

The research core of the knowledge management literature

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ABSTRACT

A bibliometric analysis and a content analysis were conducted to explore the nature of the knowledge management literature. For the bibliometric analysis, three levels of Bradford analysis were used to examine the shape of the knowledge management literature based on 21,596 references from 2771 source publications. Each of the three analyses conformed to the typical curve of the Bradford distribution. For the content analysis, the texts of 630 knowledge management articles were analyzed to address the question of what research methodologies are used in the knowledge management literature. It was found that 27.8 percent of knowledge management-related articles in knowledge management journals used no identifiable research method. Of the remaining 455 refereed articles, 60 percent employed mainstream social sciences research methodologies. The remaining 40 percent of the articles using an identifiable methodology were characterized by the use of “provisional methods” that appeared to substitute for more formally defined or scientifically based research methodologies.

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1. Introduction: research and professions

1.1. The nature of professions

The nature of professions has been discussed and studied at least since the beginning of the 19th century. One of the earliest detailed expositions was Flexner's discussion of social work as a profession (1915). One of the most cogent and comprehensive analyses was provided by Pavalko (1988), who identified seven essential characteristics of a profession:

1. A theory of intellectual technique.
2. Relevance to basic social values.
3. A training period.
4. Motivation.
5. Autonomy.
6. Commitment.
7. A sense of community (pp. 20–27).

The nature of professions has also been explored by Abbott (1988), Middleton (2007), and others.

1.2. Knowledge management as a profession

The extent to which knowledge management as a field has developed a professional identity is subject to interpretation and argument. As Wallace (2007) noted, knowledge management has to date not developed any meaningful or central sense of self-reflection suggestive of widespread concern about professionalism. Wallace suggested that knowledge management is currently very uneven in terms of compliance with Pavalko's seven criteria.

A variation on the concept of a profession is that of a *professional discipline*. Squires (2001) defined a professional discipline in terms of (1) its impact on society, (2) decisions and actions based on analysis of uncertain circumstances, and (3) the use of techniques and rules to guide action (p. 473). Grossman and Hooton (1993) argued that the members of a professional discipline act as the “educational custodians of the discipline,” in part by controlling the literature of the profession (p. 871). Wallace (2007) suggested that, whatever the status of knowledge management as a profession, knowledge management has not emerged as a professional discipline, particularly with regard to the scholarly status of the knowledge management literature (p. 225).

1.3. Knowledge management and scholarship

One of the characteristics frequently attributed to a profession is the development of a systematic body of scholarship underpinned by research. It is unclear that any such systematic body of research-based scholarship has emerged for knowledge manage-

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ment as a professional discipline or field. This is the embodiment of Pavalko's (1988) "theory of intellectual technique" (p. 20) and is reflected in Flexner's (1915) contention that "A profession must find a dignified and critical means of expressing itself in the form of a periodical which shall describe in careful terms whatever work is in progress; and it must from time to time register its more impressive performances in a literature of growing solidity and variety" (p. 588).

The literature of knowledge management is scattered and varied, ranging from volumes of short notes on practice to articles on knowledge management topics in journals not exclusively devoted to knowledge management to a handful of scholarly journals dedicated to knowledge management. According to Wallace (2007), "Much of what has been published is exhortatory in nature, encouraging the adoption of knowledge management as an overall organizational philosophy or the incorporation into organizational operations of certain aspects of knowledge management such as the transfer of tacit knowledge or the development of content management systems" (p. 221).

2. Definitional issues

Schultze and Stabell (2004) noted that "Defining knowledge management research is challenging because a complete and agreed-upon definition of knowledge remains elusive" (p. 551). Kane, Ragsdell, and Oppenheim (2006) echoed this concern and quoted a number of prominent, sometimes overlapping, sometimes conflicting definitions of knowledge in the knowledge management context (p. 141).

Easton and Araujo (1997) suggested that "the field of management studies may be regarded as an artistic enterprise" (p. 99) rather than a scientific discipline and proposed the use of literary criticism techniques as an approach to management research. In the same issue of the *British Journal of Management* in which Easton and Araujo's article appeared, Linstead (1997) argued in favor of social anthropology as a platform for increased interdisciplinarity in management research.

3. Theoretical foundations of knowledge management

Baskerville and Dulipovici (2006) explored the "flow and use" of theoretical concepts in knowledge management, identifying eight broadly defined critical influences:

1. Information economics.
2. Strategic management.
3. Organizational culture.
4. Organizational structure.
5. Organizational behavior.
6. Artificial intelligence.
7. Quality management.
8. Organizational performance management (p. 87).

Baskerville and Dulipovici further subdivided each of these broad areas into more specific theoretical frameworks, but did not explicitly ground their model in a systematic analysis of the knowledge management literature. The result is a largely speculative, albeit highly useful, model of the theoretical structure of knowledge management.

4. Proposed research agendas

There have been several proposed agendas for research in knowledge management, one of which seems to have actually served as a driver for knowledge management research. One of the

first sets of targets for knowledge management research was presented by Teece (1998). Teece called for research activities designed to:

- Assemble evidence to test the proposition that firm-level competitive advantage in open economies flows fundamentally from difficult to replicate knowledge assets.
- Make greater effort to quantify the value of intangible assets.
- Understand generic inputs, idiosyncratic inputs, and profitability (pp. 289–292).

Alavi and Leidner (2001) provided an extensive knowledge management research agenda centered around five essential research questions:

1. What conditions facilitate knowledge creation in organizations?
2. What incentives are effective in encouraging knowledge contribution and sharing in organizations?
3. How can knowledge be effectively transferred among organizational units?
4. How can an organization encourage application of knowledge that is made available?
5. What are the consequences of increasing the breadth and depth of available knowledge, via information technology, on organizational performance? (p. 127).

Gulati (2007) commented on the regrettable gap between perceptions of rigor and perceptions of relevance in the management literature and suggested a five-step agenda for achieving better integration of the literature:

1. Rely on managerial sensibility to shape research questions.
2. Test theory in the classroom.
3. Build theory.
4. Appreciate—and synthesize—the dialectic between theory and phenomenon.
5. Become "bilingual interpreters" for and active collaborators with practitioners (pp. 780–781).

Desouza (2004) called for knowledge management research to improve itself by addressing four fundamental actions:

1. "Integrate the research on knowledge management with the extant work in other functional areas such as accounting, finance, marketing, innovation, research & development, and production and operations management."
2. Explore "how can we secure our existing knowledge assets."
3. "Conduct research that links success in knowledge management to organizational outcomes."
4. Document and publish "practitioner based knowledge management novelties" (pp. 2–4).

5. Literature analyses

Scandura and Williams (2000) examined research trends in management by comparing all articles published in the *Academy of Management Journal*, *Administrative Science Quarterly*, and the *Journal of Management* during a three-year period in the 1980s to articles written during a comparable three-year period in the 1990s. They used McGrath's taxonomy of research strategies as an approach to classifying 347 articles that employed some mixture of "theory/literature reviews and/or empirical data" (p. 1254). Their results are presented in Table 1, which is drawn directly from their article.

Table 1
Scandura and Williams's typology of management research strategies.

| Research strategy | 1985–1987 | 1995–1997 |
|------------------------------------|-----------|-----------|
| Triangulation: research strategies | | |
| Formal theory/literature review | 22.90% | 18.70% |
| Sample survey | 6.90 | 3.60 |
| Laboratory experiment | 10.70 | 4.90 |
| Experimental simulation | 0.60 | 1.70 |
| Field study | | |
| Primary | 38.00 | 40.90 |
| Secondary | 16.10 | 26.60 |
| Field experiment | 3.90 | 2.20 |
| Judgment task | 0.60 | 0.20 |
| Computer simulation | 0.30 | 1.20 |

Scandura and Williams found that field studies dominated in both time periods and that there were significant changes for sample surveys, laboratory experiments, and field studies employing secondary data (p. 1256). They concluded that the shifts that had taken place were potentially of a negative nature and involved compromises to triangulation and validity.

Schultze and Leidner (2002) examined 94 articles related to information systems research from six journals selected to “review academic research that represents a diversity of epistemological assumptions” (p. 218). Their analysis focused on the congruence between the content of the articles and Deetz's taxonomy of discourses in organization science, which divides research into four areas of discourse: dialogic, critical, interpretive, and normative. They found that a distinct majority of the articles were reflective of the normative discourse model, that a meaningful number of articles were characterizable as interpretive discourse, and that only three articles fell into the combined dialogic discourse/critical discourse domain (p. 220). Schultze and Leidner concluded that knowledge management literature, as represented in the sample examined, is biased toward optimistic, consensus oriented research approaches and that “the negative consequences of information technologies on organizational learning, namely its disciplining and dominating effects, are left largely unexamined” (p. 230). Schultze and Stabell (2004) attempted to build a theoretical model that would extend their explanation of Deetz's model and expand the role of the concept of discourse by reframing the four discourse areas as neo-functional, constructivist, critical, and dialogic discourse (p. 566).

Karami, Rowley, and Analoui (2006) described the historical development of research methods in management studies as having its origins in the positivist mode, with an early emphasis on case studies, a later transition to primarily empirical explorations, and a much more recent and somewhat tentative infusion of phenomenological and qualitative methods (pp. 44–46). Their study of 120 articles in 20 leading management journals examined 23 very broadly defined factors associated with choice of research methodology. Many of these factors, such as “simple random sampling” and “used means, standard deviations or similar,” cannot really be considered to be methods so much as tools. With those tools eliminated, they found the most frequently used methodological areas to be questionnaire-based descriptive research (69 percent of the articles studied), “grand theory” (50 percent), case study (40 percent), interview (38 percent), and “participatory or action research” (20 percent). Some articles used more than one methodological area, resulting in a total substantially greater than 100 percent.

Kane et al. (2006), in an article that conforms to the provisional methodology termed an analytical literature review in the present study, commented that “It would appear that researchers may explicitly or implicitly state their methodological stance but subsequently appear to have difficulty in implementing the methodology in their primary research. Secondly, the methodological stance is

not always evident, which may result in criticism that the research position is ambiguous and, therefore, problematic for others in the research community to construct a possible stance by piecing together aspects of the data collection and analysis in an effort to ‘assemble’ a possible methodology” (p. 143). Kane, Ragsdell, and Oppenheim offered a number of examples of the use of various research methodologies in knowledge management, but made no attempt to quantify or assess the relative importance of the methodologies identified.

Bjørnson and Singsøyr (2008) examined 68 articles focused on the intersection of knowledge and software engineering. They found that 29 articles (43 percent) were reports of empirical research projects, while 39 (57 percent) were reports of “lessons learned” (p. 1059). Their results revealed no clear pattern over time that defines the balance of empirical and lessons learned approaches, although there was some indication of growth in the numbers of empirical articles between 2003 and 2006, the final year for which articles were studied (p. 1060).

Guo and Sheffield (2008) set about “to examine the KM theoretical perspectives, research paradigms, and research methods reported in influential journals in order to see what they tell us about KM research as a whole” with a specific goal of determining whether “KM research in information systems and/or management journals employs paradigms and methods that are broad enough to capture the full range of theoretical perspectives—utility, human agency, and power relations” (pp. 674–675). They developed a systematic approach to categorizing knowledge management research articles, which they applied to 160 articles drawn from 10 “first-tier” journals (p. 680). Their findings revealed that about 75 percent of the articles were empirical in nature and that 77 percent conformed to the positivist paradigm (p. 681). They indicated that “analysis of all articles (empirical and nonempirical) by research method shows that sample survey occurs most frequently, followed by field study, theory building, and literature review” (p. 682).

6. Research questions

The study presented here extends from and expands the work of Wallace, Van Fleet, and Downs (2009). The study was designed to address two very straightforward research questions:

1. What are the basic bibliometric characteristics of the research literature of knowledge management, as revealed by a Bradford analysis?
2. What methodologies are used in the research literature of knowledge management?

The goal was to explore the nature of the scholarly knowledge management literature and the use of research methodologies in the knowledge management literature in a systematic, comprehensive, quantitative manner by examining a broad cross-section of the knowledge management journal literature.

7. Methodology

7.1. Basic methodology

The basic methodological approaches selected for the study were a series of Bradford analyses of the scatter of the knowledge management literature and a content analysis of the full-texts of articles provisionally identified as being relevant to knowledge management.

7.2. Journal selection

The study was designed to explore the research methodologies used in the 20 journals of greatest importance to the knowledge management literature. Two interpretations of importance were implemented: (1) a journal can be assumed to be important to knowledge management if it is highly cited by the knowledge management literature and (2) a journal can be assumed to be important to knowledge management if the title of journal explicitly includes the expression “knowledge management.” Journals to be included in the study were therefore selected using two strategies.

1. A search of *Social Sciences Citation Index* (Social Scisearch) was conducted in Dialog using the keyword expression “knowledge management.” This yielded 1067 articles that could reasonably be assumed to be in some way related to the topic knowledge management. The references from all of the articles were then captured; yielding 21,596 references from a total of 2771 source publications. These references were used in the first round of the Bradford analysis. The source publications were ranked by number of references per source publication and the top 11 journals were identified for inclusion in the content analysis phase of the study. Only those journals for which full texts were available digitally were selected for the content analysis. The top 11 journals for which digital full text was available; in order of descending productivity; were:

- Strategic Management Journal.
- Harvard Business Review.
- California Management Review.
- Academy of Management Review.
- Administrative Science Quarterly.
- Management Science.
- MIT Sloan Management Review.
- MIS Quarterly.
- Journal of Management Information Systems.
- Academy of Management Journal.
- Communications of the ACM.

2. A search of *Ulrich's International Periodicals Directory* online (Ulrichsweb) was conducted to identify all refereed journals with the expression “knowledge management” in the title. Only those journals for which full texts were available digitally were selected for the study. The search yielded nine titles:

- Electronic Journal of Knowledge Management.
- Information, Knowledge, Systems Management.
- Interdisciplinary Journal of Information, Knowledge, and Management.
- Journal of Information and Knowledge Management.
- Journal of Knowledge Management.
- Knowledge Management for Development Journal.
- Knowledge Management Research & Practice.
- Knowledge and Process Management.
- Knowledge Management Review.

The combination of these two strategies identified 20 journals that became the source of data for the content analysis phase of the study.

7.3. Research procedure

7.3.1. Bradford analysis

Bradford (1948) noted that, for selected subject literatures, the distribution of articles among the journals that produced them followed a common pattern, which he described as follows:

If a large collection of papers is ranked in order of decreasing productivity of papers relevant to a given topic, three zones can

be marked off – such that each zone produces one-third of the total of relevant papers. The first, the nuclear zone, contains a small number of highly productive journals, say n_1 ; the second zone contains a larger number of moderately productive journals, say n_2 , and the outer zone a still larger number of journals of low productivity, say n_3 . The law of scatter states that

$$n_1:n_2:n_3 = 1:\alpha:\alpha^2$$

where α is a constant (p. 85).

This principle has come to be known as Bradford's Law. Bradford's Law has been extensively explored by Fairthorne (1969), Brookes (1977), Leimkuhler (1980), Wallace (1986), Nicolaisen and Hjørland (2007), and others. Drott (1981) commented specifically on the generality of the application of Bradford's Law to scientific literatures:

Broadly speaking, this regularity is characterized by both concentration and dispersion of specific items of information over different sources of information. Thus, for a search on some specific topic, a large number of the relevant articles will be concentrated in a small number of journal titles. The remaining articles will be dispersed over a large number of titles. Throughout the remaining discussion, journal articles will be used to represent the items retrieved and journals will be the sources. This is in keeping with most of the Bradford's law literature, although there is clear evidence that similar patterns occur for other kinds of items and sources (p. 41).

Chen, Chong, and Tong (1995) conducted an empirical examination of the dynamics of the Bradford distribution and concluded that, while there are variations based on the relative ages of journals in a given distribution, Bradford distributions are predictably stable over time.

In addition to the pattern noted when a bibliography is divided into productivity zones, Brookes noted that graphing the cumulative number of articles in a bibliography on an arithmetic scale against the cumulative number of journals on a semilogarithmic scale produces a distinctive result that approximates a straight line. Brookes (1968) explored the impact of multidisciplinary literatures on the consistency of the Bradford curve and found that the general linearity of the distribution was not affected to any meaningful extent.

Three Bradford analyses were conducted using the body of references gathered for this study:

1. An analysis of the entire corpus of 21,596 references from 2771 source publications was conducted to observe the conformity of the knowledge management literature with the overall pattern of the Bradford distribution. Results of this analysis are presented in Fig. 1.
2. An analysis of the 3037 candidate articles from 20 journals was conducted to estimate the extent to which the distribution of the candidate articles conformed to the distribution of the corpus of references. Results of this analysis are presented in Fig. 2.
3. An analysis of the 630 articles determined through content analysis to be truly related to knowledge management as a subject was conducted to estimate the extent to which those articles conformed to the distributions for the overall corpus of references and for the 3,037 candidate articles. Results of this analysis are presented in Fig. 3.

7.3.2. Content analysis

Once the 20 source journals were identified, the full texts of all articles published for the three-year period 2006 through 2008 were retrieved. This process identified 3037 articles. A two-pass content analysis was used to identify a final body of articles for

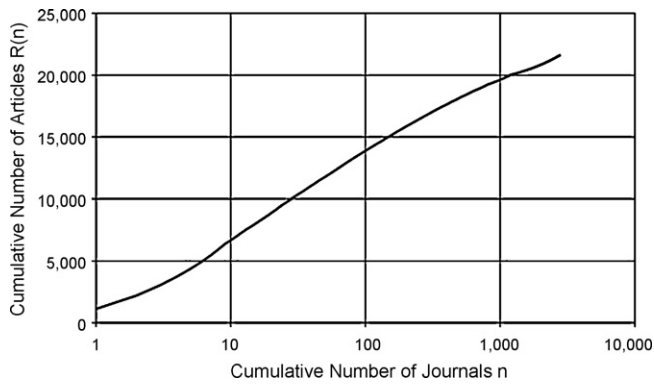


Fig. 1. Bradford Plot for 21,596 References from Source Articles.

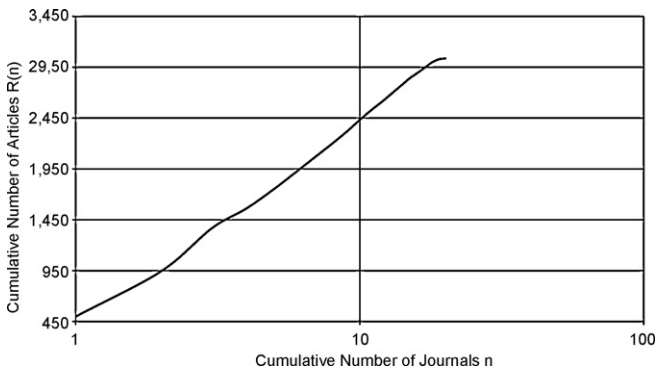


Fig. 2. Bradford Plot for 3037 Candidate Articles.

analysis. The content analysis was carried out independently by two individuals and results were then reconciled by the principal researcher.

Although the journals identified by capturing references from articles returned from the *Social Sciences Citation Index* search were cited by articles including the keyword expression “knowledge management,” many of those journals do not concentrate on publishing knowledge management research and could reasonably be expected to contain articles having nothing to do with knowledge management. The first pass content analysis was conducted to remove articles that did not appear to legitimately deal with knowledge management topics. Six hundred and thirty of the 3307 articles (21 percent) were judged to be about knowledge management topics.

Table 2 lists the frequencies of knowledge management articles contributed by the 10 most productive journals. The remaining

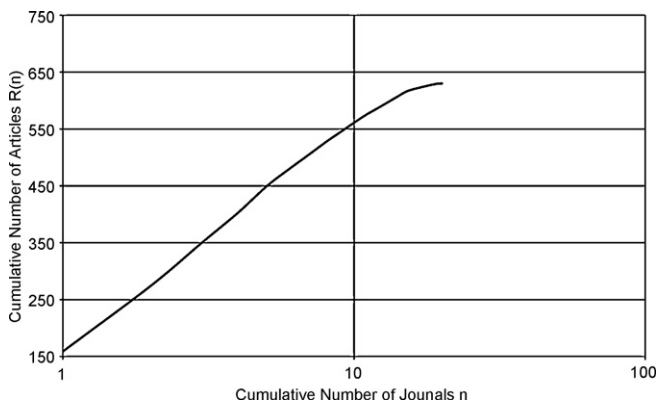


Fig. 3. Bradford Plot for 630 KM Articles.

Table 2
The 10 most productive journals.

| Journal title | Number of KM articles | Percent of KM articles |
|---|-----------------------|------------------------|
| Journal of Knowledge Management | 159 | 25.2 |
| Knowledge Management Review | 115 | 18.3 |
| Knowledge Management Research & Practice | 76 | 12.1 |
| Journal of Information & Knowledge Management | 53 | 8.4 |
| Knowledge Management for Development Journal | 46 | 7.3 |
| Electronic Journal of Knowledge Management | 31 | 4.9 |
| Knowledge and Process Management | 25 | 4.0 |
| MIS Quarterly | 22 | 3.5 |
| Management Science | 18 | 2.9 |
| Journal of Management Information Systems | 16 | 2.5 |

10 journals contributed only 10.9 percent of the articles. Not surprisingly, journals dedicated to knowledge management were the most productive, although the interdisciplinary nature of knowledge management is reflected in the inclusion of *MIS Quarterly*, *Management Science*, and *Journal of Management Information Systems* in the top 10.

A second pass content analysis identified articles that did not have an identifiable research methodology. The second pass identified 175 articles (28 percent) that had no identifiable research methodology and 455 (72 percent) that had at least a provisionally identifiable research methodology. Table 3 provides a frequency breakdown for the identified methodologies.

8. Discussion

8.1. Bradford analysis

The three Bradford analyses provide a high level of conformity to the frequently observed curve of the Bradford distribution. All three distributions are characterized by both the tendency to over-productivity in the core or Bradford restriction at the lower end of the distribution and by the under-productivity at the upper end known as the Groos droop. It is typical for Bradford analyses of smaller bibliographies to exhibit less pronounced core deviations from linearity and more conspicuous Groos droops than larger bibliographies. The pattern of the three differently sized bibliographies analyzed here confirms that tendency. The overall similarity of the three curves provide confirmation that the knowledge management literature conforms to the overall pattern of the Bradford distribution, that the 3037 candidate articles conformed to the distribution of the corpus of references, and that the 630 articles determined through content analysis conformed to the distribu-

Table 3
Most used research methodologies.

| Method | Number of KM articles | Percent of KM articles |
|-----------------------------|-----------------------|------------------------|
| Case study | 122 | 26.8 |
| Survey/questionnaire | 77 | 16.9 |
| Literature review | 70 | 15.4 |
| Framework | 66 | 14.5 |
| Interview | 54 | 11.9 |
| Mathematical model | 22 | 4.8 |
| Content analysis | 12 | 2.6 |
| Field study | 8 | 1.8 |
| Nineteen additional methods | 24 | 5.3 |

tions for the overall corpus of references and for the candidate articles. The more pronounced Groos droop observed in the distribution of the third body of articles is suggestive of a maturing, but not yet mature, literature.

8.2. Content analysis

8.2.1. Non-research articles

The most striking result of this study is that more than a quarter of knowledge management-related articles published in refereed journals employed no identifiable research methodology. This echoes the findings of Bjørnson and Singsøyr (2008) and of Guo and Sheffield (2008). The articles for which no research methodology could be identified were primarily expositions of expert opinion, expository literature reviews, and summaries of practice.

8.2.2. Articles employing social science research methods

Two hundred and seventy-three (60 percent) of the articles for which research methodologies were identified were reflective of typical social sciences research. Systematic case study, as distinguished from less formal summaries of practice, accounted for 26.8 percent of research articles; although an explicit count of qualitative vs. quantitative case studies was not conducted, there were clearly more qualitative than quantitative case studies. Survey and questionnaire research was the focus of 16.9 percent of the articles. Surveys tended to be rather informal and most involved very small populations or convenience sampling. Interview research, also generally somewhat informal and based on convenience sampling, accounted for 11.9 percent of the research articles. Content analysis was used in 2.6 percent of the articles, while 1.8 percent were reports of field studies. An additional 5.3 percent of the articles used a total of 19 other social sciences research methods.

8.2.3. Provisional research methods

An additional 182 articles (40 percent) were considered to have “provisional” research methods. It was clear from examination of these articles that the approaches, techniques, and tools employed were intended to serve as research methods, even though they did not meet typical criteria for formal research methods.

The most frequent of these provisional research methods were extensive, analytical literature reviews that served a more-or-less historical or exploratory function. Although these literature reviews did not constitute true historical studies, their intent was clearly to yield understanding of the origins and evolution of ideas, concepts, tools, and institutions central to the development of knowledge management principles and knowledge management practice. Seventy articles (15.4 percent) fell into this category.

The remaining 88 articles used visualization as a substitute for more formal social sciences research methods. Seventy of these were graphic representations of institutions, systems, and processes. In some cases, these took the form of traditional organizational charts, process charts, flow charts, GANTT charts, or other standard graphic depictions. Most, however, were unique visualizations that tended to focus on processes and flows not easily depicted with more standard tools. Among the most frequently used visual tools were knowledge maps, relationship diagrams, and multi-part linear flow diagrams.

Pojasek, Garn, and Papadopoulos (2001) discussed the role of visualization in leveraging knowledge capital in organizations. They identified the core benefit of visualization: “Once a visual context process has been completed, members of the organization can interact together in a commonly defined context with the information that forms our individual perspectives” (p. 85). This is a concise summarization of the apparent motive for the extensive use of visualization as a surrogate for research methods in the knowledge management literature. There appears to be a widespread accep-

tance of the principle that words accompanied by pictures can tell stories more effectively than words alone.

A further 22 articles presented mathematical models as a form of explanatory mechanism. These models tended to be fairly simplistic in comparison to the mathematical models that appear in journals in information science, computer science, engineering, and related areas.

9. Conclusions

This study was designed to explore the bibliometric nature and to provide an initial analysis of the research methodologies employed in the knowledge management literature. Three prominent conclusions can be drawn from this analysis.

First, the scholarly literature of knowledge management appears to be consistent with that of other fields that have been studied using Bradford analysis. The shapes of the curves yielded by the Bradford analyses are well within keeping of other Bradford studies and suggest that the literature of knowledge management is at least superficially within the norms for scholarly literature.

Second, empirical research using established social sciences research methods is clearly not the dominant focus for articles in refereed journals in knowledge management. Of the 630 articles determined to be relevant to knowledge management, only 34.8 percent used typical social sciences research methods. Furthermore, 27.8 percent did not use any identifiable research methodology, implying that the standard for scholarship in refereed knowledge management journals is not directly based on research.

Third, the knowledge management literature appears to employ an alternative to or surrogate for traditional social sciences research methods that emphasizes detailed analyses of prior literature as a substitute for historical methods and visual modeling as a substitute for quantitative and qualitative methods.

10. Implications for future research

These conclusions suggest that not only is the literature of knowledge management relatively immature methodologically but also the literature may be evolving in a direction that distinguishes it from other literatures. Two implications for future research action emerge from this analysis and the conclusions drawn from it:

1. There is a need to revisit the analysis here to determine if the nature of scholarship in knowledge management continues to evolve in a seemingly new direction or moves toward conformity with standard social sciences research methodologies. The dominance of what have been termed here *provisional methodologies* may be a development fluke that will disappear as the literature matures, but may indeed be an indicator of a permanent distinguishing focus for the knowledge management literature. Such a permanent focus might very well lead to a need to reconsider the role of scholarship in professions and the nature of professional disciplines.
2. It would be instructive to compare the pattern of research methods use in the knowledge management literature to that of other professions or professional disciplines such as management, library and information science, and computer science to determine whether there is indeed a unique pattern that characterizes the knowledge management literature. Applying the methodology employed in this study to other professional literatures has substantial potential for furthering understanding of the commonalities and individualities of the roles played by research methods in scholarly literatures.

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