Table of Contents

Preface .................................................................................................................................................... xv

Chapter 1
Effort-Accuracy Trade-Off in Using Knowledge Management Systems ........................................... 1
   Robin S. Poston, University of Memphis, USA
   Cheri Speier, Michigan State University, USA

Chapter 2
Knowledge Appraisal and Knowledge Management Systems: Judging What We Know .................. 28
   Hannah Standing Rasmussen, University of Western Ontario, Canada
   Nicole Haggerty, University of Western Ontario, Canada

Chapter 3
Rewarding End-Users for Participating in Organizational KM: A Case Study ................................. 47
   Mayasandra N. Ravishankar, National University of Singapore, Singapore

Chapter 4
Exploring System Use as a Measure of Knowledge Management Success ....................................... 63
   Murray E. Jennex, San Diego State University, USA

Chapter 5
Collaborative Knowledge Management in the Call Center ................................................................. 78
   Debbie Richards, Macquarie University, Australia

Chapter 6
Diffusing Management Information for Legal Compliance: The Role of the IS Organization within the Sarbanes-Oxley Act .......................................................................................... 93
   Ashley Braganza, Cranfield University, UK
   Ray Hackney, Brunel University, UK

Chapter 7
The Role of Expertise in the Evaluation of Computing Architectures: Exploring the Decision Models of Expert and Novice IS Managers ........................................................................ 112
   Akhilesh Bajaj, University of Tulsa, USA
Chapter 8
End User Types: An Instrument to Classify Users Based on the User Cube ............................................. 142
Chittibabu Govindarajulu, Delaware State University, USA
Bay Arinze, Drexel University, USA

Chapter 9
Social and Usage-Process Motivations for Consumer Internet Access ..................................................... 159
Thomas F. Stafford, University of Memphis, USA

Chapter 10
General and Specific Computer Self-Efficacy: An Empirical Comparison of their Strength in Predicting General and Specific Outcomes.................................................................................. 176
James P. Downey, University of Central Arkansas, USA
R. Kelly Rainer Jr., Auburn University, USA
Summer E. Bartczak, University of Central Arkansas, USA

Chapter 11
Design of the PromoPad: An Automated Augmented-Reality Shopping Assistant................................. 193
Wei Zhu, Michigan State University, USA
Charles B. Owen, Michigan State University, USA
Hairong Li, Michigan State University, USA
Joo-Hyun Lee, Cheil Communications, Korea

Chapter 12
Thinking Outside of the Ballot Box: Examining Public Trust in E-Voting Technology ............................... 206
Susan K. Lippert, Drexel University, USA
Ekundayo B. Ojumu, IBM Global Services, USA

Chapter 13
End Users' Acceptance of Information Technology: A Rasch Analysis .................................................... 225
Geoffrey N. Soutar, University of Western Australia, Austraila
Steven Ward, Murdoch University, Australia

Chapter 14
Information Technology Supported Communication - Group Cohesion, Agreeability, and Performance: The Role of Media Richness.......................................................................................... 242
Michael B. Knight, University of Wisconsin –Green Bay, USA
D. Scott Hunsinger, Appalachian State University, USA
J. Michael Pearson, Southern Illinois University at Carbondale, USA

Chapter 15
Ratings Schemes in e-Commerce ................................................................................................................. 260
Robin S. Poston, University of Memphis, USA
Marla B. Royne, University of Memphis, USA
Chapter 16
Validating the End-User Computing Satisfaction Instrument for Online Shopping Systems .......... 291
   Chung-Tzer Liu, Soochow University, Taiwan
   Yi Maggie Guo, University of Michigan – Dearborn, USA

Compilation of References .............................................................................................................. 309

About the Contributors ................................................................................................................ 349

Index ................................................................................................................................................... 343
Detailed Table of Contents

Preface .................................................................................................................................................. xv

Chapter 1
Effort-Accuracy Trade-Off in Using Knowledge Management Systems ............................................... 1
   Robin S. Poston, University of Memphis, USA
   Cheri Speier, Michigan State University, USA

To solve complicated problems, people often seek input from others. Knowledge management systems (KMSs) provide help in this activity by offering a computer-mediated approach to information sharing. However, if the KMS contains content that is obsolete or incomplete, those using the system may expend greater amounts of effort to detect what content is worthwhile or they risk relying on poor inputs, which may lead to less accurate solutions to their problems. As a result, most KMSs include rating schemes as part of the user interface designed to help those using the system identify high-quality content. Rating schemes depend on current users rating the quality of the existing content, guiding subsequent users in future content searches. If specific ratings are low in validity, then they may not reflect the true content quality (unintentionally or intentionally). This chapter provides a robust summary of the KMS literature and draws on the effort-accuracy trade-off framework to offer the results of a research study. The research study examines how rating validity influences how KMS users employ their limited cognitive resources to search and evaluate KMS content, with the goal of finding and using the highest-quality content. Through an experimental design, the study described herein manipulates rating validity and content quality in a replicated KMS setting and examines how users trade off search and evaluation effort. The results of the study demonstrate that rating validity differentially influences how KMS search and evaluation effort relates to decision accuracy. The chapter concludes with a discussion of the study findings and ideas for future research.

Chapter 2
Knowledge Appraisal and Knowledge Management Systems: Judging What We Know ...................... 28
   Hannah Standing Rasmussen, University of Western Ontario, Canada
   Nicole Haggerty, University of Western Ontario, Canada
Knowledge management (KM) is a critical practice by which a firm’s intellectual capital is created, stored and shared. This has lead to a rich research agenda within which knowledge management systems (KMS) have been a key focus. Our research reveals that an important element of KM practice—knowledge appraisal—is considered in only a fragmentary and incomplete way in research. Knowledge appraisal reflects the multi-level process by which a firm’s knowledge is evaluated by the organization or individual for its value. The processes are highly intertwined with the use of the KMS. It therefore requires consideration of KA across multiple levels and types of knowledge across the entire KM cycle. To achieve this goal, the authors develop and present a taxonomy of knowledge appraisal practices and discuss their role in the KM lifecycle emphasizing implications for research and practice.

Chapter 3
Rewarding End-Users for Participating in Organizational KM: A Case Study ........................................ 47
Mayasandra N. Ravishankar, National University of Singapore, Singapore

Organizations position their formal knowledge management (KM) initiatives as a continuous process of deriving strategic benefits from the knowledge resources dispersed in the various internal constituencies. While most organizations implement a rewards program attached to their KM initiative, the influence exerted by such programs on employees’ responses to organizational KM is less well understood. In this context, this article focuses on the KM initiative of Rexon, a leading Indian software services and products company recognised globally as a successful KM exponent. Adopting the case study methodology, the authors conducted intensive fieldwork for 6 months over a 2 year period at Rexon. Evidence from the case highlights how a KM-related rewards program was used to build awareness about organizational KMS and how employees responded to the rewards program. The theoretical and managerial contributions of the study are discussed.

Chapter 4
Exploring System Use as a Measure of Knowledge Management Success ............................................. 63
Murray E. Jennex, San Diego State University, USA

This article discusses system use as a measure of knowledge management success. It is proposed that for knowledge management systems (KMS) it is not the amount of use that is important, but rather the quality of that use and the intention to use the KMS when appropriate. Evidence is provided to support this proposition and a knowledge management system success model incorporating this proposition is discussed. Additionally, findings are provided that show that new users to an organization use the KMS differently than experienced users and implications of this difference are discussed.

Chapter 5
Collaborative Knowledge Management in the Call Center ........................................................................ 78
Debbie Richards, Macquarie University, Australia

Collaboration is fundamental to the goals and success of knowledge management (KM) initiatives aimed at supporting decision making and problem solving. Yet many KM approaches and systems do not provide explicit mechanisms which allow knowledge to be collaboratively built up, validated and
reconciled so that the more general goals of knowledge sharing and reuse can be achieved. The approach suggested allows knowledge, in the form of rules, to be incrementally acquired as the problem arises, in the form of cases, as part of the daily routine. This chapter reports experiences and issues with knowledge management systems in the call center environment. A case study conducted during 2003-2006 is presented which describes how users found the incumbent systems and a prototype knowledge management system embodying the above approach.

Chapter 6
Diffusing Management Information for Legal Compliance: The Role of the IS Organization within the Sarbanes-Oxley Act
Ashley Braganza, Cranfield University, UK
Ray Hackney, Brunel University, UK

Information systems are vital to successful compliance with Section 404 of the Sarbanes Oxley Act. However, there is little published academic literature which reports systematic studies that explain how IS organizations implement 404. Institutional theory was adopted as the lens through which to examine the experiences of 404 implementation in three global organizations. The methodology for the research involved in-depth case study analysis. The authors conclude that key implementation drivers for 404 are directives from senior authorities, financial and resource subsidies, standards being set and adhered to, and knowledge being deployed. The findings are believed to present significant insights into the complexities and role of IS in providing valid and appropriate approaches to 404 compliance.

Chapter 7
The Role of Expertise in the Evaluation of Computing Architectures: Exploring the Decision Models of Expert and Novice IS Managers
Akhilesh Bajaj, University of Tulsa, USA

Recently, there has been considerable interest in evaluating newer computer architectures such as the Web services architecture and the network computer architecture. In this work, the authors investigate the decision models of expert and novice IS managers when evaluating computing architectures for use in an organization. This task is important because several consumer choice models in the literature indicate that the evaluation of alternative products is a critical phase that consumers undergo prior to forming an attitude toward the product. Previous work on evaluating the performance of experts vs. novices has focused either on the process differences between them, or on the performance outcome differences, with work in MIS focusing primarily on process differences. In this work, the authors utilize a methodology that examines both aspects, by constructing individual decision models for each expert and novice in the study. There is a growing consensus in the management literature that while experts may follow different processes, very often their performance does not differ significantly from novices in the business domain.

Chapter 8
End User Types: An Instrument to Classify Users Based on the User Cube
Chittibabu Govindarajulu, Delaware State University, USA
Bay Arinze, Drexel University, USA
Contemporary end users are more knowledgeable about computing technologies than the end users of the early ’80s. However, many researchers still use the end user classification scheme proposed by Rockart and Flannery (1983) more than two decades ago. This scheme is inadequate to classify contemporary end users since it is based mainly on their knowledge and ignores other crucial dimensions such as control. Cotterman and Kumar (1989) proposed a user cube to classify end users based on the development, operation, and control dimensions of end user computing (EUC). Using this cube, users can be classified into eight distinct groups. In this research, a 10-item instrument is proposed to operationalize the user cube. Such an instrument would help managers to identify the status of EUC in their firms and to take appropriate action. Based on the data collected from 292 end users, the instrument was tested for construct, convergent, and discriminant validities. Researchers can use this instrument to study the interaction between constructs such as development and control with end user computing satisfaction (EUCS).

Chapter 9
Social and Usage-Process Motivations for Consumer Internet Access .............................................. 159

Thomas F. Stafford, University of Memphis, USA

Differences between light and heavy users of America Online are investigated using theoretical expectations derived from recent research on uses and gratifications theory. Measures of Internet-usage-process gratifications and Internet socialization gratifications were utilized to test for differences between light and heavy Internet users in the consumer market, and it was expected that heavy users would be more socially motivated in their Internet use while light users would be more motivated by gratifications related to usage processes. However, results indicate that both heavy and light users are more motivated by usage factors, although the difference between usage and social motivation was more pronounced for heavy users. Heavy users are more socially motivated than light users, but both heavy and light users show a significant preference for process uses and gratifications as compared to social uses and gratifications for Internet use.

Chapter 10
General and Specific Computer Self-Efficacy: An Empirical Comparison of their Strength in Predicting General and Specific Outcomes................................................................. 176

James P. Downey, University of Central Arkansas, USA
R. Kelly Rainer Jr., Auburn University, USA
Summer E. Bartczak, University of Central Arkansas, USA

Computer self-efficacy is known to operate at multiple levels, from application-specific sub-domains like spreadsheets to a judgment of ability for the entire computing domain (general computer self-efficacy-GCSE). Conventional wisdom and many recent studies contend that the level of self-efficacy (specific to general) should match the level of its related constructs to maximize predictive power (Bandura, 1997; Chen, et al., 2001; Pajares, 1996). This thinking claims, for example, that GCSE should be used with a general attitude like computer anxiety (and vice versa). This study examines whether such a limitation is theoretically and empirically sound, given that SE judgments generalize across domains. Results indicate any self-efficacy judgment (specific or general) significantly relates to both general and domain-specific
constructs. These results suggest that an individual’s cognitive processing of ability level is multi-faceted; that is, every SE judgment consists of general and specific components. The implication is that CSE is simultaneously generalizable and formative in nature. The results also suggest that the relationship between general and specific CSE is mediated by one’s ability level in the specific domain.

Chapter 11
Design of the PromoPad: An Automated Augmented-Reality Shopping Assistant............................ 193
Wei Zhu, Michigan State University, USA
Charles B. Owen, Michigan State University, USA
Hairong Li, Michigan State University, USA
Joo-Hyun Lee, Cheil Communications, Korea

Augmented-reality technologies as a new way of human-computer interaction make possible real-time modification of our perception of reality without active user interference. This article introduces the prototype of an augmented-reality shopping-assistant device, the PromoPad, based on a handheld tablet PC allowing see-through vision with augmentations. While this new interaction utilizing augmented reality that places products into contextual settings can enhance shopping experience and suggest complementary products, it also has challenges and issues when used in a public environment such as a store setting. This article discusses the design and implementation of the PromoPad, and addresses the issues and possible solutions. The concept of dynamic contextualization is further investigated in this setting with a list of possible context modifications and their relation to advertising and the psychology of consumer purchasing.

Chapter 12
Thinking Outside of the Ballot Box: Examining Public Trust in E-Voting Technology ................. 206
Susan K. Lippert, Drexel University, USA
Ekundayo B. Ojumu, IBM Global Services, USA

Electronic voting, or e-voting, is a relatively closed process that contains inherent risks associated with the potential for voting irregularities, translation errors, and inappropriate manipulation (Oravec, 2005). To develop a greater understanding of trust issues surrounding the use of e-voting, an investigation into the public trust and the relationship between trust and electronic voting technology were assessed. Men and women of various ethnicities, ages, educational backgrounds, technological experiences, political affiliations, and prior experience with e-voting participated in this study. Rogers’ (1995) taxonomy of adopters—innovators, early adopters, early majority, late majority, and laggards—was used to classify individuals based on their willingness to participate in e-voting. A principle-components factor analysis (PCFA) with separate tests for discriminant validity and multiple-regression analyses were used to confirm the hypotheses. The findings suggest that innovators and early adopters are more likely to trust technology and express an intention to use an e-voting system.

Chapter 13
End Users’ Acceptance of Information Technology: A Rasch Analysis ........................................ 225
Geoffrey N. Soutar, University of Western Australia, Australia
Steven Ward, Murdoch University, Australia
While there has been research on the diffusion of a particular type of innovation, few if any studies have examined the acceptance of a set of innovations (behavioral innovativeness) over time. This study using the Rasch methodology found evidence that computer hardware innovations are adopted in a particular order.

Chapter 14
Information Technology Supported Communication - Group Cohesion, Agreeability, and Performance: The Role of Media Richness

Michael B. Knight, University of Wisconsin –Green Bay, USA
D. Scott Hunsinger, Appalachian State University, USA
J. Michael Pearson, Southern Illinois University at Carbondale, USA

This study looks at face to face (FTF) and virtual teams, the personality trait of agreeability and the impact of specific communication technology on cohesion and performance. We use the media richness theory to facilitate our literature review and to guide the development of our hypotheses.

Chapter 15
Ratings Schemes in e-Commerce

Robin S. Poston, University of Memphis, USA
Marla B. Royne, University of Memphis, USA

Evidence has been growing that suggests Internet-based opinion systems influence users’ purchase decisions. One of the most popular systems are the rating schemes found on Web sites such as eBay.com, expertcentral.com, bizrate.com, epinions.com, slashdot.net, moviefone.com, citysearch.com, etc. Rating schemes affect user productivity by changing their ability to search and find products and services on the Internet. Regrettably, ratings schemes can provide misleading information because those inputting ratings have personal subjective opinions, or they want to manipulate other users’ behaviors. For example, an author of a book may ask family and friends to rate his or her book highly and his or her competitors’ books poorly. This chapter provides a robust summary of the rating scheme literature and delineates the sources of rating scheme bias and the potential effects of this bias on how users utilize ratings. In a research study, data were gathered from 73 upper-division undergraduates completing a preliminary survey with open- and closed-ended questions and 164 additional students completing an exploratory survey to support the preliminary survey results. Based on the research findings, the chapter discusses preliminary insights and develops a set of propositions to encourage a more rigorous and in-depth examination of rating scheme bias by both practitioners and academicians.

Chapter 16
Validating the End-User Computing Satisfaction Instrument for Online Shopping Systems

Chung-Tzer Liu, Soochow University, Taiwan
Yi Maggie Guo, University of Michigan – Dearborn, USA

End-user satisfaction has always been an important component of Information Systems (IS) success. This is also true for online applications, including online shopping systems, where in addition to being
a customer, the shoppers play the role of end-users. Shoppers may not come back to or make a purchase on a Web site if they have an unsatisfactory experience. In this research, the authors focus on this aspect of online shopping by examining shoppers' experiences as end-users.

Compilation of References ................................................................. 309

About the Contributors ........................................................................... 349

Index ........................................................................................................ 343