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Information Management: Learning Things Outside Textbooks

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Article abstract

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Information Management: Learning Things Outside Textbooks

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The world changed. More than ever information gains a strategic role in professional contexts. Organizations are told that they will not survive in the modern era without a strategy for managing and leveraging value from information (extended to knowledge). This means that organizations must change the way information is managed, from a "housekeeping" style to a transversal mode, similar to how Human Resources, Finance, or Information Technology departments. This paper recommends some actions to make information/knowledge management an asset to be measured and with an impact on career development. It is a qualitative analysis resulting from an exploratory literature review and its comparison with working experience and observation in the last 15 years as an information manager. *Via* this combination, it was possible to approach a different type of intellectual capital investment, resulting in the proposal of creating an information/knowledge ladder strategy followed by a new performance evaluation indicator resulting from the information/knowledge management investments. The key conclusion shows that although information/knowledge management is a key asset for success, it's necessary to reinforce research and implementation studies in strategies that measure the returns on information/knowledge investments. It's also fundamental to the role of the academic side, extra engaging with organizations but also investing more in studies and creating new measurement techniques and indicators to be explored by future information professionals, particularly information managers.

Keywords: information management, information/knowledge ladder; information/knowledge culture, information governance

Introduction

The world changed. More than ever, information (and questions) have gained a strategic role in personal and professional contexts. Artificial Intelligence (AI) has made a considerable contribution to boosting it. Consequently, the key driver seems no longer to be access to premium information products and services (i.e., highlight specialized databases, AI environments, corporate information hubs, etc.). Still, the key now relies on the personal level, information literacy and information management competencies and capacities (with a strong focus on the capacity to ask the right questions, which means being able to analyze and ask). It is also at the organization level, meaning the full understanding by organizations – profit and non-profit - that information should be managed in a transversal/corporate way similar to Human Resources (HR), Finance or Information Technology (IT) departments. Information (and should be added knowledge, focusing tacitly) cannot be managed based on the principle of the "housekeeping" concept, missing corporate policies, governance and strategic planning. However, information/-knowledge management paradigms inside organizations must change.

This research hypothesizes that a rewarding information/knowledge-sharing behaviour strategy inside companies is necessary to encourage collaborators to embrace a culture of information and knowledge-sharing.

Literature also has been pointed to this need. Organizations are told that they will not survive in the modern knowledge era unless they have a strategy for managing and leveraging value from their intellectual assets, and many information/knowledge management lifecycles and strategies have been proposed (Arthur, 1996). However, as the terms information and, very particularly, knowledge management have been applied to a very wide-ranging variety of activities designed to manage, exchange and create or enhance intellectual assets within an organization (Haggie and Kingston, 2003), it seems difficult to find a consensus regarding what focus both have to explore and drive inside this context.

Frequently, information and knowledge activities are under the IT spectrum and, in comparison, the number of organizations with a functional information and knowledge management division seems to be lower than the existence of IT. This reflects a massive gap between what theory shows and what happens in practical contexts, impacting the applicability of

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information/knowledge management strategy and actions regarding process management with the consequence of little or non-value extraction from organizations' intellectual assets/capital.

According to Shannak (2009; p. 242), the challenge lies in the "ability to assess a person's knowledge and ensure it is fully taken advantage of and that an environment is created to encourage people to participate in the sharing process". Therefore, organizations need to internally prepare themselves to use their intellectual capital best, developing for that an information/knowledge atmosphere based on a technology fully customized for this purpose, an information/knowledge governance that states the transversal principles that all areas should follow when it concerns to information and knowledge management. Creating a rewarding information/knowledge behaviour plan is necessary to encourage people to embrace this practice by default in their daily work tasks, which should impact their career development and progression inside the organization. The combination of these aspects seems to leave behind the lack of connection between theory and practice concerning the current information/knowledge management role inside organizations.

However, the change will only be completed after a significant culture change. Here, we analyze how this change can occur. The change seems to result from a set of small but organized actions regarding how information/knowledge is perceived and worked inside organizations. Under this spectrum is highlighted the decisive action that the academic field can have to promote the change, being one of the first players in planting the seed of cultural transformation in organizations due to informational/knowledge behaviour. This is attributed to the academy, particularly to all faculties that teach Information Management (at the University of Porto, Information Science), the principal ruler of transformative behaviour in an organizational context rather than a reactive one.

Theoretical framework and key concepts

To avoid any semantic misinterpretation, it is important to start by defining this paper's central concepts: information, knowledge, information governance, and information ladder.

Its definition will help explain the particularities of information/knowledge management implementations as a strategic area inside organizations and frame the management of the analyses, methodology, and proposals projected in this paper.

Information and knowledge

Numerous articles and monographs have been written about these two concepts. This paper does not aim to dive into this analysis; however, it is essential to establish the perspective that drives this paper, starting with the Information concept.

According to Malheiro da Silva (2006):

> [. . .] in the scope of trans and interdisciplinary Information Science, it has a double semantic functionality. It refers to a human and social phenomenon that comprises both the giving form to ideas and emotions (informing), and the exchange, the effective interaction of these ideas and emotions between human beings (communicating). And it identifies a scientific object, namely: a structured set of codified mental and emotional representations (signs and symbols) and modeled with/by social interaction, capable of being registered on any material support and, therefore, communicated in an asynchronous and multi-directed way (p.4).

It is a cognitive phenomenon, considering that it happens in Human brains and minds (perception, attention, memory, language, etc.), but simultaneously, it is a social phenomenon because it requires communication and, by default, exchange.

Since Plato and Aristotle, knowledge definition has encountered a very long and not concluded /unanimous definition. As Bolisani and Bratianu (2018; p.1) refer to, "both developed Epistemology as a theory of knowledge, trying to answer the fundamental question: What is knowledge?" It's possible to find many answers and arguments in the literature supporting their theories, but none of those theories has been accepted so far as being fully pleasing. Its nature seems to be a universal truth, which is verified to be indescribable and without a convincing and commonly accepted result (Preyer & Peter, 2005; Neta & Pritchard, 2009). Nevertheless, in this context, we will consider the definition of Nonaka and Takeuchi (1995) of knowledge a "justified true belief" (p. 87). According to Ayer (2009), it means, "the necessary and sufficient conditions for knowing that something is the case are first that what one is said to know be true, secondly that one be sure of it, and thirdly that one should have the right to be sure" (p. 13). Simplifying, we may say that knowledge is a personal asset that results from interaction, connection and integration of received information from the outside into the personal brain's knowledge network. That means that communication is mainly a knowledge-sharing act that is received by others as information that could be transformed by the receptor into knowledge or not.

In conclusion, both are cognitive processes/phenomena. In some circumstances, both are social phenomena, too. Considering this dualist character, it is important to note that information, particularly information management, can exist without knowledge management, but this last one cannot occur without the first.

Information governance: a cultural principal

Information governance (IG) becomes progressively essential for organizations to be more competitive. A fundamental part of good organizational strategy seeks to control, secure and extract value from information. According to Bennett (2020), the mission of IG is "to maximize the value of information while minimizing the costs and risks of holding it" (p. 462). Through a corporate definition of systems management – comprising policies, processes and technology - by which information is used and reused, processed, stored, controlled and secured, organizations can find an effective way to be ahead of competitors and ensure sustainable development and growth. However, IG seems to be very dependent on the existence of an information/knowledge organization's culture, meaning this is a set of organizational principles that perceive information and knowledge as an asset that must be managed in an identical way as HR, Finance, or IT are driven. In Gartner's (2007) glossary, the definition very clearly states that IG is "the specification of decision rights and an accountability framework to ensure appropriate behaviour in the valuation, creation, storage, use, archiving and deletion of information". By bringing to the table the concept of behaviour, Gartner's definition not only highlights the need for corporations to own a more holistic view of organizational information but also a clear notion that information and knowledge cannot be managed following the "housekeeping" principle, meaning by this an action which belongs to micro or personal management. Information (also adding knowledge) is an asset to an organization like any other asset. That is the first assumption that organizations must understand and incorporate into their management core values. In this regard, the whole information/knowledge strategy would be concise and unique, following and materializing the IG toward extracting value from information and, in a second step, from knowledge.

In conclusion, information and knowledge are assets. Like other assets, they can be measured in their value and costs. In Bennett's (2020) words, "This means quantifying the financial benefits of both as well as the costs (and subsequent savings) resulting from risk management investments" (pp. 463-464).

Information/Knowledge Ladder

In the literature over the last 20 years, the concept of Information/Knowledge Ladder (IKL) appeared once (Kozma, 2009). It seemed more associated with the context of education and its impacts on social and economic development goals. However, gathering some concepts found in the literature, it's possible to detect that ILK is frequently associated with the process of transforming data into knowledge to deliver affordable, accessible, agile data analytics and data science benefits (Lopez and Project Team, 2000; Haggie & Kingston, 2003; Tseng & Lee, 2009; OECD, 2013; Martinez et al., 2021). This echoes a progressive technological society and, according to Sachs (2008), an information economy theory that can lead to increased productivity. Following Sachs' perspective, the deepening of capital results from using equipment and technology that is more productive than earlier versions. Consequently, improving the quality of labour, reflecting in a more knowledgeable workforce being more capable of solving problems, adding value to products and services and boosting the creation of new ones using new knowledge turns information and knowledge into the key source for development and success. Still, it seems not transversal to corporations; it continues to be a challenge to find cases and proposals that quantify the impact and outcomes of information/knowledge usage, mainly as a key differentiator factor in workers' career evolution performance.

An IKL, defended here, relies on the capacity of organizations to "assess a person's individual knowledge and ensure it is fully taken advantage of, and that an environment is created to encourage people to participate in the sharing process" (Shannak, 2009, p. 242). To summarize, IKL collects, organizes, evaluates, and delivers ROI in information/knowledge by combining the soft (human and culture) and the hard (technology) aspects covered by information /knowledge management.

Method

It's a qualitative analysis resulting from an exploratory literature review and comparing it with working experience and observation over the last 15 years as an Information Manager.

Through a bibliographical search in reference databases (Library & Information Science Abstracts, ACM Digital Library and Scopus) and in the generalist search engine (Google Scholar), confined to the years 2000 and 2023, repeating the exact search but reducing it to the last two years, 2021 to 2023, considering possible impacts from AI developments, it was sought the correlation between the theory evidence and the personal practice, experience and observation reveals, highlighting that it's out of this scope reporting any specific professional case. In this sense, this paper is the result of crossing, analyzing, and comparing the collected experience with the literature findings. *Via* this combination, it was possible to study and approach a different type of intellectual capital investment, resulting in the proposal of creating an information/knowledge-sharing behaviour strategy based on an IKL process followed by a new approach to the classification of performance evaluation indicators and metrics resulting from the intellectual capital investments.

Results: challenging core management values

The creation of an IKL that challenges HR performance measurements for all areas is needed to push the career evaluation process to see the whole picture (Shannak, 2009) and strengthen a closer collaboration with information managers, which is not very common.

The integration between the soft (human and culture) and the hard (technology) aspects covered by information/knowledge management is critical to optimize the effects of these practices. However, the efforts to ensure this seems promising – innovation and exclusivity. Considering the current developments (and AI, incredibly generative AI plays a central role) in accessing information, it looks like the differentiator factor is no longer and exclusively as it was a few years ago in accessing information. Instead, it seems to be in promoting and capturing the insights generated by staff and by checking if they are increasing or not improvements, changes and growth by its usage. The link between insights and results and the capacity to track the changes – from insight to result – constitute the critical differentiator factor because it will take full advantage of the unique restricted factor from organizations – people's knowledge, which corresponds to organizations' intellectual capital.

Organizations need to understand that money can buy technology and even information. Still, knowledge is an internal and exclusive construction, justifying the need for specific performance indicators that measure its contributions to organization growth and have a full impact on career evaluation and development. On the other hand, on the operational side, similarly requests a technological environment - an information/knowledge system (IKS) - capable of delivering valid measurements, skilled experts to design and manage the cycle of information/knowledge flow and to develop the performance indicators, not forgetting the relevance of combining quantitative and qualitative ones (Shannak, 2009).

Bases of an Information/Knowledge System (IKS)

Collecting information in an organized manner fundamentally requires selecting a technological environment that allows two core information behaviours: easily accessible information required to satisfy users' needs and a proper space to clearly and independently share their insights (organization tacit knowledge). However, here in the insights collection space, this should be organized in five areas that are, in practice, the five stairs of the IKL. They are:

1. Adding – the space where users can write their ideas, comments, and suggestions.

2. Insight's classification—a set of previously controlled terminology should appear as an option for users to select to facilitate the insights recovered or even quantify and measure them.

3. Rating impact and outcome—a set of previously discussed and analyzed terminology (engaging top management) that defines two scales: one for possible insights impact and another for organizational outcomes, all from the insights given.

4. Working group validation is an area to rate, from a group perspective, the value, urgency, and relevance of initiatives provided to organizational development.

5. Applicability – the space to finalize the cycle, presenting a scale of insights status, for example, ongoing, on hold, discard, and so on.

The technological environment should allow for establishing interdependency between areas and options and fixing mandatory filling. Visualization is also critical, meaning that all measurement data must be accessed in a friendly dashboard where users can push diverse Insights derived from information and knowledge-sharing activities.

Human and financial resources bases

Human expertise is also essential. Skilled people to propose, present and coordinate with the different stakeholders the architecture of the IKS, the discussion and analyses of IKL measurements and its impact on HR strategy in performance and career development as well the roll-out tactic: training, communication, and a plan for a close monitoring progression are the bases to the success of IKL process. In summary, this requires the work of an information manager, leading a team of other information professionals and coordinating the necessary internal interactions to create and maintain the IKS, as well as the technological environment to allow the implementation of the IKL process.

This human factor is vital in the two working arms of IKS. The work connected with the information itself—collecting, organizing, storing, quantifying, and delivering—and the work to implement the IKL process (culture may be added), training, engaging, and monitoring are inseparable (Silveira, 2024).

Another relevant point to consolidate this practice is the creation of a Standard Operating Procedure (SOP), which is "a set of step-by-step instructions compiled by an organization to help workers carry out routine operations. SOPs aim to achieve efficiency, quality output, and uniformity of performance while reducing miscommunication and failure to comply with industry regulations" (Wikipedia, 2024).

Last but not least relevant is the financial support. Highly customized technological solutions have significant costs, and IKL requires an IKS with high customization, updates, and monitoring. On the other hand, as it was referred to previously, working with the information demands an expert information team representing an investment for long-term success. Pinpointing and carefully planning all these investments is crucial for approval from top management. Returning to the primary idea that information/knowledge management is not a "housekeeping" act is essential. It's a strategic and continuous process that needs planning, monitoring and investment because it is the base of organizations' intellectual capital.

Career development: the critical role of IKL in performance

Measuring information/knowledge performance (and boosting the value of intellectual capital) requires first defining the ideal, expected information/knowledge behaviour in organizations. However, considering this an internal exercise, it's possible to establish some key assets that constitute transversal expected behaviours independently of the organization's nature.

Three major information/knowledge behaviours, adapted from Shannak's (2009) and Tseng and Lee's (2009) shall be considered:

1. Information/knowledge attitude.
2. Information/knowledge activities.
3. Impact of information/knowledge contribution.

Next, to define some possible transversal expected information/knowledge behaviour in organizations, it is now time to link those to IKL and IKS' information/knowledge behaviour/usage data with indicators and metrics to get its possible returns and impact on performance and career development, particularly and then in return on investment (ROI) generally.

Table 1 presents a possible connection between the three principal stairs of IKL (inside the IKS), associated with the expected behaviour, and the indicators and metrics related to each one. This reinforces the idea that the expected IK behaviour is an asset very dependent on the organizations' internal cultural drivers.

After presenting some possible organizations' expected knowledge behaviours and connecting those with indicators and metrics to quantify the levels of information/knowledge actions, it's time to analyze the information that measurements provide regarding individual and group information/-knowledge involvement, revealing the possible returns and impact on performance and career development.

At the individual level, the direct line of managers and HR at the following and broader level have factual information to define workers' information/knowledge behaviour profile due to their engagement and compromise toward organization development. Information like (a) capacity of generating knowledge, (b) generated knowledge with applicability or in ongoing stage, (c) daily work improvements due to knowledge re-usage, (d) persistent feedback, votes and comments toward colleagues' insights, etc., unequivocally reveal an active and pro-active involvement with their work and their work in/for the organization using and sharing knowledge.

However, the IKL also provides information at the group level and the attitude of individuals inside their working group. The ladder Working Group Validation also reflects the position and capacity of a group to reach a consensus related to a topic, which is a master dimension for success. Negotiating in group work is as crucial as being an innovator individually. So, the balance between these two capacities is something that IKL performance indicators and metrics support. For example, an individual with a significant number of insights versus its applicability shows a high proactive knowledge delivery profile, which is a positive point in career growth. But if the same individual reveals a lack of action in the area of Working Group Validation or if the individual's action here is constantly voting against with repeated non-constructive comments, this could reveal an absence in the subject's capacity to work in a group which, in an organization's perspective, perhaps it's not a very positive point. Nevertheless, this holistic vision is essential to provide a fair and transparent performance evaluation, and all this comes from the working domain of information/knowledge management expertise.

IKL and Return On Investment

The IKL returns and impacts do not end at career expansion. It will reverberate in ROI as well. The IKL system aims to collect in organized form insights to be central support for getting a holistic vision about information/knowledge attitude and actions performance but also constitute a faster and very organized way to take full advance from intellectual capital.

The existence of dashboards with regular or real-time updates connecting expected results derived from operational actions *versus* information/knowledge-sharing behaviour is a tremendous speeder for creative and innovative actions, problem-solving or new initiatives that put organizations ahead of their competitors. This is why information, especially knowledge, is currently considered the petrol of the XXI century. With it comes a new perception of ROI, which is no longer associated mainly with financial returns. Instead, it should be combined with ROKI – Return on Knowledge Investment. This concept appears in the literature at the end of the 90s by Davenport in his paper *Working Knowledge: How Organizations Manage What They Know*, but in this study, it is related to the rate of generation and use/reuse of content versus the subsequent value. The value should be understood as the weight of interactions – in-in, in-to-out and out-to-in – in producing information/knowledge and increasing the quality of the company's intellectual capital reflected in a faster but sustainable development and growth. Figure 1 illustrates the connection between ROI and ROKI.

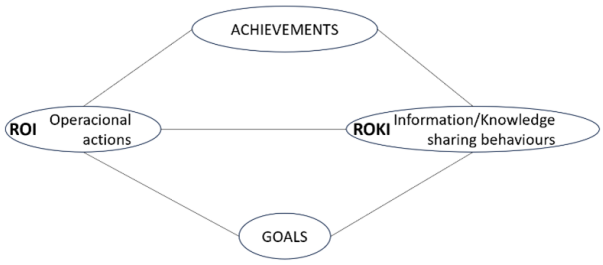
Table 1

Proposed performance indicators resulting from IKL process

IKL(S)	Expected IK behaviour	Indicator	Metric
Insights	Knowledge-sharing attitude & actions	Sharing new solutions/contributions; reusing solutions/contributions; quality of knowledge	New insights; reused insights; increased job performance
Working group validation	Participation and constructive attitude	Active involvement	Number of engagements (e.g., voting, commenting)
Application	Improvements in information/Knowledge contributions	Faster problem solving due to knowledge sharing; faster innovation due to knowledge sharing.	Number of insights applicable, ongoing, on hold or discarded.

Figure 1

Conceptual connection between ROI & ROKI.



The organization culture's change: finding the right moment

It was intentionally left for the final topic in this section, the delicate but fundamental aspect of the IKL process, the organizational culture that sustains the whole strategy. Literature and the experience revealed a twist concerning implementing an organization's cultural change toward an information/knowledge-sharing culture. Frequently, it is possible to find, in both contexts, the following sequence in the implementation of a cultural change:

1. Call for action moment — considered the main driver given by the Board or high-top managers. It is the moment when these organizational forces assume the urgency of a change in strategy and call their direct reports to prepare for it.

2. Strategy definition – generally the second line of management in organizations that start preparing a new strategy and goals and collecting them to accomplish the strategy.

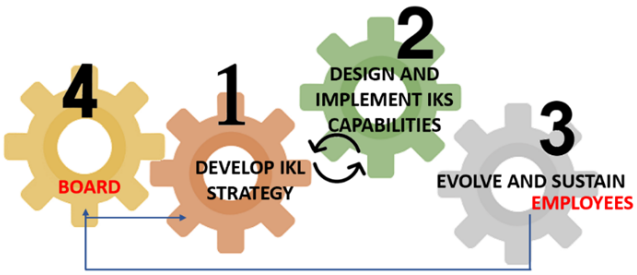
3. Design and implementation capabilities—Consider the operational part of the strategy implementation. This requires all organizational stakeholders to create the environments and procedures, technological and human, to implement it. Generally, areas such as information technologies, information management, and quality assurance are engaged here.

4. Evolve and sustain – associated with the rollout of the "change" that is reflected by implementing revamped processes. It is the moment when many organizational workers are involved, requiring a solid training program, awareness, communication and monitoring.

The proposal here is to leave the call for action moment at the end of the cycle, starting by considering this moment as a driver that guarantees implementation and progressive change. Figure 2 shows the twist in the plot.

Figure 2

Steps to prompted cultural change toward information/knowledge sharing culture via IKL.



The proposal suggests that in this context, cultural changes have more probability of occurring in a faster and more consolidated way if started by a small pilot, promoted by

managers and technical workers (are 1 and 2), which generates a case with evidence and results capable of gaining Board support and their direct sponsoring. Implementing an information/knowledge-sharing culture supported by an IKL process seems fundamental in this case. Firstly, the case and its results ensure the existence of an organizational context favourable to its development and flourishing, meaning a good context for investments in human expertise (enriching the number of information professionals) and technical strategy required for the purpose (a basic condition previously referred to). Secondly, in this time of profound change, collecting insights and high valorization of intellectual capital is unavoidable because this is what makes the difference. It's not the information but the knowledge construction. In practical terms, it means the existence of planned sharing cultures in organizations as one of the bases of the action strategy. Information/knowledge management in companies means the production, administration, and evaluation of know-how related to the company's goals, which means that information/-knowledge organization is always an instrument of information/knowledge management within internal/external organizations/sociological systems.

Discussion and next steps

So far, the challenge seems to be the lack of more profound applicability between theory and practice. Based on the reviewed literature, there is no question about the impact and value that information/knowledge management brings to any organization. The same recognition was observed in the context here due to the opportunity to build an IKL. However, and perhaps as a consequence of an economic paradigm entirely driven by speed and faster returns, it seems that information/knowledge management still has a long journey to undeniably get a set on the table inside organizations as a structural and strategic pillar for development and growth, in both capitals: financial and intellectual.

The issue seems to rely on the nature of culture, information, and knowledge, particularly. Literature has shown that the lack of trust and, in some cases, the fear of staying behind regarding technological developments have been pushing organizations to optimize IT and not information/knowledge management, which is in line with the current economy and, in a broader way, the XXI culture paradigm grounded on speed and ease.

As exposed here, information and knowledge strategies would take time to produce the expected results and returns, especially if the action plan engages HR and career development via IKL. This could also be understood because both are dependent on human behaviour changes. It's easier to create a technology, but it's harder to change behaviours that the technology solution stimulates. So, this suggests that these two areas—information/knowledge management and IT—must work side by side to produce the expected results. Information/knowledge management and technology strategies must serve organizations' goals, and those areas should be clearly defined, understood, and guided by an information and knowledge culture. Information governance must never be forgotten in this process, particularly if it emphasizes active information/knowledge behaviour as an essential point in workers' daily working performance. In parallel, some actions could take place from the academic side that might impact the way organizations perceive the value that comes from information/knowledge management if it is worked and dealt with inside organizations as an asset like other assets that can/should be measured in their value, costs, and impact.

Here, we start by presenting some ideas that result from the compilation of literature and the experiences that result from this experience. It constitutes some suggestions that should be explored, expanded and marked for future analyses, where it would be necessary to check if the efforts to connect via awareness programs from academies to organizations are producing the expected results: information/knowledge management a corporative asset in organizations and being part of the decision-making table.

Developing a bond between these two players — academy and organizations — should be worked on in three directions: from the academy to the academy, from the academy to outside organizations, and from outside organizations to the academy.

From inside to inside, incomes more classes and research in evaluation methods, which measure the effects of information and knowledge management on organizational performance (Matošková, 2016, p. 6). This field of study has a lot of potential to be the ultimate differentiator in the eyes of organizations that still struggle to understand the role and value of information/knowledge management as a corporate area and a basic but fundamental asset to be ahead of the competition.

Classes should prepare students to know what is measured in information and knowledge and how these professionals can do it. Yet, it would be necessary to explore students' critical thinking and capacities to create or adjust performance indicators and metrics that show the value of sharing knowledge and the investment required to implement, for example, an IKL and an IKS. The second and third-level Master's and PhD research should be explored with more empirical work that addresses questions such as the validity of the measurements and performance techniques. Also, case validation in achieving competitive advantage comes upon organizations' capability to exploit current information/knowledge and generate new information/knowledge (Laursen & Mahnke, 2001).

In short, students' preparation with and, firstly, a strong internal communication plan for dissemination between students, professors, and researchers in the area here discussed of good practices are powerful ways to boost confidence and

decisiveness to share with outside organizations – profits and non-profits — evidence from the value of investments in information and knowledge management, which leads to the second movement, from academies to organizations. The following actions are examples of ways to engage in a sustainable way:

1. Mentoring programs are based on the principle of engaging stakeholders from different organizations to monitor the work that information management students have to develop. These programs also include internships, which could be from the mentor´s organization or from a different one.

2. Together in business events, to show employers, at the national and international level, cases of the use of methodologies and strategies from information and knowledge management in resolving and increasing performance (for example, presentation of IKL process and possible results), but also to collect challenges encountered by invited entities.

3. Students provide short training sessions to support the construction of governance in information management and to optimize and enhance the information behaviour of employees in the sectors. Thus, they can build human staff that are more prepared to use information sources and AI technologies responsibly.

4. Creative programs in which students and organizations are challenged to create solutions based on information/knowledge management assumptions.

Integration and partnering could transform the perception and position of this area inside organizations. It would be a fundamental starting point for planting the seed in the Board and organizations' top management, resulting in the transformation of cultural organizations through informational/-knowledge management.

Conclusion

Since its beginning, this paper's title, Information Management: Learning Things Outside Textbooks, has indicated an analysis of the gaps between theory and practice.

Although limited by the fact that a complete review of literature cannot be claimed and this proposal results also came from working experience, this study throws light on a subject that requires much more dedication from information management professionals and researchers in the area of information/knowledge indicators and metrics, related to career development.

The persistence and focus, along this analysis, in career development, as the ultimate goal, is justified by the experience (which was out of textbooks) of recognizing that both – information and knowledge - only could be fully developed and worked out by all in organizations when directly have an impact in personal career development and growth. So far, it seems that information/knowledge management depends on personal beliefs and behaviours and not on organizations' working procedures that are above personal choices. Information/knowledge management is the choice selected for those organizations that want to be winners sustainably.

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