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USING A PRACTICE-BASED PERSPECTIVE TO INFORM THE DESIGN OF KNOWLEDGE MANAGEMENT SYSTEMS: EVIDENCE FROM SUPPORTING (E-)BANKING ACTIVITIES [CASE STUDY]

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ABSTRACT

The existing mechanistic view of Knowledge Management (KM) pursued by most IT initiatives in this stream, perceiving knowledge as a commodity has proven inadequate to support the highly knowledge-intensive workplace contexts. Drawn from the generic ideas of “technologies-in-practice”, as suggested by Orlikowski (2000), we emphasize the necessity of attaching a more situated character in the technical propositions for KM. In the center of our perspective stand the notions of activities and work practices, as the explanatory tools for interpreting roles and experiences of actors. Work practices serve not only as the context to knowledge, but also as the anchoring point for the enactment of collective learning and thus the support of communities of practice. Our work is substantiated with recommendations for technical approaches to KM. We ground our propositions on the experience of implementing a KM solution for the support of a newly employed and strategically important (e-)banking role, the “Front-line Customer Service”.

1. INTRODUCTION

Over the years, the issue of ‘convergence’ between Information Technology (IT) solutions and innovative business practices has been found in the center of the attention of Information Systems (IS) research. The underpinnings of this drift are traced back in the fundamentals of the long-standing debate between theory and practice. Prompted by this challenge, several research perspectives on technology have tried to explicate the role of technology in meeting the knowledge management and learning requirements of contemporary organizational contexts. In this respect, we can identify several contributions for the type of IT-support in the organizational knowledge and learning processes, which

primarily view the underlying IT-supported object, knowledge, as a data piece able to be stored, retrieved and applied (Liebowitz, 1999).

Up to now, technological propositions have been exhibiting features related to the aforementioned mechanistic view of knowledge management as their core capability (Alavi & Leidner, 1999; Liebowitz, 2000). As organizations started to put ‘order in chaos’, soon enough they realized that they were using information management tools and concepts to design knowledge management systems (McDermott’s, 1999). However, the management of knowledge exceeds the capacity of technology to support the storage, organization, search, distribution and hence development of an electronic organizational memory (Hansen et al., 1999; Walsh & Ungson, 1991). The social and context aspects of knowledge have been neglected in the current technological and methodological developments and, as the paper justifies later, is something that should inform and guide all IT-mediated interventions aiming at the management of knowledge.

This paper tries to reveal and justify a perspective that lays emphasis on the situated and practice-based character of IT-supported KM practices. Under this viewpoint, the paper capitalises on the phenomena taking place in the social space of the workplace to determine the appropriate design constructs of a KM technical proposition. Primarily, we draw on existing research accounts dealing with the description of the workplace in terms of activities and work practices (Owen, 2001; Turner, 1994) to support our claim of IT-enacted work-based knowledge management and organizational learning.

The findings of this paper have emerged through the writers’ involvement in a longitudinal research study of the introduction of a novel KM technological offering in the e-banking operations of one of the largest retail banks in Greece. Within this paper we try to accommodate some preliminary interpretative observations dealing with the situation beforehand, meaning the time the decision for the new system to launch was made, but also with the on-going affairs that followed the system introduction. We describe the individuals and collective perceptions of the main stakeholders groups, who were involved in the process of the system formulation and appropriation. The empirical evidence elicited from this research site reinforced the paper’s claims.

The paper unfolds its ideas through two main thematic sections, a theoretical and an empirical. The first section elaborates on the basic theoretical constructs that were used for the interpretation of our case study. Among these, we identify the contribution of the practice and activity theory, but also of emerging research accounts that try to explain knowledge management and organizational learning phenomena based on these theories, i.e. communities of practice, work-based learning, and knowledge. The second section describes in an evolutionary way the empirical experience of the authors through their involvement in the introduction of a KM system in a Bank. The authors, following an interpretivist approach, come up with some valuable considerations for the design and assimilation of KM systems within organizations.

2. KNOWLEDGE MANAGEMENT AT THE WORKPLACE: THE NEED FOR A PRACTICE-BASED PERSPECTIVE

Managing knowledge is a very complex process. Up to now, KM was dominated by the need to have content-based structures, known as knowledge repositories, available to organizations and its members (Davenport and Prusak, 1998). While this approach is still considered as fundamental for KM and beneficiary for the company’s information management challenges, the absence of *context* deters such systems from yielding benefits for the actual performance of employees. Introduced by organizational learning theorists, context and specifically the workplace context, which is what organizations dictate as the battlefield for managing knowledge, influences and affects the formal and informal processes of knowledge management and organizational learning (Billett, 1995).

Thereafter, it is evident that knowledge and learning need not to be studied in a vacuum, but rather within the context they are being enacted. In our perspective the workplace, through its activities and

its actors offer this context. We capitalize on ideas stemming from activity theory to explain the notion of work practices with regards to knowledge and learning. Activity and practice theory enables the analysis of the workplace context as it is reflected through the individual actions performed daily emphasizing the interdependent and collaborative nature of work as well as the meaning practitioners give to their interactions (Engeström, 1998; Bourdieu, 1990). Our proposition for the management of knowledge at the workplace context is mediated by tools for capturing knowledge of daily work practices, while allowing informal learning to occur.

2.1 Work Practices & Knowledge

The literature on organizational knowledge and learning is littered with implicit or explicit references to work practices. While the key role of work practice in the study of knowledge and learning in organizations emerges as a common theme, in our view more work is needed on the elaboration of this relation (Schultze, 2000). Models related to the study of the organization of work (e.g. task analysis) usually address its execution and not its knowledge and learning dimension. A practice-oriented approach is essential in KM so that its tacit component can be revealed. The practice approach contemplates that we can only understand knowledge in relationship to the context in which it was generated. Only in the realm of action, can knowledge become useful and valuable. The argument of the practice component of knowledge and vice versa should be taken into account for the design of KM practices and technologies.

By work practice we mean the conceptualisation of work – the way in which work gets done. Schön thinks of practice as the process by which individuals acquire and practice artistry (Schön, 1983). Usually the concept of practice implies repeated actions that follow certain rules and principles to achieve a specific goal (Turner, 1994). Practices comprise recognizable patterned actions in which both individuals and groups are engaged (Schultze, 2000). They do not necessarily adhere to specific rules and norms, but emerge through the daily improvisations of actors involved in working situations (Bourdieu, 1973).

Workplace context and specifically work practices exhibit both explicit and tacit forms of knowledge in individual and group senses (Cook and Brown, 1999). Explicit knowledge is the knowledge, which can be codified in certain form (e.g. written documents and reports, data base etc.). Tacit knowledge is what we know but cannot say, and comes usually in the form of rules of thumb, incorporated into individuals' experiences or inherent in organisational practices (Senker, 1993; Polanyi, 1966; Nonaka and Takeuchi, 1995). Consistent to Polanyi's (1966) distinction of tacit and explicit, Garud (1997) proposes the distinction between "know how" (procedural knowledge based on experience and often embedded in practice) and "know that" (theoretical, declarative knowledge which can be codified and transmitted without loss of meaning) correspondingly. Ryle sustains also that none of the above types of knowledge is independent. To make "know that" useful requires appropriate "know how" and similarly "know how" usually derives from precepts and rules.

2.2 Integrating Learning and Practice

Similarly to knowledge accounts, literature is not offering sufficient detail on how work practices could be conceptually organized in a sufficiently generic fashion that is relevant for organizational learning action. Based on Kim's distinction of operational and conceptual learning (Kim, 1993), we sustain that the learning processes should utilize the tacit knowledge embedded in work practices as they are being routinized. Learning associated with practice-oriented knowledge leads eventually to higher levels of understanding of the work arrangements in the organization (conceptual learning). The integration of learning and work practices dictates the interplay between theory and practice. As put forth by Raelin, there are two dimensions that are fundamental to the process of work-based learning: theory and practice modes of learning and explicit and tacit forms of knowledge (Raelin, 1997).

Theory allows practitioners to explicitly reflect upon and actively experiment with their practice interventions, whilst experience reinforces the tacit knowledge acquired in practice.

The way we have conceptualised the issue of work-based learning is through the notion of Communities-of-Practice (CoP). The notion of CoP returns knowledge back into its context. CoP are supposed to embody tacit social knowledge through the interactions of individuals upon a common practice (Lave and Wenger, 1991). Their success lies upon the intentions of individuals to act in a collective manner within the context of work. The employees inside the organization as social units interact and communicate with each other and build relationships that strengthen the workforce integrity. Individuals with the same interests and common recognized targets may form a community where they will share experiences and knowledge while they will work towards the benefit of the collective. Especially, employees participating in a same business process (our manifestation of work practice) may form a community that will place high interest in experience share or exchange and in the common effort to find solution. Within these CoP, the knowledge creation and sharing among the members is an ongoing continuous process. The CoP formation is a very common phenomenon inside organizations and lately their study is in the center of strategic and managerial research.

A common characteristic of COPs is that their members share the same practices and that's why they share knowledge collectively (Hutchins, 1991). Its members may be located on the same place and/or time, or they may be geographically dispread, while they may come with different intellectual backgrounds and interests, ethics and cultures. In a knowledge rich environment like a CoP, people learn to construct shared understanding amidst confusing and conflicting data (Brown and Duguid, 1991; Raelin, 1997). Personal relationships between the members are created and hence mutual respect and trust is established. These are essential in communication and share of tacit knowledge and are catalysts in community's knowledge enrichment. Perhaps the most attractive part of CoP is its capacity to assimilate unexpected environmental stimulus and in return to produce strong feedback loops. Each CoP encompasses a collective knowledge repository that is the organization's intellectual capital or collective expertise of the workforce (Banks, 1999). This is considered to be the most valuable resource for the organization.

3. EVIDENCE FROM EMPIRICAL WORK

In the remainder of the paper, we turn to the description of our empirical experience that will lead us to the elicitation of the KM recommendations. Our reasoning for this approach was unfolding as we were monitoring while managing the introduction of a KM technological solution. In the time spent in the research site, we have been engaged (both authors) as participant observers in the design negotiations to shape up an operational KM solution. The empirical work comprises details of the research site, briefing for the KM project in which the particular organization was engaged to, description of the technological features of the proposed KM solution and finally our main informants' perceptions and how they enacted our claim for KM.

Our research approach follows the interpretivist paradigm (Walsham, 1993). We seek to apply our theoretical constructs into organizational settings with the primary goal of eliciting a deeper understanding on the phenomena surrounding the introduction of KM technologies and draw findings that could inform the formulation of KM solutions. Our unit of analysis is that of an organizational group and the nature of our research output comprises ultimately organizationally feasible and systemically desirable (Checkland, 1981) proposals for knowledge management support.

Empirical research presented below comprises a single site (organization), longitudinal case study. It is a 3-year long study in its second year of development. We work with multiple informants within this business organization all of whom have an expressed stake in encouraging and supporting knowledge enactment in their firm. Our involvement with this organizational setting is intense and multifaceted. More specifically:

- i. We are responsible for the design and delivery of a knowledge management application within an organizational unit whose work brief is deemed as critical for the sustainable development of the organization as a whole. The design of the system reflects the organization of work practices around business processes as it is discussed later.
- ii. We have undertaken the commitment to engage in appropriate action to support this organization in the process of adopting in a meaningful manner the technological proposition (i.e. the system) that is being developed.
- iii. We are complementing work done in (i) and (ii) with inquiry into knowledge management and its relation to strategic imperatives and work practices within this organizational setting.

Evidence is being collected primarily through interviews, brainstorming and issue resolution meetings (concerning the knowledge management system and its adoption), and participant observation of organizational activities. Brainstorming and issue resolution meetings comprised scheduled people gatherings between bank's executives and the authors to discuss the progress of system development but also the conditions of the system's introduction in the bank, i.e. targeted business operation, impact, time plan, etc. Our informants fall into three categories:

- Division/department managers, i.e. e-Banking and HRD department
- Senior staff coming from the above, but also peripheral departments, i.e. IT and Intranet department
- Employees

3.1 The Organizational Setting: Background

The organization under study is a medium to small (by EU standards) retail bank. The bank is ranked fourth in size at a national level, it employs around 4000 people and has a network of 200 branches all deployed in a single EU country (Greece). Our engagement with the organization started from the e-banking department, which was created in January 2000. Preparatory work on the development and procurement of the necessary infrastructure to deliver electronic banking services had started in the bank approximately one year before that date. The bank launched its first 'bouquet' of e-banking services to public in March 2000 with an extensive and intensive marketing campaign. It should be noted that at that time the bank was the first to offer such an extensive range of electronic banking services in the local market.

The bank's "digital strategy" (their own term) comprised a number of banking services that its customers could access through "digital channels". Under digital channels, the bank grouped all types of transactions that a customer could perform over ATMs, Internet, phone (call center), mobile phone (based on SMS and WAP), while it also plans to develop services for interactive digital television. At its inception, the e-banking department comprised groups responsible for marketing and sales, Internet activities, electronic commerce, call center services, ATM operations, and mobile phone banking services. A few months' later, call center operations were consolidated as a separate (subsidiary) business organization.

E-banking operations were supported within the bank by a network of people, identified as "e-banking agents", located in each branch of the bank network. Initially, the role of the e-banking agent was assigned to the people that were responsible for the technical maintenance of the transaction systems in each branch ("the platform officers"). Very soon it was realized that these people lacked the necessary customer communications skills needed to promote the new services to the bank's large, disparate and unaccustomed to technology customer base. Subsequently, e-banking agent responsibilities were redistributed among branch staff already experienced with customer service (e.g. loan & investments consultants).

The brief of the e-banking department was “the management of the banking products and services offered through digital channels” (their own words). Management refers to the design and support of the banking products and services. The e-banking agents are the human interfaces of e-banking department with bank’s customers. Their role, at least in the beginning, was to promote e-banking services and products to external and internal customers. To facilitate the promotion e-banking services, agents were periodically subjected to face-to-face training regarding product and services characteristics, development of communication and marketing skills, and trouble-shooting.

At the time of the e-banking department establishment, a number of relevant initiatives were taking place in the bank. Of particular interest was the “competences mapping project” handled by the Human Resource Development department. The scope of this project, still currently under way, is to re-conceptualise the organization of the roles across all bank operations by placing emphasis of the skills required to meet the requirements in each operational front. This project, along with other re-organisation initiatives is the result of a top-level decision to reshape all major operations “from inward looking functional silos, to customer oriented service provision by all bank employees” (their own words). The competences mapping project is hailed by the bank as the groundwork required to inform human resource development strategy particularly in terms of re-deploying personnel around new and restructured operations, and in terms of managing training initiatives.

At the time of the aforementioned transformations, the e-banking department was also involved in a KM project for the development of an innovative software platform. The role of the bank in that project was to provide requirements for the development of a technical solution for KM. Initially, it has been decided that the tool-set would support the e-banking activities. The reason for this was that the e-banking department was new and therefore it needed the support of KM as a way capturing its experiences coming from both the customer and the management side.

The participation of the e-Banking department in the KM project involved the hand-by-hand with us formulation of the KM solution. The case of the bank for the research described in this paper is not simply an organizational context we draw data from. Our involvement with the case setting is much more active and includes the following:

- i. The development of a knowledge management application tailored to the needs of the e-banking department both in terms of providing knowledge oriented support for their internal work arrangements, and in terms of providing learning opportunities both to them and to e-banking agents located in the branches particularly through knowledge sharing and collaboration.
- ii. Appropriate facilitation and support throughout the scooping, specification, and (most importantly) deployment of (i) with special emphasis given to work context-sensitive adoption guidance and on alignment of this effort with related projects such as the competences mapping project, and the development of the learning portal.

3.2 System Conception

The design of the technical system was driven by imperatives emerging from theory as presented in the previous sections. Specifically, we sought to define a system that could support *on-the-job experience capturing and sharing* through the capture and structuring of tacit and explicit forms of knowledge. To this end, we needed a descriptive structure for work practices, which would host the material and would be sufficiently generic to be “understood” by various actors and adequately focused on the “business rationale” of work practices. As such, we considered business processes as the organizational manifestations of work practices and routines that take place within the organisations. In order for it to serve our knowledge oriented analysis purposes, a business process comprises *activities and tasks* carried out by organisational *actors* and *resources* (information and other) involved in the execution of these activities and tasks. The designer’s intention was not to structure work according to business process principles but to utilise constructs from this stream of work design literature as an organizing structure for material in the system. In addition to the core

material organising construct, the system featured experiences capturing mechanisms in the form of annotations that the users would be allowed to make on the initial work descriptions. The knowledge material, stored and organised in the system, comprises a common reference point for all practitioners, upon which they are able to reflect their work experiences. On this basis, the system offers various sharing and collaboration practices through appropriate facilities such as e-mail, chat, and discussion fora, thus enabling community structures to emerge.

The design period resulted in a prototype system. During the design negotiations with the Bank, it became evident that an appropriate KM solution requires a multidimensional approach, incorporating aspects of knowledge and learning that are grounded on the specificities of the organisational situation, which was selected to support. The system encompasses in a technically viable way those context-specific concerns in terms of activities, knowledge content and social interactions, as constitutive elements of the targeted workplace context.

Several distinguishing features characterize the KM system. These are its ability to:

- store and diffuse information resources,
- describe the work practices in terms of business process elements,
- enable communication and collaboration,
- have the information resources attached to specific in the actor's work context descriptions,
- accommodate user comments through annotations, and
- trace information exchanges among practitioners and anchor on the elements of the business process description from which they were initiated.

3.3 System Contextualisation

Our initial cooperation with the Bank could have been characterized as visionless, due to the lack of an expressed KM strategy; part of it could have been the new system. The envisaged KM intervention, in the initial phases at least, was aiming at the support of the newly introduced business operation, e-Banking. When presented with the initial system concept (which we describe below) the e-Banking department proposed a performance sensitive part of its operation as the targeted work practice. The practice included tasks related to promoting and selling the new e-products and services, as it was being undertaken by employees identified as "e-banking agents" located in the bank's branches.

As the KM intervention was unfolding and our involvement was becoming more intense, changes taking place at the organisational landscape resulted in a series of new facts for the project. Very soon the situation changed radically and we found ourselves not only working with various bank actors but also in the middle of a generic strategic initiative. The initiative called "The Bank's Learning Strategy" (in their own words), and the KM system was embedded in it. The new strategy was complemented by other initiatives, like the formulation of role descriptions and the organisation-wide competence-mapping project led by HRD department. As a result of the new developments, our negotiations for the introduction of the KM system involved also, in addition to the e-banking informants, informants from the Human Resource department and peripheral departments dealing primarily with content provision (intranet content manager). At this time we started re-thinking the tasks that could be supported by the system. The revised intention of the Bank was the KM system to support a *newly introduced role* dealing with the front-line customer service, which activities entailed a spectrum of tasks calling from informing about the traditional and electronic banking products and services to selling them. The role comprises an upgrade of the e-banking agent role and entailed more generic customer-centric activities related to traditional and e-banking services and products.

The rationale for this shift of support locus is ascribed to the organisational necessity, as declared by HRD department and accepted by the Bank as the appropriate orientation for the KM project, to move

from supporting *activities to fulfil a business operation* to *activities delineating a role*. Nevertheless, despite some organisational mobilisation regarding our project, the actual KM system adoption was restricted to a very particular organisational situation. In fact, the involvement of new organisational informants in the KM project, and at this point we are referring to the HRD people who became active, if not leading, members of the project, influenced the conceptualisation of the capabilities of the KM system for the targeted business operation (*customer service*). The currently undertaken by HRD department skills and roles initiative shifted the scope of the KM intervention from that of the “business operation performance”, as initially planned by the e-Banking department, to that of the “shaping of organisational roles”, which comprised the instantiation of the HRD’s strategy for the targeted business operation. However and in total compliance with the HRD’s objectives, the role of the e-Banking department became more meaningful as the main contributor of action material regarding the content of work of the targeted business operation.

3.4 Organisational Interpretations of the KM project

The KM project development process resulted in engaging the Bank (the participating organisational members) in a productive debate on how to exploit the prescribed system capabilities prior to its actual application and use. Whilst the system’s functionalities development was being finalized, the bank with the support of the research team was formulating the system’s seed knowledge material comprising the description of the targeted business operation in terms of its business process constituents. On that basis, so much the HRD as the e-Banking department provided their own interpretations related to the underlying and probably hidden offerings of the KM system. These interpretations were reflected upon 3 emergent organisational elements, the *targeted Business Operations*, the *Roles* and the *Competences* that according to the bank’s participants constitute the regulatory factors for the KM system intervention. In other words, participating organisational members grasped the opportunity of system feature formulation to pursue further organisational goals regarding:

- Skills and competences monitoring (the HRD department)
- Role shaping (the HRD department)
- Documentation and fast diffusion of new business practices (the business development unit)

In fact, HRD saw real value in the proposed KM system for their strategy. It comprised for them a comprehensive tool for modeling role descriptions through the specific business processes and tasks that the role was consisted of. The introduction of the KM system coincided with the bank’s intention to launch the operation of the new “customer service” role as the targeted business operation. The KM project served as an internal consulting tool that was utilized for the development and configuration of the new role. To this end, the bank’s participating members worked collaboratively with the research team to work out an operational but also system viable definition of the new role.

Moreover, the KM system materialized HRD department’s vision for a competence-driven role operation. This would be achieved through a number of system-enabled features as the continuous appropriation of the workplace situations delivered to the practitioners in the form of process descriptions and the participation in community acts. It is envisaged that the system could be used as a community-building tool, based on the need of people to communicate and collaborate upon common work practices. The tools offered for that purpose may seem trivial (chat, e-mail, discussion forum) but their anticipated use, anchored on the context of a particular work practice allows multiple affordances in the workplace context (table 1). More specifically, the utilization of these functionalities from the practitioners is being captured in a technical fashion that allows its contextualisation and reflection on the work descriptions, as being expressed in the system through the business processes.

In addition to the interpretation given by the HRD department, the e-banking department put forth very clearly its intentions of exploiting the system capabilities. The KM system comprised for the e-

Banking department a communication proxy through which products and services' information was transmitted to the practitioners of the targeted business operation. Besides the behavioral part, which resides in the responsibility of the HRD department, the "customer service" role implements the business needs of the e-Banking department through the selling and promotion of its products and services. To this end, the KM system allows the documentation of the department's business practices, while ensuring the immediate and continuous diffusion of possible changes.

The last but not least informants are the business practitioners that will impersonate the new role and thus use the KM system in their everyday life. The system offers a lot of interpretations for their work; some of them not still visible to them. However, the system anticipations depend upon its efficacy to support the employee's daily work practices. This would only happen if the system offers the opportunity for an easy and focused mapping of the activities taking place in the specific workplace context along with the resources necessary for its operation.

3.5 From System to Intervention: Constituencies of Informants and Intervention Affordances

Our engagement in the carrying out of a KM intervention in the Bank organisation, though limited at the moment to the experiences gained during the design of the system and its introduction negotiations, has revealed meaningful aspects of the adoption of IT artifacts regarding so much the design principles that systems aiming at the workplace support should feature, as also the organisational fermentations enacted by their introduction. Our preliminary findings concentrate on the role and type of organisational members that ought to become involved in the formulation a KM intervention. We finalise this discussion by shortly referring to a general framework of constituents for KM projects.

Specifically, it is obvious from our experience in the case setting that three generic constituencies of informants need to contribute in the negotiations shaping up particular KM systems design as well as the conditions and rationale of its introduction (table 1). In an attempt to integrate the views of multiple constituencies of informants for the KM project, we have come up with the following generic constituencies:

- Constituency 1:** Focal Business Operation unit (in our case the e-Banking department). Participants in this constituency are people, like decision makers and business designers that design targets for business behaviours (e.g. flow of activities, performance metrics, material informing on the content of activities). In a KM project they act as initial content providers.
- Constituency 2:** Human resource support unit (in our case the HRD & training department). Participants in this constituency are people that interpret elements of business operation into roles and requirements for skills and competences. They also plan action for monitoring and support (e.g. training) to roles, skills and competences.
- Constituency 3:** The targeted practitioners. Participants in this constituency are expected to systematize the reflections of their work experiences through the system capabilities, so as to allow the enactment of sharing and community practices. In addition, the system offers a comprehensive manner for the familiarization of the practitioner with the content of its work, whilst allowing the development of their competences.

	Focal Business Operation Unit (e-Banking department)	Human Resource Support Unit (HRD & training department)	Targeted Practitioners (e-banking agent)
Targeted Business Operations	Structuring generic descriptions of work	Enacting required employee skills	Experiences sharing in the Community of Practice
Roles	Exploring the adequacy of prescribed activities	Creating definitions for competence-driven role operation	Comprehend
Competences	Enabling strategy realisation	Identify gaps inhibiting performance improvement	Realise and Develop

Table 1: KM Intervention Affordances

We have tried to present the interpretations of the basic organisational stakeholders involved in the introduction of a technological proposition for KM in a Bank organisation, the HRD, the e-banking department and the practitioners with regards to the anticipated but also partly unanticipated organisational consequences addressed by the proposed system (Table 1). The aforementioned perceptions have obvious and most valuable implications for the design of KM interventions. We still have to explore how these arguments are applied during the actual use of the system, something that will occur shortly.

4. DISCUSSION & CONCLUSIONS

The experience gained from the introduction of a KM system in a Bank organization, along with the need to provide a new perspective for the development of such systems drove the research of this paper. The ultimate aim of this paper would be to create an impact on the future stream of new socio-technical solutions for knowledge management. The contemporary knowledge environment of firms and the characteristics of its evolution comprise the drivers for describing the arrangements taking place in the work context. We propose a technological intervention, and we are primarily guided by this to explain the need and thereupon the phenomena, meaning the conditions and factors related to the organizational adoption of the knowledge-oriented ICT offerings. Further research will elaborate more on the need of a work related knowledge management system from a social, organizational and certainly technological perspective.

To this aim, we tried to investigate the opportunities offered by research accounts referring to the understanding of the workplace phenomena on technology deployment with regards to the specific empirical setting. The need to manage knowledge across people and processes imposes certain imperatives for the development, introduction, adoption and use of any information technology. To this end, we use the activity and practice theories to guide the technological intervention in its integration with existing work practices and forms of informal learning occurring among people in workplace contexts.

The practice and situated orientation that we sustain is necessary for KM, is reflected through several technological characteristics. Work practices and activities comprise the codified description of the business processes in terms of tasks and its accompanying elements, i.e. actors, events, resources, etc. Tacit knowledge is captured through ‘annotations’ that the user is attaching on specific process elements. Also, the tracing of any type of communication or collaboration, i.e. e-mail, chat, on the basis of finding a solution to a problem can be considered as tacit knowledge. Finally, the system allows the development of communities of practice through their synchronous and asynchronous participation in shared problem solving and idea exchanges over the system.

We view our case as indicative of the situation facing KM practitioners in the implementation of KM projects. Clearly a technology-oriented strategy does serve the purpose of KM as envisaged in the literature. Our first hand experience reveals a complex web of interests and issues that probably inevitably will emerge even in the most limited KM intervention exercises. In fact our proposition is shaped as follows. KM systems driven organisational interventions involve 3 main elements:

- The envisaged **system intervention** as this is reflected in the system's designed elements (i.e. services to users)
- The moderation of the above by **business operants' aspirations** (usually performance driven)
- The **contextualisation** of the above within human activity systems driven by human resource management.

Our final comment on this level is that KM should be treated as project for the support of certain organisational situations. Lack of knowledge of the application context may compromise efforts to manage knowledge effectively. Stakeholders need to be identified and then turned into practitioners of the KM project. It is certain that each of the stakeholders has a specific role both in the organisational landscape, which in turn affects its involvement and its role in the project. Finally, it should be noted that any KM technology does not in itself store and retrieve knowledge, but merely manipulates codified representations (Sutton, 2001).

The interpretation of the organizational situation described in this paper, is evolving in parallel with the actual deployment of the knowledge management initiative in which we are actively involved. The outcome of this process will provide useful indications of how the firm can approach knowledge enactment and how it should evolve to cope with the knowledge requirements of its organizational routines and vice versa. Knowledge as a resource is difficult to grasp; this research aims at revealing the methods that can be deployed to best utilize this resource within the business processes of the organization.

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