EDITORIAL PREFACE

Tailoring Knowledge and Knowledge Management Systems: Interesting Research Problems?

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ABSTRACT

Once an organization implements a knowledge management system (KMS) and users start to engage it, two outcomes are almost certain. First, users will soon discover that the knowledge housed in the system does not meet all of their expected needs. Second, users will also realize that they must modify or customize the KMS to meet their needs. Studying these two outcomes can be quite fruitful. In particular, from an end-user perspective, we should be concerned about how users interact both with the knowledge and the KMSs. In this editorial piece, I discuss the concept of tailoring in the context of knowledge management systems and its implications for research.

Having spent the last several years investigating knowledge management issues in organizations, through both a strategic and a technical lens, it is no surprise that I have strong feelings about research in the field. While research in the field of knowledge management continues to grow at an astounding rate, I am unsure about the impact this research is making. Knowledge management, if it can be called a discipline or area of research, is one that is applied and grounded in practice. It does little for an executive, a major stakeholder group, to read about research that does not contribute to management practices.

To quote an executive: “Do not tell me that a system will be used if it is useful—my son can tell me that without the fancy regression results.” Similarly, there is very little to be gained if we look to make incremental changes to existing models and apply them in the context of KMSs. It is common for studies on KMSs to blatantly apply theories and concepts from traditional information systems without much regard for the fact that knowledge is quite different from information.

The Journal of Organizational End-User Computing (JOEUC) can serve a critical role by encouraging research in
the area of knowledge management. In particular, from an end-user perspective, we should be concerned about how users interact both with the knowledge and the KMSs. In this editorial piece, I would like to discuss the concept of tailoring in the context of knowledge management systems and its implications for research.

As the name implies, KMSs house knowledge. In the case of repositories, these entities store items such as presentations, business plans, product documentation, and so forth. In the case of directory services, information on knowledgeable resources (e.g., employees) is captured. This information serves as a map or yellow pages to help a worker locate sources of expertise in the organization. There are also hybrid KMSs that enable one to both exchange explicit knowledge and also help find sources of knowledge. The prime example for this is Microsoft’s Instant Messenger, or any of its clones. By using these tools one can not only identify sources to connect to, but also exchange documents and even engage in conversation. Once an organization implements a KMS and users start to engage it, two outcomes are almost certain. First, users will soon discover that the knowledge housed in the system does not meet all of their expected needs. Second, users will also realize that they must modify or customize the KMS to meet their needs. Studying these two outcomes can be quite fruitful.

TAILORING KNOWLEDGE

Knowledge overload is a common problem in most organizations today. As one executive remarked, “We have the Wild West out here...everything is knowledge, from the fixing of a broken copier to the sales presentation for our next major client bid.” Issues of information overload have received attention in the information systems community. The focus of much of this research was to understand the cognitive underpinnings of information overload and to devise strategies, most often technological solutions, to enable better retrieval, organization, presentation, and delivery of information so as to reduce the load. Today, we must also begin to examine the problem of knowledge overload. I would like to call attention to a very interesting piece of research conducted by Majchrzak, Chellappa, and Cooper (2005). In this study, the researchers examine how users inject personalized knowledge into emergent knowledge processes. An interesting outcome of this study is an examination of the trade-offs between personalization and privacy. In order to receive personalized knowledge from a KMS, one must be willing to share information on his or her needs, demographics, and so forth. While not necessarily in proportion, the more information one shares about oneself the greater the chances of receiving knowledge that is of interest in a targeted manner. In addition, Majchrzak et al. (2005) examine what type of knowledge is personalized and how such knowledge is injected into work processes.

Tailoring knowledge is quite important, as knowledge is a subjective construct. Knowledge is not universal, across people, time, or space. Hence, users must tailor knowledge to meet their individual needs. At the most
fundamental level, tailoring knowledge could involve minor, cosmetic changes to the knowledge artifact (e.g., changing the language for editorial purposes). At a more significant level, a user may decide to modify the contents of the knowledge artifact before consuming it. This is quite common in the case of software artifacts, where a programmer may tweak the source code of another programmer. In some cases, a user could decide that no tailoring is needed and decide to reuse the knowledge artifact as is. The tailoring and reusing of knowledge artifacts, especially in a collected setting, raise interesting questions. What are the processes users go through to tailor knowledge? Does expertise of the consumer play a role in tailoring, for instance, the extent of tailoring? To whom do we attribute a tailored piece of knowledge? Do we attribute it to the original creator or the person who modified the piece? What kinds of permissions do we allow in terms of tailoring knowledge?

TAILORING KMSS

KMSs are normally all-encompassing systems. This is because they are normally designed to meet the needs of a broad audience, most often everyone from the accountant to the engineer and the CEO. However, each user also needs to interact with a small portion of the KMS. For example, the accountant may find knowledge on financial topics of interest, while the engineer may want to pursue the technical specifications. Moreover, not all functions of a KMS will be apparently useful to a user at any given time. A function that is useful today may not be useful tomorrow. Similarly, a function that is latent to a user today may be of paramount importance as the user increases his or her experiences with the technology. Hence, features of interest move between the users’ foregrounds and backgrounds.

A few years ago, I had an interesting opportunity to collaborate on a project (Desouza, Awazu, & Ramaprasad, 2004) for which we examined how users customized an integrated development engine (IDE) environment, post-adoption. Our subjects were novice software engineers who had no significant experience working with IDEs. During our research we found that users move through stages in their attempt to tailor the IDE. They begin in the stage of operability, where they are concerned with learning the bare minimum features of the technology. Their goal here is to get the technology up and running in the quickest possible manner without getting overburdened by too much detail. Once the initial comfort level is reached, the users engage in acts of personalization, which we termed the flexibility stage. Personalization involved tailoring the interface to meet the preferences of the user (e.g., moving toolbars, changing fonts, etc). The adaptability stage followed. Here, users began to customize their technology to meet the needs of the social group they worked in. The issue of standards and the process of standardization played important roles here. For instance, in the case of the IDE, it was important for the work group to agree on common spaces to store files, naming conventions, and so forth. The adaptability stage was one of the crucial inflection points in the postadoption period. In next stage, exaptability, us-
users discovered new functions using the existing technology features. These are commonly considered work-arounds and are ways of manipulating the existing system features to meet the needs of the user. The final stage, agility, signified a user who had reached the level of a super-user and could use and modify the technology in an efficient and effective manner.

As can be seen from the above example, users do not just use technology in the manner intended by the developers or implementers. This is especially true for KMSs when we compare them with traditional IS. Traditional IS for the most part were static, rigid, and limited in scope and function. Today, KMSs are just the opposite. They are dynamic, highly flexible, and definitely broad in reach and scope. Recognizing that users engage in tailoring KMSs and studying the tailoring process is thus of the utmost importance. Understanding how users tailor these systems can lead us to discover important system design considerations and can also inform how our innovation practices.

CLOSING COMMENTS
I started out this editorial with some rather broad statements on research in the KM area. I hope that the brief pointers on the issue of tailoring in the context of both knowledge and the KMSs that house it will stimulate some exciting future research.

In closing, undertaking projects that are going to make a significant impact in the area is risky, difficult, and costly. I firmly believe that KM is in dire need of such research. We should resist taking the safe path. In reading many of the KM papers, including my own, I am surprised by how little care we take in addressing issues of failures. One final comment by a CKO: “In reading some of these papers, I would imagine that the academicians had a crystal ball and could predict the future…their hypotheses are supported…their data adds up…and life is good…I am unsure about the credibility of such work as it does not tell me what did not work and how were the things that did not get as planned addressed.”

I encourage the readers of JOEUC to take up the risky studies, write about the failed efforts, and even the close misses in the KM arena. I cannot speak for all, but I am sure to welcome papers that do this and will do my best to support them through the publication process.

REFERENCES

Dr. Kevin C. Desouza is on the faculty of the Information School at the University of Washington. He is a founding faculty member of the Institute for Innovation Management (I3M) and is an affiliate faculty member of the Center for American Politics and Public Policy, both housed at the University of Washington. His immediate past position was the director of the Institute for Engaged Business Research, a think-tank of the Engaged Enterprise, a strategy consulting firm with expertise in the areas of knowledge management, crisis management, strategic deployment of information systems, and government and competitive intelligence assignments. He has authored Managing Knowledge with Artificial Intelligence (Quorum Books, 2002), *co-authored* The Outsourcing Handbook (Kogan Page, 2006), Managing Information in Complex Organizations (M.E. Sharpe, 2005) and Engaged Knowledge Management (Palgrave Macmillan, 2005), and *edited* New Frontiers of Knowledge Management (Palgrave Macmillan, 2005). *His most recent book is currently in press - Agile Information Systems - to be published by Butterworth Heinemann (2006).* In addition, he has published over 100 articles in prestigious practitioner and academic journals. His work has also been featured by a number of publications such as the Washington Internet Daily, Computerworld, KM Review, and Human Resource Management International Digest. Dr. Desouza has advised major international corporations and government organizations on strategic management issues ranging from knowledge management, to competitive intelligence, and crisis management. He is frequently an invited speaker on a number of cutting-edge business and technology topics for national and international, industry and academic audiences. Dr. Desouza is a fellow of the Royal Society of Arts.