



PUSHING THE BOUNDARIES ON MENTORING: CAN MENTORING BE A KNOWLEDGE TOOL?

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Abstract. Easy access to organizational knowledge is fundamental in dynamic environments that demand continuous firm adaptation. In that scenario we believe that mentors have a key role as access facilitators to knowledge in the change periods. We have developed this study aiming to explore the role and importance of mentors as knowledge access facilitators. We have approached that role in two different ways. We set apart the knowledge base in two categories: Information centers and organizational memory, accepting that mentors act differently accordingly. Based on the literature reviewed we were able to stage a three-dimensional theoretical setting (mentoring, knowledge, and change) and produce three research questions. We have addressed these research questions using an exploratory qualitative approach to five different firms from three industries apart. This study contributes to the literature at least in two ways. Firstly, it connects the mentor figure to the knowledge base's access, exposing the importance of the mentor as a knowledge access facilitator during change periods. Secondly, by categorizing the knowledge base in two different ways, we are able to explicitly differentiate mentor roles accordingly.

Keywords: human resources management practices, mentoring, information centres, organizational memory, change

1. Introduction

Accepting that organizations act on very dynamic environments where the pressure demanding continuous adaptation is huge, one of the most important challenges to firms is to grant access to knowledge on a permanent basis during change periods. We believe that mentors have a key role as access facilitators to knowledge in the change periods. Somewhat surprisingly the importance of the mentor as a facilitator of access to knowledge is understudied in the mentoring literature. Considering the former arguments we have developed this study aiming to explore the role and importance of mentors as knowledge access facilitators. We have approached that role in two different ways. We set apart the knowledge base in two categories: Information centres and organizational memory, accepting that mentors act differently accordingly.

Based on the literature reviewed we were able to stage a three-dimensional theoretical setting (mentoring,

knowledge, and change) and produce three research questions. We have addressed these research questions using an exploratory qualitative approach to five different firms from three industries apart. This study contributes to the Human Resources Management literature at least in three ways. Firstly, it connects the mentor's figure to the knowledge base's access, exposing the importance of the mentor as a knowledge access facilitator during change periods. Secondly, it enlarges the Human Resources literature by illustrating the relevancy of the Mentor figure in the organization. Thirdly, by categorizing the knowledge base in two different ways, we are able to explicitly differentiate mentor roles accordingly. By applying the concepts from the Human Resources Management literature and the Knowledge Management literature, this paper should lead to some interesting directions regarding the way organizations consider the role of mentor pushing the boundaries on mentoring and fostering new lines of research on the knowledge base.

2. Three-dimensional theoretical setting

Mentoring

Mentoring has been defined after Clutterbuck (1992) as an interpersonal relationship in which a senior or more experienced person helps a junior or inexperienced person in the organization. Organizations can benefit from the use of mentoring relations as they may enhance higher organizational commitment, knowledge retention, managerial succession and productivity, as illustrated in early studies on informal mentoring relationships (Sosik *et al.* 2005).

Recent socio-economic changes have led to an increase in knowledge work. More jobs are based on higher levels of knowledge creation and sharing, encouraging the adoption of formal mentoring programs hoping to achieve the benefits associated to existing of mentoring relationships (Sosik *et al.* 2005; Chao *et al.* 1992; Fagenson-Eland *et al.* 1997; Raggins and Cotton 1999; Scandura and Williams 2000; Allen and Eby 2003). Having these arguments in mind, this paper analyzes the relationship between mentoring and the knowledge base in both kinds of firms (presenting formal and informal mentoring programs), in order to capture the essence of that relationship in a more complete way. Before moving forward, let us briefly present the mentor functions and characteristics in order to fully understand the possible impact of the mentor as a knowledge accessing tool.

Mentor functions and characteristics

Typically, mentors are someone older, more experienced, and higher placed in the organizational or professional rank (Kram 1985), that provide career guidance, personal support and facilitate the socialization process into the organization (McManus and Russell 1997; Ostroff and Kozlowski 1993). Additionally, mentors can provide emotional support or protection from political enemies (Baugh and Scandura 1999). The mentor's job is long lasting (Jones 2001; Williams 2001; O'Connor and Ertmer 2006). According to Zey (1995), in the business context the mentor's roles are: teaching (teaching the job, drawing the organizational road map and giving career guidance), organizational interventions (protection, marketing and giving access to resources) and sponsoring. As a result, mentors may gain prestige, and protégés may build up social networks (Sosik *et al.* 2005).

As mentors are usually senior elements in the organization, they can benefit from gaining new skills or perspectives from the junior protégé, as well as the opportunity to put their knowledge, skills and abili-

ties to work (Wasburn and Crispo 2006). Mentors also seek information from their protégés (Mullen and Noe 1999), so this reciprocity in mentoring allows for the development of a relationship where both individuals learn from each other.

Following previous studies, we can identify some mentor personal qualities such as: the mentor usually is trustworthy, honest, open, frank, informal, friendly approachable, non-judgmental and respectful (Hirsh *et al.* 2001; Howieson and Semple 2000). According to Smith *et al.* (2005) the mentor should rank high in respectability (honesty, integrity and high morals). Unlike previous studies, we did not consider the gender composition of the pair mentor-protégé (Allen *et al.* 2005), empathy between the pair mentor-protégé (Allen *et al.* 2005; Lankau *et al.* 2005), or expected outputs from the relation (Allen *et al.* 2006a; Smith *et al.* 2005; Eby and Lockwood 2005; Wanberg *et al.* 2006). We have opted to analyze the mentor's role as a knowledge base access facilitator despite any effect gender may play in the success of the mentoring relation, the empathy of the elements in the pair, and the expected outputs from the relation.

Having defined mentoring and established the characteristics and functions of mentoring, let us present now the two categories of the mentoring programs, introducing the differences between formal and informal mentoring programs. By identifying both realities, we want to draw the readers' attention to the relevancy of the role of the mentor as a knowledge accessing tool in both categories.

Formal mentoring programs

Formal mentoring refers to organizationally initiated efforts to match mentors and protégés. Eligibility for participation varies across organizations with some companies allowing anyone in the organization to assume the role of mentor or protégé and other companies having screening criteria such as job performance, nomination by others, or job type (Eddy *et al.* 2001). Formal mentoring programs have various goals such as talent development, improvement of employee knowledge skills and abilities, employee retention, and diversity enhancement (Eddy *et al.* 2001). Furthermore, formal mentorships often have contracted goals and a specific timeline (Murray 1991; Zey 1985), as well as guidelines for interaction frequency and interaction content (Eddy *et al.* 2001; Ragins *et al.* 2000). Finally, some formal programs offer preparatory activities such as orientation and training to help mentors and protégés understand their role, obligations and become comfortable with the mentoring process (Allen *et al.* 2006a, b; Eddy *et al.* 2001).

Informal mentoring programs

Informal mentoring programs are spontaneous and emerge from human relationships that arise within the firm based upon personal affinities among colleagues. There is no mandatory internal rule that establishes the beginning of the mentorship and no structured orientations regarding its evolution, objectives or timeframes. These informal relations are not proposed nor nourished by a formal established program and thus they are difficult to identify and assess by the organization. As a result, there is less literature on informal than on formal mentoring programs (Eby and Lockwood 2005). Considering informal mentoring programs are less resistance generator and more motivator (Eby and Lockwood 2005), relations developed within informal mentoring contexts are highly valuable, resulting in a base where trust can be developed within the organization (De Carolis 2002). Mutual trust is the heart of knowledge exchange, as it allows spontaneous and informal knowledge share (Adler 2002).

Formal versus informal mentoring programs

Formal mentoring relationships differ from informal mentoring in several fundamental ways. Firstly, the relationships are initiated differently; informal mentoring relationships develop because of mutual identification and interpersonal comfort (Ragins 2002). In contrast, formal mentoring programs match individuals as part of an employee development process, and each pair must then strive to get to know one another. Secondly, formal and informal mentoring relationships also differ according to the timing and structure of the relationship (Ragins and Cotton 1999); informal relationships are not governed by a timeline or a third party; there are no external rules dictating whether something should be accomplished, or how long the relationship will last. On the other hand, the formal mentoring relationship is part of an organized, established employee development program, they are designed for a specified time length (e.g., nine months to a year), and protégés are generally prompted to have development goals in mind.

Likely because of the fundamental differences between informal and formal mentoring, research has suggested that on average, informal mentoring may be more valuable than formal mentoring (Chao *et al.* 1992; Ragins and Cotton 1999). A study by Ragins *et al.* (2002), on the other hand, showed that formal mentoring relationships have the potential to collect the same benefits as informal mentoring relationships. In addition, organizations continue to see formal mentoring as an important employee development tool (Hegstad and Wentling 2004).

Having addressed the mentoring concept, the multidimensional role of the mentor, and having presented the two mentoring program categories let us now elaborate on knowledge base critical literature. Following the two dimensions commonly considered when referring to knowledge: tacit and explicit, we will present the two knowledge base components: information center (based upon explicit knowledge) and organizational memory (based upon tacit knowledge). Our aim in presenting both realities is to draw the readers' attention to the relevancy of the role of the mentor as a knowledge accessing tool.

3. Knowledge base

A knowledge base is a fluid mixture of experience, values, contextual information and experts' vision that creates a working space able to incorporate new experiences and information (Davenport and Prusak 2000). This knowledge base occurs in organizations in formal documents and databases, as well as in organizational informal routines, practices and norms. This concept of knowledge base is consistent with the Knowledge-based approach of the firm and opens up new questions about the interaction of the explicit and tacit (Polanyi 1962) knowledge assets (Spender 2002). This new organizational reality challenges the traditional planning, organizing, leadership, controlling, accounting and other organizational practices (Sveiby 1999; Guthrie 2001; Mouritsen *et al.* 2001).

Knowledge base presents managers with a huge challenge: how to manage knowledge? Knowledge management is an organizational discipline bridging information demand and supply within organizations (Huizing and Bouman 2002). It is partly achieved through the nourishing of knowledge and personal experience sharing, and the development of a common knowledge base. The real issue is about retaining and efficiently using knowledge in the organisation. We believe the mentor is a key figure that might facilitate protégés' access to knowledge, whether located in the information center or the organizational memory.

Information Centres

Information is usually aggregated in the organizations and mostly available, but its precise location is often not known by everyone in the firm. As a result, it is necessary for organizations to have an information directory through which all members can access information centres (Garvin 1993; Nevis *et al.* 1995). Information centres can be used as gateways into the knowledge of the organization, and search engines can be used to access the organization's knowledge wherever it resides.

As information is processed in the organization it becomes explicit knowledge (Takeuchi and Nonaka 2003) holding a special characteristic; its initial creation is much more expensive than its subsequent replication (Leliaert 2004; Grant 2002; Winter and Szulanski 2002; Reinhardt *et al.* 2003). To better explore the powerful resource that knowledge is and learn from each experience, organizations need to have an information exchange net; the so-called information transaction space (Huizing and Bouman 2002), or information space (Boisot 2002). Knowledge management in the firm involves the management of this space. This approach is consistent with the long-lasting vision of the organization as an information processing system (March and Simon 1958; Galbraith 1977; Ahuja and Carley 1999).

Information centres aggregate and manage the stocks and flows of information in the exchange net meeting supply and demand. Firms may also benefit from having information centres as they prevent the potential financial losses associated with the unavailability of organizational information. We consider two unavailability sources (a) the existing internal untraceable information and (b) the information that no longer remains in the firm.

Organizational Memory

Organizational memory is used as an analogy from the individual universe and used to address something common or shared by all individuals in the firm. The social function of memory – and forgetfulness – may be considered as an instrument for the homeostatic organizational equilibrium. The language to articulate organizational memory is developed in close association with organizational experience and it is acquired by the individuals through face-to-face relationships within the firm (Czarniawska 2003).

Organizational memory is made of the tacit, specific and complex knowledge that the organization develops internally and thus is difficult to imitate. The firm absorbs internal and external knowledge, combines them with pre-acquired knowledge, and creates new one (Cohen and Levinthal 1990). The organization may enlarge its knowledge base through the new application of pre-existing knowledge in the firm (Szulanski 2003), as these new combinations of pre-existing knowledge generate new knowledge (Gratton and Ghoshal 2003).

Organizational memory allows for knowledge sharing; by letting individual employees find others who can provide information or help to accomplish a specific job-related task, and by nurturing organizational culture. Organizational memory also enables work

groups and teams to identify, to locate, and to contact colleagues to bring additional expertise to bear on their projects, and to encourage business units to share best practices and lessons learned from past projects (Croasdell *et al.* 2003).

Having defined mentoring and the mentor's characteristics and functions we would like now to highlight the role of the mentor as a knowledge accessing tool. We believe the mentor plays a key function when facilitating protégés' access to knowledge, whether located in the information center or in the organizational memory. In order to complete the theoretical setting let us briefly introduce the reader to change. Such literature is justifiable, as we believe that it is under change conditions that the mentor plays a definite role.

4. Change

All organizations need to change and develop if they are to remain competitive and satisfy the market's ever increasing expectations. The need to change can be either driven by external factors, such as new legislation or increased competition, or internal factors, such as the implementation of new technologies. However, the implementation of change is a complex process that is not always successful mainly due to poor communications or an underestimation of the amount of training required. Organizations face a high competitive rhythm and permanent-changing scenarios, so they need to consider the complex reality that change is an element in the firm's activity (Beer and Nohria 2000).

Change can be considered in several dimensions in the organization, like the processes, the functions, the culture and the power distribution (Cao *et al.* 1999, 2003). These dimensions of change have been accepted and followed by many authors, who have considered them as all interconnected and influencing each other. As a result, organizational change has been conceptualised as a dynamic process: change in one of its dimensions will probably result in an alteration of the others (Stebbins *et al.* 1998; Cao *et al.* 2000; Cao and McHugh 2005).

5. Research questions

During change periods there are rearrangements of the knowledge base, making it more difficult for employees to access them. We consider that difficulties in accessing the knowledge base arise from different origins: changes in the location of the knowledge base, employees' turnover consequences, strengthening of individual defence systems due to reduced informa-

tion sharing. As a result, there is a higher difficulty in accessing the knowledge base and often the employees can't reach them. Under these circumstances we believe mentoring programs may act as connecting systems between the ones looking for knowledge and the ones holding it. Still, we suggest a distinction between the roles of mentoring regarding access to the information centres and the organizational memory.

Information systems reveal to be key elements in the maintenance of the organizational structure during change. Information systems seem to be particularly relevant when changes occur in the organizational structure or in the power distribution within the firm. When considering information centres, mentoring should work as a distributor, identifying the location and contents of them, so mentoring would act as a (faster) alternative to internal information supply system's update. Based upon these inferences we propose the following research questions:

RQ #1: *How do mentors speed up protégés' access to information centers during organizational change periods?*

Concerning organizational memory, the difficulties involved are higher. The increase in difficulty to access organizational memory is due to the tacit essence of the information involved and it is spread all over the organization, being held by several organizational members. Organizational memory is harder to access when the other individuals do not want to share it and hold it, the usual scenario during change periods. When considering organizational memory, mentoring relationships should work as true roadmaps to organizational memory and also knock down barriers promoting knowledge sharing by reducing individual self-defence behaviours that prevent fluidity of organizational memory. Thus we propose that:

RQ #2: *How do mentors ease protégés' access to organizational memory during organizational change periods?*

As mentors are usually senior, more experienced and higher-placed employees, they have accumulated huge amounts of organizational tacit knowledge. They have the capability to interpret knowledge and situations that have no formal applicable processing rules as commonly observed under change conditions, so mentors are privilege positioned to help protégées. Thus we suggest the following:

RQ #3: *How do mentors facilitate protégés' access to the knowledge base using their privileged status?*

Guided by our research questions, let us now present the empirical study we have undertaken.

6. Three-dimensional empirical setting

6.1. Setting and participants

This study aims to gather empirical support to the formulated research questions. We approach the research questions using data from five different organizations coming from three industries: banking, construction and public works and logistics, all of them knowledge-intensive firms. Primarily we have addressed organizations going under major change processes. These organizations seemed to be a fine setting for the study because it is during change periods that knowledge management and knowledge access are most affected. Secondly, we chose firms among the ones that were making use of mentoring processes, either formal or informal. Thirdly, we have selected the firms based upon five indicators: turnover per employee; business notoriety and market recognition; media and expert recognition of innovative human resources management practices.

Bank 1 is the private leading bank in the Portuguese banking industry, having at present a market share of 13%. From its foundation Bank 1 is known for applying a very innovative set of human resources management and practices (e.g., not having an established Human Resources Department). This Bank has quickly reached industry leadership and keeps that position by consecutive organic growth and through mergers and acquisitions.

Bank 2 is the second largest private bank in the Portuguese banking industry, having now a market share of 11% and it has recently been acquired by a big international banking group. The acquired Portuguese bank was itself a merger of two old, traditional and renowned Portuguese banks. Due to the recent acquisition the bank is going through a huge internal restructure of: processes, activities, strategies and even organizational culture.

Bank 3 is a small Portuguese regional bank that is crossing a fast growing process to national wide, having at this time a market share of 4%. This bank presents traditional management practices as well as conservative clients.

The construction and public works firm is the largest in its industry in Portugal. The firm has developed from a family business into a big enterprise, supported by its process innovation capability, in the last 6 years. Recently the firm has acquired a close competitor and is reorganizing processes, practices and organizational structures.

The logistics firm is a small organization with the highest growth rate in the sector. Since the establishment of this firm, the specialized media has recognized it consistently as the most innovative one in the sector (e.g., (a) introducing the flat structure concept in the industry; (b) having a quality certification for internal processes since the establishment; (c) using the most recent human resources practices valuing people over tasks). Table 1 presents a short summary of the five organizations.

6.2. Data Collection

We have conducted 133 interviews (38 mentors and 95 protégés) at the organizations. The selection of the

interviewees was made in two phases. Firstly, we have asked the organizations for a list of all employees acting as mentors. From that list, based on their internal identification numbers we have randomly selected the candidates for the mentor interviews. Secondly, we have asked the organizations for a list of all non-mentors and again we randomly selected them for interviews based on the employee internal identification numbers. After the selecting phase we have asked the firms to give us the names and organizational phone numbers of the selected employees and we have contacted them (Table 2).

Data on the interviewees involved in the study can be found in Table 2.

Table 1. The organizations in figures (2005)

Organization	Bank 1	Bank 2	Bank 3	Construction and Public works	Logistics
Date of establishment	1985	1857/1864 /1875/2004*	1988	1947	1995
Head office	Porto	Lisboa	Funchal	Lisboa	Porto
# Employees	9.417	4.286	1.478	1.493	18
Annual Turnover (T) (million €)	3.849.2	996.2	183.354	492.132	7.114
Turnover per Employee (€)	408.751	232.431	124.055	329.626	395.222
Average annual cost per employee (€)	48.700	36.804	31.055	38.500	23.040
Mentoring program	Formal	Informal	Informal	Formal	Informal

* The international banking group was established in 1857, the two merged Portuguese banks were established in 1864 and 1875, and finally the acquisition by the international bank took place in 2004.

Table 2. The interviewees in figures (2005/2006)

Organization	Bank 1	Bank 2	Bank 3	Construction and Public works	Logistics
Average age (all employees)	38.16	36.09	35.33	37.24	30.11
Mentor's average age	45.84	38.47	39.86	41.29	40.63
Average # of years at the firm (total employees)	7.1	9.3	7.1	8.7	4.5
Average # of years at the firm (mentors)	12.7	12.8	9.8	12.3	8.2
# Mentors interviewed	M: 9 F: 4	M: 5 F: 3	M: 4 F: 2	M: 6 F: 2	M: 3 F: 0
# Mentors contacted	20	15	12	15	3
# Protégés interviewed	M: 14 F: 14	M: 9 F: 16	M: 8 F: 6	M: 10 F: 11	M: 1 F: 6
# Protégés contacted	40	30	24	30	7

M – Male; F – Female

6.3. Analysis

The data gathering contemplated triangulation (from secondary; archives data collection and observation) Jick (1979), in order to ensure higher reliability of data. Interviews were recorded, typed and codified into tables independently by both authors following a code-chart developed for this study that enabled us to match the information collected accordingly to the research questions. After confronting the two authors' codifications, some differences were found, discussed and merged. The coded information was then discussed in panels among key employees at each organization, and differences were leveraged by incorporating more information from the key employees. The analysis was developed based upon the confrontation of literature review against the gathered data. In the next section we will be presenting the most important aspects of the undertaken analysis. We will also display some illustrative transcriptions from the taped interviews in order to present some adequate examples following a chain of evidence.

The mentoring programs in the organizations studied, despite being formal or informal, have objectives consistent with the literature; they are based upon interpersonal relationships in which a senior or more experienced colleague helps a junior or inexperienced colleague in the organization. Mentoring programs allow talent development, improvement of employee knowledge, skills and abilities, and employee retention. We found formal mentoring programs involving organizationally assigned pairs, matching mentors and protégés. We also found spontaneous informal mentoring realities developed naturally, established between individuals in three of the firms, where we were also able to identify mentor-protégé pairs.

The formal mentoring programs in the two organizations presented contracted goals and a specific timeline as well as guidelines for interaction frequency and interaction content. These mentoring programs offer preparatory activities such as orientation and training to help mentor and protégé understand their roles and become comfortable with the mentoring process.

“... the bank considers that the mentor is a powerful instrument for intellectual capital creation and circulation, which promotes organizational learning and capability dissemination...” (Internal document - bank 1).

“... a mentoring program should support people in the functional posts and ensure that they circulate at the same level through different organization areas, so that they develop a wider range of knowledge in critical processes and become able to satisfy resource demand in the organization...” (Human resource manual – careers chapter, at the construction firm).

Regarding the informal mentoring programs we were able to observe they were based upon spontaneous human relationships that arise out of personal affinities among colleagues in the firms. The most common long-lasting relationships identified were the initial pairs established at employee entrance: employee – direct supervisor. In none of such cases there was a mandatory internal rule establishing the beginning of the mentorship and no structured orientations regarding its evolution, objectives or timeframes. The informal relations were not proposed nor nourished by a formal established program but their existences were quite clear to identify in the firms.

Despite the informality of the relationships, they still work out and they have concrete implications for the firm's daily activities:

“...When I was invited to consider my relocation to another construction site performing increased functions I looked for counselling from my mentor asking him about my real capabilities to perform well in the new job...” (protégé from the construction firm).

The figure of the mentor in the organizations studied presents characteristics consistent with the literature; mentors are senior elements in the organization (Table 2) and occupy high-level posts (Table 3) and, on average, they have been around for a long time (Table 2). We have been able to attest that mentors are responsible for initialising the socialization of the newcomers to the firms. Some interviewees considered the

Table 3. Mentors' career rankings (2005/2006)

Organization	Bank 1	Bank 2	Bank 3	Construction and Public works	Logistics
Organizational total ranks	18	18	18	12	3
Minimum accepted rank for being a formal Mentor	>15			>10	
Minimum observed informal Mentor ranks		>13	>15		>2

The mentor figure is also relevant to stimulate the protégé's career development at the firm.

mentor as a counsellor and a friend in the organization, someone they can count on when they have problems, either professional or other.

“...my relationship with the mentor that was assigned to me has evolved over time. Today we are more than acquaintances; when ever I need I can trust in his counselling and orientation, sometimes even for personal issues... He calls me several times just to know how things are going...” (protégé from the bank 1).

“... people are extremely demanding in terms of professional development opportunities, if the bank doesn't satisfy them, they'll go away... accompanying them is a way to nourish, or speed up those opportunities...” (Internal supervisor's guide book from bank 1).

All five organizations presented functional organizational charts. Information found in documents reflects the existence of functional structure in all organizations reflecting their high level of specialisation in each area or department. Knowledge developed and held at each area is systematically used in daily routines, tasks and activities. However, it is not easy to let it flow to other functional areas in the organization. Interview analysis shows that interviewees know about the existence of the knowledge base in the organization, most of the times they know the precise location of the different knowledge base.

“...I know how information is organised. ... I also know there are certain procedures we must follow to ask for information from the other departments...” (protégé from the bank 3).

“... in this organization (because of its dimension) information is easily duplicated ... so, to obviate that, we gather information functionally and there are procedures and information access levels to each employee” (mentor from the bank 1).

In all five organizations it is clear that getting the access to explicit information was not a problem. During the socialization process newcomers are introduced to the organizational design, the intranet system, information warehouses and become aware how to retrieve the information they will need to perform their jobs in the near future.

“ Each employee shall be attributed a domain, a login and a password to access the intranet ...all information regarding organization, organizational routines and information are available in the intranet. ” (Employee welcome internal document – bank 2).

*“ All employees are invited to keep updated with the bank latest news through the *** TV” (Employee welcome internal document – bank 1).*

In the five organizations we were able to find electronic systems supporting information storing and information flows. Such systems allow for the cataloguing of information on either general or classified. Considering classified information, there are specific rules and different access levels given to the employees in different hierarchical levels. Classified information contains personal data respecting individual performance, organizational data respecting firm performance, data on clients and suppliers, data on present and past projects, security procedures and strategic orientations from the board. There are also special classified information storing and distributing systems which are only accessed by board members.

On the other hand, general information gathers explicit culture values, written procedures, rules, and manuals for routine tasks, indications on the location, contacts and functions of every employee in the organization. At these organizations there are electronic platforms (intranets) used as dialogue space where employees exchange experiences, post their doubts and get the answers they need. Some interviewees have stated that the debates in these forums often produce changes in the information centres showing a dynamic process.

“... we've been scheduling vacations on a different system due to changes suggested by colleagues on the forums. This shows that what we debate on those forums is really used later on...” (protégé from the logistics firm).

“... for instance, if I have a problem related to a certain procedure in my job, I can broadcast a question on the system asking my colleagues for help, like: Has anyone ever faced this problem? How did you solve it?” (protégé from the construction firm).

We were also able to collect evidence in support of the mentor's helpful role in facilitating the protégé's access to information by guiding him in navigation, especially when he uses an electronic system to access information.

“... Sometimes, based on my remembrances, I only have to tell my protégés to take a look at a specific archival period, where I'm sure they will find the answer to their problems” (mentor from the construction firm).

“...I recall having a problem on identifying the right form to fill in at a certain time... it was my mentor who helped me choosing it ...” (protégé from bank 3).

“... being able to facilitate, to show the way and to make corrections, that's our job as mentors. Sometimes we don't have the necessary knowledge, but most of the times we know someone who does, and that way we can help our protégés...” (mentor from bank 3).

Interviews show that when information is not accessible or is not updated, the mentor plays an even more important role, as he/she knows personally the individuals who have that information for sure and, as a result, he/she is able to establish the contact between that person and the protégé who needs the information.

“... when I can't find the information because we are temporarily out of system ... I make use of my mentor. Sometimes he doesn't know either, but he searches for someone who knows and puts me in contact with that colleague ...” (protégé from the bank 2).

Organizational memory and also the sets of non-explicit rules used to identify the persons that maintain organizational memory alive, as well as their post in the organization, their career evolution and their level of information access were identified from the data collected. The interviews' analysis revealed the importance protégés confer to the mentor role in facilitating the access to organizational memory.

“... the most important help I get from my mentor is the information that only she knows...” (protégé from bank 2).

We came across some mentions about the long experience of mentors and their career evolution, when the interviewees commented on the reason why the mentors were so helpful.

“... when I came into the firm in 1991, my mentor was already a director, now he is the construction chief executive...” (protégé from the construction firm).

Inspired by these strong testimonies and not completely satisfied about the consistency of the phenomena, we were curious about the mentor facilitating access to organizational memory process. We have developed a small field experiment consisting of an artificial problem in order to be able to spot the organizational memory in each organization and to understand the degree to which every employee uses the mentor figure to access it. The field experiment was prepared with the help from the human resources department liaison elements. As bank 1 presents no functional human resources department, we have used the help from the division of personnel training and development, where our liaison person came from. Due to the small size of the logistics firm, we did not perform this field experiment there.

The field experiment consisted of presenting the protégés with a certain problem that could not be solved using the knowledge in the information centres and we have asked them who, in their opinion, would be the right person to contact (due to their knowledge) and help them solve the problem.

In the four organizations where we have applied the field experiment, the majority of protégés were able to identify the colleague that holds the needed information. The results presented in Table 4 led us to suspect on the existence of organizational memory and that protégés know how to access it. These results also illustrate the relevancy of the role of mentors as access facilitators to organizational memory.

The field experiment was not performed at the logistics firm due to its small dimension, but this organization was previously very helpful in the study and its contribution was highly relevant, because it was there we developed a very in-depth study. We have used this organization as our “lab firm”, it was there we first confronted the research questions against reality and worked on them. We also have developed there the methods and the methodology we have applied. We have conducted a long and meticulous work at the logistic firm, by interviewing all the 18 employees. This extensive effort allowed us to better understand some mentoring dimensions that we were able to identify in the subsequent firm analysis as well.

We can assume that organizational memory access is an organizational concern, as we were able to trace some internal procedures manuals mentioning it, reinforcing our suspicions. The documents' analysis has shown us the role of the mentor in accessing organizational memory:

“... the mentor is a member of the board, and its mission is to accompany the protégé during time, allowing the protégé to have someone influent to call ... the figure of the mentor doesn't question direct hierarchy, on the contrary, it provides a complementary alternative allowing to obviate punctual limitations that occur ... the mentor's interventions are characterised by its influence and pedagogy. The mentor listens and elucidates the protégé, and, if necessary, he will mediate...” (Internal supervisor's guidebook from bank 1).

Table 4. Results from the field experiment

Organization	Bank 1	Bank 2	Bank 3	Construction and Public works
# of protégés questioned	28	25	14	21
# and % of protégés questioned that pointed out the mentor as source of information	21 (75%)	14 (56%)	11 (79%)	18 (86%)

7. Discussion and conclusions

We believe to have reached the main goal of this study by exploring the importance of the mentoring programs and the mentor figure as a knowledge accessing tool. In order to better analyze the relevancy of mentoring programs and the figure of the mentor regarding internal knowledge access, we have chosen five organizations going under major change processes to develop the study.

When addressing the concepts of mentoring program, knowledge base, information centre and organizational memory we were able to empirically identify what the literature states. Regarding mentoring programs, and despite of being formal or informal, they are based upon interpersonal relationships that allow talent development, improvement of employee knowledge, skills, and abilities and employee retention, consistently with the literature. On the topic of knowledge base, they retain knowledge developed and held at each firm and that knowledge is systematically used in daily routines, tasks and activities, though it is not easy to maintain the inter-functional flow of knowledge within the organizations. On the subject of information centres (part of the explicit knowledge base), they exist in all five firms and even if their exact location is known, during change processes that location might not be precise, or the information might not be available. Concerning organizational memory (part of the tacit knowledge base) we were able to identify its existence in the firms and the observed employees' practices follow non-explicit rules to identify individuals that grant the access to organizational memory.

Regarding the first research question: "*Mentoring speeds up protégés' access to information centers during organizational change periods*", we were able to collect evidence supporting it. Although all five organizations have electronic systems supporting information storing and information flows, our interviewees clearly shared with us that the mentor plays a critical role whenever they have difficulties in fast accessing of information. It was also stated that when information is not accessible or is not updated, the mentor's personal net is an important asset to re-established fallen links.

As far as the second research question is concerned: "*Mentors ease protégés' access to organizational memory during organizational change periods*", we were also able to collect evidence supporting it. Due to the intangible essence of organizational memory, change periods are particularly critical and allow for much ambiguity. Considering the results from the field experiment, protégés enlightened the figure of the men-

tor because he/she was a strong rock they could hold on to when accessing such a volatile source as organizational memory.

Finally, as proposed on the third research question: "*Mentors facilitate protégés' the access to the knowledge base due to their privileged status*", we were able to collect evidence partially supporting it. From the data gathered, mentors in the firms are ranked in the highest levels, indicating that these individuals have greater access to both explicit and implicit forms of information. In addition to this, in all five organizations mentors have a higher average number of years at the firm than general. These two findings implicitly seem to indicate that mentors may possess a higher level of organizational tacit knowledge, but we were not able to measure the extent of such possession. Being so, we cannot fully support research question # 3 on empirical data.

We have suggested focusing on unnoticed dynamics of mentoring, relating it to information access and organizational change. The evidence collected has shown us the relevancy of the role of the mentor in facilitating the protégés' access to knowledge base in organizations, despite the mentoring program being formal or informal in its essence. We believe it is important to enrich the role of the mentor, regarding its ability to identify the location and facilitate protégés' access to knowledge base. We propose that the role of the mentor, from a conceptual point of view, also involves the access facilitating and distributing knowledge to protégés, pushing the boundaries on mentoring.

As a result of this study focusing on organizations going through huge change processes, we believe that the role of the mentor as a key element in the mentoring programs to give access to knowledge base is particularly important in the periods of organizational change. We can therefore dare to enlarge the mentoring scope by asking if mentoring can be a knowledge accessing tool. Based on this study we believe it can.

8. Limitations and future work

Regarding potential limitations on this study, we believe we can consider two kinds of restrictions: one relating to the methodology applied and the second related to the number and diversity of the firms involved. Admitting that the qualitative research approach followed in this article presents some limitations, being the lack of generalisation is the most important one and commonly mentioned (Yin 2003). We reduced such problem by using the adequate research tools such as triangulation on data gathering, two independently data

codification procedures and discussion panels with key employees from each organization.

Concerning the potential limitations from the number and diversity of the firms involved, we are aware of the little contrast existing within data as we have studied five different firms, but they all presented mentoring practices (formal or informal in their essence) and that the role of the mentor was much similar across them. Such choice was deliberate, for our aim was to push further the boundaries on mentoring. Regarding the number of firms involved, it seemed suitable enough for us, given the exploratory nature of this work. The diversity issue (firms from three different industries) has no great impact on the study, as we were looking for knowledge-intensive firms responding to selecting criteria established. Being all the firms going under change, we admit that the research conclusions are related to that scenario. Considering that change is the major feature in modern business environment, we consider that this restriction is not a real limitation; on the contrary, it represents the most common of settings.

The development of the arguments on pushing the boundaries on mentoring presented is still at a relatively early stage. However, we hope that it stimulates interest in this research field and catches the attention of researchers to several other issues associated with the features involved in this study: mentoring, knowledge access and organizational change. In addition, this study also provides guidance for future theory development both in mentoring and knowledge management. Regarding knowledge base components considered in this work – information centres and organizational memory – we believe future work should study the possible influence of organizational structure on their access.

Furthermore, future developments of this study might include the approach from the social networks perspective such as the measurement of the learning networks and checking whether mentors are really the central node in those learning networks.

References

- Allen, T. D. and Eby, L. T. 2003. Relationship effectiveness for mentors: factors associated with learning and quality, *Journal of Management* 29: 469–486.
- Adler, P. 2002. Market, hierarchy, and trust, in Choo, C. W. and Bontis, N. (Eds.). *The Strategic Management of Intellectual Capital and Organizational Knowledge*. New York: Oxford University Press, 23–46.
- Allen, T.; Day, R.; Lentz, E. 2005. The role of interpersonal comfort in mentoring relationships, *Journal of Career Development* 31(3): 155–169.
- Allen, T.; Eby, L.; Lentz, E. 2006a. The relationship between formal mentoring program characteristics and perceived program effectiveness, *Personnel Psychology* 59(1): 125–153.
- Allen, T.; Eby, L.; Lentz, E. 2006b. Mentorship behaviors and mentoring quality associated with formal mentoring programs: Closing the gap between research and practice, *Journal of Applied Psychology* 91(3): 567–578.
- Ahuja, M. and Carley, K. 1999. Network structure in virtual organizations, *Organization Science* 10(6): 741–757.
- Baugh, S. G. and Scandura, T. A. 1999. The effect of multiple mentors on protégé attitudes toward the work setting, *Journal of Social Behavior and Personality* 14(4): 503–522.
- Beer, M. and Nohria, N. 2000. Cracking the code of change, *Harvard Business Review* 78(3): 133–141.
- Boisot, M. 2002. The creation and sharing of knowledge, in Choo, C. W. and Bontis, N. (Eds.). *The Strategic Management of Intellectual Capital and Organizational Knowledge*. New York: Oxford University Press, 65–77.
- Cao, G.; Clarke, S.; Lehaney, B. 1999. Towards systemic management of diversity in organizational change, *Strategic Change* 8(4): 205–216.
- Cao, G.; Clarke, S.; Lehaney, B. 2000. A systemic view of organizational change and TQM, *The TQM Magazine* 12(3): 186–193.
- Cao, G.; Clarke, S.; Lehaney, B. 2003. Diversity in organizational change: towards a systemic framework, *Systems Research and Behavioural Science* 20(3): 231–242.
- Cao, G. and McHugh, M. 2005. A systemic view of change management and its conceptual underpinnings, *Systemic Practice and Action Research* 18(5): 475–490.
- Chao, G.; Walz, P.; Gardner, P. 1992. Formal and informal mentorships: A comparison of mentoring functions and contrast with nonmentored counterparts, *Personnel Psychology* 45: 619–636.
- Clutterbuck, D. 1992. *Mentoring*. London: IPM.
- Cohen, W. and Levinthal, D. 1990. Absorptive capacity: A new perspective on learning and innovation, *Administrative Science Quarterly* 35(1): 128–152.
- Croasdell, D.; Jennex, M.; Yu, Z.; Christianson, T.; Chakradeo, M.; Makdum, W. 2003. A meta-analysis of methodologies for research in knowledge management, organizational learning and organizational memory: Five years at HICSS, in *Proceedings of the 36th Hawaii International Conference on System Sciences (HICSS'03)*, January 6–9, 2003, Hawaii, HI: HICSS.
- Czarniawska, B. 2003. Anthropology and organizational learning, in Dierkes, M.; Antal, A.B.; Child, J.; Nonaka, I. (Eds.). *Handbook of Organizational Learning & Knowledge*. Oxford: Oxford University Press, 118–136.
- Davenport, T. and Prusak, L. 2000. *Working knowledge: How organizations manage what they know*, Boston: Harvard Business School Press.
- De Carolis, D. 2002. The role of social capital and organizational knowledge in enhancing entrepreneurial opportuni-

- ties in high-technology environments, in Choo, C. W. and Bontis, N. (Eds.). *The Strategic Management of Intellectual Capital and Organizational Knowledge*. New York: Oxford University Press, 699–709.
- Eby, L. and Lockwood, A. 2005. Protégé's and mentor's reactions to participating in formal mentoring programs: A qualitative investigation, *Journal of Vocational Behavior* 67: 441–458.
- Eddy, E.; Tannenbaum, S.; Alliger, G.; D'Abate, C.; Givens, S. 2001. *Mentoring in industry: The top 10 issues when building and supporting a mentoring program*. Technical report prepared for Naval Air Warfare Training Systems Division (contract No. N61339-99-D-0012).
- Fagenson-Eland, E.; Marks, M.; Amendola, K. 1997. Perceptions of mentoring relationships, *Journal of Vocational Behaviour* 51: 29–42.
- Galbraith, J. 1977. *Organizational design*. Menlo Park, CA: Addison-Wesley Publishing Co.
- Garvin, D. A. 1993. Building a learning organization, *Harvard Business Review* 71(4): 78–91.
- Grant, R. 2002. The knowledge-based view of the firm, in Choo, C. W. and Bontis, N. (Eds.). *The Strategic Management of Intellectual Capital and Organizational Knowledge*. New York: Oxford University Press, 133–148.
- Gratton, L. and Ghoshal, S. 2003. Managing personal human capital: New ethos for the "Volunteer" Employee", *European Management Journal* 21(1): 1–10.
- Guthrie, J. 2001. The management, measurement and the reporting of intellectual capital, *Journal of Intellectual Capital* 2(1): 27–41.
- Hegstad, C. D. and Wentling, R. M. 2004. The development and Maintenance of exemplary formal mentoring programs in Fortune 500 companies, *Human Resource Development Quarterly* 15: 421–448.
- Hirsh, W.; Jackson, C.; Kidd, J. 2001. *Straight talking: Effective career discussions at work*. Cambridge: CRAC.
- Howieson, C. and Semple, S. 2000. The evolution of guidance: listening to pupil's views, *British Journal of Guidance and Counseling* 28(3): 372–388.
- Huizing, A. and Bouman, W. 2002. Knowledge and learning markets and organizations, in Choo, C. W. and Bontis, N. (Eds.). *The Strategic Management of Intellectual Capital and Organizational Knowledge*. New York: Oxford University Press, 185–204.
- Jick, T. 1979. Mixing qualitative and quantitative methods: Triangulating in action, *Administrative Science Quarterly* 24: 602–611.
- Jones, M. 2001. Mentor's perceptions of their roles in school-based teachers training in England and Germany, *Journal of Education for Teaching: International Research and Pedagogy* 27(1): 75–94.
- Kram, K. 1985. *Mentoring at work*. Glenview, IL: Scott, Foresman.
- Lankau, M.; Riordan, C.; Thomas, C. 2005. The effects of similarity and liking on formal relationships between mentors and protégés, *Journal of Vocational Behavior* 67: 252–265.
- Leliaert, P. 2004. Red herrings of intellectual capital and lame ducks of knowledge management, in *Proceedings of the 25th McMaster World Congress*, January 14-16, 2004, Hamilton, Ontario, Canada.
- March, J. and Simon, H. 1958. *Organizations*. New York: John Wiley and Sons.
- McManus, S. E. and Russell, J. E. A. 1997. New directions for mentoring research: An examination of related constructs, *Journal of Vocational Behaviour* 51: 145–161.
- Mouritsen, J.; Larsen, H.; Bukh, P.; Johansen, M. 2001. Reading an intellectual capital statement – Describing and prescribing knowledge management strategies, *Journal of Intellectual Capital* 2(2): 359–383.
- Mullen, E. and Noe, R. 1999. The mentoring information exchange: When do mentors seek information from their protégés? *Journal of Organizational Behavior* 20(2): 233–242.
- Murray, M. 1991. *Beyond the myths and magic of mentoring*. San Francisco: Jossey-Bass.
- Nevis, E. C.; DiBella, A. J.; Gould, J. M. 1995. Understanding organizations as learning systems, *Sloan Management Review* 36: 73–85.
- O'Connor, D. and Ertmer, P. 2006. Today's coaches prepare tomorrow's mentors: Sustaining results of professional development, *Academy of Educational Leadership Journal* 10(2): 97–112.
- Ostroff, C. and Kozlowski, S. 1993. The role of mentoring in the information gathering process of newcomers during early organizational socialization, *Journal of Vocational Behavior* 42: 170–183.
- Polanyi, M. 1962. *Personal knowledge: Toward a post-critical philosophy*. Chicago: University of Chicago Press.
- Ragins, B. and Cotton, J. 1999. Mentor functions and outcomes: A comparison of men and women in formal and informal mentoring relationships, *Journal of Applied Psychology* 84: 529–550.
- Ragins, B.; Cotton, J.; Miller, J. 2000. Marginal mentoring: The effects of type of mentor, quality of relationship, and program design on work and career attitudes, *Academy of Management Journal* 43: 1177–1194.
- Ragins, B. R. 2002. Understanding diversified mentoring relationships: Definitions, challenges, and strategies, in Clutterbuck, D. and Raggins, B. R. (Eds.). *Mentoring and Diversity: An International Perspective*. Woburn, MA: Butterworth Heinemann, 23–53.
- Reinhardt, R.; Bornemann, M.; Pawlowsky, P.; Schneider, U. 2003. Intellectual capital and knowledge management: perspectives on measuring knowledge, in Dierkes, M.; Antal, A.; Child, J.; Nonaka, I. (Eds.). *Handbook of Organizational Learning & Knowledge*. Oxford: Oxford University Press, 794–820.

- Scandura, T. and Williams, E. 2000. Research methodology in management: Current practices, trends, and implications for future research, *Academy of Management Journal* 43(6): 1248–1264.
- Smith, W.; Vernard, J.; Harrington, K. 2005. Essential formal mentor characteristics in governmental and non-governmental organizations from the programs administrator's and the mentor's perspective, *Public Personnel Management* 34(1): 31–58.
- Sosik, J.; Lee, D.; Bouquillon, E. 2005. Context and mentoring: Examining formal and informal relationships in high-tech firms and k-12 schools, *Journal of Leadership and Organizational Studies* 12(2): 94–108.
- Spender, J. 2002. Knowledge, uncertainty and an emergency theory of the firm, in Choo, C. W. and Bontis, N. (Eds.). *The Strategic Management of Intellectual Capital and Organizational Knowledge*. New York: Oxford University Press, 149–162.
- Stebbins, M.; Shani, A.; Moon, W.; Bowles, D. 1998. Business process reengineering at Blue Shield of California: the integration of multiple change initiatives, *Journal of Organizational Change Management* 11(3): 216–232.
- Sveiby, K. 1999. *The new organizational wealth*. San Francisco: Berrett-Koehler Publishers.
- Szulanski, G. 2003. *Sticky knowledge – barriers to knowing in the firm*. London: Sage Publications Ltd.
- Takeuchi, H. and Nonaka, I. 2003. *Hitotsubashi on knowledge management*. Weinheim, Germany: John Wiley & Sons, Inc., 1–27.
- Wanberg, C.; Kammeyer-Mueller, J.; Marchese, M. 2006. Mentor and protégé predictors and outcomes of mentoring in a formal mentoring program, *Journal of Vocational Behaviour* 10: 10–16.
- Wasburn, M. and Crispo, A. 2006. Effective mentoring, *Review of Business* 27(1): 18–25.
- Williams, B. 2001. *Adult learning theory: The mentoring connection*. ERIC Clearinghouse for Teacher Education (SP039775). (ERIC Document Reproduction Services N° ED450101).
- Winter, S. and Szulanski, G. 2002. Replication of organizational routines: Conceptualising the exploitation of knowledge assets, in Choo, C. W. and Bontis, N. (Eds.). *The Strategic Management of Intellectual Capital and Organizational Knowledge*. New York: Oxford University Press, 207–221.
- Yin, R. 2003. *Case study research: Design and methods*. Third edition. Thousand Oaks, CA: Sage.
- Zey, M. 1985. Mentor programs: Making the right moves, *Personnel Journal* 64: 53–57.
- Zey, M. 1995. *The mentor connection: Strategic alliances in corporate life*. New Brunswick, NJ: Transaction Publisher.