Preface

This handbook introduces to the reader current research articles that address the different areas of information technology usage and adoption within organizations, studies that address new software development in relation to organizations and end-users, as well as the social issues that are either impacted or created by the use of new systems. Additionally, the handbook aims to provide academicians and practitioners scholarly value in the field of social and organizational dynamics within the field of information technology. Articles in this handbook will provide one comprehensive source of the latest trends and research in the field of social and organizational issues as they relate to information technologies and information systems. The book provides high quality research chapters on various topics that range from workforce issues to the development, adoption, and identification of new technologies. Industry professionals can use the handbook to identify timely topics within the area of social and organization issues in relation to information technologies and systems which may guide them in gaining knowledge that will and can affect organizational change.

SOCIAL AND ORGANIZATIONAL ISSUES

There are many social and organizations issues arising from the use of information technology use and systems. Historically, as well as currently, information technology and systems is comprised of people, technology, and knowledge processes. In addition, all of the components of information systems are mutually connected and cannot exist individually to perform the role of informing. Therefore social and organizational issues are inherent with the use of information technology and information systems.

Currently, through the Internet and other technological innovations, organizations have seen an increase in the collecting, storing, processing, transmission, and presentation of information that has not only transformed the information technology sector itself into a highly dynamic and expanding field of activity, but has also created new markets, generated new global investment opportunities, and offered new job openings. In response to these new opportunities, organizations have had to rapidly and efficiently change in order to remain competitive, thus affecting their organizational cultures. Organizational culture consists of the major understanding and assumption that a business must plan for, implement, and handle change. Change can be created by several factors, especially by social factors.

As the professional work world has changed dramatically over the past decade, organizations are more global, and employee groups are much more likely to be culturally diverse. Therefore, being in such a culturally diverse workforce means employees will need to be able to enter a new culturally fluent context where mastering the norms, and feeling comfortable in doing so, allows for individuals to
become either highly successful or woefully ill-prepared. In addition, changes in society as a result of increased international trade and cultural exchange continue to have a significant impact on organizations and their information systems, as well as the humans involved with those systems.

Organizational structures have also changed, and have become less hierarchical and more collaborative with today's networked offices around the world. In addition, these new work worlds are full of technological distractions that would have been unimaginable to the 20th-century manager. Modern organizations must deal with the introduction of new information technology systems and technologies, and in so doing, must deal with the human aspects related to this activity.

In his book *The World is Flat*, Thomas Friedman describes three areas of globalization. The most current of these areas is Globalization 3.0, dated from 2000 until today, which is characterized by individuals from around the world who can compete and influence other people, corporations, and countries by using the Internet and other powerful technology tools. Workers in this era are from around the world with differing cultures, lifestyles, and tasks. These opportunities offer several advantages, from the use of combining work that can be accomplished in subtasks to applying the smartest workers to the task. At the same time, there are obstacles that can be introduced such as cultural differences that include work issues, language differences, and others.

The area of social and organizational issues in relation to information technology has been and continues to be an increasing field that encompasses various areas such as building relationships between the information systems area and other academic disciplines; addressing cultural issues in the area of social barriers and digital divides; assimilation of emerging technologies into an organization; looking at diversity within the workforce in areas related to gender, race, age, education, and socio-economic differences in IT (information technology), as well as diversity in virtual work teams; ethical and human reactions issues surrounding codes of conduct; human interaction issues related to leadership, motivation, and social presence; and information technology security issues including the misuse of data and the social, legal, and ethical issues of IS (information systems) security.

Within the past decade the world has gone from a total of 12 billion e-mails a day to 247 billion, from 400,000 text messages to 4.5 billion, from an individual average of 2.7 hours a week online to 18 hours. Therefore, in some form or fashion, a computer or an information system keeps end users connected to colleagues, customers, clients, family, community, entertainment, and hobbies; to everything we know we should be doing and everything we know we shouldn't. The dynamic use and introduction of IT introduces the aforementioned issues surrounding the area of social and organizational issues in relation to the adoption and use of information systems.

This handbook aims to answer the question, “Why should you understand the social and organizational issues surrounding IT?” The answer is simple. Despite a wealth of knowledge in this area, the answer forms another question: “Don’t you want to be the most informed user; that is, a person who is knowledgeable about information systems and information technology and its effects on the individuals who are involved with these systems and technologies?” In general, informed and educated individuals tend to get more value from the technologies that they are using. Therefore, if an end user can understand the many benefits from technology use then they can better understand why it is needed.
CHAPTERS IN THE HANDBOOK

The handbook consists of 14 chapters organized into three sections, which address workforce issues, organizational issues, and virtual and software issues. Each section contains chapters relevant to the section, which are related in topical areas to the other chapters.

In each of the aforementioned articles, new research is presented that addresses the human and social factors in relation to information technology and information systems. As the roles of both humans and computers change, so do the opportunities.

Beginning with Section 1, Workforce Issues, seven chapters are introduced that focus on issues related to topic areas, such as the lack of technical skills of graduates to enter the IT workforce, earnings in relation to gender, the stigma of being a technology geek, collaboration and collaboration efforts, and lastly, the management of organizational change.

A brief description of each chapter follows.

Chapter 1, “Workforce Assessment in the Jordanian ICT Industry,” is presented first to introduce the view that there is a growing workforce gap in the ICT sector within Jordan. But the case of non-qualified workers for IT positions has also affected other countries such as the United States, where there is a rising and identified need for qualified and skilled graduates, but a decline in their apparent skills. Therefore, a contrast is acknowledged that highlights the fact that what is produced at the university level (the graduate) and what is needed within the ICT industry (the skills and knowledge) are at a crossroads of defining what technical skills and knowledge are required to be successful within the IT field. The author presents several key factors: 1) in Jordan, the need for qualified IT workers is quickly growing; 2) very little empirical research has been conducted to assess the quality and the relevance of the ICT curriculum; 3) how can a comprehensive ICT program be built and a model developed to motivate the development of a curriculum that challenges students be a part of a successful workforce? The results of this study found that there is a lack in technical skills among graduates of the higher education system, and the results of the study can be used to identify curricular areas that can be improved upon.

Chapter 2 discusses how remaining relevant in the workplace is a persistent concern for people in all professions, especially in today’s economy. The information technology industry is no exception, where the relevance of knowledge and skills must be continuously maintained in order to meet the demands of the profession. The article titled “Is Updating Play or Work? The Mediating Role of Updating Orientation in Linking Threat of Professional Obsolescence to Turnover/Turnaway Intentions” is a study that examines the behavior of IT professionals in the face of constant threat of obsolescence. Specifically, the study looks at updating skills as play or work and the relationship of that attitude towards turnover and turnaway intentions. Additionally, and according to the authors, IT professionals hold one of two forms of updating orientations, where some regard updating as work, while others tend to view updating as play. Patterns of job mobility intentions associated with each of the two forms of updating orientation were also examined. In summary, the authors found that the results indicated a negative relationship exists between the threat of obsolescence and updating as play, and a positive relationship with updating as work.

Chapter 3, “Gender Wage Differentials in Information Systems: 1991-2008 A Quantitative Analysis,” analyzes the salary disparity between men and women to determine if the compensation gap has changed over time. The study uses data compiled by the Current Population Survey (CPS) and evaluates the salaries of men and women across industries and professions. The study focused primarily on (1) whether the gender wage gap diminished in IS professions since 1990, (2) how the Internet bubble and
the high demand of skilled IS workers affected the disparity, and (3) what impacts the “new economy” had on wages after the dot com bust. The research found that in professional level occupations there was a narrower wage gap and that the higher demand for IS professionals in the 1990s was inversely related to salary disparity as the gap once again increased after the dot com bust. In summary, their findings were concluded by stating that “it still seems to be a man’s world when it comes to the bottom line of compensation.”

Chapter 4 describes how social stigma has traditionally had negative effects on people who have occupations that are considered undesirable, like garbage men and gravediggers. The unspoken perception is a “devaluing of the stigmatized individual and the view that they are less than…” except in the case of the technology geek as described in the paper “An Examination of Prestigious Stigma: The Case of the Technology Geek.” According to Goffman (1963), “A stigma is fundamentally different from a conventional stereotype due to its global nature. Stereotyping assigns a particular characteristic (positive or negative) to an individual, but assigning a stigma leaves one’s whole identity discredited.” The article further describes how a geek exerts a position of prestigious stigma and discusses the value of better integrating their expertise within the organization.

Chapter 5 discusses the process of managing organizational change, or change management, which requires well-defined processes and plans for deployment. This practice is especially true within the information technology industry, where the changes include employees learning new ways of executing tasks. “Committing to Organizational Change in IT Industry” is a study that evaluates the relationship between employees’ commitment to change and the quality of the transition. The study further identifies factors that hinder employees’ willingness to change behaviors such as negative perceptions and low expectations that may result from a change within the organization. The study results indicate that better planning, communication, and commitment by management is a key factor in a quality organizational change effort.

Chapter 6 shows how new technologies and collaboration tools on the Internet have injected enthusiasm among end users and have created collaboration efforts among those who interact and learn from one another. Though more recent technologies implemented within organizations have the capability to be effective collaboration tools, many of the knowledge management systems and Web 2.0 technologies end up functioning more as places to post information rather than as collaboration tools, as were intended for use by the organizations. “Understanding Collaboration Success in Context of Cognitive and Social Presence” looks at how cognitive and social presences have a bigger role in collaborative success than does the technology used. The study looks at the constructs of e-learning literature to demonstrate this point, which was developed independently of the information systems collaboration literature.

In Chapter 7, the authors show how organizations are actively pursuing tools and methods that best allow their employees to collaborate and solve business problems. Brainstorming is a part of the collaborative and problem solving process. However, a refinement to brainstorming called convergence is discussed in “Coding for Unique Ideas and Ambiguity: A Method for Measuring the Effect of Convergence on the Artifact of an Ideation Activity,” and offers a simplified approach to the same idea, according to the study. The main idea is to adopt a standardized approach to brainstorming and to submit ideas so that the ideas are useful and have clarity to all participants. The study refers to this method as a coding scheme.

Section 2, titled Organizational Issues, addresses topics related to the usage, ideas, and principles surrounding the topic of Web 2.0 and knowledge management systems, the influencing factors that affect and influence technology adoption, the alignment of IT strategy to business strategy, and finally the
inner dynamics and the mechanisms of leadership and governance surrounding the virtual organizations topic and who is really in control of the individual players.

Chapter 8, “Towards a Model of Employee Weblog Usage: A Process-Oriented Analysis of Antecedents and Consequences,” is a study on Web 2.0 technologies and the impact that they have exerted on communication within organizations. The study researches whether collaboration and social networking tools in a work setting are beneficial and whether there are any uncovered benefits. Employee blogging is one part of the study to determine antecedents and consequences of its use. The study did not yield conclusive results because the adoption of Web 2.0 ideas and principles has happened so recently, but the researchers have provided a framework as a result of this study for future research.

Chapter 9 discusses how knowledge management systems (KMS) try to provide a platform where business experiences within a company can be researched and shared. “Examining the Varying Influence of Social and Technical Aspects on Adoption” researches factors of user adoption and continued usage of such technology. As organizations operate globally with teams communicating remotely, the ability to remain effective and efficient has become increasingly important. The study evaluates social and technological factors and concludes that a key factor in the success of KMS implementations is the fostering of a “reciprocity expectation” within an organization, which usually occurs in the form of a shared domain knowledge database.

Chapter 10 shows that as IT reliance increases, so does the importance of having a well thought-out development and implementation strategy. IT strategy is one of the ways that companies compete and create distinction in the market. “A Model for Operationalising Influencing Factors in IT Strategy Deployment” examines externalities and the role of those factors and how they influence an organization’s IT strategy. The approach this study takes is to examine Structuration Theory, which looks at elements such as cultural diversity as an indicator to determine the effectiveness of a company’s IT strategy.

Chapter 11, “Playing Virtual Power Games: Micro-Political Processes in Inter-Organizational Networks” is a study that looks at the virtual work environment and investigates the micro-political processes that individuals use to assert their own governance or leadership within a non-traditional network. Globalization and virtual technology has made way for this new type of virtual organization, consisting of contractors and small business networks. The results from this study suggest that each network develops its own culture, which allows individuals to join and conform or find a network that fits their culture and ideals. There is an element of self-selection (or low barriers to entry) that does not exist in the traditional sense, as it does virtually.

Section 3 of this handbook deals with the topic of Virtual and Software Issues. This section is devoted to several different important topics such as the nuances surrounding virtual communications and working within a virtual world, understanding the trends and trendsetting related to the topic of software piracy in emerging and developed countries, and how people might look at their work lives in relation to a labyrinth. Finally, research is presented that investigates the linkage between “going green,” ICTs, and researcher’s attitudes towards environmental awareness.

Chapter 12 shows that through the ability to create dynamic learning environments, collaborative business applications, or interactive, multi-user simulations, virtual collaboration has increasingly become a part of how organizations may work on tasks together. “3D Virtual Worlds: Assessing the Experience and Informing Design” brainstorms the possibility of using 3D technology to increase the effectiveness of virtual collaboration tools. The study uses the gaming world as an example of how 3D environments already capture a level of immersion and emotion that is currently not realized in a conventional user interface. This article provides tools to evaluate the level of user engagement to determine the feasibil-
ity for work collaboration. The study does find that virtual worlds do not replace physical presence and people recreate as much of the physical world as is possible within the 3D environment, therefore finding that collaboration tools may be quite effective in the work tasks area.

In Chapter 13, the authors describe how the software industry loses billions of dollars to piracy every year and is undertaking initiatives to understand this trend. “Toward an Understanding of Software Piracy in Developed and Emerging Economies” is a study where researchers address the trends of software piracy and study the tendencies of developed versus emerging economies to identify piracy indicators. Three economic and social factors that the paper looked at were (1) per capita GNI, (2) the relative size of a country’s IT market, and (3) government corruption. In analyzing these three factors, the study suggests that there is no correlation between software piracy and whether a country is developed or emerging. However, there is a slight relationship between the relative size of a country’s IT market and corruption with software piracy.

In Chapter 14, technology, the number of product choices, shopping, and the network of real and virtual relationships people now have are scenarios described in “Getting Lost in the Labyrinth: Information and Technology in the Marketplace.” According to the article and suggested by the author John Conway, “The labyrinth is a complicated trope that fits the paradoxical complexity of how we experience our modern lives.” Further, he found that leveraging the labyrinth as a resource can add a new dimension of understanding and meaning in our own lives, which will further enhance how we can view technology and our working lives within the marketplace as labyrinths.

Chapter 15, “Using an Ethical Framework to Examine Linkages Between “Going Green” in Research Practices and Information and Communication Technologies,” examines the factors determining whether a researcher uses green research practices (GRP). GRP refers to the transition of researchers who traditionally relied on travel and paper to work that can be facilitated through the use of information and communication technologies. Much of the paper refers to Kuhn’s study on paradigm shifts, but the conclusion is that the strongest influence on GRP is the researcher’s ethical judgment and, indirectly, from their attitude towards the environment.

**SUMMARY**

In summary, this handbook is written to provide an overview of the integration of technology utilization and social dynamics in organizations. What have been noted throughout these aforementioned chapters are the following observations for managers, researchers, scholars and end users of information technologies and information systems. Probably only a fraction of the benefits derived from information technology-based innovations have so far been reaped; the rest remain to be acquired in the next decades. The shift towards systems integration to capitalize the full potential benefits of information technology requires considerable adaptations, learning processes, and structural changes in existing socioeconomic institutions and organizational systems. The tradition in most current organizations is still to operate in a largely “disintegrated” fashion, reminiscent of the Ford-Taylorist management approaches that dominated the fourth Kondratiev cycle. These approaches consisted of a high division of labor, increasing functional specialization/differentiation and de-skilling of many tasks, rigid manufacturing procedures and controls, long management hierarchies with bureaucratic decision-making procedures and a “mechanistic” approach to performance. Under these conditions, the adoption and uses of information technologies are found to be restricted to piecemeal technology improvements. By contrast, information technology-
based systems offer organizations the opportunity of functional integration, multi-skilled staff, rapid and flexible decision-making structures with greater delegation of responsibilities and greater autonomy of operating units, and a more flexible and “organic” approach enabling a quick adjustment to changing environmental conditions (Piore and Sabel, 1984).

In the case of developing countries, information technologies have a significant impact on the growth and success of organizations. Issues surrounding technology adoption and adequate staffing are two large issues that developing countries are most currently facing. Although the socio-economic structure of these countries sometimes resists organizational or institutional changes, the complex interrelations between these changes and information technologies have significant implications for the way information technology does and will affect the societies and economies of developing countries. As a matter of fact, the negative and positive potential impacts of IT on these countries are a matter of great controversy among economists and politicians. The main short-term issues usually discussed are the potential erosion of the comparative advantages of low labor costs, and the effects of automation, particularly on international competitiveness. Implications of information technology usage for those countries hold great importance.

It is anticipated that this handbook, which offers a comprehensive and diverse look at the integration of technology utilization and social dynamics in organizations, will contribute to a better understanding of this field of study. Additionally, this handbook is written for the academician and professional researcher to offer an opportunity to be introduced to timely topics in this area. The handbook is also written with managers in mind, who can use the frameworks and models provided to serve as a guide in decision making processes. Lastly, it is presumed that this handbook will serve as an inspiration for future researchers to explore the current and emerging topics in this immense field of study.

REFERENCE


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