Preface

In an increasingly connected world, ICTs are playing a major role in enabling change. Globalization has altered the landscape of trade, employment, communication and many other areas. Social-development change is no exception to this trend. One of the major challenges facing the world, especially developing countries today is how to take full and smart advantage of quite spectacular and far-reaching advances in science and technology not only in promoting national economic development, but particularly addressing the needs of poor and marginalized sections of society. This effect can be clearly seen in the recent turmoil in the developing countries, in which governments, economies and social mores have changed in ways which have drawn the attention of the world. Because ICT use correlates with many of these developments, and in some cases may cause such changes, understanding the role of ICT in socio-economic development in both developed and developing countries is of great importance.

This Handbook for Research on ICT for Socio-Economic Development discusses and address the role which ICTs are playing in selected, high-impact sectors, such as governance, economic competitiveness, social relationships, and education. It focuses on the required actions needed to enhance the impact of ICT on socio-economic development, in such a way to catalyze positive change in the development challenges. The editors will seek chapters that address different aspects of ICT for Socio-Economic Development (ICT4SED), ranging from the role of ICT in sustainable development, which has been increasingly acknowledged by a variety of stakeholders, including governments, the private sector and civil society, the socio-economic impact of e-services, the role of social media, and the increasing relevance of mobile technologies. Additionally, the handbook will fosters the importance and need of international cooperation for use and promotion of Information and Communication Technologies for socio-economic Development (ICT4SED) trying to bridge the digital divides within countries, regions and the world. Finally, the handbook will provide a platform for sharing experiences and best practices around the world on the ICT for socio-economic development.

This volume brings together a wide range of research on the past, present, and future of the international trend toward the field of Information Technology Integration for Socio-Economic Development (ITi4SED) globally, while providing for further research opportunities in this dynamic field. It is hoped that this text provides the resources necessary for policy makers, technology developers and managers to adopt and implement Information Technology Integration for Socio-Economic Development (ITi4SED). The volume will benefit many groups, not limited to Policy makers, academicians, researchers, advanced-level students, technology developers, and government officials will find this text useful in furthering their research exposure to pertinent topics in Information Technology Integration for Socio-Economic Development (ITi4SED) and assisting in furthering their own research efforts in this field. As a result, this volume contains research in various topics including:
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- ICT and Agricultural Development
- ICT for Socio-Economic Development Adoption
- ICT for Socio-Economic Development Platforms
- Social Networking and Politics
- ICT and Social Networking
- ICT for Sustainable Economic Development
- ICT for Socio-Economic Development in Developing countries
- Barriers to ICT for Socio-Economic Development
- Case Studies on ICT for Socio-Economic Development
- Legal Considerations in ICT for Socio-Economic Development
- Ethical Considerations in ICT for Socio-Economic Development
- ICTs and Industrial Development
- Challenges of ICT for socio-economic development
- Research methods in ICT for socio-economic development
- ICT policy and strategy
- ICT in education
- ICT in healthcare
- ICT in governance
- Mobile technologies for development
- ICT in sustainable development
- Impact of e-Services on Socio-Economic Development
- The role of social media
- ICT in economic competitiveness
- ICT for persons (women, disadvantaged, etc.)
- ICT in social relationships
- ICT for international cooperation

The First chapter written by Prof. Eugenijus Kurilovas, from Vilnius University Institute of Mathematics and Informatics, Vilnius, Lithuania, Vilnius Gediminas Technical University, Lithuania is about Future School: Personalization Plus Intelligence. Prof. Eugenijus Kurilovas is Senior Research Scientist in Vilnius University Institute of Mathematics and Informatics and Associate Professor in Vilnius Gediminas Technical University. He has published about 100 scientific papers, is a member of 35 scientific journals’ and conferences Editorial boards and Programme committees. Dr. E. Kurilovas is honoured TOP 100 Scientist 2014 by International Biographical Centre (IBC), Cambridge, and his biographical records are included in: Who is Who in the World – 2014 (31st Edition) and 2015 (32nd Edition); 2000 Outstanding Intellectuals of the XXIst Century – 2014 (8th Edition); Who is Who in Science and Engineering – 2016-2017 (12th Edition); and Dictionary of International Biography – 2014 (37th Edition) and 2015 (38th Edition) by International Biographical Centre (IBC), Cambridge.

The Second Chapter is authored by Dr.Titus Tossy from Mzumbe University, Tanzania, the founder of Tanzania Institute of Technology and Tanzania Business School is titled Collaborating Partnerships: A Project-Based Legitimizing Strategy amongst East African E-Learning Providers. The chapter examines the phenomenon of e-learning in East Africa. The classic grounded theory methodology was used to carry out the study. Through multiple encounters with 24 e-learning providers, the investigation revealed legitimizing of e-learning projects to be a significant issue for these providers. Developing col-
laborating partnerships was a key strategy used by the providers to legitimize e-learning projects. The study identified two types of collaborating partnerships: Asymmetrical and Reciprocal. These findings are positioned within literature to highlight the contribution that this paper makes to the discourse on e-learning projects in developing countries.

The Third Chapter is on Application of Information Communication Technologies for Agricultural Development through Extension Services: A Review. It is written by Mabe L. K. and O. I. Oladele from the Department of Agricultural Economics and Extension, North-West University Mafikeng Campus, South Africa. This chapter outlines the role that Information Communication Technologies (ICT) play in the global context and in Africa, agricultural extension and Agricultural development. The role of and use of ICT by extension officers, the trends of ICT in agricultural information management, how ICT bridge the digital divide as well as the types of ICT tools used by extension officers such as radio, television, computers and internet. It also gives the perspective about the factors that influence use of ICT by extension officers which are seen as playing an important role human development.

The Fourth chapter titled “A Set of Principles for Doing and Evaluating Classic Grounded Theory Research in Information Systems” was written by the joint efforts of Andy Lowe from Grounded Theory Institute, Mill Valley CA USA and Titus Tossy from Mzumbe University, Tanzania. Grounded theory (GT) is a latent pattern recognition research method discovered by Glaser and Strauss (1967). Due to GTs power and transcendence many research papers across several academic disciplines including Information Systems claimed to have used GT when in fact they have used pseudo GT methods. It is argued in this paper that any other research method which adopts the GT label without following orthodoxy of the authentic GT research method should not be called GT. All of the pseudo GT methods make the false assumption that GT is a sub set of Qualitative Data Analysis. This is a false assumption because authentic GT can use either quantitative or qualitative data and it is a general research methodology and produces empirically grounded but modifiable propositions. Within the Information Systems (IS) research community it is therefore not surprising that many, who claim to use GT, have used different types of pseudo GT. They have adopted vocabulary of the GT without following its original tenets. This paper explains how authentic GT can be carried out in an information systems context by trusting in emergence rather than forcing the data.

The fifth chapter is about Cloud Based Geo-Information: Infrastructure with Big Data Analytics to Support Agriculture Activity Monitoring. It is authored by Shamim Akhter, East West University, Bangladesh. Dr. Md. Shamim Akhter received his Ph.D. in Information Processing from Tokyo Institute of Technology (TokyoTech), M.Sc. in Computer Science and Information Management from Asian Institute of Technology (AIT) and B.Sc. in Computer Science from American International University Bangladesh (AIUB) in 2009, 2005 and 2002 respectively. He joined AIUB as a Lecturer in 2002 and since 2005 he has been an Assistant Professor. He was also a JSPS Post-Doctoral Research Fellow in National Institute of Informatics (NII) from FY 2009-2011, Visiting Researcher in Tokyo Institute of Technology, Japan from FY 2009-2011, Research Associate at the RS and GIS FoS, Asian Institute of Technology, Thailand in 2005 and Global COE Research Assistant from Sep 2007~ Aug 2009 in Tokyo Institute of Technology, Japan. He was awarded “The Excellent Student of The Year, FY2008”, Global COE Program, Photonics Integration-Core Electronics (PICE), Tokyo Institute of Technology, Japan and Magna-Cum Laude for academic excellence from American International University Bangladesh in 2002. His research interests are Artificial Intelligent, Evolutionary Algorithms and Models for their Parallelization, Remote Sensing (RS) and GIS applications, High Performance Computing (HPC), Algorithm and Complexity Analysis,
Wireless Communications and Mobile Computing. He is a senior member of IEEE and member of JARC-Net.

The sixth chapter is titled “Profiling Collaborating Partners in E-Learning in Developing Countries”. It is written by Titus Tossy from Mzumbe University, Tanzania and Prof. Wallace Chigona from University of Cape Town, South Africa. This chapter enlightening the non-existence or existence of e-learning development strategic alliances, which has been sought to solve dual problem, scarcity of resources and increase the certification and recognition of online degrees in developed countries.

The seventh chapter on Before eGovernance and eGovernment, Back to Basics! The Case of the Caribbean was written by Pearson A. Brome, Department of Government, Sociology and Social Work, The University of the West Indies. Dr. Pearson Brome is a lecturer in Political Science and the Programme Coordinator for the MSc. e- Governance for Developing Countries in the Department of Government, Sociology and Social Work at the University of the West Indies, Cave Hill Campus, Bridgetown, Barbados. He has diverse working experience in the Caribbean and served as a Consultant for UNDP, the Commonwealth Secretariat and CSME Unit, CARICOM Secretariat. His research interests include: EGovernance/eGovernment/ eCommerce/ eDemocracy, with particular emphasis on the theoretical approaches and the institutionalization of ICTs; ICTs and the globalisation process focusing on outsourcing, trade, investment and technology transfer flows; the evaluation of national ICT Policies and National Systems of Innovation, the politics of science and technology policy, deregulation and Telecommunications policy, new public management and the restructuring of state bureaucracies, and public policy and its application to public sector management in developing countries.

The eighth chapter is about A Comparative Evaluation of E-Learning Adoption in Private and Public Higher Education Institutions: A Tanzania Survey. Authored by Mpe Paulo Mwamahusi, Tanzania Institute of Technology, Tanzania and Titus Tossy, Mzumbe University, Tanzania. This paper examines e-learning adoption in Higher Education Institutions (HEIs). The paper examines whether there is a difference between the Private and public HEIs e-learning adoption. The rationale for the examination stands from the fact that scholars are of option that there is different between private and public HEIs e-learning adoption. From an empirical survey conducted in Tanzania, this paper evaluates both staffs and students on the current situations, factors affecting, similarities and differences of e-learning adoption between private and public HEIs.

The ninth chapter is titled “The Impact of Web 2.0 on E-Commerce Adoption and Use by Tourism Businesses – Can SMMEs Play the Trick? A Case of the Eastern Cape Province” by Pardon Blessings Maoneke and Naomi Isabirye from University of Fort Hare, South Africa. This chapter proposes a framework that shows challenges and incentives (critical success factors) of e-Commerce, identifies e-Commerce platforms tourism SMMEs should adopt in order to maximise benefits and outlines what tourism SMMEs should expect from their e-Commerce platforms.

The tenth chapter presents new theory in e-learning, the theory of Cultivating Recognition: A Classic Grounded Theory of E-Learning Providers Working in East Africa by Titus Tossy from Mzumbe University and Prof Irwin Brown from University Of Capetown, South Africa. The E-learning provision in East Africa including Tanzania, Kenya and Uganda is rapid gaining its way. E-learning providers are all groups tasked with e-learning activities including design, delivery, implementation and others. The e-learning providers are surrounded by issues and challenges (main concerns). The purpose of this study was to identify and examine the main concern amongst e-learning providers in East Africa (Tanzania, Kenya and Uganda). In this study the Classic Grounded Theory Research Methodology was used in order to identify the main concern of e-learning providers. In the course of repeated encounters
with e-learning providers, this study found the concept of Cultivating Recognition to emerge as the main concern or core variable amongst these e-learning providers. The core variable within the Classic Grounded Theory research methodology is the main entity that accounts for most of the variation in the data. The core variable of the theory, the basic social psychological process of Cultivating Recognition is characterized by Legitimizing and Credentializing. The process of legitimizing involves convincing the e-learning stakeholders that the e-learning programs and projects will be delivered in a timely, valid and sustainable manner. Legitimizing process is achieved through Collaborating [reciprocal and asymmetric], Referral Networking and Strategic alliancing. Credentializing aims to enhance the stakeholders’ belief in the e-learning providers’ competence prior to the provision of the e-learning programs and projects. While Credentializing is achieved through Endorsementizing, Result Orienting and Prioritizing Duties, Result Orienting itself is achieved through Visualizing, Professionalizing, Focalizing and Role Delineating. This study will help e-learning providers and other groups to cultivate recognition and pave a way for their success in implementation of e-learning.

The eleventh chapter on Assessment of Contribution of ICT for Sustainable Livelihood in Kilosa District by Shirima, C. and Prof. Camilius Sanga from Sokone University of Agriculture, Tanzania. The purpose of this study was to assess the contribution of ICT for sustainable livelihood in Kilosa district.

The twelfth chapter titled “Doing Classic Grounded Theory Research in Information Systems: Trust in Emergence” by Titus Tossy from Tanzania, Prof. Irwin Brown from University of Cape Town, South Africa and Prof. Andy Lowe from Grounded Theory Institute, USA. Following publication of the original grounded theory by Glaser & Strauss (1967), Glaser (1978) went on to explain in detail how to operationalize the GT method. Despite this, some researchers mistakenly continued to classify GT as a subset of the qualitative data analysis research methodology. In doing so, they reveal that they have misunderstood both the purpose of GT and how to use it correctly. In this paper the author will concentrate on the authentic approach to GT, which is termed “Classic Ground Theory” (CGT), so as to differentiate it from any misconceived remodelled version of the theory. This paper explains how CGT can be carried out in an IS context by trusting in the emergence from the data of the required information, rather than forcing it.

The thirteenth chapter is about Information and Communication Technologies (ICTs) for Industrial Development: Challenges and Opportunities.” Written by Dr. Felichesmi Celestine Lyakurwa and Dr. Joseph Sungau from Mzumbe University, Tanzania. Both authors are lecturers at Mzumbe University.

The fourteenth chapter is about Technology Access and Research Prolificity: An Econometric Analysis by Pearson A. Brome. Modern information and communication technologies enable research collaborations that were not conceivable a mere decade ago. Moreover, the diffusion of extant technologies (such as broadband, and cellular communication devices) more fully in both developing and developed nations has afforded more people access to key communications technologies, creating ever increasing networks and communities of researchers and collaborators. The current study seeks to more fully explicate the relationship between technology access, diffusion and research output. The study shall consider the impact of telecommunications tele-density, Broadband penetration, Computer access and ICT investment on research output and patent submissions. Both static and dynamic estimations are conducted, employing the Arellano & Bover systems estimator method. The findings suggest that telecommunications tele-density and ICT investment are key determinants of academic research output. They are however not significant determinants of patent submissions. These findings are robust for both static and dynamic estimations.
SUMMARY

This volume will be used as a platform in the establishment of international conference on ICT integration for socio-economic development to be help every year. We hope readers will be part of the coming conference too. There are so many important issues attached to this subject, many explored by scholarly contributions in this volume, dealing both with pragmatic implementation and with conceptual design, that they cannot be enumerated here. What is certain, however, is something close to the heart of and bringing a smile to the lips of every academic: more research is needed! Toward this end, this volume seeks to make a small contribution.

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