Knowledge management research & practice: visions and directions

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Abstract
This editorial paper outlines key directions for knowledge management research and practice. The editorial team presents the results from a small survey of academics and practitioners about the present and future of knowledge management, and the editors include their own informed views on how this journal can help promote scholarly inquiry in the field.
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Introduction
Knowledge is critical in today's global economy. Knowledge work continues to increase as a fraction of world business, and many scholars view knowledge as one of the few sustainable sources of competitive advantage. Of course, people have been studying knowledge for millennia, and disciplines such as epistemology address the study of knowledge directly, but the field of knowledge management (KM) represents a relatively recent addition to the scope of academic research and enterprise practice. Unfortunately, relatively few KM articles are based on rigorous research, and most KM practice is not well informed by theory. This situation makes it difficult for science to progress by developing cumulative knowledge in this field, and it relegates practice to reliance upon imitation, vendor technology 'solutions' and trial and error. This journal, *Knowledge Management Research & Practice* (*KMRP*), is established to address this problematic situation as it affects both research and practice.

For the first issue of this new journal, it is appropriate to consider the state of the art in knowledge management and what expectations are held about the future. We also feel it is appropriate to provide our own informed views of the KM field, to help with direction setting and signal the academic and practitioner alike as to the kinds of topics and methods we feel are particularly important. In order to achieve this, the *KMRP* editorial team has drawn from its own KM scholarship to outline a set of key issues and ideas, and it decided to carry out a small survey of other academics and practitioners interested in KM to better inform these speculations. This paper reflects the synthesis of the two processes, and it is organised into four parts beginning with this introduction. Next, the survey method and results are discussed, and then a set of KM visions and directions from the editorial team are included. The paper closes with a call for action in the KM field.

Survey design
It is appropriate to include a 'health warning' here. The survey on which we report below does not reflect the kind of scale, detail and rigour that we

would normally expect for a *KMRP* article. For example, there are too few responses, there is a bias towards those who actively participate in certain KM activities, and the instrument used has not been validated. Thus, we do not present our survey design or results as an exemplar of rigour. Rather, we were interested in quickly 'feeling the pulse' of academics and practitioners for this inaugural journal issue, especially to help indicate the breadth of backgrounds and issues relevant to KM as it is at present. Therefore, we conducted a relatively informal survey of researchers and professionals with an interest in KM.

The criterion for 'interest in KM' was participation in KM conferences and e-mail lists (two of each). After pilot testing, 158 questionnaires were distributed to different people or e-mail addresses, although it is possible that in a few cases two distinct e-mail addresses may have represented the same person. One reminder was also sent by e-mail. In all, 25 usable questionnaires were returned, representing a response rate of 15.8%. Whilst acceptable by normal survey standards, this was slightly disappointing to the authors, given the focused nature of the community. However, the length of the questionnaire, at four substantive pages, perhaps contributed to this.

Survey results

The results of the analysis of the collected survey data are presented in six sections. The first examines the respondents' demographic information. The second presents respondents' views about KM, influential ideas in KM and influential people in KM. The next three sections examine their views on the most useful forms of support for KM activities, the most important types of KM technologies, and the most important factors in KM initiatives, respectively. The final results section presents respondents' views on the most important challenges facing research and practice in the field of KM.

Respondent demographics

The profile of the sample is examined here in terms of the respondents' occupation, experience with KM, subject area of academic qualifications, importance of KM to them as an area of work/interest and responsibility for KM. The average respondent to this survey can be described as being an academic, with either business or technology-related academic qualifications, with less than 5 years of experience in KM, with their main interest being KM, but not necessarily having a clear position of responsibility for KM (as nearly as possible, there is an even split between those who have and those who have not). Given the way in which the questionnaire was distributed, it seems reasonable to expect some non-response bias in that those who were less interested in KM, and specifically in a new journal about KM, might be expected to be less likely to respond.

Occupation

Of the total of 25 survey respondents, 68% were academics, 24% were practitioners and 8% were both (academics and practitioners), as shown in Figure 1. This distribution shows that the views of academics are somewhat over-represented, and those of practitioners are somewhat under-represented. This further suggests that the survey responses generated may reflect more closely the views of academics. This is, however, consistent with academics being more interested in influencing a new journal, especially one that emphasises rigour, as *KMRP* does.

Experience with KM

The survey respondents' years of experience with KM are illustrated in Table 1. These results show a high proportion of respondents in the 3–4-year experience group (56%) and fewer respondents in the 2 and under, and 5 and over groups. In particular, 16% of the individuals from the respondent population had 1–2 years of experience with KM, 16% had between 5 and 10 years of experience, while the remaining 12% had over 10 years
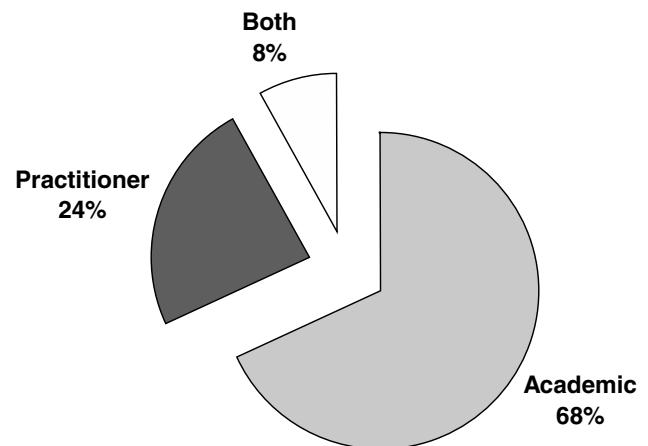

Figure 1   Main occupation of respondents.

Table 1   Respondents' experience in knowledge management

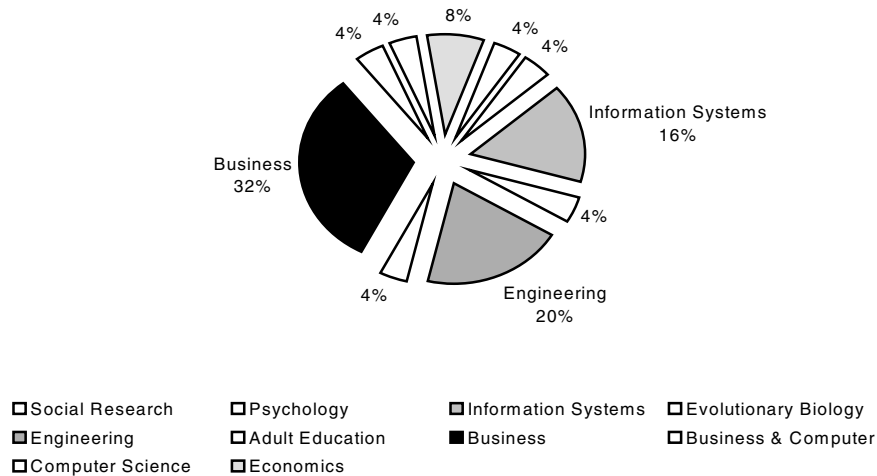| Year(s)	No. of respondents	%
1	1	4
2	3	12
3	8	32
4	6	24
5	1	4
7	2	8
10	1	4
18	2	8
25	1	4
Total	25	100

Figure 2   Subject area of respondents' qualifications.

of experience with KM. While these responses suggest that KM is not a recent phenomenon, they also show that it has gained an increased popularity within the last couple of years.

Subject area of academic qualifications

Of the 25 individuals surveyed, the majority had their most recent subject area in business (32%), followed by engineering (20%) and information systems (16%). Other subject areas represented include social research (4%), psychology (4%), biology (4%), education (4%), economics (8%), computer science (4%) and a mix of business and computer science (4%), as shown in Figure 2. A high proportion of respondents from business and technology areas suggests that these disciplines place particularly high value on KM. The variety of disciplines mentioned confirms the multi-disciplinary nature of KM, which *KMRP* is particularly concerned to strengthen.

Importance of KM

All survey respondents indicated presently active interest or work in the area of KM. This is not surprising given the population sampled, but clearly indicates the relevance of the responses to the market at which *KMRP* is aimed. About two-thirds (68%) considered KM as their main area of interest or work, while the remaining one-third (32%) had a significant interest in KM (see Figure 3).

Special responsibility for KM

The distribution of responses shown in Table 2 indicates that the respondents were quite evenly divided between those who had a special responsibility for KM (52%) and those who did not (48%). This, together with the importance of KM to respondents reported above, suggests that all knowledge workers, KM specialists as well as non-specialists, are equally important stakeholders in KM.
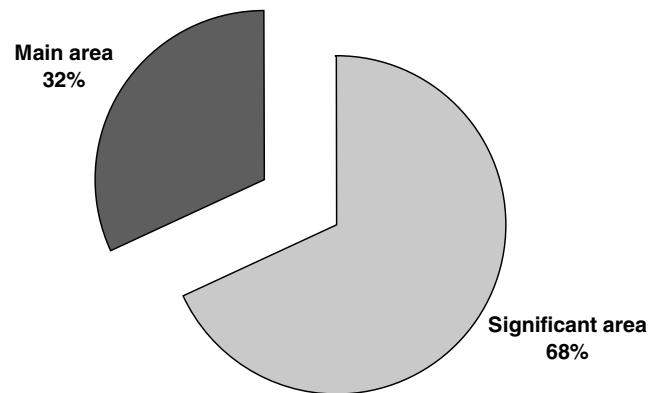

Figure 3   Importance of KM as an area of respondents' interest/ work.

Table 2   Respondents' special responsibility for KM

	N. of respondents	*%*
Yes	13	52
No	12	48
Total	25	100

KM foundations

This section examines the respondents' opinions about the KM phenomenon, as well as their assessments of the most influential ideas and people in KM.

Opinions about KM

Table 3 shows the distribution of respondents' opinions about KM separated into those that agree (somewhat or strongly) and those that disagree (somewhat or strongly) with a series of 10 statements. Thus, it was possible to

identify more clearly positive and negative attitudes towards KM aspects. Each statement was rated separately by the respondents on a 5-point Likert scale where $1 =$ strongly agree and $5 =$ strongly disagree.

When asked about their opinion about knowledge, 100% of the respondents agreed that 'There is some knowledge that cannot be put into explicit form'. This implies a widespread recognition of the *stickiness* of tacit knowledge. In all, 58% of the respondents believed that 'knowledge only exists in the minds of humans', and also that 'an organisation has knowledge that goes beyond that of the people in it' (58%), suggesting a view that knowledge combined can be greater than the sum of the parts.

There was a shared view by 71% of the respondents that 'KM practice needs to be based on sound theory', and that 'KM should be built around an organisation's processes, not its structure' (65%). Furthermore, 62% of the respondents considered that 'Most organisations see KM as a technological issue', and disagreed with the view that 'collaboration approaches do not give enough help in implementation' (29%).

Finally, 58% of the respondents recognised that 'There is a split between Western and Eastern approaches to KM', but only 45% felt that 'The divide between Western and Eastern approaches to KM needs to be bridged'. Not surprisingly, there is a significant correlation between responses to these two statements (0.471, $P = 0.027$, two-tailed). This implies a fair degree of tolerance for differences. This view is further reinforced by 83% of the respondents who strongly opposed the idea that 'An organisation cannot use both collaboration (network) and codification KM strategies together'.

In all, 62% agreement with the view of KM as a technological issue is contrary to some earlier survey results. The most recent Australian survey, for example, found that only 6% of the respondents defined KM as a technological concept, and 85% as a business-focused approach (Zyngier, 2001). To eliminate any possibility of bias, the responses for this question were cross-tabulated against the subject area of the respondents, as shown in Table 4. No major differences were found in ratings between respondents from business and technology-focused subject areas. However, from the wording of the question, respondents here should have been answering what they perceived others (i.e. organisations in general) to be doing. This may account for some of the disparity.

Apart from the one correlation mentioned earlier, the only other statistically significant correlation (at $P = 0.05$) was between the responses to 'There is some knowledge that cannot be put into explicit form' and 'KM practice needs to be based on sound theory' (0.479, $P = 0.018$, two-tailed). This may suggest that the limitations of attempts to make knowledge explicit is one of the areas in which further theoretical development is most needed.

Influential ideas in KM

Respondents were asked to give a textual response about the three most important ideas in KM. From the variety of themes reflected in the responses obtained, the most frequently cited as important were an integrated content-narrative-context framework of KM, and the concept of communities of practice. The third most frequently cited idea was the explicit–tacit knowledge taxonomy.

It was a little surprising that neither Nonaka & Takeuchi's (1995) SECI spiral model nor the codification-personalisation distinction of Hansen *et al.* (1999) received any first-place rankings.

The complete list of ideas is shown in Figure 4.

To give more structure, we have grouped the ideas mentioned by respondents grouped into eight categories, as shown in Table 5:

- Business (e.g. strategy, competitive advantage).

Table 4 Respondents' views on 'most organisations see KM as a technological issue' broken down by subject of most recent qualification

Subject area	Agree	Disagree
Business+economics	7	1
Engineering+IS+CS	7	3
Other	1	1

Table 3 Respondents' views about 10 statements relating to KM

Statements	Agree (%)	Disagree (%)
The divide between Western and Eastern approaches to KM needs to be bridged	45	22
There is a split between Western and Eastern approaches to KM	59	9
Knowledge only exists in the minds of humans	58	37
An organisation has knowledge that goes beyond that of the people in it	58	25
Most organisations see KM as a technological issue	62	21
KM should be built around an organisation's processes, not its structure	65	9
KM practice needs to be based on sound theory	71	21
There is some knowledge that cannot be put into explicit form	100	0
An organisation cannot use both collaboration (network) and codification KM strategies together	12	83
Collaboration approaches do not give enough help with implementation	25	29

- Culture (including leadership and organisational learning).
- Intellectual capital.
- Practice of KM.
- KM as process.

- Social capital and networking (e.g. communities of practice).
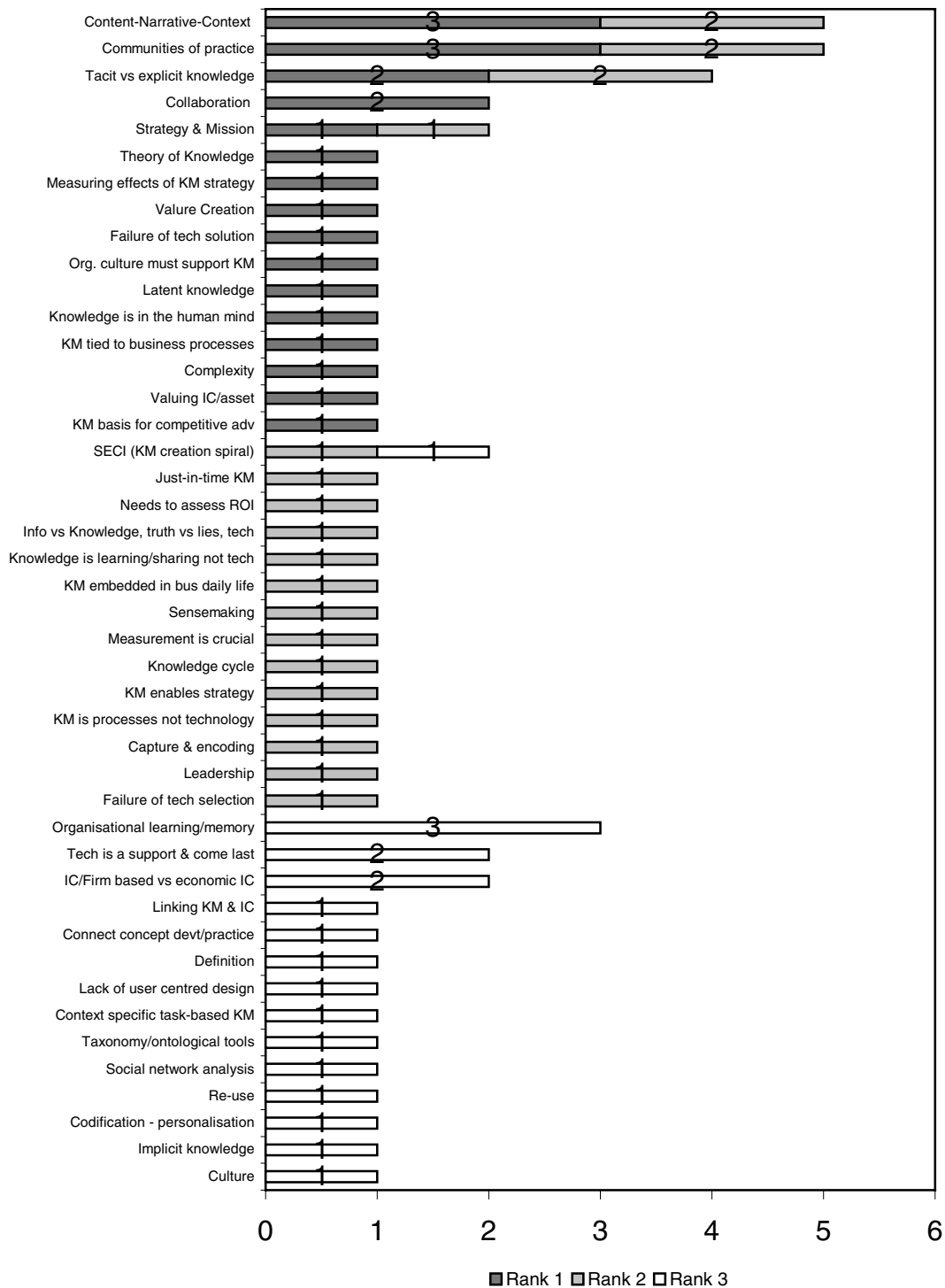- Technology.
- Theories about knowledge.

Figure 4   Respondents' views of the most important ideas in KM.

These may therefore indicate some of the topics we might expect to be addressed in articles submitted to *KMRP* in the near future.

As might be expected, theories about knowledge appeared most often and were most highly ranked. Cultural concepts, and issues related to social capital and (human) networking were close behind. Business aspects were ranked first three times. Although seven respondents mentioned ideas specifically related to practice or the application of theories, no one ranked these first. Again, this is perhaps unsurprising; there needs to be some sound theory before issues of practice can really be considered.

Influential people in KM

Respondents were asked to name the three most influential authors/teams of authors on KM. The distribution of responses shown in Figure 5 clearly identifies Nonaka as the most influential single author in KM, followed by Nonaka and Takeuchi as a team of authors. We are pleased to be able to include a paper co-authored by Nonaka in this first issue of *KMRP*. Davenport and Prusak as a team hold a strong third position (when higher ranks are weighted more). The remaining responses are divided quite evenly among more than 20 other authors.

KM activities and support

Respondents were asked to fill in what they believed were the most useful forms of support for each of a set of KM-related activities, under the headings of IT/software support and non-computer support. Here we give a lesson regarding rigour. A substantial minority interpreted this set of questions as asking for a vote between the two types of support for each activity; this was not the intention, and such responses have been disregarded. Although the questionnaire had been given a small-scale pilot (five respondents), this problem did not surface – perhaps because the pilot sample was too homogeneous (all UK academics). Table 6 shows a simple count of responses given to the set of questions about useful forms of support (IT and non-IT) for activities relating to the management of knowledge. These numbers indicate that respondents consider that both IT and non-IT support are

equally useful for all activities except one. For the knowledge valuation activity, non-IT forms of support were more frequently indicated as useful.

The detailed responses were more notable for their diversity than for any specific patterns. Under most of the 16 headings, it was unusual for any type of support to be mentioned by more than one respondent. This is testament to the breadth of activities that KM needs to encompass, and which *KMRP* aims to cover. It is also clear that there is no 'one size fits all' way to 'do' KM. The next two sub-sections consider IT and non-IT support in a little more detail.

IT/software support

Two elements of the responses are worthy of mention: support for knowledge retention and the role of groupware.

Knowledge retention was the activity with the clearest consensus as to the most useful form of IT support, with six votes for some form of knowledge repository and three for some form of content management system.

Groupware (including collaboration tools) was the type of software that was mentioned by far the most often
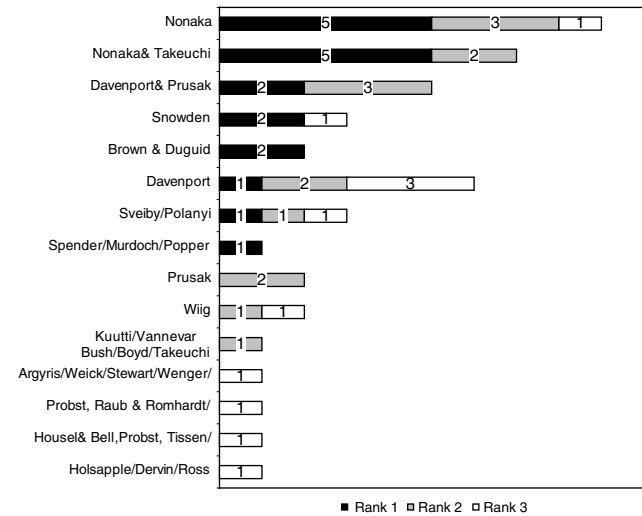
Figure 5 Respondents' views of the most important authors in KM.

Table 5   Categorisation of views about the most important ideas in KM

Category	Number of different ideas	Rank 1	Rank 2	Rank 3
Business (e.g. strategy, competitive advantage)	5	3	3	0
Culture (including leadership and organisational learning)	6	4	4	4
Intellectual capital	4	2	0	3
Practice of KM	7	0	3	4
KM as process	1	1	1	0
Social capital and networking (e.g. communities of practice)	4	5	3	1
Technology	6	1	3	3
Theories about knowledge	10	6	5	4

Table 6 Preferences for different forms of support for various KM activities

Activity	IT	Non-IT
Knowledge creation	9	11
Knowledge acquisition	11	12
Knowledge sharing	11	12
Knowledge retention	12	11
Knowledge valuation	5	10
Knowledge use/application	8	10
Knowledge discovery	11	11
Knowledge integration	9	10

overall (13 times). Knowledge sharing produced five votes for groupware plus one for collaboration tools, and knowledge creation yielded three for groupware, plus again one for collaboration tools. Groupware was also mentioned twice under knowledge integration and once under knowledge use. Respondents clearly perceived it as the most generally useful software tool for KM.

Non-IT support
Only four forms of support were mentioned more than once for a particular activity. Brainstorming was mentioned five times out of 11 under knowledge creation, face-to-face interaction of some kind three times out of 12 for knowledge sharing, reports twice out of 11 for knowledge retention, and team working three times out of 10 for knowledge integration.

KM technologies
Respondents were asked to write in 'the most important types of technology that can provide support for KM' (up to three). Internet/intranet/extranet/portals combined were most frequently cited, as shown in Figure 6. This is especially interesting given that these were very rarely cited as the most useful form of support for any particular KM activity, in answers to the previous question. When considering all other responses of high importance, groupware (as would be expected from the previous section), search/retrieval and data-mining tools were rated among the highest. Among the rest, communication and collaboration technologies were generally cited as important more frequently than knowledge retrieval and discovery technologies. These, in turn, were cited more than technologies for storage and preservation of knowledge or various other support devices.

KM influences
This section examines and compares the respondents' opinions about how KM relates to different aspects of an organisation's work. The respondents rated different factors in terms of the importance placed on these factors in KM initiatives.
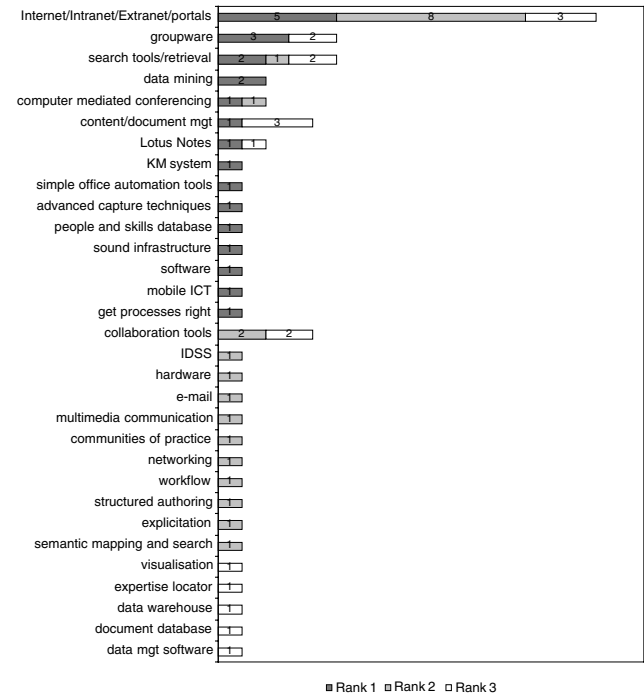

Figure 6 Respondents' views of important types of technology to support KM.

Given importance
With respect to the importance that *is usually placed* on different aspects of an organisation's work in KM initiatives, the responses shown in Table 7 and Figure 7 inform us that *technology* is the single most important aspect. Technology was most cited as an important factor by the respondents (79%), followed by business tasks and processes (63%). In contrast, c*ulture* was indicated as being rarely considered in KM initiatives. Only 33% of the responses rated this factor as important. Similarly, less than 50% of responses rated as important factors: *people* (46%), *structure* (43%) and *performance/measuring outcomes* (38%). Overall, these responses reveal a dominant role played by technology in an organisation's KM initiatives.

However, we need to include a word of warning here, again related to rigour. A high rating of 'how much importance is usually placed on technology in a KM initiative in an organisation' here and agreement with 'most organisations see KM as a technological issue' earlier appear to be addressing the same construct. Yet there was no correlation at all ($r = -0.093$, $P = 0.664$) between the two sets of responses! This raises some questions about the validity of our questionnaire instrument.

Desired importance
With respect to the importance that *should be placed* on different aspects of an organisation's work in KM initiatives, shown in Figure 8 and Table 8, most responses

Table 7 The importance that is usually placed on different aspects

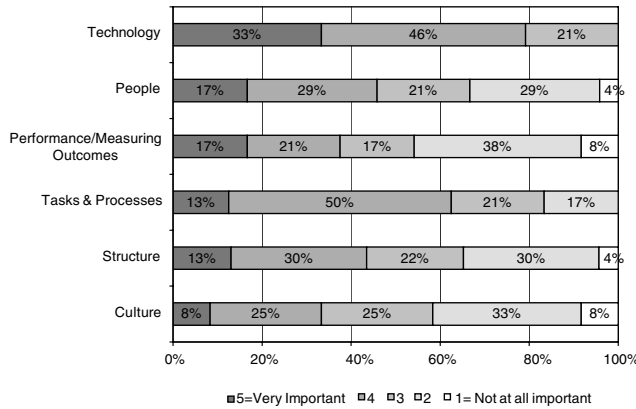| Factors	1 = not at all important	2	3	4	5 = very important
Tasks and processes	0	4	5	12	3
Structure	1	7	5	7	3
People	1	7	5	7	4
Technology	0	0	5	11	8
Culture	2	8	6	6	2
Performance/measuring outcomes	2	9	4	5	4

Figure 7 Respondents' views of the importance that is usually placed on different aspects.

rate *people*, *culture*, *tasks & processes*, and *performance/measuring outcomes* as quite important. People and culture were most cited as important factors (96 and 92%, respectively). Tasks and processes were also acknowledged as important (84%), as were performance/measuring outcomes (79%). Scores obtained for technology (41%) and structure (50%) indicate that the respondents believed that there should be less importance placed on these aspects. Overall, these responses reveal a desire to place a greater emphasis on human aspects of an organisation's work in an organisation's KM initiatives.

Given *vs* desired importance
A comparison of the respondents' opinions about actual and desired importance placed on different factors in KM initiatives is shown in Figure 9. A series of paired T-tests was performed to compare the average actual and desired importance scores for different factors. The results, shown in Table 9, indicate that the respondents tended to think that there was significantly greater than desired importance given to technology, and significantly less than desired emphasis placed on people, culture, tasks and processes, and performance/measuring aspects in an organisation's KM initiatives. No significant difference was found between actual and desired importance scores for structure.
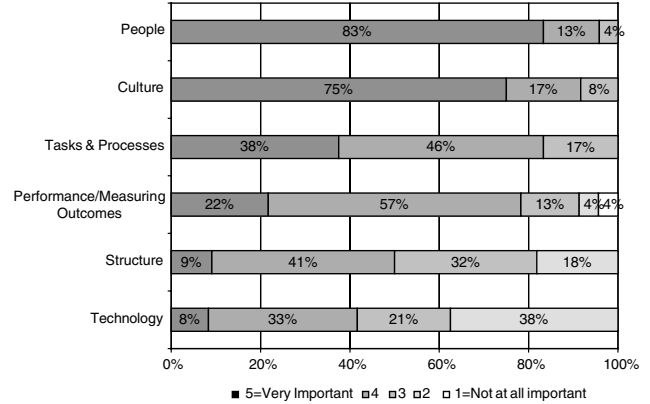

Figure 8 Respondents' views of the importance that should be placed on different aspects.

Table 8 The importance that should be placed on different aspects

Factors	1 = not at all important	2	3	4	5 = very Important
Tasks and processes	0	0	4	11	9
Structure	0	4	7	9	2
People	0	0	1	3	20
Technology	0	9	5	8	2
Culture	0	0	2	4	18
Performance/measuring outcomes	1	1	3	13	5

Interestingly, the overall average scores also rose significantly, from 3.36 for the given importance to 4.01 for the desired importance. This suggests a widespread belief that organisations need to consider KM initiatives more carefully, taking into account a broader range of factors.

Challenges for research and practice
The following section examines major challenges for KM. research and practice.

Challenges for research
Respondents were first asked to give a textual response about the most important challenge facing *research* over the next 3 years. There were a variety of themes in responses obtained as demonstrated in Table 10. The challenge mentioned most often (20%) was the need for a consistent and cohesive theory supported by empirical evidence to provide sound and stable foundations for the field. This is one of the main objectives of *KMRP*. Some respondents (8%) indicated that connecting research and practice was the most important challenge for them. Again, this is one of *KMRP*'s main objectives. Others felt that finding and measuring business benefits was the key
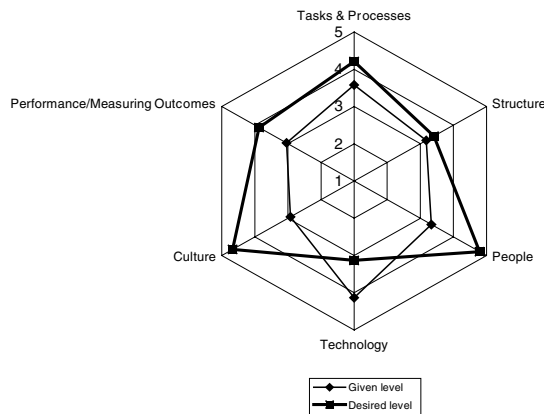
Figure 9 Comparison of perceived and desired levels of importance placed on different factors.

issue. Other notable general issues mentioned by the respondents include tacit knowledge, context and integration of disparate KM elements.

Challenges for practice

Respondents were also asked to give a textual response about the most important challenge facing *practice* over the next three years. As shown in Table 11, there were a large variety of responses. The challenge mentioned most often (16%) was evaluation and measurement. Among other more often mentioned challenges were: choosing the right KM strategy (8%), creating trust-based organisational culture (8%), and demonstrating the value of and motivating people to share knowledge (8%). There were a variety of elements reflected in the remaining 60% responses, including demystification, gaining acceptance, regaining credibility, and making KM a part of practice and daily processes of an organisation.

Editorial visions

The editorial team for this journal is committed to promoting rigorous and practical research on KM. In this section we summarise the vision for KM from the perspective of the team, and we synthesise this vision into a direction setting statement about the journal. For ease of presentation, we first organise the four individual visions of each editorial team member, and then we include the synthesised vision from the perspective of the journal.

Vision 1 – John Edwards, Editor

My vision is for *KMRP* to become the journal to which authors of high-quality papers on KM would choose to submit their work. Let us consider this in more detail.

At present, the KM literature appears somewhat fragmented. There are some journals specialising in knowledge management, but many of the most influential articles on KM appear in journals devoted to the researchers' 'home' discipline. Our small survey yielded a range of disciplines including business, engineering, information systems, economics, social research and even evolutionary biology. Organisational sociology or human resources would be just as likely, as would many others.

This has two effects. One is that rather than a single body of literature on KM, there are several knowledge management literatures. The second is that multi-disciplinary research tends to be discouraged, because of the difficulty of finding a suitable outlet for publication. Consequently, aspects of the literature that should be taking the form of debates appear instead as unbridgeable splits. These splits include those between people who favour a codification strategy on KM and those who favour a personalisation strategy, and between 'Western' (meaning North American) and 'Eastern' (meaning Japanese) approaches.

My vision is that *KMRP* can not only accommodate different perspectives, but also seek common ground between them, and integrate diverse concepts in a complementary fashion. The articles may be empirical research papers, theoretical papers, conceptual papers, case studies or surveys. Their authors may be academics, practitioners or a joint team. Their common element will be rigour and openness to ideas springing from different paradigms.

Vision 2 – Sven Carlsson, Regional Editor – Europe, Middle East and Africa

To a large extent I share my colleagues' visions for *KMRP*, but here I outline four complementary views.

First, much of the KM research has an intra-organisational perspective. Some studies indicate that the most valuable knowledge source for competitive

Table 9 Comparison of perceived and desired levels of importance placed on different factors

Factors	Given importance	Desired importance	t	df	P
Tasks and processes	3.58	4.21	−2.532	23	0.019
Structure	3.18	3.41	−0.611	21	0.548
People	3.33	4.79	−6.061	23	0.000
Technology	4.13	3.13	4.153	23	0.000
Culture	2.92	4.67	−7.000	23	0.000
Performance/measuring outcomes	3.04	3.87	−2.299	22	0.031

Table 10   Challenges for KM research

Challenges for research	Number of respondents
Consistent and cohesive theory supported by empirical evidence, sound and stable theoretical foundation	5
Connecting research and practice	2
Finding/measuring business benefit	2
Simpler more usable results that apply to daily industry life	1
Find suitable base for research to be cumulative, not *ad hoc*	1
Maintaining a cross-disciplinary community	1
Inhibitors and enablers for knowledge use	1
To shake off technological/elitist aspects	1
Fewer hypotheses, more stimulation of emergence	1
Find potent creation and capture methods	1
Tacit/explicit dimensions, narratives	1
Moving from micro to mezzo level	1
Context	1
Better ways to manage/deal with tacit knowledge	1
Evaluation, sharing processes, organisational impact	1
Be socially effective	1
Funding	1
Integrating people, tech, performance, culture, structure	1
Measuring value added – and not added	1

Table 11   Challenges for KM practice

Challenges for KM practice	Number of respondents
Measurable successes/metrics and measurements, evaluation	4
Choosing the right KM strategy	2
How to create trust-based organisational culture	2
Demonstrate value, motivate people to share knowledge	2
More attention to explicit knowledge	1
Become an integral part of everyday activities	1
Getting the most out of the people	1
Go beyond large wealthy firms in developed countries	1
Accepted as fundamental discipline for organisational excellence	1
Regaining credibility from vendor/tech-dominated solutions	1
KM impact on organisation's performance	1
Avoiding disappointment when technologies fail to deliver	1
Demystify, make part of good organisational practice and strategy development	1
Overcoming management obsession with financial issues/RoI	1
Inter-organisational knowledge transfer and globalisation	1
To shake off technological/elitist aspects	1
Being part of a process, not being a process	1
Separate KM from IT and prove its worth	1
Framework that can be applied in any organisation	1

advantage lies in organisations' networks of external relationships. Research addressing KM in the extended organisation will be valuable to the KM field. Studies focusing on KM in the extended organisation have so far primarily studied R&D and new product development processes, but studies focusing on KM in other types of processes are needed, for example KM around traditional processes such as the order management processes in supply chains.

Related to my first complementary view is the general question of level of analysis. I envision that *KMRP* will be a place where KM studies having micro, mezzo and macro levels of analysis will find their home. I especially foresee interesting studies straddling different levels of analysis.

Second, an underlying assumption of KM and this journal is that a firm's competitive advantage to a large extent flows from its unique knowledge and how it manages knowledge. I think too little empirical evidence exists to show that this assumption is true. A stream of

research could address the question of what is the strategic value of knowledge. Related to this is that KM research in general should produce ever more detailed answers to the question of *why* a KM initiative works for *whom* and in *what* circumstances. A problem to tackle in addressing this question is the divergent meaning of the concepts of knowledge and KM when comparing the theoretical (conceptual) and empirical literatures. For example, how can we operationalise abstract theoretical concepts? There is also a need to understand discrepancies in empirical findings and what we can learn from them about the strategic dimension of KM.

Third, the phrase *'Research & Practice'* points to the differences between 'traditional' sciences and design sciences – the latter concerning the sciences of the artificial and design theories. Sciences aim at understanding reality, and focus on exploring, describing and explaining phenomena. Design sciences attempt to create things that serve human purposes. They aim to change existing situations into preferred ones. I envision that *KMRP* will not only have research and practice contributions, but will actually be a bridge between the research and the practice.

Fourth, regarding research approaches and theories, my view is that for advancing the KM field we should be more open to different approaches and theories. Not only that, but I would like to see (1) multi-disciplinary research drawing on different disciplines, (2) research using multi-paradigm approaches (meta-triangulation) by employing disparate theoretical perspectives and (3) research using multi-methodology by employing different research methods (even from different perspectives).

Vision 3 – Meliha Handzic, Regional Editor – Asia-Pacific

My vision is for *KMRP* to play a major role in addressing unresolved issues, challenges and opportunities in research and practice of KM.

At present, the development of a cohesive theory supported by empirical evidence appears to be the greatest challenge. Our survey respondents share this editorial view. Meeting this challenge will require both conceptual and empirical studies of the KM phenomena and integration of diverse concepts into holistic and integrated frameworks. Seeking common and unifying ideas, the articles may draw from a variety of disciplinary perspectives and explore topics ranging from KM foundations, through knowledge resources, processes and socio-technical influences, to outcomes of KM.

The other more specific challenge, in my opinion, is determining the role of information systems and technology (IS/IT) in KM. Currently, opinions on the issue are quite divided. Our small survey identifies technology as an important KM concept, but also recognises a significant over-emphasis placed on technology in current KM initiatives by organisations. Resolving the issue of the 'right' place of IS/IT in KM will require studies on whether and how successfully IS/IT can be integrated

into processes of creation, storage, transfer and utilisation of knowledge in organisations.

Finally, it should be remembered that the principal motive for KM research is to reliably inform KM practice. Business managers are often sceptical of the immediate practical value of academic research and there is a role for *KMRP* in alleviating that scepticism. This will require producing proven techniques for managing the knowledge resources in organisations. In the research arena, this can be achieved through rigorous studies that can reliably establish what works and what does not, and under what circumstances.

Vision 4 – Mark Nissen, Regional Editor – the Americas

My vision for *KMRP* shares several scenes in common with those above (e.g., integration of 'hard' and 'soft' approaches, need for multidisciplinary research, criticality of rigorous research), on which I do not elaborate further here. Instead, I outline four complementary views that are perhaps unique to my perspective as an information systems scholar.

First, many scholars view knowledge as distinct from information (and data), but few KM articles appear to reflect such distinction. Being able to appreciate and articulate how knowledge is unique and how its unique aspects can be managed represents a central aspect of my KM vision. If research and practice is unable to address the management of knowledge as distinct from information/data, then I see little that the study of KM has to offer over and above the past four decades of knowledge accumulated through effective research and practice of information/data management.

Second, I do not view the role of information technology (IT) as a necessary component of KM, and it is certainly not a sufficient element. Indeed, research and practice that centre on IT have good potential to be misguided in my view. Alternatively, IT offers excellent potential to complement people and organisations in the KM context; hence research and practice that integrate IT, people and organisations appear likely to produce new, actionable and generalisable KM knowledge.

Third, I foresee critical interactions between research and practice through two temporal pairings. In the one pairing in which research follows practice, excellent lessons can likely be learned and generalised from failures as well as successes. In the other pairing in which research leads practice, the number of failures can likely be reduced through development of actionable theory to inform the manager and knowledge worker.

Finally, knowledge appears to be truly fundamental to work in the organisational context. As such, how knowledge is managed in an organisation may turn out to be as or more important than any other management activity. Of course, this remains speculation today. However, my KM vision includes understanding knowledge first and centrally, with the idea of discovering how other management issues (e.g., planning, organising, decision

making) should be based on such an understanding of knowledge.

Combining the visions

Drawing these four editorial visions together, we see a constructive tension in place, between *difference* and *integration. KMRP,* and indeed KM in general should embrace difference – differences in perspective, differences between disciplines, differences in levels of analysis, differences between the concerns of research and those of practice. These differences are to be embraced rather than eliminated; they serve to make the field more fruitful and relevant. However, they need to be embraced in a spirit of integration, of debate, of complementarity, of building bridges; and the most important of these bridges is the one between research and practice, whether research leads practice or follows it. All of this needs to be done with the necessary rigour to convince people, whether academic or practitioner, of the usefulness of KM and its study. Specific aspects where special emphasis may be needed at present include the role of information systems and IT in KM, KM in the extended (and perhaps virtual) organisation, and what KM offers above information management.

The future of KM

From the questionnaire responses, and the editorial team's visions, it is clear that KM covers a very broad and somewhat fragmented field. The people who are interested in, and involved in KM come from a wide range of educational backgrounds, and have a wide range of concerns, from the cultural to the technological, and from social capital to business strategy.

The most important single challenge – but really it binds all issues together – is to produce a coherent and cohesive body of theory, based on empirical evidence.

Perhaps the most specific issue is shown by survey respondents' concern about the emphasis that they believe is currently given to technology in KM initiatives, although they still rate technology as an important factor. There is a strong support for a view that 'knowledge only exists in the minds of humans', as witness the significant partial correlation between the responses to that statement and the importance value that should be placed on people, even when controlled for the importance that is usually placed ($r = -0.466$, the negative sign being because the scales run in opposite directions, $P = 0.022$, two-tailed).

KMRP will try to play its part in helping to produce and disseminate this coherent and cohesive body of theory, and by providing empirical evidence. In so doing, it will try to balance human, technological and organisational aspects of KM, and include any other issues that may arise in KM, such as physical space or even fashions in knowledge.

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