In recent years, the field of Library and Information Science (LIS) has been rapidly expanding in the non-Western world to meet the increasing demands for information among users in these developing regions. The role of information provision in economic and social development is often overlooked, yet access to high quality information is an important facilitator of progress, supporting the work of governments, industry, the education sector, and all other areas of activity within developing societies.

This is especially important in the current economic climate: according to a recent United Nations report, the global economy continues to struggle some four years after the financial crisis, and the outlook for the foreseeable future is not encouraging. Developing countries have not been directly affected as severely as the Western world by the crisis, but the knock-on effects of the global problems are severely hindering economic and social progress in many of these countries, reducing the speed of poverty reduction, and severely constraining much needed investments in health, education, and other critical areas (UN, 2013).

Though there are wide variations in levels of social and economic development in the non-Western world, most developing countries have relatively low levels of education and literacy, high unemployment rates, and often an over-reliance on a small number of main economic sectors. It has recently been reported that among developing countries as a whole, 200 million people aged 15 to 24 have not even completed primary school education and the youth unemployment rate is as high as 1 in 8 (UNESCO, 2012).

In these countries, Library and Information Science (LIS) can potentially make a significant contribution to economic growth, poverty alleviation, improving literacy and education levels, and reducing inequalities by providing governments, businesses, and the general population with the information resources they need and helping to ensure they have the ability to understand and apply it in their work or daily lives. Information is important to help ensure that activities, policies, and resource allocation are well-informed by evidence about what works in practice, and to generate human capital in the form of skilled and educated people able to contribute to the development of their countries.

However, the LIS profession in the non-Western world is itself struggling with challenges that must be overcome if it is able to effectively fulfill this central role of supporting economic and social development. For one thing, the problems of severely limited financial resources and weak technological infrastructure hinder the development of LIS products and services in many developing countries. These are longstanding problems; however, there are now also heavy demands on the LIS profession to adapt to a rapidly changing information environment in which digital resources are largely replacing physi-
cal information materials and the Internet and Web 2.0 technologies are becoming the main tools of information seekers. Libraries in developing countries are well behind their counterparts in the Western world in this trend: by 2005 it was already being reported that up to 70% of information in developed countries had been converted to digital format compared with only around 2.5% in some developing countries such as India, with the lag being attributed to problems such as limited funding, low literacy levels which have reduced the demand for digital resources, and a lack of skilled library personnel who could lead digitization initiatives (Kaur & Singh, 2005).

The new information environment offers significant opportunities for improving information access to information within developing country populations, but also imposes extensive new demands on the LIS profession. For example, there is a pressing need to develop new types of skills and knowledge, such as IT and information security skills, as well as the ability to evaluate the quality of online resources and educate users to navigate the Internet effectively and determine which sources of information are most reliable. Addressing these is difficult when resources remain severely limited, yet it is important to do so to serve the expanding needs of library users in these countries and ensure that socio-economic progress is supported by high quality information which can be readily accessed.

To exacerbate the difficulties facing the LIS profession in developing countries, however, research-based knowledge about the information needs and seeking behaviors of library users in the non-Western world is very limited, and the applicability of formal theories and models of information seeking in this setting is largely unknown. The academic field of LIS is grounded in a series of models and theories (Ellis, 1989; 1991; Kuhlthau, 1991; Dervlin, 1992; Wilson, 1996) which were almost exclusively based on the experiences of information seekers in English-speaking developed countries, and reflect their cultures and ways of thinking and behaving. These do not necessarily apply in the same way to library users in the developing world, where cultures, thought patterns, and behaviors are often very different.

What this means in practice is that, unlike many of their counterparts in the developed world, LIS specialists in developing countries often lack a robust evidence base for use in designing products and services targeted to the needs of users, and face difficulties in determining how to prioritize their already limited resources to maximize their value and return on investment.

This is the context in which the need for this book has become increasingly evident. As a small body of research on information seeking in developing countries gradually emerges, it is becoming clear that LIS specialists across the non-Western world face similar challenges and opportunities, which to some extent at least are unique to the developing country context. Until now, however, there has been little attempt to bring together research and theoretical perspectives relating to the needs and behaviors of information seekers in developing countries, and the ways in which the LIS profession in these countries is adapting to the changing information environment. This ground-breaking book, based on the contributions of experts and specialists in LIS and related fields from around the globe, addresses these information gaps and the types of questions and issues that are pertinent to an understanding of the role of LIS in socio-economic development.

Collectively, the chapters provide a comprehensive overview of key issues relating to information seeking in developing countries and the challenges that the LIS profession needs to address in order to play an effective role in facilitating and supporting socio-economic development. They also provide extensive research-based information on current patterns of information seeking among various groups
in developing countries, as well as examples of best practice in LIS within these countries and proposed theoretical approaches and models to help support the transformation of LIS in the developing country context as it adapts to the new information environment.

The wealth of information and wide variety of perspectives presented in this book mean that it is likely to appeal to diverse audiences, as well as becoming a key source of reference for years to come. The book will provide readers with an enhanced understanding of information needs and information seeking behavior in the developing regions of the world and the challenges and opportunities facing the LIS profession in this context, as well as practical information and guidance to help inform the design and delivery of library and information services.

The primary target audiences for the book are those working or studying within the field of Library and Information Science (LIS) in developing countries, including LIS academics and researchers, heads of university departments and faculties, LIS students, and library and information service managers. More generally, the book helps to fill a significant gap in the literature relating to LIS in developing countries, and as such is likely to appeal to the international community of LIS academics and practitioners wishing to broaden their understanding and knowledge of user needs and seeking behavior, especially now that many LIS products and services are delivered via the Internet across international boundaries.

The book is also likely to be of interest and relevance to prospective funders as well as commercial providers of LIS facilities, products and services, providing useful background information to help support resource allocation and product design.

The book contains 14 chapters, each covering a different issue or perspective relating to the information needs and information seeking behavior of users in developing countries, or discussing the challenges being faced by LIS specialists in these countries and how they are being addressed. A variety of developing countries and regions are the focus of different chapters of the book, specifically the Arab Gulf states, various African countries, Venezuela, Uruguay, Mongolia, and Romania. Some chapters focus on the issues and challenges faced by the LIS community in developing countries more generally. To provide a little more information and help guide readers to the parts of the book in which they have the most interest, the chapter content is summarized here.

In the first chapter of the book, Mohammed Nasser Al-Suqri examines the changing nature of the information environment and its implications for Library and Information Science (LIS), focusing on developing countries in general and the Arab Gulf states in particular. Drawing on key findings from a review of LIS literature, the author considers in this chapter what is needed to ensure the future viability of the profession in the GCC region so that it can help underpin social and economic development in these states. Examples of successful practice in LIS innovation from other parts of the developing world are included to demonstrate some possible approaches, and the chapter concludes with a summary of key points for consideration by LIS education specialists, library managers, and policymakers in the Gulf States.

Next, Collence Takaingenhamo Chisita and Ismail Abdullahi look at the ways in which LIS schools in developing countries can contribute towards promoting the integration of culture, tradition, and technology to support socio-economic development. In Chapter 2 of the book, they examine the extent to which culture and technology have an influence in the integration of technology in socio-economic development in Africa, as well as exploring how technology influences culture and traditions in developed countries and the degree to which culture and traditions are receptive to the integration of technology within the socio-economic fabric of society. Since the development of any society is hinged upon the effective and efficient utilization of information and knowledge, the chapter examines the extent to which the LIS
Curriculum addresses issues relating to the integration of technology and how this integration affects education and training, research, and development. Abdullahi and Chisita highlight how LIS schools in developing countries are grappling with issues relating to the integration of culture, tradition, and technology, and examine their readiness to do so, focusing in particular on the merits and demerits of integrating technology in Africa.

Africa remains the focus in Chapter 3, which examines the influence of social networking and Library 2.0 in providing access to information and knowledge sharing in this continent. Manir Abdullahi Kamba examines the transition from a traditional to an electronic information environment and highlights the ways in which these technologies provide libraries and information centers with new opportunities for sharing information and knowledge among people regardless of distance or geographical location. The chapter highlights the importance of access to information and knowledge sharing in Africa’s socio-economic development and stresses the importance of managing this effectively to benefit all, while observing that as in other developing regions, it takes time for the changes to be fully integrated into systems. Kamba argues that the developments will help strengthen and empower the African people to be global players in the knowledge-based economy and provide opportunities for their development more generally.

The non-availability of research materials in their own language is one of the problems facing many information seekers in developing countries. In many academic fields including the social sciences, the vast majority of research has been published only in English, often presenting difficulties for scholars in non-English speaking countries. Now, technology is providing opportunities to retrieve information resources in different languages, as discussed in Chapter 4 by YooJin Ha. Drawing on a review of relevant literature, this author observes that there has been an enormous increase in demand for information written in different languages by library users from various backgrounds and disciplines, especially in developing countries. She proposes a research design to examine multilingual information users’ information behaviors when using a Cross Language Information Retrieval (CLIR) system, using as a theoretical framework Kuhlthau’s Information Search Process (ISP) model. Development of a CLIR is argued to be essential to enable users to access information in their languages of choice; for example, when this is different to the language of their original query or when users wish to retrieve additional information written in a second and/or third language or one which they cannot understand. YooJin Ha concludes that the research presented in this chapter is expected to yield a revised or new ISP model applicable to CLIR environments, provide increased understanding of CLIR users, and inform CLIR system design.

Information seeking behavior in developing countries may be influenced or constrained by factors unique to the developing country environment in which it takes place, which must be identified and understood so that initiatives and measures can be adopted to improve the effectiveness of information seeking. For example, the types of factors influencing information seeking in developing countries may include levels of literacy and education, available technology, restrictions on data access imposed by governments, or cultural traits. However, as Rebecca L. Miller notes in Chapter 5, most current models of information seeking behavior (ISB) do not explicitly address the effects of the environmental context on ISB. She observes that, though Wilson (1996) identified several intervening variables in information seeking, even these have not been systematically considered since the formulation of his model. In this chapter, Miller proposes the use of the Katz, Levin, and Hamilton (1963) model of diffusion of innovations to provide a framework for examining the various elements of an environmental context. The proposed new model provides, in particular, the means to account for the cultural, social, communicative, and actor components of ISB. The model is described and its use as a supplementary analytic framework in ISB is examined, paying particular attention to its potential use in LIS research in developing nations.
Chapter 6 continues the focus on models of information seeking and their applicability to library users in developing countries, in this case within South America. Ellis’ (1987; 1989) six-stage model of information-seeking is one of the main conceptual models underpinning the international field of Library and Information Science and still forms the framework for much research in this area. In this chapter of the book, Simon Aristeguieta-Trillos presents the findings of a qualitative research study which explored the applicability of the Ellis Model of Information Seeking Behavior to the scientific community of Venezuela. The research investigated the main information seeking activities of this peripheral country scientific community in the context of dependency theory, and generated evidence for the applicability of the starting, browsing, chaining, filtering, extracting, and information management elements of Ellis’ model in this setting. This provides at least some evidence that established models of information-seeking can be useful to LIS professionals in the developing world, at least as a general framework within which environmental factors can be considered.

The following chapter has a more practical focus, but is also based on empirical research with scholars in South America. Martha Sabelli et al. present the findings of a multidisciplinary study which examined the needs and behaviors of real and potential information users in Uruguay. The research was conducted for the purpose of developing electronic information resources to promote the social inclusion of vulnerable communities in Uruguay, and was carried out in a university context to address social issues as well as to find solutions appropriate to the Uruguayan context. The authors discuss their multidisciplinary research methods and the study results, as well as the electronic information resources developed, and their impact on the target population and social mediators. The findings are likely to be of particular interest to LIS practitioners in developing countries as they digitize their library collections and develop electronic tools and resources for the purpose of improving information access, especially among disadvantaged populations.

Continuing on a similar theme, Stephen Asunka explores in Chapter 8 the importance of digitization as a means of improving access to Indigenous Intellectual Resources in Sub-Saharan Africa. In today’s knowledge and technology driven society, he observes, most scholarly information is increasingly being produced and distributed in digital formats. Yet, in Sub-Saharan Africa, academic libraries have been very slow at joining this digital movement, and hence stand the risk of losing their relevance, particularly with regard to locally generated intellectual material. As a contribution to efforts being made towards the reinvention of these libraries so they can better meet the knowledge and information seeking needs of their patrons, this article first discusses the challenges that these libraries have to contend with, and prescribes some workable strategies that librarians, information scientists, and other stakeholders within the sub-continent can adopt to overcome these barriers. Such strategies, it is argued, mostly involve appropriately leveraging the existing Information and Communication Technology (ICT) tools and resources to make library resources more accessible, and also working towards a better understanding of user needs and information seeking habits so they can be better served.

Entrepreneurs in small to medium sized enterprises (SMEs) are the focus of a chapter by Dr. Linda Lillard, which is based on a review of relevant literature conducted for the purpose of comparing the information needs and information seeking behavior of these entrepreneurs in developing and developed countries. Entrepreneurial spirit is observed to be an important stimulus to economic development stimulus, with SMEs employing 22% of the adult population in developing countries and having a significant job creation capacity, yet the author notes that this is one of the least studied economic and social phenomena. Entrepreneurship in developing countries is found to be distinctive from that practiced in developed countries, and the chapter offers valuable recommendations for meeting the information
needs of this population, as well as more general information for use in designing information packages and information services to benefit entrepreneurs globally. Given the important role of entrepreneurs in economic development, it is especially important for the LIS community in developing countries to understand and address the information needs of this group, as well as raising awareness among entrepreneurs of the products and services available through libraries that are relevant to their work and can help drive business growth.

Chapter 10 has a more general focus, and returns to the problem of the limited research available on the information-seeking behavior and information needs of library users in developing countries. In this chapter, Lisa Block notes that since information users in developing countries face different types of challenges to users in developed nations, it is essential to understand the various obstacles that must be overcome by library and information users in developing nations. In order to address this research need, Block reports on a study which examined the information-seeking behavior of social science faculty in developing nations, in an attempt to explain the barriers to information access for this specialist group. In the chapter, patterns of information-seeking behavior among social science faculty are examined and comparisons made with the information-seeking behaviors and information use of social science faculty in developed nations, and also with existing and proposed models of information-seeking behavior.

Shifting the focus to Asia in Chapter 11, Scheiding, Yadamsuren, and Lkhagva examine information seeking behavior in Mongolian scholarly communities. The inadequacy of information resources and limited access to scholarly research, often experienced by researchers in developing countries, was found to be a particular problem in Mongolia. However, the researchers note that while much of the existing LIS research in developing countries has focused on whether access to information should be donated or provided free of charge without restriction, in Mongolia the most important issues are whether the scholarly communication system meets researcher needs, is adapted to constraints within the country, and reduces communication dependency. Using survey data, usage statistics, and interviews with researchers, librarians, and research administrators, the authors examine the information seeking behavior of scholars in Mongolia and how this behavior intersects with the resources made available by research administrators and librarians. They conclude that the current system is not meeting researcher needs and that the country is currently dependent on scholarly communication products provided by outsiders.

Within developing countries, there are many sub-groups within the population with different information seeking needs and behaviors, and it is important to ensure that LIS products and services are effectively tailored to these different groups. Addressing this issue, chapter 12 of the book focuses on a specific group of library users in Romania: older adults. Nyce, Bader, and Klimaszewski examine the experiences among this group of using computers and the Internet in the context of the Biblionet-Global Libraries Romania project, which provides computers to public libraries throughout the country. One of Biblionet’s first public access computer centers located outside of a public library opened at a pensioners’ club in the city of Zalau, and Local librarians who had taken Biblionet-sponsored “train the trainer” courses adapted instructional methods for older users. The authors report on their ethnographic research at the pensioners’ club uncovered a variety of experiences around new technology, especially in relation to how computer use is informed by and extended kin or family work. The project is discussed in the context of NGO-led development initiatives to illustrate the importance of including the wider ICT development landscape when studying users, ICTs, and information use.

In chapter 13, Mohammed Nasser Al-Suqri draws on a review of literature to examine contextual factors influencing information seeking behavior of social scientists and explores the impact of disciplinary traditions in non-western environments on patterns of information seeking and retrieval. Research
traditions and publication patterns and formats and their impacts on the information seeking behaviors of social science scholars in developing countries are explored in the chapter. Existing literature is reviewed to examine the impact of contextual factors on information seeking by social science scholars and other categories of researchers. The author concludes on the basis of his literature review that there is substantial evidence from previous research to demonstrate the importance of contextual factors in influencing the information-seeking behavior of social scientists, which are relevant to the development of LIS in developing countries. While some of these factors are related to the nature of social science as a domain of study, others are specifically related to the developing country environment, including constraints on the availability of particular types of information.

As noted earlier, LIS practitioners in developing countries are under pressure to keep up with changes in the information environment in order to serve their users effectively, but often face constraints on the ability to do so due to the nature of the developing country environment. In chapter 14, Naifa Eid Saleem presents the findings of a descriptive study which investigated the information needs and information-seeking behavior of undergraduate students at Sultan Qaboos University in Oman, an example of a developing country. The study was designed to explore how undergraduate students define their needs and seek for the required information; identify the role of faculty members and librarians in assisting undergraduate students to attain search skills; and discover the differences in information-seeking behavior by factors such as age, gender, academic year, and college. Results of the study indicated that only 3% of undergraduates use the electronic services and databases subscribed to by the SQU libraries. The study also found a statistical difference between undergraduate students in terms of their age and the use of e-resources, indicating that as students mature, their use of e-resources increases. In addition, the results showed that 57.7% of the undergraduate students at SQU use a Google search engine for their initial search. The study also found that the role of faculty members and librarians in assisting undergraduates to learn search strategies is almost absent.

As observed by many of the authors in this volume, relatively little has been published in the past about the information needs and seeking behaviors in developing countries. This is a major problem for the ongoing development of Library and Information Science (LIS) in the non-Western world, since the profession lacks a robust evidence base for the development of products and services to meet user needs. Moreover, there has been a pressing need for research into the challenges and opportunities offered by the new digital, Internet, and social media-based information environment within the developing country context, to enhance understanding of how the LIS community needs to adapt to this environment, and to provide examples of the best practice that can be adopted. This is essential so that the community can effectively fulfill its increasingly important role of providing good access to up-to-date, accurate information to underpin all areas of social and economic development.

This book represents a major step forward in helping to address these issues and information gaps and provides a diverse range of research-based evidence, theoretical contributions, and practical recommendations likely to be of value to LIS practitioners, academic researchers, students, and other groups. More generally, the book represents a significant contribution to the evolving body of knowledge and theory about information seeking behavior and information needs, which has in the past been dominated by research conducted in the Western, developed world. This will help the worldwide LIS community play an increasingly central role in the information-focused global economy. The book also provides practical guidance and information to inform the design and delivery of LIS academic program curricula
as well as LIS products and services. We are sure that it will be a welcome addition to the LIS literature, thanks to the many eminent, knowledgeable, and highly skilled individuals who have taken the time to contribute their work to the volume.

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