■ **Research Article**

Practical Relevance of Knowledge Management and Intellectual Capital Scholarly Research: Books as Knowledge Translation Agents

Alexander Serenko[1], Nick Bontis[2]* and Emily Hull[1]

[1]Faculty of Business Administration, Lakehead University, Ontario, Canada
[2]DeGroote School of Business, McMaster University, Ontario, Canada

To enhance our understanding of the relevance of knowledge management/intellectual capital (KM/IC) academic research, this study explores the sources authors utilize to develop their book content. Ten prominent KM/IC book authors were interviewed to identify if and how the KM/IC academic literature is being disseminated through books. It was confirmed that the body of knowledge present in peer-reviewed journals is utilized in the development of book/textbook content. Thus, books serve as knowledge translation agents through which academic literature is summarized, aggregated, and transformed into a format that may be easily comprehended by non-academics. In addition to peer-reviewed journals, KM/IC book authors utilize other sources, including personal research, experts' opinions, personal experience, practitioner magazines, conferences, books, and informal discussions with academics. The model, which was developed within this study, demonstrates that the book's target audience and author's motivation serve as a pure moderator of the relationship between the available content sources and actual book content. Books targeted to practitioners and inspired by a desire to bring theory to practice are based on the author's personal experience and contain many non-peer reviewed sources, whereas books written for academic readers have content that is mostly derived from peer-reviewed journals, books, and the author's personal research. Copyright © 2011 John Wiley & Sons, Ltd.

INTRODUCTION

Knowledge management and intellectual capital (KM/IC) is a burgeoning field of research and practice appealing to both academics and professionals (Bontis and Serenko, 2009). Practitioners work in an environment of rapid environmental change and information overload, which increases the need for knowledge in order to make sense of large quantities of disparate information and data (Malafsky, 2003). Consistent with the changes that take place in practice, scholars focus their research attempts toward identifying and improving KM practices and capitalizing on the IC within an organization. Traditionally, management researchers have created knowledge that mostly appears in peer-reviewed publications. Recently, questions have been raised about the practical relevance of research produced by KM/IC business academics

(Andriessen, 2004; Ferguson, 2005)[1]. For example, there are claims that scholarly publications are outdated, narrow in scope, and difficult to read. Some practitioners also state that recommendations presented in scholarly journals are impossible to implement or, at least, impractical. When the first KM/IC journal articles appeared in 1994, non-academics represented 30% of all authors (Serenko et al., 2010). In fact, practitioners rather than academics laid the foundation of the KM/IC scholarly discipline. Even though practitioners are still actively involved in the development of the field (Serenko et al., 2009), their overall contribution to the body of knowledge has been gradually declining. In 2009, they constituted only 10% of all journal article authors (Serenko et al., 2010).

At the same time, Booker et al. (2008) conducted a series of interviews with KM/IC professionals and

---

*Correspondence to: Nick Bontis, Lakehead University, Ontario, Canada. E-mail: nbontis@mcmaster.ca

[1]Similar questions have been raised with respect to virtually all research conducted by academics in the business domain.

concluded that the view that KM/IC academic output does not appeal or is not valuable to practitioners is fully not warranted. Instead, the KM/IC practitioners studied perceived KM/IC academic research output to be of high value. Instead, it was proposed that it is knowledge distribution channels that impede the transformation of scholarly research findings to practical implementations. In other words, academics deliver useful and relevant knowledge on the knowledge market, but it needs to be transferred into knowledge which can be effectively and efficiently applied by practitioners.

There are two ways by which KM/IC research output reaches practitioners (Booker *et al.*, 2008). In the case of the *direct knowledge transfer* method, industry professionals educate themselves by attending academic conferences and reading academic papers. According to the *indirect knowledge transfer* approach, knowledge appearing in peer-reviewed sources is transformed into a format that may be more easily comprehended by busy practitioners. For example, consultants utilize academic knowledge in reports which are delivered to their clients, think tanks and policy research centers make use of academic findings, new knowledge gets incorporated into curricula, workshops, and textbooks, academics directly interact with practitioners during consulting projects, and word-of-mouth discussions take place among industry professionals. Thus, the key question in terms of the relevance of KM/IC academic research is not *whether* academic findings are relevant to the needs of practitioners but *how* the knowledge dissemination process occurs to ensure that knowledge is available to practitioners in an appropriate form.

As part of a multi-phased project which investigates a number of vehicles of KM/IC academic knowledge transformation, this study explores the indirect knowledge distribution channel. In particular, it investigates whether academic knowledge appearing in peer-reviewed publications is utilized in the content of books and textbooks which in turn are delivered to the end knowledge consumers. Book authors typically target one of three primary audiences: (1) other academics (e.g., monographs), (2) students (e.g., textbooks), and (3) practitioners (e.g., how-to books). In this project, 10 prominent authors of KM/IC books were selected and interviewed in order to unravel the issues concerning how KM/IC academic research is translated to practice through the medium of books and textbooks.

LITERATURE REVIEW

Knowledge translation is a dynamic and interactive process that includes the synthesis, dissemination, exchange, and ethically sound application of scholarly output (Strauss *et al.*, 2009). Knowledge may be transferred from person to person (Levin and Cross, 2004), during consultations (Song *et al.*, 2003) or through media such as article databases (Garavelli *et al.*, 2002) and books (Kilgour, 1998). Ideally, these mechanisms would suffice in providing practitioners with adequate information containing the most recent and relevant research findings (Armstrong *et al.*, 2006) such that they could incorporate the knowledge and act accordingly. In reality, this is not the case and practitioners are rarely exposed to or make use of up-to-date academic material (Pearson *et al.*, 2005).

The issue of the relevance of academic research to practice has a long-standing history in scientific circles (Park, 1993; Ruback and Innes, 1988), including management. The idea to apply scientific evidence in practice may be traced to the ancient medicine in the 11th century when a medical encyclopedia ''The Canon of Medicine'' was compiled. This book contained the most up-to-date evidence-based summary of knowledge which medical professionals were supposed to apply in their practice (Daly and Brater, 2000; Smith, 1980). It was also used as a textbook at several universities and set the foundation for the future development of medical science (Huff, 2003). In the 20th century, a term evidence-based medicine was coined. It refers to the conscientious, explicit, and judicious application of best available evidence to make decisions on the care of individual patients. Proponents of evidence-based medicine integrate their individual clinical expertise with the best external clinical evidence obtained from systematic scholarly research (Sackett and Haynes, 2000; Sackett *et al.*, 1996). Evidence-based clinical practices were developed to respond to unexplained differences in clinical practice patterns, slow acceptance of methods of known effectiveness, and continued use of approaches that were already known to be ineffective (Walshe and Rundall, 2001). An illustrative example of under-utilized medical findings is the fact that it took nearly 200 years from the time a clear and convincing cure for scurvy was found to the time it was widely adopted by the British navy (Mosteller, 1981).

However, practicing evidence-based medicine is difficult for many reasons. Perhaps the most salient challenge is the lack of personal time to locate, review, and understand current research output (McColl *et al.*, 1998). In earlier eras when fewer journals existed, graduate student training tended to be less rigorous. Research was insufficiently funded, research methods were less powerful, and major scientific breakthroughs took place rarely. Currently, researchers, who have a variety of funding sources and rigorous research methods, generate scholarly findings at an accelerating pace. As a result, medical scholarly journals publish thousands of

papers per year that are relevant to clinical practice. Keeping up with this rapidly growing body of literature is a virtually impossible task for a practicing medical doctor who cannot possibly read tens of papers every day (Davidoff *et al.*, 1995).

In addition to time constraints, other factors that impede the ''absorption'' of scholarly medical knowledge by practitioners have been suggested. For example, medical practitioners have little or no training which is relevant to being able to understand peer-reviewed articles (Pravikoff *et al.*, 2005), they demonstrate a low awareness of journals, and they use published materials on a limited basis (McColl *et al.*, 1998).

In an extension of evidence-based medicine, Pfeffer and Sutton (2006) at Stanford University introduced the term *evidence-based management*, which refers to the translation of principles based on best evidence into organizational practices (Rousseau, 2006). Evidence-based management proposes that if managers make decisions based on valid evidence, the quality of their decisions should be improved and hence, by extension, they should be able to be more successful than their competition (assuming that their competition is not as good at applying evidence-based management principles as they are). Managers, however, often rely on intuition, past practices, or unreliable information sources despite novel and contradictory findings that are often discovered by academics. Experienced practitioners rarely seek out new evidence because they trust their own prior experience more than they trust research findings provided by others. Even though managers are aware of the problems associated with their limited expertise, they believe that their first-hand knowledge is richer and closer to issues that currently face them than information/knowledge which is available in journal articles (Pfeffer and Sutton, 2006). Indeed, less than 1% of human resources managers read the relevant academic literature on a regular basis (Rynes *et al.*, 2002). Business consultants and practicing managers are likely to ignore academic articles as well (Rousseau, 2006).

In this paper, we argue that in order for research to be truly relevant, three factors must be taken into account. First, the evidence created in academia must be applicable in practice. Second, the research findings must be transformed into a form which is understandable to practitioners. Third, the transformed knowledge should be disseminated, through the appropriate channels, to those who may put it into practice. The second and third factors are the focus of this paper. A better understanding of the means by which academic research is transformed into a form which is understandable to its intended users will allow us to bridge the gap between academia and practice.

In the field of organization science, the failure of academic research to meet the practitioners' needs occurs because of the use of increasingly sophisticated inquiry methods which have scientific rigor but are hardly applicable for solving practical organizational problems (Susman and Evered, 1978). As a result, executives typically do not consult academics or seek out scholarly findings when they are required to develop management strategies and practices (Mowday, 1996). Exacerbating the problem, researchers rarely turn to practitioners to identify current problems and important research questions (Rynes *et al.*, 2001). Although the research topics and findings may be of interest to both researchers and practitioners, the way in which research is conducted, written about, and presented in academic journals has little appeal or comprehensibility to practitioners.

Even though over one hundred scholarly papers have been devoted to the problem of the relevance of academic research in management, only a handful of researchers have studied the problem of relevance empirically. Overall, those who investigated the issue found a large discrepancy between academic findings and related practices (Duncan, 1974; Ankers and Brennan, 2002). However, Baldridge *et al.* (2005) demonstrated that high-quality academic publications also have great practical value. On the one hand, practitioners may dramatically benefit from using the scholarly body of knowledge. On the other hand, they use it very rarely. This observation applies to all business disciplines, including KM/IC (Booker *et al.*, 2008).

In order to bridge the gap between academic research and practice, it is critical to explore the indirect scholarly knowledge distribution channels to identify the mechanisms through which research can be translated and transmitted to practice. Academic institutions rarely reward their faculty for publishing in professional journals or trade magazines; as a result, few academics write for the professional audience (Kelemen and Bansal, 2002).

We would propose that there needs to be an effective knowledge translation mechanism, bringing academic KM/IC research to practice. Most previous attempts to investigate the translation of scholarly knowledge have mostly focused on conventional research processes by directly analyzing publications in academic journals (i.e., the direct knowledge dissemination approach). However, while knowledge may be disseminated via these methods, they have little impact on practice or policy (Grunfeld *et al.*, 2004). For this reason, it is important to investigate other means through which knowledge can be translated for and transmitted to practitioners so that it can be quickly and effectively utilized in decision-making.

Among the main mechanisms with the potential to disseminate research findings, books and textbooks play an important role. They are read by industry professionals and used as a learning tool in business schools; therefore, books have the potential

to showcase current research findings and educate future managers about the contemporary academic literature. In this study, it is suggested that books used in classrooms to teach future managers and those read by practitioners are a mechanism equipped with the potential to translate and transmit knowledge from academia to practice.

Books are an important mechanism for intercultural and intracultural communication (Davidson, 1988). The invention of writing and printing allowed people to keep records, exchange ideas across time and space, transform information, and access knowledge created by previous generations (Bruns, 1980). Founded in 427 AD in North East India, and continuing to be active until 1197 AD, Nalanda was one of the first universities in recorded history.[2] It had a nine-story library where monks continuously copied books to allow individual scholars to have their own collections (Garten, 2006). Initially, books were written by hand, one at a time. With the rise of universities in the 13th century, the Manuscript Culture facilitated an increased demand on books; as a result, a new system for copying books, referred to as the pecia system, appeared (Kilgour, 1998). Under the pecia system, the original manuscript was divided into several parts which individual students, scholars, and other readers were able to borrow one by one to read or copy. Therefore, multiple people were able to work on the same book simultaneously which in turn dramatically expedited the distribution of books in the society (Saenger, 1975).

Since the availability of books increased, books became a common medium through which knowledge was disseminated. Books have generated the transfer of knowledge and provided people with a greater access to knowledge; this process has been accelerating in the current electronic era (Snyder, 1998). Scholarly books dramatically differ from peer-reviewed journal articles which are mostly written by faculty members and doctoral students who wish to contribute to theory and achieve recognition within their own research community. They are rarely motivated by the needs of practice, and industry professionals rarely join academics in their research endeavors (Serenko et al., 2008; Serenko et al., 2010). Journal reviewers favor scientific rigor and theoretical insights rather than practical recommendations based on someone's work experience. At the same time, book authors have a unique opportunity to combine their industry expertise with the body of knowledge in peer-reviewed journals and present it to the reader in the most efficient form.

As such, books and textbooks have become a critical mechanism in preserving and disseminating knowledge. However, it is not known what role they currently play in translating pure academic knowledge existing in peer-reviewed journals into a format targeted to non-academic, practice-oriented audiences. The present project attempts to explore this issue.

METHODOLOGY

In order to investigate the use of academic research in KM/IC books, 10 prominent authors in the field of KM/IC were interviewed. These authors are highly involved in KM/IC research and practice. They maintain roles as professors, consultants, directors, and CEOs of organizations of varying sizes directly dealing with KM/IC issues. Some of them are often referred to as the founders of the entire KM/IC field. Nine semi-structured telephone interviews were conducted over a period of 2 months, all of which were tape-recorded and subsequently transcribed. Each interview lasted approximately 1 hour. One interview was conducted over email. The interview questions were designed to investigate three relevant issues: the motivation of authors, the sources used in the content of their books (e.g., types of references), and the intended target audience for their respective publications. We consider each of these issues in more detail below.

The term motivation is often used to analyze aspects of decisions and behaviors that cannot be explained by ability alone. Motivation research studies the direction, arousal, amplitude, and persistence of people's behaviors (Campbell and Pritchard, 1976). Motivation is considered to be a multidimensional construct. For example, in the case of Career Motivation its components are considered to reflect individual characteristics (career identity, career insight, and career resilience domains), which relate to career decisions and actual behaviors (London, 1983). An author's decision to write a book may be influenced by a variety of factors of personal, professional, or financial nature. Whereas some people may want to extend theory, others may wish to contribute to practice. Therefore, the author's motivation may influence his or her decision to write the book and what topics to cover. Most importantly, it may also affect what type of material the author selects as a source of book references. Therefore, a number of interview questions were constructed to identify a potential link between an author's motivation to write the book and the use of content sources, including academic literature.

The content selected by authors determines the material presented to readers. The content selected, in turn, depends on the types of information sources (e.g., types of references) that were used. Particularly, it is assumed that book authors summarize,

---

[2]In 2010, it was re-founded under the name of Nalanda International University in Bihar, India near the ancient university site.

aggregate, and transform knowledge from a variety of sources and deliver it to the reader in an effective and efficient way. At the same time, it is unknown to what extent authors rely on the body of knowledge existing in peer-reviewed journals. It is, therefore, worthwhile to investigate how authors selected the content for their books. Accordingly, we asked the respondents to list the sources of information they used, and to comment on the degree to which each of them was employed.

When writing a book, authors usually envision a category of potential readers who would hopefully benefit from the ideas presented in the book. It is possible that book authors select different types of information sources depending on the category of readers. Therefore, we asked the authors what target audience they had in mind when they wrote their book in order to analyze the link between the types of information sources and the book's target audience.

All questions pertained to only one, either the latest or most influential book (from the author's perspective). All interviews were subjected to qualitative data analysis techniques (Miles and Huberman, 1994) by two coders who had expertise in the areas of KM/IC and academic research relevance.

FINDINGS

Framework

The subjects represented a sample of respected KM/IC academics and professionals encompassing a wide demographic. They held (hold) a range of positions in academia, industry, and the public sector. Some of them have published up to seven books on KM/IC and related topics. On average, they read 178 peer-reviewed and professional articles per year, and publish five articles in academic and professional journals per year. Most attend various conferences, serve on editorial boards, and perform reviews for scholarly journals.

It was found that the authors utilized various sources to develop book content, such as peer-reviewed journals, personal research, field experts' opinions, personal experience, practitioner and trade magazines, ideas from conference proceedings and presentations, other books, and informal discussions with academics. The process of content source selection was affected by two major factors: book's target audience and author's motivation. It was observed that target audience and motivation influence the extent to which the authors utilize these content sources. Based on the findings, a framework representing these relationships emerged. This framework potentially represents how target audience and author motivation function as a moderating variable which changes the

strength of the link between academic sources and their use in book content (see Figure 1). This variable is a pure moderator, consistent with the framework proposed by Sharma *et al*. (1981).

Content sources

It was found that academic journals were the most frequently utilized source for ideas, evidence, and examples presented in books:

> I'm looking at the reference list here, I would say that half of them are [academic] journal articles, if not more.

Academic journals were followed by personal research, formal and informal discussions with practitioners, personal industry experience, and professional publications:

> We drew on a lot of material to help found the book, the [academic] references served as a departure point, and then we drew upon our own experiences.

In some cases, content was obtained during academic and practitioner conferences, found in other books, or emerged during discussions with KM/IC academics.

Influencing factors

There are two major factors that affect the authors' content selection decisions, namely the book's target audience and the author's motivation to write the book. Two distinct target audiences were identified: 1) professionals, for example, industry experts, and 2) academics, including researchers, instructors, and students:

> I write to help other practitioners.

> [I write for] the people that are thinking about carrying out acquisitions, people that are concerned with growth of the organization. They can be the strategists, they can be the people who then carry it out...

> I was writing for students and academics.

> I wrote the book to be used in my own courses.

Whereas some authors wrote for a specific target audience (i.e., either for practitioners or academics), others targeted both groups:

> The target audience, for me, was all knowledge management practitioners... as well as academics.

The target audience had a moderating effect on the relationship between content sources and actual book content. Academic journals were utilized to a lesser extent in books targeted toward industry professionals, whereas they were a predominant
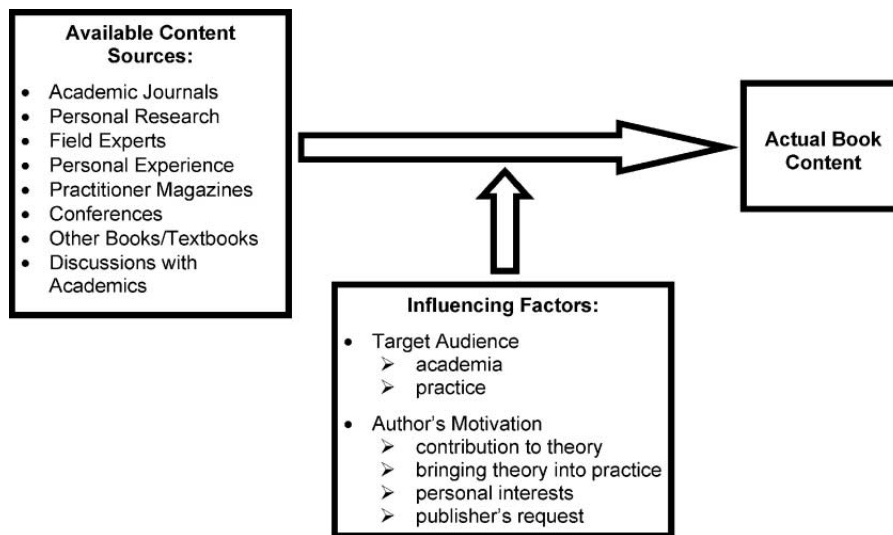
Figure 1   The suggested framework

content source in books aimed at academia. For example, if the authors were writing a book for use in academic settings, they reported having used academic journals and other books more often than those writing for practitioners, who relied on trade magazines and personal industry experience to a larger extent.

The authors were motivated by several factors. The most common was to fill the gap in existing literature or to correct commonly held misunderstandings in an effort to create a comprehensive understanding of the field. Perhaps, due to the immaturity of the field, this should be expected:

> My intention is to fill a gap in literature and in the practice about how to manage the dynamics of knowledge assets and intellectual capital. Most of the attention, when looking at the literature, has been focused on the assessment of IC and KM. I believe there is now a need to bridge a gap between the knowledge management and the assessment of intellectual capital looking at the dynamics of intellectual capital.

> There was, at the time, so much confusion about what is intellectual capital and knowledge management... I wanted to bring together all the different perspectives because I got hugely frustrated going to conferences and hearing people [using] different terminology... I tried to bring it all together, and say 'how has the whole field evolved, and how can we convert this into one integrated theme basically'?

The second most commonly stated reason for writing a book was to teach others and bring theory into practice. These authors felt it was important to pass onto others what they know and to bridge the gap between findings made by academics and practices being carried out by practitioners:

> I wanted to identify and inform others about what we have to understand and know to be good KM professionals.

> [I] love to learn and help others grow in life – life is too short, and I desire to leave a legacy. Words live on, people don't.

Some books were written because of personal interests. The authors believed that if they are interested in some topics, so might be the reader. The books were also written upon the request from the publisher:

> I got this book contract because this book series had been established and the book then kind of acquired its own sort of life that in a way moved away from the traditional knowledge management base.

Motivational factors also moderated the link between content sources and actual book content. The authors who were motivated to contribute to theory development tended to rely on academic information sources (e.g., peer-reviewed journals) to a large extent. In contrast, those who wished to contribute to practice used more non-peer reviewed content, including practitioner magazines, personal experience, and discussions with other academics or industry experts. A positive correlation between motivation and target audience was observed; those who were motivated by purely academic issues were more likely to target an academic audience. For instance, the author who wanted to contribute to theory with academic readers in mind stated:

> [I use] mostly academic stuff...it would be primarily academic and my own approach to kind of integrate sources.

In contrast, those who tried to bring theory to practice in order to teach industry professionals,

developed content based on their personal experience and non-academic publications. For example:

> Forty percent of the material in the book came from reports of my own personal practical experience.

Those, who were motivated by several factors and appealed to both audiences, utilized all available resources.

The influencing factors are considered a pure moderator of the relationship between the content available at each author's disposal and the content utilized in the book. A pure moderator is a variable that affects the strength and/or direction of the causal link between two factors, but it is totally independent of them (Bontis and Serenko, 2007; Sharma *et al.*, 1981). In the present case, target audience and motivational factors were not related to the sources used or the book content, but they dramatically influenced the author's selection decisions.

IMPLICATIONS

The purpose of this study was to investigate whether KM/IC books serve as a medium of knowledge transfer from academic journals to knowledge consumers such as scholars, students, and industry experts. For this, 10 interviews with respected KM/IC book authors were conducted, and the data were subjected to qualitative data analysis techniques. Based on the findings, several important implications emerged.

Implication no. 1: The body of knowledge existing in peer-reviewed journals is utilized in the development of book/textbook content

Throughout the past decade, many academics and practitioners have claimed that academic research appearing in peer-reviewed journals rarely reaches the final knowledge consumers, especially, practitioners. In contrast, it was observed that knowledge from peer-reviewed articles may indirectly reach its destination by means of books that are used by not only scholars, but also practitioners and students, most of whom will eventually join the non-academic sector.

This indirect route from academic research to practitioner consumption is understandable given that the initial genesis of the KM/IC field was precipitated by senior executives at banks and insurance companies. In fact, there was a delay of about 5–10 years from the first reported evidence of KM/IC initiatives taking place to the publication of the first peer-reviewed journals in the field. Evidently, this delay still persists as the delayed cycle now continues from academic research to book/textbook content.

Implication no. 2: Books serve as knowledge translation agents

Consistent with the findings by Booker *et al.* (2008), it was concluded that books serve as a knowledge conversion mechanism. Books aggregate, summarize, contextualize, and convert academic knowledge into a format that may be easily comprehended by practitioners and students, most of whom will eventually join the non-academic world. All authors reported that they used peer-reviewed journals to design book content to some extent. This means that books are equipped with the potential to disseminate academic knowledge.

One main benefit that books bring to the knowledge translation process is their relative increased emphasis on application compared to academic journal articles. The typical final section of virtually all academic research papers is a small paragraph or two on application and practitioner implications. This of course is an after-thought and not the main purpose of journal articles. Conversely, books have the opportunity to dive deeper into the knowledge translation process by providing more insight into how the theoretical and conceptual contribution of a research study can be transformed into actual practical advice. At the same time, even though books serve as knowledge translation agents, their actual impact depends on whether these books are read by their target audience.

Implication no. 3: The book's target audience and the author's motivation serve as a pure moderator of the relationship between the available content sources and actual book content

Books targeted to practitioners and inspired by a desire to bring theory into practice are based on the author's personal experience and contain many non-peer reviewed sources, for example, trade magazines or work experience. In contrast, books targeted to the academic readership have content that is mostly derived from peer-reviewed journals, books, and the author's personal research.

Ultimately, it is the target audience and author's motivation that play a significant role in the nature of a book's content. Furthermore, it is important to reiterate that whereas a journal article's publication is often considered a measure for academic performance (i.e., toward tenure and promotion), a book's publication also has a revenue generation parameter that alters the author's motivation and size of target audience.

CONCLUSION

Authors are not generally motivated to write books for the purpose of reporting and interpreting academic literature. In fact, they often write books

because there is a paucity of books on a specific topic. Authors usually select their book's content based on the topics with which they are very familiar. Accordingly, content is selected in an effort to create a comprehensive discussion of the issue. While this research presents an optimistic understanding of books' potential to disseminate academic knowledge to those who may put it into practical use, there is an assumption that business students and practitioners actually read the book, understand the material, and will eventually implement the practices which reflect the message in the book. For this reason, it is imperative to continue investigating the relevance of KM/IC academia in practice.

This study had several limitations. First, the sample size was relatively small. This, however, was addressed by interviewing the most prominent authors in the field. Second, the research relied on self-reported data. The findings, therefore, might be distorted by the presence of the social desirability bias. These limitations can be addressed in future research by increasing the sample size, and quantitatively verifying the extent to which authors use academic references, for example, by counting the types of references in their books. Future research should also measure the extent to which other potential knowledge translation agents, such as consultants or doctoral program graduates who went to industry upon graduation, disseminate knowledge to those who may benefit from its use.

ACKNOWLEDGEMENTS

REFERENCES

Andriessen D. 2004. Reconciling the rigor-relevance dilemma in intellectual capital research. *The Learning Organization* 11: 393–401.

Ankers P, Brennan R. 2002. Managerial relevance in academic research: An exploratory study. *Marketing Intelligence and Planning* 20: 15–21.

Armstrong R, Waters E, Roberts H, Oliver S. 2006. The role and theoretical evolution of knowledge translation and exchange in public health. *Journal of Public Health* 24: 384–389.

Baldridge D, Floyd S, Markoczy L. 2005. Are managers from mars and academicians from venus? Toward an understanding of the relationship between academic quality and practical relevance. *Strategic Management Journal* 25: 1063–1074.

Bontis N, Serenko A. 2007. The moderating role of human capital management practices on employee capabilities. *Journal of Knowledge Management* 11: 31–51.

Bontis N, Serenko A. 2009. A follow-up ranking of academic journals. *Journal of Knowledge Management* 13: 16–26.

Booker L, Bontis N, Serenko A. 2008. The relevance of knowledge management and intellectual capital research. *Knowledge and Process Management* 15: 235–246.

Bruns G. 1980. The originality of texts in a manuscript culture. *Comparative Literature* 32: 113–129.

Campbell JP, Pritchard RD. 1976. Motivation theory in industrial and organizational psychology. In *Handbook of industrial and organizational psychology*, Dunnette MD (ed.). Rand McNally: Chicago; 63–130.

Daly WJ, Brater DC. 2000. Medieval contributions to the search for truth in clinical medicine. *Perspectives in Biology and Medicine* 43: 530–540.

Davidoff F, Haynes B, Sackett D, Smith R. 1995. Evidence based medicine. *BMJ* 310: 1085–1086.

Davidson C. 1988. Towards a history of books and readers. *American Quarterly* 40: 7–17.

Duncan W. 1974. Transferring management theory to practice. *The Academy of Management Journal* 44: 628–639.

Ferguson JD. 2005. Bridging the gap between research and practice. *Knowledge Management for Development Journal* 1: 46–54.

Garavelli C, Gorgoglione M, Scozzi B. 2002. Managing knowledge transfer by knowledge technologies. *Technovation* 22: 269–279.

Garten J. *Really old school*, The New York Times. 2006. Available at: http://www.nytimes.com/2006/12/09/opinion/09garten.html?_r=1

Grunfeld E, Zitzelsberger L, Evans WK, Cameron R, Hayter C, Berman N, Stern H. 2004. Better knowledge translation for effective cancer control: A priority for action. *Cancer Causes and Control* 15: 503–510.

Huff TE. 2003. *The Rise of Early Modern Science: Islam, China and the West*. Cambridge University Press: NY.

Kelemen M, Bansal P. 2002. The conventions of management research and their relevance to management practice. *British Journal of Management* 13: 97–108.

Kilgour F. 1998. *The Evolution of the Book*. Oxford University Press: New York.

Levin D, Cross R. 2004. The strength of weak ties you can trust: The mediating role of trust in effective knowledge transfer. *Management Science* 50: 1477–1490.

London M. 1983. Toward a theory of career motivation. *Academy of Management Review* 8: 620–630.

Malafsky G (ed.). 2003. *Handbook on Knowledge Management 2: Knowledge Directions*. Springer: New York.

McColl A, Smith H, White P, Field J. 1998. General practitioners' perceptions of the route to evidence-based medicine: A questionnaire survey. *British Medical Journal* 316: 361–365.

Miles MB, Huberman AM. 1994. *Qualitative Data Analysis: An Expanded Sourcebook*. Sage Publications: Thousand Oaks.

Mosteller F. 1981. Innovation and evaluation. *Science* 211: 881–886.

Mowday R. 1996. Presidential address: Reaffirming our scholarly values. *The Academy of Management Review* 22: 335–345.

Park T. 1993. The nature of relevance in information retrieval: An empirical study. *The LIbrary Quarterly* 63: 318–351.

Pearson JM, Pearson A, Shim JP. 2005. The relevancy of information systems research: The practitioner's view. *Information Resources Management Journal* 18: 50–67.

Pfeffer J, Sutton R. 2006. Evidence-based management. *Harvard Business Review* 84: 62–74.

Pravikoff D, Tanner A, Pierce S. 2005. Readiness of U.S. nurses for evidence-based practice. *American Journal of Nursing* 105: 40–50.

Rousseau D. 2006. Is there such a thing as ''evidence-based management?'' *Academy of Management Review* **31**: 256–269.

Ruback RB, Innes CA. 1988. The relevance of psychological research: The example of prison crowding. *American Psychologist* **43**: 683–693.

Rynes S, Bartunek J, Daft R. 2001. Across the great divide: Knowledge creation and translation between practitioners and academics. *Academy of Management Journal* **44**: 340–355.

Rynes S, Colbert A, Brown K. 2002. HR professionals' beliefs about effective human resource practices: Correspondence between research and practice. *Human Resource Management* **41**: 149–174.

Sackett DL, Haynes RB. 2000. *Evidence-based medicine: How to practice and teach EBM*. Churchill Livingstone: Edinburgh, New York.

Sackett DL, Rosenberg WM, Gray JA, Haynes RB, Richardson WS. 1996. Evidence based medicine: What it is and what it isn't. *British Medical Journal* **312**: 71–72.

Saenger P. 1975. Colard mansion and the evolution of the printed book. *The Library Quarterly* **45**: 405–418.

Serenko A, Bontis N, Booker L, Sadeddin K, Hardie T. 2010. A scientometric analysis of knowledge management and intellectual capital academic literature (1994–2008). *Journal of Knowledge Management* **14**: 3–23.

Serenko A, Bontis N, Grant J. 2009. A scientometric analysis of the proceedings of the McMaster World Congress on the Management of Intellectual Capital and Innovation for the 1996–2008 period. *Journal of Intellectual Capital* **10**: 8–21.

Serenko A, Cocosila M, Turel O. 2008. The state and evolution of information systems research in Canada: A scientometric analysis. *Canadian Journal of Administrative Sciences* **25**: 279–294.

Sharma S, Durand RM, Gur-Arie O. 1981. Identification and analysis of moderator variables. *Journal of Marketing Research* **18**: 291–300.

Smith RD. 1980. Avicenna and the canon of medicine: A millennial tribute. *Western Journal of Medicine* **133**: 367–370.

Snyder I (ed.). 1998. *Taking Literacy into the Electronic Era*. Routledge: London.

Song J, Almeida P, Wu G. 2003. Learning-by-hiring: When is mobility more likely to facilitate interfirm knowledge transfer? *Management Science* **49**: 351–365.

Strauss S, Tetroe J, Graham I. 2009. Defining knowledge translation. *Canadian Medical Association Journal* **181**: 165–168.

Susman G, Evered R. 1978. An assessment of the scientific merits of action research. *Administrative Science Quarterly* **23**: 582–603.

Walshe K, Rundall T. 2001. Evidence-based management: From theory to practice in health care. *The Milbank Quarterly* **79**: 429–457.