

Preface

Welcome to the latest annual volume of *Advances in End-User Computing (EUC)*. EUC research and practice continues to provide new insights into the domain, and this 2008 volume aims to represent some of the most current investigations into a wide range of End-User Computing issues. We hope that you, as researchers, educators, and professionals in the domain, find something to enhance your understanding of these most recent developments, and, not least, that you enjoy reading about them. A summary of the contents of the text is given below.

Chapter I, “Information Systems Success and Failure—Two Sides of One Coin, or Different in Nature? An Exploratory Study”, by Jeremy Fowler and Pat Horan, La Trobe University, Australia, argues that, although the discipline of information systems (IS) development is well established, IS failure and abandonment remains widespread. They further suggest that little attention has been given to any possible relationships that exist among “uncovered” factors, and seek to address this by examining the development of a successful IS, and comparing the factors associated with its success against the factors most reported in our review of the literature as being associated with IS failure. The results of the study show that four of the six factors associated with the success of the investigated IS were related to the IS failure factors identified from the literature.

Chapter II, “Achieving Sustainable Tailorable Software Systems by Collaboration Between End-Users and Developers”, is by Jeanette Eriksson of the Blekinge Institute of Technology, Sweden, and Yvonne Dittrich, IT-University of Copenhagen, Denmark.

The chapter looks at a case study to show how the sustainability of information systems as a way of gaining advantage in rapidly changing environments. They argue that the fast pace of change makes flexibility in software an essential part of this process, and that one way to provide this is end-user tailoring (enabling the end user to modify the software while it is being used, as opposed to modifying it during the initial development process). This has the added advantage that end users already possess domain knowledge, so by providing support for end-user tailoring alterations can be made more immediately. Their results support the claim that end-users can even tailor the interaction between business applications. Three different categories of issues emerge as important when providing end-users with the possibility to manage interactions between applications in an evolving IT-infrastructure.

Chapter III, “Usability, Testing, and Ethical Issues in Captive End-User Systems”, by Marvin D. Troutt and William Acar, Kent State University, USA, and Douglas A. Druckenmiller, Western Illinois University – Quad Cities, USA, addresses some usability and ethical issues that arise from experience with captive end-user systems (CEUS). These are systems required to gain access to or participate in a private or privileged organization, or for an employee or member of another organization wishing to gain such access and participation. It is argued that the discussion is relevant to other systems than the one investigated, and has particular relevance to the domain of usability testing.

Chapter IV, “Do Spreadsheet Errors Lead to Bad Decisions? Perspectives of Executives and Senior Managers”, is by Jonathan P. Caulkins, Carnegie Mellon University, Erica Layne Morrison, IBM Global Services, and Timothy Weidemann, Fairweather Consulting, all in the USA. Whilst they accept the

common argument that spreadsheets are frequently flawed, they contend that it is not clear how often spreadsheet errors lead to bad decisions. The findings are based on interviews with forty-five executives and senior managers / analysts in the private, public, and non-profit sectors about their experiences with spreadsheet quality control and with errors affecting decision making. Spreadsheet errors emerged as commonplace, and quality control informal. Instances of errors directly leading to bad decisions were widely cited, but opinions differ as to whether the consequences of spreadsheet errors are severe. Overall, spreadsheet errors were seen to be a significant problem, and more formal spreadsheet quality control was widely recommended.

Chapter V, “A Comparison of the Inhibitors of Hacking vs. Shoplifting” by Lixuan Zhang, College of Charleston, USA, and Randall Young and Victor Prybutok from the University of North Texas, USA. In this chapter, grounded in information security research, the authors argue that the means by which the United States justice system attempts to control illegal hacking assumes that hacking is like any other illegal crime. This concept is evaluated by comparing illegal hacking to shoplifting. From a survey of 136 undergraduate students attending a university and 54 illegal hackers attending the DefCon conference in 2003, it emerged that both groups perceive a higher level of punishment severity but a lower level of informal sanction for hacking than for shoplifting. The results add to the stream of information security research and provide significant implications for law makers and educators aiming to combat hacking.

Chapter VI, “Developing Success Measures for Staff Portal Implementation”, by Dewi Rooslan Tojib and Ly Fie Sugianto from Monash University, Australia, looks at the proliferation of Business-to-Employee (B2E) portals. The study aims to develop a scale for measuring user satisfaction with B2E portals, arguing that, to date, very few studies have focused on determining the extent to which the portal implementations have been successful.

Chapter VII, “Contingencies in the KMS Design: A Tentative Design Model”, by Peter Baloh, University of Ljubljana, Slovenia, discusses the leveraging of knowledge to improve business performance. Grounded in the domain of Knowledge management (KM), the aim of this chapter is to propose theoretical background for design of KMS that successfully supports and enables new knowledge creation and existing knowledge utilization. Proposed fit profiles suggest that one-size-fits-all approaches do not work and that organizations must take, in contrast with extant literature, a segmented approach to KM activities and technological support.

Chapter VIII, “Users as Developers: A Field Study of Call Centre Knowledge Work”, by Beryl Burns and Ben Light from the University of Salford, UK, reports the findings of a field study of the enactment of ICT supported knowledge work in a Human Resources contact centre, illustrating the negotiable boundary between what constitutes the developer and user. The authors examine how discussions regarding producer-user relations require a degree of greater sophistication. The research reaches the valuable conclusion that although much has been made of contextualising the user, as a user, further work is required to contextualise users as developers and moreover, developers as users.

Chapter IX, “Two Experiments in Reducing Overconfidence in Spreadsheet Development”, by Raymond R. Panko of the University of Hawai`i, USA, describes two experiments that examined overconfidence in spreadsheet development. The first experiment studied a new way of measuring overconfidence, whilst the second experiment attempted to reduce overconfidence by telling subjects in the treatment group the percentage of students who made errors on the task in the past.

Chapter X, “User Acceptance of Voice Recognition Technology: An Empirical Extension of the Technology Acceptance Model”, by Steven John Simon, Mercer University, USA, and David Paper, Utah State University, USA, investigates the implementation of a voice recognition device in the United States Navy. Grounded in the social psychology and information systems literature, the researchers adapted instruments and developed a tool to explain technology adoption in this environment. Using

factor analysis and structural equation modeling, analysis of data from the 270 participants explained almost 90% of the variance in the model. This research adapts the technology acceptance model by adding elements of the theory of planned behavior, providing researchers and practitioners with a valuable instrument to predict technology adoption.

Chapter XI, “Educating Our Students in Computer Application Concepts: A Case for Problem-Based Learning”, is by Peter P. Mykytyn, Southern Illinois University, USA. The subject of the chapter is the difficulty of teaching computer literacy and advanced computer application concepts. Traditional approaches, it is argued, are open to question, and textbooks struggle as they attempt to compile and organize appropriate material. This research has taken a problem-based learning (PBL) approach to teaching computer application concepts (in this case, Microsoft Excel and Access).

Chapter XII, “Covert End User Development: A Study of Success”, by Elaine H. Ferneley, University of Salford, UK, asserts that End User Development (EUD) of system applications is typically undertaken by end users for their own, or closely aligned colleagues, business needs. EUD studies have focused on activity that is small scale, is undertaken with management consent and will ultimately be brought into alignment with the organisation’s software development strategy. However, owing to the increase pace of today’s organisations, EUD activity increasingly takes place without the full knowledge or consent of management, and such developments can be defined as “covert”. The authors report on a covert EUD project where a wide group of internal and external stakeholders worked collaboratively to drive an organisation’s software development strategy. The research highlights the future inevitability of external stakeholders engaging in end user development as, with the emergence of wiki and blog-like environments, the boundaries of organisations’ technological artifacts become increasingly hard to define.

Chapter XIII, “When Technology Does Not Support Learning: Conflicts Between Epistemological Beliefs and Technology Support in Virtual Learning Environments”, is by Steven Hornik and Yu Wu, University of Central Florida, USA, and Richard D. Johnson, University of South Florida, USA. Using data from 307 individuals, this research study investigated the process and outcome losses that occur when friction exists between individuals’ epistemological beliefs and their perceptions of how the technology supports learning. Specifically, the results indicated that when there was friction between the technology support of learning and an individual’s epistemological beliefs, course communication, course satisfaction, and course performance were reduced. Implications for design of virtual learning environments and future research are discussed.

Chapter XIV, “A Theoretical Model and Framework for Understanding Knowledge Management System Implementation”, by Tom Butler, Ciara Heavin, and Finbarr O’Donovan, University College Cork, Ireland, aims to arrive at a theoretical model and framework to guide research into the implementation of KMS, while also seeking to inform practice. The chapter applies the critical success factors (CSF) method in a field study of successful KMS implementations across 12 large multinational organisations operating in a range of sectors. It is hoped that the model and framework will aid theory building and future empirical research on this highly important and relevant topic.

Chapter XV, “Exploring the Factors Influencing End Users’ Acceptance of Knowledge Management Systems: Development of a Research Model of Adoption and Continued Use”, is by Jun Xu, Southern Cross University, Australia, and Mohammed Quaddus, Curtin University of Technology, Australia. The chapter develops a model of adoption and continued use of knowledge management systems (KMSs), which is primarily built on Rogers’ innovation stages model along with Ajzen and Fishbein’s (1980) theory of reasoned action (TRA) and Davis’s (1986) technology acceptance model (TAM). It presents various factors and variables in detail. Hypotheses are developed which can be tested via empirical study. The proposed model has both theoretical and practical implications. It can be adapted for application in various organizations in national and international arena.

Following on from the above fifteen chapters, we have also included a series of four selected readings which we hope you will agree enhance the quality of the text. The coverage of these, in summary, is given below.

Chapter XVI, “Classifying Web Users: A Cultural Value-Based Approach”, looks at the problems inherent in today’s communication mechanisms, which enable global interaction between different cultural groups, and aims to understand some of the cultural similarities and differences in this seemingly borderless world. A typology of individual cultural value orientations is proposed, emphasizing the need for making distinctions at the level of the individual, before group-level comparisons can become meaningful

Chapter XVII, “mCity: User Focused Development of Mobile Services Within the City of Stockholm”, presents the mCity project in the city of Stockholm, which aims at creating user-friendly mobile services in collaboration with businesses. The project takes an end-user perspective, focusing on how to satisfy existing needs in the community, and as a result creates involvement among end users which, it is claimed, leads to the development of sustainable systems that are actually used after they have been implemented.

Chapter XVIII, “End-User Quality of Experience-Aware Personalized E-Learning”, looks at how user quality of experience may be seen as dependent not only on the content served to the users, but also on the performance of the service provided. Using an experimental study, the authors compared a classic adaptive e-learning system with one enhanced with their ‘quality of experience layer’, to arrive at some novel and interesting findings.

Chapter XIX, “High-Tech Meets End-User”, reviews matching the design of high-tech products to the needs of end users via a human-centred design (HCD) approach. A HCD project is studied, with the outcome that the relation between interacting with end users and making design decision is seen as not straightforward or “logical.” It is argued that HCD is a social process with ethical qualities, and that researchers and designers need to explicitly address these qualities and to work more reflectively.

CONCLUSION: CONTRIBUTION TO THE FIELD

The chapters and readings presented above provide a wide variety of perspectives on the domain of End User Computing. The range of topics in this subject is, of course, vast, but I have been particularly pleased with the coverage of these chapters, and I hope you agree that they offer a valuable contemporary insight into EUC.

As always, I hope you enjoy reading them.

Steve Clarke
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