

Series on Innovation and Knowledge Management – Vol. 11

Knowledge Management

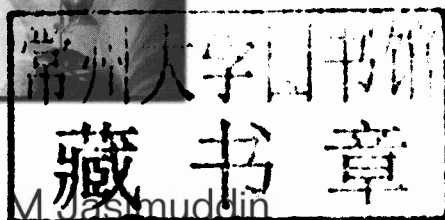
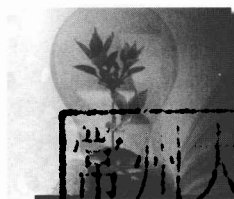
An Interdisciplinary Perspective

Sajjad M Jasimuddin

Series on Innovation and Knowledge Management - Vol. 11

Knowledge Management

An Interdisciplinary Perspective



Sajjad M. Jassmuddin

Aberystwyth University, UK

 **World Scientific**

NEW JERSEY • LONDON • SINGAPORE • BEIJING • SHANGHAI • HONG KONG • TAIPEI • CHENNAI

Published by

World Scientific Publishing Co. Pte. Ltd.

5 Toh Tuck Link, Singapore 596224

USA office: 27 Warren Street, Suite 401-402, Hackensack, NJ 07601

UK office: 57 Shelton Street, Covent Garden, London WC2H 9HE

British Library Cataloguing-in-Publication Data

A catalogue record for this book is available from the British Library.

Series on Innovation and Knowledge Management — Vol. 11

KNOWLEDGE MANAGEMENT

An Interdisciplinary Perspective

Copyright © 2012 by World Scientific Publishing Co. Pte. Ltd.

All rights reserved. This book, or parts thereof, may not be reproduced in any form or by any means, electronic or mechanical, including photocopying, recording or any information storage and retrieval system now known or to be invented, without written permission from the Publisher.

For photocopying of material in this volume, please pay a copying fee through the Copyright Clearance Center, Inc., 222 Rosewood Drive, Danvers, MA 01923, USA. In this case permission to photocopy is not required from the publisher.

ISBN-13 978-981-4271-22-6

ISBN-10 981-4271-22-5

In-house Editor: Wanda Tan

Typeset by Stallion Press

Email: enquiries@stallionpress.com

Printed in Singapore by World Scientific Printers.

Knowledge Management

An Interdisciplinary Perspective

Series on Innovation and Knowledge Management

Series Editor: Suliman Hawamdeh
(University of North Texas)

ISSN: 1793-1533

*Published**

- Vol. 5 Creating Collaborative Advantage Through Knowledge and Innovation
edited by Suliman Hawamdeh (*University of Oklahoma*)
- Vol. 6 Knowledge Management: Innovation, Technology and Cultures
edited by Christian Stary (*Johannes Kepler University, Austria*),
Franz Barachini (*Vienna University of Technology, Austria*) and
Suliman Hawamdeh (*University of Oklahoma, USA*)
- Vol. 7 Knowledge Management: Competencies and Professionalism
edited by Suliman Hawamdeh (*University of Oklahoma, USA*),
Kimberly Stauss (*University of Arkansas, USA*) and
Franz Barachini (*Vienna University of Technology, Austria*)
- Vol. 8 Managing Knowledge for Global and Collaborative Innovations
edited by Samuel Chu (*The University of Hong Kong*),
Waltraut Ritter (*Knowledge Dialogues, Hong Kong*) and
Suliman Hawamdeh (*University of Oklahoma, USA*)
- Vol. 9 Governing and Managing Knowledge in Asia (2nd Edition)
edited by Thomas Menkhoff (*Singapore Management University, Singapore*),
Hans-Dieter Evers (*University of Bonn, Germany*) and
Chay Yue Wah (*SIM University, Singapore*)
- Vol. 10 The Dynamics of Regional Innovation: Policy Challenges in
Europe and Japan
edited by Yveline Lecler (*University of Lyon, France*),
Tetsuo Yoshimoto (*Ritsumeikan University, Japan*) and
Takahiro Fujimoto (*University of Tokyo, Japan*)
- Vol. 11 Knowledge Management: An Interdisciplinary Perspective
by Sajjad M. Jasimuddin (*Aberystwyth University, UK*)

*The complete list of the published volumes in the series can be found at
http://www.worldscibooks.com/series/sikm_series.shtml.

*To my beloved parents, A. K. M. Aftabuddin and
Kohinoor Dilara Aftab. You have been such a strong beacon
of guiding light for me for so long. You are treasured blessings.
Rest in peace.*

Preface

Despite being a relatively young discipline, knowledge management has grown dramatically in size and influence over the past two decades. Its widespread usage as a task of major consulting firms is phenomenal. The notion of knowledge management has become increasingly important in our ever-changing global environment due to an increased awareness of the significance of knowledge in an organization's success. The main focus of knowledge management practice has been on why and how an organization discovers and deploys its knowledge. In the 21st century, an organization's ability to discover and deploy actionable knowledge faster than its competitors is regarded as a powerful source of competitive advantage. The footprints of knowledge management can now be found as a top business agenda.

The motivation for this book comes from the recognition that too many scholars from many different disciplines have discussed and used knowledge management. Throughout this book, the notion of knowledge management and its relationship with other related disciplines is explored.

Early academic discussions about the concept of knowledge management date back to the 1980s. In line with this, research done by Beckman (1999)¹ suggests that Karl Wiig was the first scholar to coin the term "knowledge management" in 1986 at an International Labour

¹ The details for this and other references cited in the Preface can be found in the Bibliography.

Organization (ILO) conference in Switzerland. However, an issue of the journal *Public Administration Review* (Vol. 35, Iss. 6, 1975) could be thought to be one of the earliest contributions to the knowledge management field (Gu, 2004).

From its beginnings as a fad in the information management discipline, the knowledge management field has progressed significantly. There has been a tremendous surge of research and practice over the last 10 years in this area. Substantial academic output is evidenced by the rapid growth of both the knowledge management communities (e.g., Information and Knowledge Management Society) and the journals associated with knowledge management (e.g., *Journal of Knowledge Management*, *Journal of Information & Knowledge Management*, *Knowledge Management Research & Practice*, *Knowledge and Process Management*).

There are a number of reasons that prompt me to write a book on knowledge management. Interest in knowledge management education has never been greater. Evidence now shows that many students are pursuing their doctoral research in various issues of knowledge management. Similarly, knowledge management is being more frequently added as a course in the business curriculum. It is also observed that a rapidly increasing number of modules on knowledge management at graduate and postgraduate levels have been offered by the higher education institutions (e.g., Aberystwyth University, Aston University, Cranfield University, University of East Anglia, University of Leeds, Lancaster University, University of Manchester, University of Warwick) over the past five years.

Accompanying the growth in institutional provision has been an equally impressive growth in the number of books devoted to the various aspects of knowledge management (e.g., Al-Hawamdeh, 2003; Dierkes *et al.*, 2001; Awad and Ghaziri, 2004; Becerra-Fernandez *et al.*, 2004; Choo, 1998; Davenport and Prusak, 1998; Despres and Chauvel, 2000; Desouza, 2005; Easterby-Smith and Lyles, 2003; Gamble and Blackwell, 2001; Hawryszkiewicz, 2009; Hislop, 2005; Holsapple, 2003; Jashapara, 2004; Lehane *et al.*, 2004; Leonard-Barton, 1995; Liebowitz, 1999b; Malhotra, 2000b; Morey *et al.*, 2002; Mertins *et al.*, 2003; McNabb, 2007; Newell *et al.*, 2002a;

Schwartz, 2006b; Tiwana, 2002; Wiig, 1993). While such contributions are invariably welcomed, most writers are preoccupied with discussing the basics of knowledge management and how it can be operationalized.

It is noted that scholars from various disciplines have attempted to explore the unexplored areas within knowledge management and exploit them to fit into their own areas of study. So far, we have not discovered the linkage between knowledge management and disciplines such as information management, strategic management, organizational learning, human resource management and innovation management. There is a tendency among scholars from these disciplines to claim ownership. This book aims to identify the issues that seem to clarify the notion of a discipline — for example, “information management” with respect to “knowledge management” — in order to provide fresh insights into the interdisciplinary field of knowledge management.

This book attempts to provide some insights on knowledge management, explaining it as an interdisciplinary field so as to establish the argument that this field is not grounded in a specific discipline. In particular, this book will look at a number of issues that successfully bridge the linkage of knowledge management with information management, strategic management, organizational learning and innovation management. It can be argued that high potential for synergies between knowledge management and other disciplines seems obvious, given the many interrelations and dependencies between these fields. The book intends to help readers understand how knowledge management and the other related disciplines can fit together on the apparent synergies between them.

This book is considered to be a stand-alone volume. Specifically, the text is intended to explain the role of knowledge management and present a thorough review of the relevant literature from an interdisciplinary perspective. The book follows a traditional sequencing of topics, and contains 11 chapters in total. An overview of the key issues to be addressed along with an outline of the book are given below.

Chapter 1 sets the scene for knowledge in an organizational context, which is at the center of the knowledge management discipline. A discussion about what knowledge is from a philosophical point of

view and alternative perspectives on organizational knowledge will be furnished. Knowledge, information and data are sometimes used interchangeably in the management and information systems literature; an attempt will be made to reduce the confusion between these constructs using a knowledge hierarchy. Since knowledge is regarded as the key resource of sustainable competitive advantage for an organization, the increasingly significant role of organizational knowledge will be elaborated.

Chapter 2 reviews the key issues that constitute the notion of knowledge management and discusses various facets of the knowledge management process. The importance, for a firm, of managing organizational knowledge to gain a competitive advantage will be explained.

Chapter 3 takes the opportunity to address some of the unresolved operational issues regarding knowledge management. The diverse opinions on the definition of knowledge management will be identified, and then the various debates and perspectives on knowledge management and its related activities will be discussed. Questions such as whether knowledge management is grounded in a specific discipline or a multidisciplinary field, who owns the field, whether it is a universal paradigm or a management fad, and whether it has a technical-centric or social-centric view, will be addressed.

Chapter 4 focuses on various theories surrounding organizational knowledge that are widely cited in the relevant literature. However, the existing theories have overlooked the role of knowledge extracted from external sources. An attempt is thus made to identify gaps in the theories of organizational knowledge and then propose an alternative view of knowledge typology based on its sources.

Chapter 5 presents an overview of the features of the knowledge economy, along with those of agrarian and industrial economies. Moreover, various categories of organizations based on knowledge intensity will be expanded so as to clarify the terms “knowledge-based organization”, “knowledge-intensive firm”, “professional service firm” and “knowledge-creating company”.

Chapter 6 attempts to outline the origin of knowledge management in order to establish the argument that the knowledge

management field is not derived from a single discipline. Rather, it is grounded in several established disciplines.

Chapter 7 concentrates on the themes and concepts associated with information management, including its origin and strategic role in an organization, so as to understand its connection with knowledge management. The chapter then reviews scholars' views on the relationship between knowledge management and information management. An attempt is made to identify the relevant factors in order to shed some light on the nature of their association.

Chapter 8 pays attention to the notion of organizational learning, and clarifies the current status of organizational learning concepts through a discussion on its origin, properties and role to enhance and sustain an organization's competitive advantage. The chapter then describes the contradictory views of scholars to address whether knowledge management is a forerunner of organizational learning or vice versa. Accordingly, the similarities and differences between the two subjects are discovered by highlighting the key factors that help to establish a positive link between them.

Chapter 9 focuses on the concept of strategic management and explores its relationship with knowledge management. The historical development of strategic management, the key topics of strategic management research and its role in organizations are elaborated. A cross-fertilization of ideas between strategic management and knowledge management can be found when reviewing the relevant scholars' views on their association. Several variables are used to understand the relationship between the two disciplines that will provide valuable insights into this linkage issue.

Chapter 10 emphasizes the notion of innovation management so as to establish its connection with knowledge management. The chapter starts with a discussion about various definitions and perspectives of innovation management to reduce any confusion. Moreover, its typology and role in enhancing the competitive advantage of an organization over that of its rivals are discussed. The chapter also identifies some key areas relating to the innovation management discipline. The conflicting views of scholars on the connection between innovation management and knowledge management are highlighted.

Finally, the factors that help to determine whether knowledge management facilitates innovation management or vice versa are elaborated.

Chapter 11 looks into the future of knowledge management, taking a critical perspective on the way in which knowledge management is implemented. Knowledge management holds great promise; however, the success of knowledge management in achieving its stated objectives varies. It is essential to identify the issues and challenges related to knowledge management, particularly its implementation. The purpose of the final chapter of this book is to take stock of some of the major points raised in the preceding chapters. This chapter will address certain knowledge management challenges, and offer suggestions for future work that may help additional progress.

Knowledge Management: An Interdisciplinary Perspective is intended for students taking knowledge management courses at the higher education level as well as practitioners who have not taken such courses. It will also be useful for a range of scholars and professionals in other disciplines. This book has been written to set a new standard for knowledge management books.

The reader will find a tight, integrated flow of topics from chapter to chapter. Specifically, each chapter is well organized, with topics flowing logically within each section and each chapter, having thorough explanations and complete coverage of each topic that is introduced, and drawing on a solid theoretical base. The graphics presented will provide a road map, giving readers an advantage in learning about the complex and changing field of knowledge management, and thereby making it easier for readers from different academic backgrounds to learn the material so that they can apply it in their respective careers.

Sajjad M. Jasimuddin
Aberystwyth University, UK

List of Abbreviations

ABS	Association of Business Schools, UK
AOM	Academy of Management
APQC	American Productivity and Quality Center
BAM	British Academy of Management
BPR	business process re-engineering
CAD	computer-aided design
CEO	chief executive officer
CIO	chief information officer
CKO	chief knowledge officer
COP	community of practice
CSCW	computer-supported collaborative work
DfEE	Department for Education and Employment, UK
DTI	Department of Trade and Industry, UK
HICSS	Hawaii International Conference on System Sciences
IBM	International Business Machines
ICAM	International Conference on Advances in Management
ICT	information and communication technology
ILO	International Labour Organization
IM	information management
IO	industrial organization
IT	information technology
JIT	just-in-time
KBO	knowledge-based organization
KBV	knowledge-based view
KCC	knowledge-creating company

KE	knowledge economy
KIF	knowledge-intensive firm
KM	knowledge management
KMS	knowledge management systems
MBA	Master of Business Administration
OECD	Organisation for Economic Co-operation and Development
PC	personal computer
PSF	professional service firm
QC	quality circle
R&D	research and development
RAE	Research Assessment Exercise, UK
RBV	resource-based view
SECI	socialization, externalization, combination and internalization
SMS	Strategic Management Society
STA	socio-technical approach
SWOT	strengths, weaknesses, opportunities and threats
TQM	total quality management
VRIN	valuable, rare, inimitable and non-substitutable

Acknowledgments

“It could be said of me that in this book I have only made up a bunch of other men’s flowers, providing of my own only the string that ties them together.”

Michel de Montaigne (1533–1592)
French moralist and essayist

In line with Montaigne’s statement, I have created a book that is a bouquet of other scholars’ “flowers” as I have brought together the leading ideas, concepts, frameworks and theories surrounding the knowledge management field. I believe I have successfully arranged them in a way that each complements the ‘beauty’ and ‘fragrance’ of others. In particular, the specific management studies discussed cover the subject areas of knowledge management, information management, strategic management, organizational learning and innovation management.

I am grateful to Suliman Al-Hawamdeh for his encouragement and support in creating this book.

I also want to thank the team at World Scientific, particularly the editors Sandhya Venkatesh and Wanda Tan Hui Ping, for working so hard to publish the book.

Finally, I would like to express my high gratitude to my family (Shakila, Saad and Ziyad) for their tolerance and unwavering support.

Contents

<i>Preface</i>	vii
<i>List of Abbreviations</i>	xxi
<i>List of Tables</i>	xxiii
<i>List of Figures</i>	xxv
<i>Acknowledgments</i>	xxvii
 Chapter 1 Knowledge in an Organizational Context	 1
<i>Knowledge Objectives</i>	1
1.1 Introducing the Chapter	1
1.2 The Notion of Knowledge from a Philosophical Perspective	3
1.3 Organizational Knowledge Defined	5
1.4 Knowledge Hierarchy	9
1.5 Perspectives on Knowledge in Organizations	14
1.6 The Role of Knowledge in an Organizational Context	18
1.7 Concluding Summary	20
Further Reading	23
References	23
 Chapter 2 Strategic Role of Knowledge Management	 31
<i>Knowledge Objectives</i>	31
2.1 Introducing the Chapter	31

2.2	Relevant Topics Associated with Knowledge Management	33
2.2.1	Organizational Knowledge and Its Typology	34
2.2.2	Knowledge Transfer	35
2.2.3	Knowledge Creation	36
2.2.4	Knowledge Storage	37
2.3	Knowledge Management Defined	38
2.4	Knowledge Management Process	45
2.4.1	Acquisition of Organizational Knowledge	47
2.4.2	Creation of Organizational Knowledge	48
2.4.3	Storage of Organizational Knowledge	49
2.4.4	Transfer of Organizational Knowledge	49
2.4.5	Application of Organizational Knowledge	51
2.5	The Role of Knowledge Management in Organizations	51
2.6	Concluding Summary	56
	Further Reading	59
	References	59
 Chapter 3 Debates in the Knowledge Management Field		71
	<i>Knowledge Objectives</i>	71
3.1	Introducing the Chapter	71
3.2	Lack of a Homogeneous Definition for Organizational Knowledge	74
3.3	Lack of a Universal Definition for Knowledge Management	75
3.4	Knowledge Management: A Multidisciplinary Subject or a Specific Ideology?	76
3.5	Knowledge Management: A Universal Paradigm or a Management Fad?	79
3.6	Perspectives on Knowledge Management: A Technical-Centric or Social-Centric View?	86
3.6.1	Perspectives on Knowledge Management: The Social-Centric View	88
3.6.2	Perspectives on Knowledge Management: The Technical-Centric View	88