# Towards Understanding KM Practices in the Academic Environment: The Shoemaker's Paradox

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**Abstract:** One area of omission in knowledge intensive studies is within higher education/research where there is the virtuous circle of teaching, research and consulting professional work. Using a model adapted from Handzic (2001) and a survey modified from Arthur Andersen (1998) the perceived importance and perceived implementation to faculty members is explored. The discrepancy between results of the two forced the researchers to confront their own biases. Guidance was sought from ethnographic accounts which allowed allows the researcher to state personal feelings in a confessional accompaniment to the formal findings.

**Keywords:** Knowledge management processes, Organisational environment, Knowledge management technologies; Confessional ethnography.

## 1. Introduction

The literature in management and organisation indicates a widespread recognition of the association of knowledge and organisational success. Despite early awareness of the construct (Drucker, 1967) and comprehensive overviews (Despres and Chauvel, 2000; Earl, 2001) there remains little overall advance in understanding the construct itself (Drucker, 1993; Stewart, 1997). Specific applications of knowledge to work have been explored by industry practitioners (eg Collison and Parcell, 2001 at BP; Mann et al, 1991 in power utilities), management commentators (O'Dell and Grayson, 1998) and researchers (eg Carneiro, 2000; Newell et al 2003). This produces the distinction that knowledge is associated with skills (eg Macintosh et al 1999) or making judgements and decisions in particular circumstances (Carr, 1999) so it is not surprising that differences exist among scholars as to what constitutes useful knowledge and the ways in which it is created. Some theorists show more interest in codified repositories and information processing as enablers of 'explicit' objective and systematic knowledge (Budzik et al, 1999), Carr, 1999, Den Hartog and Huzinga, 1997 in Huysman and de Wit, 2002; Klösgen (1996). Others focus on the 'tacit' knowledge that people derive from their experiences and from social interaction with others (Nonaka and Takeuchi, 1995; Malhotra, 2000). The shift in emphasis from sharing knowledge to making productive use of knowledge is reflected in the shift from individual focus to that of communities (Wenger, et al, 2002).

As organisations become more knowledge-based, their success will increasingly depend on knowledge workers becoming successful at contributing to effective decision making and creating innovation. It is therefore not surprising that there is a growing recognition amongst researchers and practitioners alike for the need to better understand what knowledge is, the value of knowledge, and how it should be managed. In some cases this is formalised as Knowledge management (KM) and in other cases as the learning organisation (DiBella et al, 1996) or organisational memory (Weick, 1979). Both are recent responses to the need to better understand and manage knowledge for success or survival. The central task of those concerned with knowledge management is to determine best ways to cultivate, nurture and exploit knowledge at individual and organisational levels. In other words, it needs to ensure to get the right knowledge to right people just in time (Snowden, 2002) and help people share and put knowledge into action in ways that strive to improve organisational performance (Dixon, 2000; O'Dell and Grayson, 1998).

A distinctive application of KM is applying knowledge to knowledge itself. Knowledge intensive firms focus on the commercialisation of knowledge (eg Starbuck, 1992; Gibbons et al, 1999), innovation and creativity (eg Gerlach and Lincoln, 2000; Brown and Duguid, 2000) or the work of experts (eg Albert and Bradley, 1997). Consulting firms are a particular example of KM practitioners (Savary, 1999). One area of omission in knowledge intensive studies is within higher education/research where there is the virtuous circle of teaching, research and consulting professional work.

The objective of this study is to examine this issue in a particular academic environment from the twin perspective of the individuals and expert in KM.

## 2. Knowledge management framework

An integrated model of knowledge management is presented in Figure 1. This illustrates the essential components of knowledge management and their inter-relationships. The model (adapted from Handzic, 2001) proposes two types of organisational factors; *organisational environment* (notably leadership and culture) and *technological infrastructure* (the information and communication resources), which may act as an enabler or constraint on *knowledge processes* (eg. creation, transfer, utilisation) and foster the development of *organisational knowledge*. The model allows the overall organisational environment to influence the choice of the technological infrastructure to support knowledge processes. Finally, the model incorporates a feedback loop to suggest the need for continuous knowledge *measurement* and potential adjustment of strategies over time.

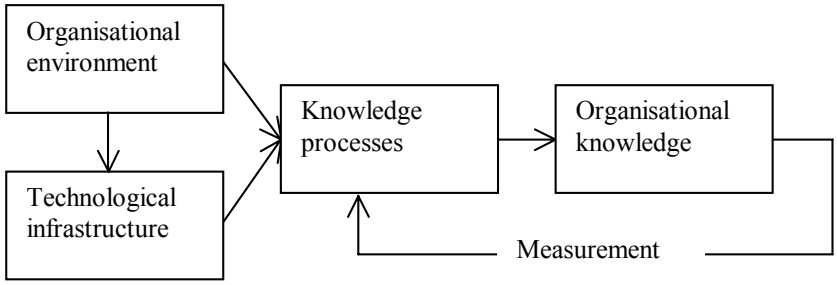


**Figure 1:** An Integrated Knowledge Management Framework

Although there have been many individual case studies of various knowledge management initiatives in organisations (eg Collison and Parcell, 2001; Fruin, 1997; Galliers, 2002; Gerlach, and Lincoln, 2000) there is little empirical evidence regarding the actual penetration and impact of knowledge management (Kluge et al, 2001; Machlup, 1962; Porat, 1977). The studies available emphasised the introduction of KM programmes and therefore considered factors such as facilitators of, and barriers to, success. Therefore there was scope for a study that examined perceptions (Likert, 1932) from both the individual and organisation points of view. The aim of the study was to investigate several aspects of knowledge management including; *organisational environment, technological infrastructure, knowledge processes, and knowledge measurement.* In light of the foregoing commentary the first stage this paper is to outline the organisational environment and specific factors to assess the approach and extent to which a semi-autonomous university school manages its organisational knowledge.

## 3. Organisational description

The university school studied is a highly renowned institution teaching and research institution. It offers both undergraduate and postgraduate programs of study. It operates a research centre, plans and conducts a series of research seminars, and, produces scholarly articles. Wiig (1995) and Liebowitz (2000) discuss the use of surveys to explore a professional's thoughts about managing knowledge and solicit perspectives on the adequacy and efficiency of KM. The survey instrument employed in this study was based on a previously available instrument (Arthur Andersen, 1998). (A copy of the survey instrument and coding sheet is available from the authors). It provides the benefits of consistency, balance in coverage and capture of individual attitudes. Modifications were made to the wording to reflect specifics of the organisation being studied and to achieve consistency in framing among questions (Oppenheim, 1992; Schulman and Presser, 1981). The survey design allows the respondent to rate the importance of particular KM practices in a parallel set of questions the perceived extent to which they are implemented. Prior to administration the survey

 

items were assigned to the four aspects in two independent inter-rater exercises. Reliability is in excess of .9. Participants in the study were academic staff with full time (continuing and contract) employment.

To minimise potential threats to validity, questionnaires were distributed to all academics who satisfied the specified criteria and a brief explanation was provided. Responses were anonymous and participation was voluntary. 24 distributed questionnaires were distributed. Surveys were completed without the researchers being present. 17 surveys were returned, achieving a return rate of 71%. This level of response and the profile across positions ensures that the sample is representative of the population.

While the formal survey sought specific responses, the researchers also considered their own organisational environment. The researchers recognised the potential for bias in the study in view of their role and responsibilities within the school. Guidance was sought from well-regarded ethnographic accounts (Geertz, 1974, Van Maanen, 1988; Trauth, 1997). Their ethnographic approaches present the problem of presenting a convincing result (Crapanzo, 1986). As the current research involves an audit of the corporate culture of a specific real-world organisation it becomes necessary to consider the results themselves and their meaning in the social context to the researcher. Proponents of this approach also argue that the results can provide a greater level of depth and understanding of self image (Pratt, 1986). As the design generates insufficient data to investigate cause-and-effect relationships it requires careful planning and attention in order to establish validity (Cook, 2000). In short the survey required a personal perspective account as well a positivist count in reviewing the results.

## 4. Research results

A descriptive analysis of data was performed as suggested by Tukey (1977) to identify prevailing patterns and ensure plausibility of findings. In order to identify a central tendency in participants' perceptions, the average scores of their responses to relevant questionnaire items were calculated. These scores are presented in Table 1, the scale for questionnaire items being 1-7 (7 being the maximum and 1 being the minimum).

**Table 1:** Summary results of knowledge management practices survey

| Knowledge Management Practice | Perceived Importance Mean Score | Perceived Implementation Mean Score |
|---|---|---|
| Organisational Environment | 5.32 | 3.16 |
| Technological Infrastructure | 4.84 | 3.38 |
| Knowledge Processes | 4.66 | 2.39 |
| Knowledge Measurement | 4.75 | 2.11 |

With respect to the perceived importance of the four knowledge management practices studied, the mean scores obtained ranged from 4.66 to 5.32. Participants rated a mean score of 5.32 for organisational environment, 4.84 for technological infrastructure, 4.66 for knowledge processes, and 4.75 for knowledge measurement practices. With a seven point scale, scores greater than four indicated that participants tended to perceive all four practices as being quite important, but the most important of all was the organisational environment.

With respect to the perceived implementation of these practices, the mean scores obtained were 3.16 for organisational environment, 3.38 for technological infrastructure, 2.39 for knowledge processes, and 2.11 for knowledge measurement practices. Scores less than 4 indicated that participants perceived the level of implementation of these knowledge management practices in their organisation as being rather low, particularly with respect to knowledge measurement practices.

## 5. Discussion

The key finding from the survey of knowledge management practices in the school studied is the variance between the perceived importance and implementation. This was demonstrated by low scores obtained for participants' perceptions of the implementation of knowledge processes and their socio-technological enablers, as compared to their perceptions of their respective importance. Each of the factors in the model is now considered.

The participants perceived organisational environment as a particularly important knowledge management practice. This view is

 

supported by the KM framework, which suggests that knowledge processes are facilitated by a conducive organisational environment. Such an environment is usually demonstrated in terms of strong leadership support and a collaborative organisational culture. Examples of good leadership support may include: recognition of the cental importance of managing knowledge to organistional strategy, encouraging learning to support existing and create new competencies, developing human resource plans and reward schemes based on the contribution to the development of organisational knowledge. The high level of awareness of KM importance found in this study is an encouraging finding.

Evidence of a collaborative culture may include an environment that enables and facilitates knowledge sharing, where a climate of openness and trust exists, and where service value creation is the main objective of knowledge management practices. In addition, there will be flexibility and a desire to innovate and drive the learning process, and an environment where employees take responsibility for their own learning. Our analysis of people's perceptions regarding these aspects of KM appear to suggest that there is an emerging collaborative culture and some support for knowledge management to be implemented within the school.

With respect to technology, the findings indicate that it was also considered as quite important KM practice. It is generally believed that technological infrastructure has the potential to enable or facilitate knowledge processes by providing a platform for knowledge capture or sharing. Some examples where technology can be successfuly used to facilitate knowledge processes include; linking all members of the firm to one another and to all relevant external parties, creating an institutional memory that is accessible to the entire organisation, linking the organistion with its customers and partners, supporting collaboration amongst employees, fostering human-centered, real-time, integrated and smart systems. Findings of this study indicate that there may be a need for further investment in technological infrastructure in order to fully facilitate knowledge management processes.

In addition, the study highlighted a low level of implementation of knowledge processes. Facilitated or not, organisational knowledge is enhanced through a series of interrelated processes of knowledge creation, transfer and utilisation. Organisations that implement these processes may exhibit some of the following characteristics; systematic identification of knowledge gaps and well-defined processes to address and close them, the development of sophisticated and ethical intelligence-gathering mechanisms and the involvement of all workforce members in looking for ideas. Formalising the process of capturing and transferring knowledge including documentation and lessons learnt, valuing and transferring tacit knowledge across the organisation through encouraging experimentation and socialisation. Our findings indicate that academics recognise the importance of these processes quite well, as shown by their high response scores. However, once again these findings indicate an emerging level of implementation of many of the above processes.

Finally, findings indicate that participants tended to view the school's knowledge measurement practices as being in the formative stages of development. Our proposed framework clearly suggests the need for continuous knowledge measurement in order to monitor and adjust an organisation's knowledge management strategy over time. Implementing good knowledge measurement practices is usually evidenced in finding ways to link knowledge management to results, developing specific sets of indicators to manage knowledge, including a balanced set of soft and hard, financial and non-financial indicators, as well as by allocating resources towards efforts that measurably increase organisational knowledge base. The results of the study indicate that these areas need to be addressed by the school.

In considering how to offer perspective on the findings, the authors considered their own position in relation to the survey. This approach parallels that suggested and practised by Schultze (2000). In this section therefore the authors adopt a confessional mode, appraising their motivations, practices and reactions to the findings. After returning to early western conceptions of knowledge, Snowden (1999) concludes that trust, naiveté and curiosity are key words in knowledge management. This unlikely combination provided the researchers with useful insights. As KM researchers and practitioners themselves, the authors were concerned that there was a lack of recognition of the contribution of KM in education given government expectations for innovation and competitiveness in a global market (Carneiro, 2000; Cronin and Davenport, 2001; Kidwell, et

 

al 2001). Unlike other countries, the Australian government commitment to the knowledge economy can be described as mild given the latest knowledge economy policy documentation at www.fed.gov.au at the deadline for submission is dated 2001. Thus any organisational commitment to KM will default to policies and champions within the governing body. This double absence is clearly distressing to the authors as they are acutely aware that members of the school tacitly hold considerable institutional knowledge (Stein, 1995). The authors had a number of experiences where they wasted time on administrative matters or made suboptimal decisions through lacking access to that knowledge. Following several of the tenets of KM the authors adopted an informal knowledge sharing approach with regard to curriculum and course advising. It is noteworthy that on a personal basis other faculty members in the school belonged to small groups which practised knowledge sharing. The pressures of teaching and research prevented codification and sharing on a wider basis. Kidwell's (2001) simple dichotomy of 'what's in it for me?" versus 'what's in it for our customer' is therefore regarded as simplistic. The 'customer' does not become the focus simply because profit is absent. One attractive view centres on a broader view of human resource development (Stern, 1996).

## 6. Conclusions

The empirical findings of the current study provide an insight into the penetration of knowledge management practices into a typical knowledge intensive organisation such as a university school. In particular, our findings demonstrate a high level of awareness of importance with a low level of actual implementation. This suggests that the school is in the formative stages of embracing knowledge management practices.

From the results presented in this paper, one may conclude that KM is an important aspect of organisational management success that needs to be carefully considered. The high level of awareness of its importance found in this study is an encouraging finding. If planned and implemented carefully, in alignment with organisational objectives and core competencies, it may enable the release of the organisational knowledge resources that will bring ultimate success.

In terms of the implementation of knowledge management practices, our findings indicate that a major challenge exists in this area. The results of the study identify an organisation in the formative stages of this process. The low level of implementation found with respect to the four types of knowledge management practices investigated, are the major indicators of this being an emerging area. Findings also indicate and highlight areas where issues need to be further addressed within the school being studied. Further research is proposed to explore these issues including a follow-up survey to ascertain any change in perception without there having been any change in the management.

When considering the nature of the organisation being studied, the findings indicate that a major challenge exists for the school. Whilst operating in an ever-changing world and environment, the challenge will be to find and implement the most appropriate mix of knowledge management practices in alignment with the school's goals and strategies. This challenge must be embraced and faced head-on in order to ensure the school's continued success.

Again, turning to a confessional mode, there are different personal reactions to the organisational implications. Recognising the evidence of management disinterest in KM gives impetus for considering external linkages to obtain sustenance and support for KM. Given the affinity of KM and consulting it raises the question of future possibilities. Rather than waiting for KM to be adopted, perhaps as a management fad or with a technology emphasis, the informal tactics practised centre on using small internal communities of practice supplemented by linkages to external networks. This latter approach may not necessarily provide examples of best practice however it confirms an ever present awareness of both deficiencies and potentialities while stimulating the members to provide teaching and research within the ability of their resourcing.

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