

Preface

This scholarly book is a collection of some of the best manuscripts published in the *Journal of Organizational and End User Computing*. This introduction is mainly a collection of abstracts provided by the authors for their manuscripts. The book is divided into three segments: Section I, which covers organizational and end user computing issues, trends, and success; Section II, which addresses collaborative technologies and implementation issues; and Section III, which discusses e-commerce processes and practices.

Section I consists of six chapters. Chapter 1, by Downey and Bartczak, starts the section by providing a comprehensive framework for research that allows one to examine the trends and issues in end user computing. It is based on a comprehensive review of research articles from some of the leading journals in the information systems area. The review is precipitated, according to the author, by the fact that during the 1980s and early 1990s, end user computing was reported to be among the key concerns facing managers and organizations. The authors claim that the framework is parsimonious and allows a comprehensive classification of three major dimensions of end user computing: end user, technology, and organization. The authors conclude by discussing emerging trends, important themes, and journal differences in the area.

Chapter II of this scholarly volume is penned by McGill. She discusses the contribution of systems developed by users on systems success. Her contention is that since end user systems development is a significant part of organizational systems development, it deserves attention. She investigated the role an application developed by the user developer plays on the eventual success of the application itself. The results of her study are intuitive but very important. She suggest that end users are likely to be more satisfied with systems they develop than with ones developed by others. More interestingly, the author found that end users also perform better with these systems.

To help end users and organizations understand and make more effective use of information technology, Staples and Seddon proposed the Technology-to-Performance Chain (TPC) model in 1995. According to the authors, the TPC model combines insights from research on user attitudes as predictors of utilization and insights from research on task-technology fit as a predictor of performance. In Chapter III of this scholarly book, the same authors tested the TPC model in two settings—voluntary use and mandatory use. In both settings, they found strong support for the impact of task-technology fit on performance, as well as on attitudes and beliefs about use. Social norms also had a significant impact on utilization in the mandatory use setting. They also found that beliefs about use only had a significant impact on utilization in the voluntary use setting. Overall, the authors found support for the predictive power of the TPC model.

In Chapter IV, Yi and Im suggest that computer task performance is an essential driver of end user productivity. Recent research, according to the authors, indicates that computer self-efficacy (CSE) is an important determinant of computer task performance. They argue that understanding the role of personal goal (PG) is also important in predicting and determining computer task performance. Employing CSE, PG, age, and experience, the authors developed a theoretical model that predicts individual computer task performance. They validate this model using PLS on data derived from a Microsoft Excel training class of 41 MBA students. They found PG, along with past experience and age, play a significant role in predicting computer task performance. Interestingly, the authors found no significant relationship between post-training CSE and task performance.

In Chapter V, Morris and Marshall claimed that several disciplines have already identified and validated the importance of control in explaining human behavior and motivation. They report an exploratory investigation that assesses perceived control within the information systems (IS) area. The authors developed a survey instrument, based on the research literature in the IS area, to assess perceived control as a multi-dimensional construct. They validated this instrument using 241 subjects. They analyzed their results to produce a set of five factors that represent a user's perceptions of control when working with an interactive information system: timeframe, feedback signal, feedback duration, strategy, and metaphor knowledge.

In Chapter VI, the final chapter in this section, Ma and Liu conducted a meta analysis to synthesize and summarize the findings of 26 prior research studies on perceived ease of use and usefulness that used the technology acceptance model (TAM) as a framework to predict the acceptance of information technology. A number of past studies have empirically investigated these relationships, but, as the authors indicated, the findings of these research studies are mixed. The authors found that both the correlations between usefulness and acceptance, and between usefulness and ease of use are somewhat strong.

They found the relationship between ease of use and acceptance as weak.

As stated earlier, Section II addresses collaborative technologies and implementation issues. It consists of five chapters: Chapters VII, VIII, IX, X, and XI. In Chapter VII, Jones and Kochtanek recognize that literature provides many examples of performance improvements resulting from adoption of different technologies. The authors, at the same time, claim that they found very little evidence demonstrating specific and generalizable factors that contribute to these improvements. The authors' qualitative study examined the relationship between four classes of potential success factors on the adoption of a collaborative technology and whether they are related to performance improvements in a small service company. They interviewed the users of a newly adopted collaborative technology to explore which factors contributed to the users' initial adoption and subsequent effective use of this technology. Their results showed that several factors were strongly related to adoption and effective implementation. They further explored the impact on performance improvements. Their results showed a qualitative link to several performance improvements, including time savings and improved decision-making.

In Chapter VIII, Duggan and Thachenkary start by suggesting that the Joint Application Development (JAD) was introduced to solve many of the problems system users experienced with the conventional methods used in determining systems requirements. They recognize that JAD helped produce noteworthy improvements over these methods. They suggest that a JAD session conducted with freely interacting groups is susceptible, however, to some problems that may curtail the effectiveness of groups. They further suggest that JAD outcomes are also critically dependent on excellent facilitation for minimizing dysfunctional group behaviors, and many JAD efforts fail because some group members are often unavailable. According to the authors, the nominal group technique (NGT) was designed to reduce the impact of negative group dynamics. The authors integrate JAD and NGT to reduce the burden of the JAD facilitator in controlling group sessions for determining systems requirements. They empirically tested their approach, which was found to outperform JAD in the areas tested and seemed to contribute to group outcomes even without excellent facilitation.

Adams, Berner, and Wyatt in Chapter IX suggest that user resistance is a common occurrence when new information systems are introduced to health care organizations. They further suggest that individuals responsible for overseeing the implementation process of these systems in the health care environment may encounter more resistance than facilitators in other environments. The authors claim that proper training of end users is an important strategy for minimizing this resistance. Their research reviews the literature on the reasons for user resistance to health care information systems and the implications of this literature on the design of training programs. They illustrate principles for reducing user resistance (e.g., communication, user involvement, strategic use

of consultants) using a case study that involved training clinical managers on business applications. The authors recommend that individuals responsible for health care information system implementations should recognize that end user resistance can lead to system failure and should employ these best practices when embarking on new implementations.

In Chapter X, Stahl suggests that decisions regarding information assurance, IT security, and privacy can affect individuals' rights and obligations. The author explores the question of whether individual responsibility is a useful construct to address ethical issues of this complexity. After introducing a theory of responsibility, he discusses the conditions that an individual typically is assumed to fulfill in such an environment. The author argues that individuals lack some of the essential preconditions necessary for handling responsibility. According to the author, individuals have neither the power, the knowledge, nor the intellectual capacities to successfully deal with the ethical challenges in the tension of privacy and information assurance. The author ends by suggesting that the concept of responsibility may be useful nevertheless in this setting, but it will have to be expanded to allow collective entities as subjects.

In Chapter XI, Jones and Price put forth that knowledge sharing in ERP implementation is somewhat unique, because ERP requires end users to have more divergent knowledge than is required in the use of traditional information systems. They claim that, because of the length of the time and commitment that ERP implementation requires, end users often are more involved in ERP implementations than they are in more traditional information systems implementations. Their study presents findings about organizational knowledge sharing during ERP implementation in three firms. They collected data through interviews using a multi-site case study methodology. The authors analyzed the findings in an effort to provide a basis on which practitioners can more effectively facilitate knowledge sharing during ERP implementation.

The last and final section in this compiled volume deals mainly with e-commerce processes and practices. It includes four chapters: Chapters XII, XIII, XIV, and XV. In Chapter XII, Gupta, Rao, and Upadhyaya assert that information assurance is a key component in e-banking services. They investigate the information assurance issues and tenets of e-banking security that would be needed for the design, development, and assessment of an adequate electronic security infrastructure. They present the technology terminology and frameworks with an understanding to equip the reader with a glimpse of the state-of-art technologies that may help toward making better decisions regarding electronic security.

In Chapter XIII, Aytes and Connolly present the Check-Off Password System (COPS) for entering passwords that combines a high level of security with easy recall features for end users. They claim that COPS is more secure than self-selected passwords as well as high-protection assigned-password procedures (FIPS). The authors provide a preliminary assessment of the efficacy

of COPS by comparing COPS with three traditional password-assigning procedures. They showed that end users perceive all password-assigning procedures tested to have equal *usefulness*, but the perceived *ease of use* of COPS equals that of an established high-security password. They claim that the COPS interface does not negatively affect user performance compared with that of high-security passwords generating systems.

In Chapter XIV, Warkentin, Davis, and Bekkering state that the main objective of information system security management is information assurance. The authors claim that user authentication is an important means toward achieving this objective, and password procedures have historically been the primary method for user authentication. As expected, the authors found an inverse relationship between the level of security provided by a password procedure and ease of recall for users. Also, as expected, the authors found the longer the password and the more variability in its characters, the higher the level of security provided by such a password. They state that such a password, however, tends to be more difficult for end users to remember, particularly when the password does not spell a recognizable word. Conversely, when end users select their own passwords that are easier to memorize and recall, the passwords may also be easier to crack.

In Chapter XV, the last chapter in this scholarly volume, Chatterjea states that in-service upgrading has been provided for retraining teachers in Singapore to help them keep abreast of changing curriculum requirements as well as a way of infusing information technology in teaching and learning. She further states that upgrading courses are offered to the teachers primarily asynchronously, using the Internet platform, with some integrated synchronous sessions. The author provides rationales for the development of such Web-based teacher-upgrading systems and discusses the developmental issues related to such systems. She also addresses issues of adult learning in a learner-controlled adaptive learning environment that provides the much-needed freedom to the participants for managing their own time. The author concludes by discussing the participants' responses to such an upgrading system.