Table of Contents

Foreword

Preface

Acknowledgment

Section 1:
Fundamental Aspects of Knowledge and Knowledge Management

Chapter 1
Knowledge Economy for Innovating Organizations

Nilmini Wickramasinghe, Illinois Institute of Technology, USA

Introduction

The Knowledge Economy

Knowledge and its Management for Innovating Organizations

Types of Knowledge

The Knowledge Spiral

Knowledge Creation

The People-Oriented Perspective to Knowledge Creation

The Technology-Oriented Perspective to Knowledge Creation

Dualities in the Knowledge Construct

Conclusion

References

Endnote
Chapter 2
Managing Knowledge for Enhancing the Participants through Organizational Learning and Leadership

Murako Saito, Waseda University, Japan

Introduction

Organizational Learning and Leadership for Improving Organizational Performance

Organizational Learning Development (OLD)

Relevance of Knowledge Management to Organizational Learning and Technology

Conclusion

References

Chapter 3
Permitting the True Potential of Knowledge Assets to be Utilized with KMI

Nilmini Wickramasinghe, Illinois Institute of Technology, USA

Introduction

Establishing a Knowledge Management Infrastructure (KMI)

Elements of the Knowledge Management Infrastructure

Knowledge Management Infrastructure Design

Infrastructures that Support the Generation of Knowledge

Infrastructures that Support the Access of Knowledge

Infrastructures that Support the Transfer of Knowledge

Infrastructures that Support the Representation of Knowledge

Infrastructures that Support the Embedding of Knowledge

Infrastructures that Support the Facilitation of Knowledge

Metrics

Conclusion

References

Endnotes

Chapter 4
Normal Science and Post-Normal Sciences

Elie Geisler, Illinois Institute of Technology, USA

Introduction

Paradigms and Normal Science

Post-Normal Science

Examples from the Healthcare Sector

Knowledge Generation and Post-Normal Science

Conclusion

References
Section 2:
Approaches to Healthcare Operations Management

Chapter 5
Whole Systems/Holistic Approaches in Individual and Collective Levels

Murako Saito, Waseda University, Japan

Introduction ........................................................................................................ 58
Conceptual Framework of Holistic or Whole Systems of Human Action ......... 58
Classification, Categorization of Human Cognition-Action Coupling
in Individual Level .......................................................................................... 62
Classification, Categorization of Organizational Culture
in Collective Level .......................................................................................... 65
Typology in the Methodologies for Intervening Complex Social Systems
and for Changing Organizational Culture ..................................................... 67
Conclusion ...................................................................................................... 71
References ...................................................................................................... 72

Chapter 6
Conceptual Levels of Information Processing and Information Interpretation in Knowledge Management

Murako Saito, Waseda University, Japan

Introduction ...................................................................................................... 76
Information Processing Levels in Knowledge Management ......................... 76
Three Levels in Cognition-Action Coupling Process of Human Action .......... 78
Information Interpretation in Internal World ................................................... 82
Juxtaposing Scientific and Interpretive Perspectives for Organizational Learning Development (OLD) and Organizational Resilience Development (ORD) .................................................................................. 84
Conclusion ...................................................................................................... 87
References ...................................................................................................... 87

Chapter 7
The Intelligence Continuum and Emergency and Disaster Scenarios

Nilmini Wickramasinghe, Illinois Institute of Technology, USA

Introduction ...................................................................................................... 91
Description of Model ........................................................................................ 92
Data Mining ..................................................................................................... 93
Steps in Data Mining ....................................................................................... 94
Business Intelligence/Analytics ...................................................................... 95
Knowledge Management ................................................................................. 96
Using the IC to Support Preparedness and Readiness .................................... 98
Chapter 10
Realising the Healthcare Value Proposition: The Need for KM and Technology
Nilmini Wickramasinghe, Illinois Institute of Technology, USA
Introduction ................................................................. 143
Challenges Currently Facing Healthcare ........................................ 144
Knowledge Management .................................................................. 145
The Knowledge Spiral .................................................................. 146
Key Role of Data and Information in Healthcare ............................... 146
Data Mining as an Enabler for Realizing the Knowledge Spiral .......... 147
Methodology .............................................................................. 147
Benefits of Knowledge Management and Data Mining to Healthcare .... 151
Conclusion .................................................................................. 152
References .................................................................................. 153
Endnotes ...................................................................................... 155

Section 3:
Case Studies Illustrating Key Workplace Issues

Chapter 11
Perceived Organizational Environment and Performance Reliability in the Case of Hospital Nurses
Murako Saito, Waseda University, Japan
Introduction .............................................................................. 159
Performance Reliability ................................................................ 160
Current Status of Perceived Organizational Environment Assessed by the CPCs ......................................................... 161
Comparison of Perceived Nursing Work by Organizational Control Mode .... 162
Comparison of Incident Rates During 24 Hours of Health and Nursing Care Works ................................................................. 163
Comparison of Reduced Reliability by Organizational Control Mode .. 165
Discussions and Implication ............................................................ 166
The Problems Left for Further Study ............................................... 167
Future Directions ........................................................................ 168
Acknowledgment ....................................................................... 169
References .................................................................................. 169
Chapter 12
Roles of Interpersonal Relationships in Improving Organizational Performances in the Case of Hospital Nurses

Murako Saito, Waseda University, Japan

Introduction ................................................................. 173
Explanation on Parameters Used as Criteria .................. 174
Performance Comparison ............................................... 175
Methods ....................................................................... 176
Comparison of Team Reciprocity by Communication in Study 1 .................................................. 177
Communication Accuracy, Member and Team Resources and Performance Reliability by Emotional Regulation in Case Study 2 ........................................................... 179
Comparison of Team Reciprocity and Performance Reliability by Job Appreciation in Case Study 3 ................................................................. 181
Discussion and Implications ......................................... 185
Future Direction ........................................................... 186
Acknowledgment .......................................................... 186
References .................................................................... 187

Chapter 13
Interference of Mood States at Work with Perceived Performance, Perceived Efficacy, and Perceived Health

Murako Saito, Waseda University, Japan

Introduction ................................................................. 191
Methodology for the Investigations ............................... 191
Methods ....................................................................... 192
Classification of Mood States at Work .......................... 193
Perceived Performance by Mood States at Work .......... 195
Perceived Efficacy by Mood States at Work ............... 195
Health Structure and Health Level by Mood States at Work .................................................. 196
Covariance Structure Models ....................................... 199
Discussion and Limitations .......................................... 200
Conclusion .................................................................... 201
Future Trends .............................................................. 201
Acknowledgment ........................................................ 202
References .................................................................... 202

Chapter 14
Causal Relationship among Perceived Organizational Environment, Leadership, and Organizational Learning in Industrial Workers

Murako Saito, Waseda University, Japan

Introduction ................................................................. 206
Theoretical Backgrounds on Organizational Learning ........ 207
Section 4:
Case Studies Illustrating Key Issues and Investigations at the Community Level

Chapter 15
Eye-Movement and Performance during Reading by Cerebral Palsy Patients
Mitsuhiko Karashima, Tokai University, Japan
Introduction ................................................................. 220
Experiment 1 ............................................................... 221
Experiment 2 ............................................................... 226
General Discussion ..................................................... 229
Conclusion ................................................................. 230
Future Research .......................................................... 231
References .................................................................... 232

Chapter 16
Roles of Home Care and Rehabilitation Equipment for the Aged Who Need Care in Improving Performance
Hiromi Nishiguchi, Tokai University, Japan
Introduction .................................................................. 235
Human Functions and Their Changes by Aging .................. 236
The Cause of Barrier and Barrier-Free Design .................... 241
Home Care and Rehabilitation Equipment as Support Technology ........................................................................ 242
Care Service in Community ............................................ 245
Conclusion ..................................................................... 246
Future Trends .................................................................. 247
References .................................................................... 247

Chapter 17
The First Attempt of Intensive Approaches in Cognitive Rehabilitation in Clients with Severe Traumatic Brain Injury
Masako Fujii, Nonprofit Organization TBI Rehabilitation Center, Japan
Introduction .................................................................. 249
Background of Cognitive Rehabilitation .............................. 251
Chapter 18
Further Directions in Cognitive Rehabilitation in Community- and
Home-based Daily Trainings in Clients with Severe Traumatic Brain Injury

Masako Fujii, Nonprofit Organization TBI Rehabilitation Center, Japan

Introduction........................................................................................................... 267
Principles of the CR Administration................................................................. 268
Outcome Measures............................................................................................ 270
Temporary Minimum Required Scores in Four Neuropsychological Tests
  for Reentry to Work ......................................................................................... 273
Efficacy of Cognitive CR Services and Social Reentry .................................. 274
Discussion .......................................................................................................... 276
Conclusion .......................................................................................................... 277
Future Trends ..................................................................................................... 278
Acknowledgment ............................................................................................... 278
References ........................................................................................................... 278

Epilogue ............................................................................................................... 282

About the Authors ............................................................................................. 288

Index ................................................................................................................... 291