Welcome to the latest annual volume of Advances in End-User Computing (EUC). The wide range of subjects embraced by EUC research and practice is evidenced by the spread of topics in this volume. The internet and knowledge management continue to dominate, but other issues covered include common domains such as decision modelling, end-user classification, call centres, compliance, and innovation. In addition, more recently developing areas such as e-voting and media richness are also represented. These chapters continue to provide new insights into EUC, representing some of the most current investigations into a wide range of End-User Computing issues.

As always, we hope that you, as researchers, educators, and professionals in the domain, find something to enhance your understanding within these recent developments, and, more particularly, that you enjoy reading about them. A summary of the contents of the text is given below.

In Chapter 1, Robin S. Poston and Cheri Speier look at how knowledge management systems (KMSs) support us by providing a computer-mediated approach to information sharing as we seek help when solving complex problems. Clearly, however, if the content provided by the KMS is obsolete or incomplete, time will be wasted detecting and correcting this. The solution to this problem in many KMSs is to provide a rating scheme as part of the user interface, enabling users to assess the quality of the content. Unfortunately these ratings may be inaccurate, and fail to reflect the true content quality. This chapter undertakes the important task of examining how rating scheme validity influences how users trade-off search and evaluation effort for decision-making accuracy. The findings provide valuable insight into KMS user interface design, and help us to understand how end-users utilise the knowledge in KMSs to make decisions.

Hannah Standing Rasmussen and Nicole Haggerty consider knowledge appraisal to be an important element of knowledge management (KM) practice which is addressed poorly in KM research. In Chapter 2 it is argued that knowledge appraisal should be seen as a multi-level process by which a firm’s knowledge is evaluated by the organization or individuals within that organization for its value. Knowledge appraisal processes are highly intertwined with the use of the KM system, such that an understanding of how they work requires consideration of knowledge appraisal across multiple levels, and of types of knowledge across the entire KM cycle. Hannah and Nicole have developed a taxonomy of knowledge appraisal practices to address these issues, and this taxonomy is discussed within the chapter.

Most organizations implement a rewards program attached to knowledge management (KM) initiatives, but, argues Mayasandra N. Ravishankar, the influence exerted by such programs on employees’ responses to organizational KM is poorly understood. Chapter 3 looks at a longitudinal (over a two year period) case study of Rexon, a leading Indian software services and products company recognised globally as a successful KM exponent. The outcomes of the research demonstrate how employees responded to the rewards program, and highlight how a KM-related rewards program can be used to build awareness about organizational KM systems.
Chapter 4 looks at system use as a measure of knowledge management success. The problem, from Murray E. Jennex’s perspective, is that all too often success is seen to be determined by the amount of use, whilst in fact it is the quality and appropriateness of that use that really matters. Evidence is provided to support this proposition and a knowledge management system success model incorporating this is discussed. Additionally, findings are provided showing how the approach to using a KMS differs between new and experienced users, and implications of this difference are discussed.

The starting point for Debbie Richards in Chapter 5 is the concept of knowledge management as being concerned with assisting the decision and problem solving process. Call centers use and reuse knowledge about problem issues, possible solutions, and, importantly, the link between certain problems and potential solutions. The extent to which knowledge which is “systematized” in a KM system frequently fails to provide the “answer”, is evidenced by the frequency with which implicit “know-how” is brought into play. Acquiring, accessing, maintaining, sharing, reconciling, and reusing knowledge in its various forms are particular challenges in the call center domain where the knowledge needed is complex and constantly changing. This problem is exacerbated by the frequently short-term nature of call center employees, resulting in implicit knowledge being lost. The research suggests an approach which allows knowledge, in the form of rules, to be incrementally acquired as a problem arises, in the form of cases, as part of the daily routine. Using this approach, knowledge workers are able to collaboratively and incrementally capture and maintain the information they use daily for troubleshooting.

Ashley Braganza and Ray Hackney look at the Sarbanes Oxley Act in Chapter 6, which was passed in response to financial misstatements and high-profile corporate frauds such as Enron and WorldCom, and aims to reduce the level and scale of financial fraud due to an organization’s misrepresentation of its financial condition. They argue that, whilst information systems are vital to successful compliance with Section 404 of the Act, there is little published academic literature that explains how IS organizations might implement 404. From an in-depth case study analysis, they see the key to successful implementation as directives from senior authorities, financial and resource subsidies, standards being set and adhered to, and knowledge being deployed. The findings deliver a real insight into this complex area of compliance.

In Chapter 7, Akhilesh Bajaj investigates the decision models of IS managers when evaluating computing architectures for use in an organization. The research uses a methodology which, by constructing individual decision models for each expert and novice in the study, examines and compares both experts and novices undertaking this task. Through this approach they are able to evaluate the 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.

Chittibabu Govindarajulu and Bay Arinze contends in Chapter 8 that, whilst many researchers still use the end user classification scheme proposed by Rockart and Flannery 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. As an alternative, the user cube has been proposed to classify end users based on the development, operation, and control dimensions of end user computing (EUC). In this research, a 10-item instrument is tested and proposed to operationalize the user cube, application of which, it is argued, would help managers to identify the status of EUC in their firms and to take appropriate action.

In Chapter 9, Thomas F. Stafford looks at the differences between light and heavy users of America Online 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. The expectation of the research was 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.

In Chapter 10, the authors look at the important area of computer self-efficacy, and most particularly at how it might be addressed and understood at different levels, varying from application-specific sub domains like spreadsheets at one end of the scale, to a judgment of ability for the entire computing domain (so-called general computer self-efficacy, or GCSE) at the other. 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. So, for example, GCSE should be used with a general attitude like computer anxiety. This study examines whether such a view is theoretically and empirically sound.

The authors of Chapter 11 introduce the prototype of an augmented-reality shopping-assistant device, the PromoPad, based on a handheld tablet PC allowing see-through vision with augmentations. The idea is to provide an experience as close as possible to the reality of the “live” shopping experience, and from this to judge whether such an approach has the ability to enhance the shopping experience. The design and implementation of the PromoPad are discussed, and issues and possible solutions which arise from this are addressed. 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.

Susan K. Lippert and Ekundayo B. Ojumu have conducted research into electronic voting for Chapter 12, which they characterize as a relatively closed process that contains inherent risks associated with the potential for voting irregularities, translation errors, and inappropriate manipulation. To understand these problems, they have investigated the relationship between trust and electronic voting, using Rogers’ taxonomy of adopters—in innovators, early adopters, early majority, late majority, and laggards, to classify individuals based on their willingness to participate in e-voting. The findings suggest that innovators and early adopters are more likely to trust technology and express an intention to use an e-voting system.

In Chapter 13, Geoffrey N. Soutar and Steven Ward have examined the acceptance of a set of computer-based innovations (behavioral innovativeness), finding evidence that computer hardware innovations are adopted in a particular order, whilst computer software acceptance may be application-based. The results obtained suggest a unidimensional order for the purchase of computer hardware, but that the computer software decision appears to be more complex and a multidimensional innovation pattern may exist for such products.

The authors of Chapter 14 argue that communications that are dependent on media richness are affected by individual user characteristics. Media richness theory suggests that a group’s cohesion and performance are impacted by the technological modes of communication used; a situation exacerbated by the nature of groups, which often experience varying levels of individual member agreeability, further affecting cohesion and performance. This study identifies significant differences between groups, using specific media to communicate cohesion, the change in cohesion, agreeability, and performance.

By looking into the rating schemes found on Web sites such as eBay.com, Robin S. Poston and Marla B. Royne provide us with an insight into the extent to which end-users are influenced by Internet-based opinion mechanisms before making a purchase. End users clearly use rating schemes to find products and services on the Internet, but these can offer misleading information, either because the submitted ratings are simply subjective opinions, or because ratings may even be submitted to try to manipulate other users’ behaviors. Chapter 15 examines the sources of rating scheme bias and the potential effects
of this bias on how users utilize ratings, and offers preliminary insights aimed at encouraging a more rigorous and in-depth examination of rating scheme bias by both practitioners and academicians.

In Chapter 16, Chung-Tzer Liu and Yi Maggie Guo look at end-user satisfaction, with a particular focus on online applications, including online shopping systems. They argue that it is important for online shopping that end-users have a satisfactory experience, since they will not return to the supplier or even to internet shopping generally if this is not the case. They focus on this aspect of online shopping by examining shoppers experiences as end-users.

CONCLUSION: CONTRIBUTION TO THE FIELD

End User Computing continues to be a major computing domain in which change and advancement shows no sign of easing. Advances in EUC aims to reflect this, and we hope that you will agree that the current issue has succeeded in this aim and has offered a valuable contemporary insight into EUC.

As always, enjoy reading.

Steve Clarke
Editor-in-Chief
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