.67	C3. Have detailed knowledge of the contract under their supervision as well as of the provisions established in it.	4.80	5º
1º	11.33	C4. Register in proper documentation the irregularities found and established measures resulting from the non compliance to obligations agreed upon in the contract.	6.80	3º
2º	10.67	C5. Utilize control mechanisms (standard documents) to aid contract monitoring.	10.00	1º

Source: Research results.

From the information in Chart 2, it can be inferred that only the C3 skill was not listed in any of the groups, due to its lower than 8.0 IPT score, and according to the adopted criteria, there would be no need of offering training for the item in question, since professionals demonstrated detailed knowledge of the contractual provisions. However, in the remaining skills analyzed, the institution must offer or provide qualification to inspectors, be them in the A or B group. Aside from skill improvement, it is also important for the entity to stimulate other knowledge conversion actions, so that older inspectors are able to share their experience with the ones who have been on the job for less time.

In conclusion of the field research, structured challenge list was presented to the respondents, in which each participant highlighted three factors that interfere the most in the performance of contract inspecting activities. The frequency of each response can be found on Table 7:

The Table 7 data reveals that professionals consider the lack of training and qualification as the greatest hurdle for the inspection activity, with a 29% rate of occurrence. According to Alves (2004), the assigned inspector must possess a profile adjusted to their current work, technical knowledge and perfect conditions to analyze, evaluate and efficiently control the contractual instrument. It is

the role of Public Administration to offer specific training in an intense and continuous manner, in order to mitigate the weaknesses highlighted by the professionals.

The "unfamiliarity with knowledge management tools" stands as the second greatest challenge listed, with a 25% rate of occurrence. The index indicates the inspectors' intention of applying the concepts and knowledge management tools at their disposal, in the attempt of improving their performance. It is convenient to clarify that the presentation and outlining of these tools, extracted from Batista (2012) was done within the applied questionnaire itself.

Field research has allowed for the identification, from the perception of contract inspectors, that the main challenges faced by these professionals during the performance of their tasks, as well as for the diagnosis of weaknesses towards the appropriate attributions and to the legislation which regulates the public contracting theme.

6.6 Learning mechanisms associated to the inspecting activity

The aforementioned qualification is not enough to create the required learning environment among inspectors, whose group does not possess an organic structure, in order to face the challenges. It is necessary to, first, stimulate an interaction process between inspectors, by way of a practice community, as suggested by Brown & Duguid (1991) in synchrony with the mechanisms and learning processes outlined by Figueiredo (2009).

Making use of the methodology proposed by Figueiredo (2009), a few important and specific intra-organizational processes were stressed, especially for the activity of inspection. The data collected through documental analysis and direct observation allowed for the identification of the presence or absence of behavior towards organizational learning, making it possible to measure from pre-established criteria the degree of key characteristics in the context of the diagnosed learning mechanisms. Chart 3 summarizes the information:

The results presented on Chart 3 inform that action is still required by the institution in order to stimulate integration between learning mechanisms and improve process evaluation. To make knowledge acquisition and conversion mechanisms available, taking into account the aspects defined by Figueiredo (2009) concerning variety, intensity, functioning and interaction, shapes the initial step for reverting the current situation.

Chart 2. Necessity of skill improvement per group.

SKILLS	GROUPS	
	A	B
C1. Have knowledge of the legal norms which regulate public contracting and inspection of outsourcing contracts	X	
C2. Have knowledge of the attributions and responsibilities inherent to the function of contract inspector.		X
C3. Have detailed knowledge of the contract under their supervision as well as of the provisions established in it.[1]	-	-
C4. Register in proper documentation the irregularities found and established measures resulting from the non compliance to obligations agreed upon in the contract.	X	
C5. Utilize control mechanisms (standard documents) to aid contract monitoring.	X	X

[1] Neither group requires improvement in the C3 skill.Source: Research results.

Table 7. Frequency of challenges that interfere in the performance of a contract inspector's tasks.

Challenges	f	fr (%)
Lack of training and qualification to perform the task	7	29%
Unfamiliarity with KM tools	6	25%
Unfamiliarity with attributions and responsibilities	5	21%
Unfamiliarity with legislation	3	13%
Relationship with agent	2	8%
Unfamiliarity with contractual provisions	1	4%
Total	**24**	**100%**

Source: Research results.

Chart 3. Intra-organizational processes in the inspection activity - Period: 2007-2013.

Processes / Learning Mechanisms	Key characteristics of learning processes			
	Variability	Intensity	Functioning	Interaction
	Absent Present (Limited Moderate Diverse)	Once Intermittent Continuous	Unsatisfactory Moderate Good Excelent	Poor Moderate Strong
Period	**2007-2013**	**2007-2013**	**2007-2013**	**2007-2013**
[1] Participation in external events: courses, seminars and conferences on contract inspection.	Limited	Intermittent	Unsatisfactory	Poor
[1] Consulting / subscribing to magazines on the practice of inspection.	Limited	Continuous	Moderate	Moderate
[2] Internal training programs on the theme of contract inspection.	Limited	Intermittent	Unsatisfactory	Poor
[3] Sharing experience and knowledge on contract inspection.	Limited	Intermittent	Moderate	Moderate
[3] Meetings for collaborative problem solution.	Moderate	Continuous	Good	Strong
[4] Manual of procedures presenting good practices and guidelines for inspection.	Absent	-	Unsatisfactory	Poor

Subtitle: [1] External Knowledge Acquisition, [2] Internal Knowledge Acquisition, [3] Knowledge Socialization, [4] Knowledge Codification. Source: Adapted from Figueiredo (2009).

7 Final remarks

The article has demonstrated the weaknesses present in the operational routines of the contract inspectors who work in a public university. By contributing to the theoretical framework of organizational learning in order to understand and formulate intervention proposals in the field of inspection, the work advances on the epistemological comprehension of the activity with the aid of knowledge management tools, which, while used in some phases and stages of the management process, holds no record of utilization in the researched environment.

From the perception of the respondents, it was demonstrated that the institution in question makes little effort of making learning mechanisms available to the contract inspection activity. Most inspectors do not register any knowledge during the performance of their tasks, and few utilize control mechanisms to aid them in the monitoring of outsourcing contracts. The absence of codification, aside from hindering knowledge dissemination, translates itself negatively in the monitoring of the established terms and interferes directly in the operational efficiency of professionals.

The contract inspectors in the organization in question do not consist in an organically structured group, with identical objects and similar culture which could easily implement formal qualification actions. They are more in the field of a practice community, which plays a key role in guaranteeing quality and in defending and preserving the scope of the contracted service. Therefore, they consist in a privileged *locus* of organizational action which, once it is operating in accordance to a well-established bidding process, can result in economic and social gain.

In the light of the current scenery marked by weaknesses in the contract inspection field, it becomes indispensable to intensify qualification action in order to improve internal work processes, develop professional skills, and offer technical adequacy to public agents. There are many duties and demands, explicit as well as tacit, which are inherent to the performance of the activity, and as such, the inspectors require preparation, training, and above all, willingness to develop an inspection and continuous control culture of the contracts under their supervision.

Finally, as further development of the insights produced here, it's appropriate to suggest that future studies take on the bridging of gaps and creation of epistemological connections between the activity of contract inspection, with its heterogeneity and contingency, and knowledge management, with its challenge of overcoming mere management of tangibles by incorporating people, and all the idiosyncrasy and complexity that come with it. In addition, it is opportune to further develop the theoretical and empirical framework to properly encompass the public sphere, where eventual changes arise, impact and are impacted by the cultural, political and motivational context in which this group is set.

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