

Vol. 2 No. 3 July 1999

Special Issue on "Information Technology in Developing Countries"

Guest Editors: Robert Davison - City University of Hong Kong

Roger Harris - Universiti Malaysia Sarawak (UNIMAS)

Douglas Vogel - City University of Hong Kong, and Gert-Jan de Vreede - Delft University, Netherlands.

EDITORIAL PREFACE

The four guest editors introduce this special issue, which precipitated from their collaboration with the Hawaii International Conference on Systems Sciences (HICSS). They comment on the plight of the developing nations that are trying desperately to keep up with the developed nations. However, global forces are simultaneously working to increase the digital divide as well as providing the means for reducing it. IT in developing countries remains something of a Cinderella pursuit; the four articles in this issue provide quite different perspectives on the subject.

ARTICLES

INFORMATION TECHNOLOGY IMPLEMENTATION IN DEVELOPING COUNTRIES: ADVENT OF THE INTERNET IN MONGOLIA

Authors: Harvey G. Enns and Sid L. Huff, The University of Western Ontario, Canada
Internet Service Providers (ISPs) in developing countries experience great difficulties in the implementation of technologies that provide access to the Internet. These difficulties are due to technical challenges, such as poor telecommunication infrastructure, lack of technological readiness, inadequate technical skills and training, financial barriers, and the like. Often they require assistance from non-government organizations. This paper begins with an overview of the factors that lead to successful implementation of IT projects in developing countries. A framework is presented which categorizes these factors into environmental, technical, intra-organizational, and inter-organizational components. The paper then reports the efforts of one company in implementing a series of telecommunications projects to provide access to the Internet for Mongolian companies, governmental organizations, and others. The paper concludes by applying the framework to illustrate successful implementation in the developing country context.

THE RAPID EMERGENCE OF ELECTRONIC COMMERCE IN A DEVELOPING REGION: THE CASE OF SPANISH-SPEAKING LATIN AMERICA

Author: Charles H. Davis, University of New Brunswick, Canada

In several respects, Spanish-speaking Latin America appears to be a "fast follower" of electronic commerce. The region has one of the world's fastest-growing rates of growth

of Internet connectivity, and demand for IT is soaring. The telecommunications infrastructure is improving and access costs are declining. Business and technological information from North America and Europe is readily available. However, structural and cultural characteristics are shaping the ways in which e-commerce can drive economic renewal. These characteristics include a relatively weak technological and educational infrastructure, highly skewed distribution of income, scarcity of capital for new ventures, a business culture that places low value on market responsiveness or customer service, and a policy and legal system that requires retrofitting. Nevertheless, the connectivity boom in the region has generated an array of e-commerce opportunities that are attracting many contenders. This paper surveys recent research on the emergence of e-commerce in Spanish-speaking Latin America and describes the challenges it faces.

ARTICLE: THE INFLUENCE OF SOCIETAL CONTEXT ON TEXTBOOK DESIGN IN SOUTH AFRICA

Authors: G.J.Erwin, University of Durban-Westville - South Africa and C.N. Blewett, University of Natal - South Africa

Changes in South African politics and society since the election of Nelson Mandela as President have brought about changes in the background of student audiences. This has stimulated a review of the areas of governance, syllabus, curriculum, teaching methods and research in educational institutions. This paper describes the first year IS textbook which meets South African needs, rather than echoes the technology and methods of developed countries. We discuss the "product-driven" and "problem-driven" arrangements of current textbooks, problems with non-South African textbooks, resistance by course instructors to change, and features of a local Information Systems course. The paper includes a summary of a survey of IS students using the textbook. We conclude with recommendations on teaching methods, textbook design and support material which are appropriate to a developing country.

ARTICLE: FROM SOFTWARE RISKS TO SUSTAINABLE INFORMATION SYSTEMS: SETTING THE STAGE FOR A DELPHI STUDY IN NIGERIA

Authors: Anja Mursu, University of Jyväskylä - Finland, Abimbola H. Soriyan and Karen C. Olufokunbi, Obafemi Awolowo University - Nigeria, and Mikko Korpela, University of Kuopio - Finland

In this paper, the authors argue that the research framework used in western software risk research – software projects – must be expanded to include IS implementation and use contexts, particularly in developing countries. The literature of software risk management indicates that the risk of failure in IS development (ISD) can be mitigated by analyzing the threats to success. In Africa the understanding of success or failure in ISD has a broader meaning than in industrialized countries. The magnitude of constraints in Africa makes the sustainability of information technology (IT) a major issue. We are in the process of conducting a Delphi study in Nigeria to produce a rank-order list of the most common risk factors in software projects. We also present a holistic framework for studying successful ISD in Nigeria. A detailed methodology is induced from the framework and the framework's applicability assessed in the light of preliminary results.

THE EXPERT OPINION

An interview is conducted by Roger Harris (co-editor) with Mr. Gabriel Accascina, Regional Coordinator of the Asia-Pacific Development Information Programme (APDIP) and United Nations Development Programme (UNDP). The interview discusses the background and the role of the APDIP program in assisting developing countries in the Asia Pacific region, to use IT to foster development activities. It also examines the experience of the program as well as the response from the various countries.

THE BOOK REVIEW

Written by Sajda Qureshi of Erasmus University, Netherlands. He reviews "Trends in World Communication, on Disempowerment and self-empowerment" by Cees Hamelink, Southbound, Third World Network, Penang. 1994. 168 pp. The countries in the South hemisphere depend on the countries of the North for their economic, political and communication infrastructures. Cees Hamelink traces the effect of this disparity to imbalances in the information flows across the globe. Four trends in world communication: digitization, consolidation, deregulation and globalization are seen to marginalize the individual and the poorer nations particularly those in the South. While Hamelink's observations may be somewhat dismal, he does make several powerful points.