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Knowledge Dissemination in an Extra-Organisational Community of Practice

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Abstract

This paper explores the potential for increasing the dissemination of knowledge in a global, extra-organisational community of practice -- the Information Systems academic community. The paper begins by defining the IS academic community as an extra-organisational community of practice, individuals linked by what they do rather than for whom they work. Second, incentives for knowledge sharing are examined and peer recognition is identified as a key incentive. Third, IS academics are characterised as shared work practitioners and implications for distributing knowledge in the community are suggested. The article concludes with a brief proposal for ISNet, a knowledge dissemination system for the global IS academic community.

Keywords

knowledge management, communities of practice, information systems

INTRODUCTION

Most knowledge management (KM) research has been intra-organisational: an organisation's ability to capture, codify, store, distribute and utilise internal knowledge (e.g., Allee 1997; Bennet and Bennet 2003; Davenport and Prusak 1998; Skyme 1999). Research on these intra-organisational knowledge management systems (KMS) has focused on incentives to encourage knowledge sharing, procedures to codify this knowledge and information technology and systems to facilitate storage, distribution and access to the knowledge base (e.g., Alavi and Leidner 2001; Davenport and Prusak 1998; O'Herron 2003).

Some intra-organisational KM research studies examine knowledge management in communities of practice within the organisation (e.g., Davenport 2001; Smith and McKeen 2003; Warner 2001; Wenger and Snyder 2000). Very little research has been conducted on extra-organisational knowledge dissemination within broad, professional-oriented communities of practice, despite the recognition that a key aspect of knowledge management is facilitating communication between people (Hildreth and Kimble 2002), regardless of where they work. Pan and Leidner (2003) note that "a goal of many KM initiatives is to develop a global knowledge community where knowledge is shared and utilized across various communities of practice in the organization". In this study we extend this goal beyond organisational boundaries into an extra-organisational context.

This paper examines the dissemination of knowledge within communities of practice that extend beyond organisational boundaries. Specifically, the paper discusses knowledge dissemination in extra-organisational communities of practice composed of shared work practitioners, with an emphasis on the knowledge needs of the community members and incentives for sharing knowledge. The paper concludes by proposing ISNet, a knowledge-dissemination tool for the global Information Systems academic community.

KNOWLEDGE MANAGEMENT IN COMMUNITIES OF PRACTICE

Relatively little knowledge management research focuses on extra-organisational knowledge management systems. This is understandable given the predominant view that knowledge is a proprietary asset or competitive weapon that offers strategic advantage to the organisation (e.g., Davenport and Prusak 1998; Holsapple 2003; Spender 1996). However, if a knowledge worker is viewed as both an employee of the organisation in which s/he works and also a member of a professional community of practice, then there is a dual opportunity for knowledge inquiry and sharing.

Communities of Practice

Professionals, academics and other knowledge workers have both organisational and community affiliations. For example, an enterprise software consultant may be employed by an ERP consulting agency and be a member of

an ERP professional association. For this consultant and other knowledge workers, sharing of organisational knowledge is most likely to occur through an internal knowledge-sharing network. However, questions of a non-proprietary nature (e.g., for professional development) are linked to the employee's community of practice.

Specifically, communities of practice can be defined as "groups of people who share similar goals and interests. In pursuit of these goals and interests, they employ common practices, work with the same tools and express themselves in common language. Through such common activity, they come to hold similar beliefs and value systems" (Collaborative Visualization Project 2004). Communities of practice can exist within an organisation (e.g., all enterprise systems consultants at Ernst & Young) but communities of practice that extend beyond organisational borders are of primary interest here. These extra-organisational communities of practice are groups of individuals who are linked by what they do rather than where and for whom they work.

Since first comprehensively described by Wenger (1998) communities of practice has been the centre of considerable strategic and managerial research (Papargyris et al. 2002). Most studies concentrate on knowledge management in a community of practice inside a company. For example, in an international chemical company (Pan and Leidner 2003), health care organisations (Marchetti et al 2001), consulting companies (Uelpenich and Bodendorf 2001) and advertising agencies (Ensor et al. 2001).

A few extra-organisational studies have been conducted too, for interagency health and social care providers (Lathlean and LeMay 2002) and in non-organisational on-line communities such as library reference service users, SME owners and Web shoppers (Davenport 2001).

No studies that focused on community of practice KM research in any academic community could be found. However, Sapsed et al. (2002) comment that "academic communities typify the dynamics of a collectively sharing identity, know-how and ways of working independently of local contact" (p. 79). This statement suggests that an attempt to introduce a knowledge dissemination system in the IS academic community is possible and may produce useful, practical outcomes.

Incentives for Knowledge Sharing

A major theme throughout the KM literature is the provision of incentives to use and, especially, contribute to knowledge management systems (e.g., Alavi and Leidner 2001; Jarvenpaa and Staples 2000; Wasko and Faraj 2000). Specifically, knowledge management research suggests that necessary conditions for knowledge sharing include shared interest, trust and language (Hanssen-Bauer and Snow 1996), access to knowledgeable people in the organisation (Brown and Duguid 2000) and an organisational or community culture that promotes knowledge transfer (Nonaka 1994).

Sharing knowledge also needs to be rewarded. "A knowledge management initiative will not get very far if – however actively you champion knowledge sharing – the existing remuneration system rewards knowledge hoarding" (Davidson and Voss 2002, p. 99). Booz-Allen and Hamilton, for example, uses a variety of recognition and financial awards for knowledge sharing to the practice as a whole, including promoting developing intellectual capital as one of the four criteria used when determining promotion and bonuses (Galunic and Weeks 1999). Similarly, knowledge sharing is a key performance indicator used in the evaluation of employee performance at the World Bank (Liebowitz and Chen 2003).

A discussion of knowledge sharing at groups.undp.org/kmstrategy/documents/docs/week_four_summary.html emphasises the need for a formal incentive program to encourage knowledge sharing:

A recurrent theme throughout the week was the question of whether a formal incentive system was necessary or not. Some felt that knowledge sharing is its own reward and that introducing formal incentive schemes might have the opposite of their intended effect. Others felt that an incentive scheme was necessary to "prime the pump" of knowledge sharing.... Among the incentives named were:

- recognition (this particular incentive was supported by many participants)
- duty or need
- a good frame of reference
- a sense of give and take, quid pro quo, you scratch my back etc.
- feedback mechanisms for letting knowledge sharers know their knowledge was being put to use
- the pleasure of helping someone attain their goals

What are obstacles to knowledge sharing at UNDP?

- people are simply too busy
- not have an appropriate mechanism to share knowledge
- not having the right technologies to support knowledge sharing

Many of these incentives, especially for peer recognition, are incorporated into the ISNet proposed in this paper.

Participants in Knowledge Networks

The emphasis in this study is in the area of knowledge reuse, which Markus (2001) defines as “sharing best practices or helping others solve common technical problems” (p. 59). Markus also describes four types of knowledge re-users: shared work producers (produce knowledge for their own reuse), shared work practitioners (producers/consumers of knowledge for/of other’s use), expertise-seeking novice (have occasional need for expert knowledge they do not possess) and secondary knowledge miners (seek new knowledge through analysis of knowledge records).

In the current study, the main contributors to and beneficiaries of the ISNet data repository would be shared work practitioners and, secondarily, expertise-seeking novices and secondary knowledge miners

The following characteristics of shared work practitioners (extracted from Markus 2001) are especially relevant to the current study:

- Shared work practitioners are knowledge workers doing similar work in different settings. They are producers of knowledge for each other’s use (i.e., knowledge sharing in a community of practice).
- Shared work practitioners seek new knowledge to understand how to handle a new and/or particularly challenging or unusual situation.
- Successful knowledge acquisition among shared work practitioners requires quality assurances (e.g., authorship), currency (e.g., freshness dating), appropriate indexing and searching capabilities and decontextualized knowledge (but context information is provided with the content). Successful knowledge contribution requires appropriate incentives.
- Shared work practitioners use networks of contacts to locate experts/expertise.
- Shared work practitioners usually have little difficulty applying the expertise, once it has been acquired.

This view of the IS academic community as a community of shared work practitioners will be applied in the following section, which applies much of what has been said about knowledge management in communities of practice to a specific application: the ISNet.

INFORMATION SYSTEMS NETWORK (ISNET)

This section introduces the proposed Information Systems Network (ISNet). Through a series of questions and discussion, the operations of the network are described.

What is ISNet?

ISNet is a knowledge management system that facilitates knowledge dissemination in the global Information Systems academic community. ISNet is principally a Web site that includes the following features:

- A home page that describes the ISNet concept, solicits visitor involvement in the network and links to other key pages in the ISNet site.
- Registration facilities for new ISNet members, including provisions of acceptance of a membership fee.
- A “request for information” page that provides instructions and forms for individuals to issue a request for information (RFI) to the ISNet community.
- A “RFI status” page that reports the status of all RFIs currently in process or under final review.
- A keyword-searchable archive for to previous RFIs.

How does ISNet Work?

Anyone can join ISNet by paying US\$15. This is a tentative figure, subject to change based on the outcome of a fully developed business plan and potential ISNet sponsorship. In return for their \$15, the new ISNet member receives an ISNet account and 15 ISNet points.

Any ISNet member can initiate an RFI to the ISNet community for 15 points. Next, the ISNet moderator reviews the RFI for completeness and non-duplication. RFI specifications (e.g., a deadline for responses) would also be set in consultation with the moderator. An approved RFI is posted at the ISNet Web site and sent by e-mail to all ISNet members.

Any ISNet member can respond to an RFI posted through ISNet, either by reply to an e-mail message or a form at the Web site.

Immediately after the deadline for submission of the RFI responses, a list of all responses is forwarded to the member who submitted the RFI for review and ranking. The ISNet member who submits the most useful response receives 5 points; the second most useful response gets 4 points, etc. for the top five responses.

Thus the 15 points deducted from the member's account when submitting the RFI is now distributed back into the ISNet community according to who submits the most useful RFI responses. In this way ISNet is a closed economy, members buy in with their 15 points and as questions are asked and answered the points get moved around.

Over time ISNet community members who provide the most and best responses to questions accumulate the most points and become "top experts". An ISNet member can retain the points to keep their expert ranking or spend the points to ask a question. Members who accumulate few or no points are not stigmatised, they just never make it on any expert list.

The RFIs and all responses are archived at ISNet for dissemination within the IS community. An ISNet visitor does not have to be an ISNet member to access the archives, but only members are allowed to submit or respond to an RFI.

The registration fee is used to support the site in areas such as site maintenance, ISNet promotion and, if funding allows, a stipend to the ISNet moderator. Once purchased, the 15 ISNet points (and the \$15) are non-refundable, but a member may withdraw from membership and the account will be deleted (any points in the account will be lost). The registration fee also reduces the likelihood of frivolous RFIs.

ISNet is not only a community of practice, it is also a community of interest. As such sponsorship funding will be sought from interest groups such the Association for Information Systems, benevolent industry firms such as IBM or Microsoft and textbook publishers. Additionally, an accounting of all funds will be provided to all ISNet members on an annual basis.

If adequate sponsorship cannot be found, then the registration fee may need to be adjusted. However, the points granted at initial membership or at subsequent purchases will always be 15 points to retain the closed economy (e.g., 15 points spent for a question is distributed to respondents in 5, 4, 3, 2, 1 point awards, equalling 15 points).

Does Anything Like ISNet Currently Exist?

To the best of our knowledge, there is no similar knowledge-dissemination facility for any other academic community. There are numerous ask-an-expert sites, both general and comprehensive (e.g., www.askme.com) and specialised (e.g., Ask a Linguist at linguist.emich.edu/~ask-ling). Most are free, but a few (e.g., Yahoo! Advice) charge a small fee. A comprehensive list of ask-an-expert sites is available at www.refdesk.com/expert.html. Only one ask-an-expert site could be found for Information Systems: CIO Magazine's Ask the Expert at <http://64.28.79.74/expert/index.cfm>.

The nature of ask-an-expert sites assumes that an individual is the best source of expert advice. In ISNet the assumption is that the collective community of practice contains the best expertise. Thus a community-oriented, knowledge-sharing model distinguishes ISNet from any other KMS known to us at this time.

Realistically, the only direct competitor for ISNet is the ISWorld mailing list. Members of the ISWorld mailing list can submit RFIs at any time, responses are sent directly to the person who asked the question and collected responses are customarily posted back to the ISWorld list.

ISNet offers the following advantages over ISWorld for exchanging knowledge among IS academics:

- Questions are not duplicative, are explicit about what is being asked and usually show some effort of prior research. A moderator works with submitters to insure the RFI meets minimum standards before being circulated.
- Questions and responses are archived at ISNet, making it easy for the community to find them again. This is a major improvement over current archive methods that depend on finding a certain e-mail message at the ISWorld Web site. Even then, response summaries are sometimes posted on an external Web site, usually the Web site of the person who asked the question, and over time these can become dead links.
- Responses to questions are never lost. An unscientific survey of ISWorld RFIs in 2001 found 70 percent of all RFIs do not have responses submitted back to ISWorld. Because ISNet captures the responses, disseminating this knowledge back to the community does not rely on the follow-up efforts of the person who asked the question.

- Contributing expert knowledge is rewarded. This is the biggest and greatest contribution ISNet makes to knowledge sharing efforts among IS academics. A difficult knowledge management problem is the lack of incentives for people to contribute to the knowledge base. ISNet's point system and "top expert" lists puts those incentives in place.

In summary, the ISWorld mailing list poses difficult problems in managing the knowledge dissemination process. A Web site dedicated to this effort seems to offer a better vehicle for collecting, distributing, managing and archiving this dynamic knowledge base.

CONCLUSION

This paper has reviewed the knowledge management literature from several perspectives: knowledge management in communities of practice, incentives for knowledge sharing and shared work practitioners as a type of knowledge re-user. On the basis of this literature review, a knowledge-dissemination tool for the global Information Systems academic community is proposed. Comments and questions about ISNet are most welcome.

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