Preface

INTRODUCTION

The revolution brought by Information and Communication Technology has led to an increase in the establishment of Digital libraries (DL) around the world. Consequently, the ways and manners of information seeking by users has changed. Users of information services are now faced with highly decentralized, heterogeneous document sources. From the user point of view, document and data structures in Digital Libraries offer a broad variety of new searching and browsing possibilities. In order to guide the user during the search, there is need to familiarize users with the idea of high-level search activities for successful searching and information seeking in digital libraries. In addition to providing information on the low-level functions offered by typical DL systems, strategic support is an important means of tactics and stratagems.

A great deal of information is needed for the Digital Libraries’ users to create more awareness on how to research for and gather information in the context of the so-called digital libraries. The idea behind these efforts is to combine different information sources to solve the problem of finding useful information in the borderless world of the internet.

The book ‘information seeking behavior in the digital libraries’ discusses and addresses the difficulties and challenges that users have faced when sourcing and seeking information through the digital libraries. The book address different aspects of information seeking in digital libraries, ranging from searching through various digital library databases, different types of information seeking behavior in the digital libraries context, the digital libraries and the barrier to information seeking behavior, relation between human computer interaction and seeking information in the digital libraries and other related topics. Additionally, the book explores the impact of seeking information through the digital libraries on the users.

Undoubtedly, this book is expected to appeal to information professionals and researchers working in the fields of library and information science, knowledge management, information management, communication science, social sciences, and information technology, especially, those who specialised in digitization, automation of libraries, electronic/digital resources. At the same time, the book provides insight and support practitioners and experts concerned with the organization, management of knowledge, and information in digital environment.

There are fifteen major chapters in the book. These chapters detailed the contents represented in the book and more importantly, they appeal to readers to read along and enjoy the piece.

The book kick-starts it discussion on a chapter that examines information seeking behaviour in the digital libraries context. The chapter emphasized that the volume of information has grown enormously and the variety of information, sources and format of presentation have increased; the speed of infor-
mation flow has increased; times and places to experience communication media have expanded; the number of information perspectives and points of view has exploded; and the people’s interest in and expectation of the availability of information have grown. The chapter also points out that the information users have also changed and now exhibit remarkably unique information seeking behaviour. They basically want synthesised information with the least effort, they are intolerant to any forms of delay and get bored very fast.

The following chapter addresses the issue of information-seeking behaviour of users in the digital libraries’ environment in Sub-Saharan Africa. Information-seeking behaviour may be shaped by the environment in which users seek information. A digital library is still relatively new in Sub-Saharan Africa and there is not much known about how the digital library environment may shape the information-seeking behaviour and/or information needs of users. The chapter also discusses what a library is, the services provided by libraries, and the differences between a traditional library and a digital library. The chapter discusses the extent to which low levels of digital literacy in sub-Saharan Africa may also be responsible for shaping information-seeking behaviour of users in a digital library environment. The chapter concludes that the major differences between the two types of libraries are mainly technology, rather than a fundamental change in the way libraries operate.

The third chapter examines the legal challenges librarians managing university libraries in Kenya experience when providing information services in support of distance learning. Kenya is experiencing enormous socio-economic changes. These changes have exerted serious pressure on higher education resulting to phenomenal expansion of university education. Unfortunately, the demand for university education has not translated into infrastructural expansion of universities. While university intake continues to grow at an alarming rate, funding for universities including libraries continue to diminish. An option taken by many universities to meet increased demand for higher education has been to invest in distance education. This option has its own challenges. Distance learning like residential programmes, require adequate financial investment in print and electronic information resources; and ICT infrastructure. Since libraries in Kenya are underfunded, they are compelled to reproduce the scarce materials available with them to serve distant learners as opposed to acquiring additional materials. The book emphasized that this arrangement has equally serious challenges. Top on the list is copyright infringement. Without adequate exceptions and limitations to copyright restrictions, university authorities and librarians are likely to be charged for infringement.

The next chapter points out that libraries have a strong role to play in promoting culture and knowledge as intermediaries between creators and readers. In the analogical world, such usages didn’t have relevant effects on the normal exploitation of copyrighted works. However, digitisation had a strong effect on right holders’ interests by facilitating and democratizing access to works, considering that libraries may reproduce them and promote their online accessibility. Litigation regarding the referred actions has dramatically increased in the last years as they may stress the normal exploitation of copyrighted works and the exclusive rights of reproduction and of distribution. Based on the European Union’s legislation and jurisprudence, the chapter analyses the lawfulness of public libraries digitisation of books from their collection in order to make them available to users without the right holder’s consent, confronting them with the exclusive right of reproduction and the making available right.

The chapter that follows points out that a variety of information-seeking models used by library and information science (LIS) academics investigate the manner in which information is sought and transformed into knowledge, which should be taken into account during the design of digital libraries. However, in part, this reflects the lack of knowledge about how these models explain user information seeking be-
behaviors in a digital library environment. On that note, the chapter addresses the lack of knowledge, and presents a set of information-seeking models that can be used by LIS scholars or experts to comprehend the dynamics of information seeking by users of digital libraries. The chapter also provides a review of the existing “models” to date, and also presents a comparative analysis of the notable models that may contribute to understanding the research on information seeking in digital libraries.

Next to this is the chapter that examined digital libraries and copyright issues. It considered several issues such as the meaning of digital libraries, the characteristics, functions, digital scholarship services, copyright and the materials that can be and cannot be copyrighted, fair use of library materials, reservation for general use, access to electronic copies, guidelines for fair use in the digital libraries, library reproduction and re-distribution and inter-library loan. The chapter concludes that, reading through this chapter, undergraduates, academics and other library users will have a good understanding of what the digital libraries are and copyright issues all of which are considered very important and germane as we approach paperless society.

The chapter that follows presents a study conducted on literature related to information seeking behaviour available on the World Wide Web. The outcome of searching the World Wide Web using Google Scholar were analysed to present the growth of publications; collaboration pattern of authors; most contributing authors; type of publications in which information scientists preferred to publish their works; highly preferred journals in which information seeking behaviour related works are published; and the impact of information seeking behaviour related literature.

Following this is the chapter that presents a literature review on indexing and abstracting, information retrieval process in digital libraries pointing out the importance of indexing and abstracting in the information retrieving process and then highlighting the roles played by indexing and abstracting as tools for information retrieval in digital libraries. The chapter posits that indexing and abstracting plays a significant role as information retrieval tools in digital libraries.

The next chapter considers the importance of demographic and socio-economic factors as well as cognitive skills to information seeking in a digital library environment. Demographic factors such as age and gender were considered. Younger adults were found to respond positively to the demands of information seeking in the digital environment while their older counterparts are still struggling to come to terms with the changes. Based on the findings of in the study, the chapter recommends that for persons who are adjudged to be the older generation, it is imperative for that they acquire requisite ICT skills that will make it easier for them to navigate the digital environment. There is also a clarion call on African leaders to provide infrastructures that will enable ICT to thrive as the digital environment is fast replacing the hitherto traditional one.

The following chapter entrenches trade unionists information needs in terms of capacity building towards organizational productivity as well as the information seeking behavior using digital sources. The chapter through literature review identifies the challenges of meeting up with the needs and management of information by Information Resource Centre of Michael Imoudu National Institute for Labour Studies’ (MINILS) in the era of digital divide.

The next chapter examines usability of digital library resources in Francis Sulemanu Idachaba Library University of Agriculture Makurdi, Nigeria. The population for the study comprised of the entire library staff of the Francis Sulemanu Idachaba Library University of Agriculture Makurdi. The chapter identifies criteria used for the selection of digitized library resources while there are challenges associated with the process of digitization of library resources of Francis Sulemanu Idachaba Library of University of Agriculture Makurdi. The chapter concludes that latest advancement in the field of
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information technology have compelled libraries to embrace automation because the facilities provided by automated libraries go far beyond the activities of traditional libraries. The chapter recommends that the library management should provide effective solution to the problems faced in the digitization unit by purchasing more equipment for the services such as digital camera, Photoshop software, a standby generating set, standardization on the supplied paper size and CD-ROMs, upgrading of the systems in other to meet the needs of modern day’s technologies.

The chapter that follows presents the report of a study that examined information needs and seeking behavior of farmers in Ladubia community, Kwara State, Nigeria. This study adopted a survey research design using simple random sampling technique to select 28 respondents from the population. Structured questionnaire was designed for the collection of data. It was discovered from the findings that majority of the farmers were illiterate of the middle aged group between 31-40. The chapter reveals the agricultural information needs of the farmers in this study to includes how to prevent diseases for their crops on the farm and after harvesting, information on how to seek for loan, where to get the best market to sell their farm produce and how to get the best agro-chemical for effective use. The chapter recommends that the farmers should be given effective adult education, provision of information centre with necessary personnel and information media to boost information accessibility.

Next in the series of chapter featured in the book is the one that examines the role of social networking for information seeking in a digital library environment; while the next chapter examines the barriers to Information Seeking in the Digital Libraries. The one that preceed these focuses on information overload and copyright infringements: A critical appraisal of postgraduate students’ attitude and use of intellectual contents.

The concluding chapter of the book points out that during the decade of 1990s the term digital libraries become a recognized phrase for describing libraries that offer access to digital information by using a variety of networks, including internet and world wide web. It’s also emphasized that digital libraries provide remote access to the contents and the services of the libraries and other information sources combining an onsite collection of current and heavily used materials in both print and electronic form with an electronic networks which provide access to and delivery for worldwide libraries and commercial information and knowledge sources. In the light of these therefore, this chapter discussed digital libraries as information superhighway looking at issues like factors responsible for the emergence of digital libraries, influence internet on digital libraries, etc.

ORGANIZATION OF THE BOOK

Chapter 1: Information Seeking Behaviour in Digital Library Contexts, by Tom Kwanya

The environment in which library services are currently offered has changed drastically. The volume of information has grown enormously; the variety of information, its sources and format of presentation have increased; the speed of information flow has increased; times and places to experience communication media have expanded; the number of information perspectives and points of view has exploded; and the people’s interest in and expectation of the availability of information have grown. The information users have also changed and now exhibit remarkably unique information seeking behaviour. They basically want synthesised information with the least effort. They are intolerant to any forms of delay and get bored very fast. Librarians must understand the emerging information seeking behaviour and
the resultant expectations to be able to satisfy the users’ information needs closely. As they do so, they must acknowledge that the uptake of traditional services has dropped drastically and that it is much easier to follow the library users into their digital echo chambers than try to attract them back to the conventional library spaces.


This chapter addresses the issue of information-seeking behaviour of users in the digital libraries' environment in sub-Saharan Africa. Information-seeking behaviour may be shaped by the environment in which users seek information. A digital library is still relatively new in sub-Saharan Africa and there is not much known about how the digital library environment may shape the information-seeking behaviour and/or information needs of users. The chapter explores the concept of digital libraries and the nature of the collections and services of digital libraries in comparison to traditional libraries. The chapter also discusses what a library is, the services provided by libraries, and the differences between a traditional library and a digital library. Covered in the chapter also is a brief history of digital libraries. Digital literacy as a factor which may shape the information-seeking behaviour of users in a digital library environment is also discussed in the chapter. Information literacy has changed drastically. The digital information literacy that may play a role in socio-economic development in sub-Saharan Africa is no longer the literacy defined as the ability to read and write at a basic level and sign a document. As society is moving from information age to digital age, new definitions of digital information literacy are evolving which include how to access information in digital formats, and how to evaluate information and use it appropriately. Digital information literacy forms the basis for lifelong learning and is common to all disciplines, to all learning environments and to all levels of education. In sub-Saharan Africa, levels of digital information literacy are low due to numerous factors which are also explored in this chapter. Development of digital information literacy in sub-Saharan Africa has been slow compared to the development of information and communication technologies in the region. The chapter discusses the extent to which low levels of digital literacy in sub-Saharan Africa may also be responsible for shaping information-seeking behaviour of users in a digital library environment. The chapter concludes that the major differences between the two types of libraries are mainly to do with technology, rather than a fundamental change in the way libraries operate. This is because digital libraries are still libraries which largely share the same objectives and purposes of the traditional libraries.

Chapter 3: Legal Considerations of Providing Information in Support of Distance Learning By Digital Libraries in Universities in Kenya, by Japhet Otike

The chapter examines the legal challenges librarians managing university libraries in Kenya experience when providing information services in support of distance learning. Kenya is experiencing enormous socio-economic changes. These changes have exerted serious pressure on higher education resulting to phenomenal expansion of university education. Unfortunately, the demand for university education has not translated into infrastructural expansion of universities. While university intake continues to grow at an alarming rate, funding for universities including libraries continue to diminish. An option taken by many universities to meet increased demand for higher education has been to invest in distance education. This option has its own challenges. Distance learning like residential programmes, require adequate
financial investment in print and electronic information resources; and ICT infrastructure. Since libraries in Kenya are underfunded, they are compelled to reproduce the scarce materials available with them to serve distant learners as opposed to acquiring additional materials. This arrangement has equally serious challenges. Top on the list is copyright infringement. Without adequate exceptions and limitations to copyright restrictions, university authorities and librarians are likely to be charged for infringement.

Chapter 4: Copyright Issues in the Context of the Digital Library, by Pedro Pina

Libraries have a strong role on promoting culture and knowledge as intermediaries between creators and readers. In the analogical world, such usages didn’t have relevant effects on the normal exploitation of copyrighted works. However, digitisation had a strong effect on right holders’ interests by facilitating and democratizing access to works, considering that libraries may reproduce them and promote their online accessibility. Litigation regarding the referred actions has dramatically increased in the last years as they may stress the normal exploitation of copyrighted works and the exclusive rights of reproduction and of distributing. Based on the European Union’s legislation and jurisprudence, the present chapter analyses the lawfulness of public libraries digitisation of books from their collection in order to make them available to users without the right holder’s consent, confronting them with the exclusive right of reproduction and the making available right.

Chapter 5: Researching Information Seeking in Digital Libraries through Information-Seeking Models, by Zeinab Zaremohzzabieh, Seyedali Ahrari, Bahaman Abu Samah, and Jusang Bolong

There has been an increasing amount of research focus on the development of digital libraries, particularly on information seeking. A variety of information-seeking models used by library and information science (LIS) academics investigate the manner in which information is sought and transformed into knowledge, which should be taken into account during the design of digital libraries. However, in part this reflects the lack of knowledge about how these models explain user information seeking behaviors in a digital library environment. This chapter aims to address this lack of knowledge. It presents a set of information-seeking models that can be used by LIS scholars or experts to comprehend the dynamics of information seeking by users of digital libraries. The major role of this chapter is to provide a review of the existing “models” to date, and also to present a comparative analysis of the notable models that may contribute to ways of understanding the research on information seeking in digital libraries.

Chapter 6: Digital Libraries and Copyright Issues, by Adeyinka Tella, Saheed Oyeniran, and Olubokola James Ojo

The chapter examined digital libraries and copyright issues. It considered several issues such as the meaning of digital libraries, the characteristics, functions, digital scholarship services, copyright and the materials that can be and cannot be copyrighted, fair use of library materials, reservation for general use, access to electronic copies, guidelines for fair use in the digital libraries, library reproduction and re-distribution and inter-library loan. The chapter concludes that, reading through this chapter, undergraduates, academics and other library users will have a good understanding of what the digital libraries are and copyright issue all of which are considered very important and germane as we approach paperless society.
Chapter 7: A Glimpse of the Information Seeking Behaviour Literature on the Web: A Bibliometric Approach, by Akakandelwa Akakandelwa

This Chapter presents a study conducted on literature related to information seeking behaviour available on the World Wide Web. The outcome of searching the World Wide Web using Google Scholar were analysed to present the growth of publications; collaboration pattern of authors; most contributing authors; type of publications in which information scientists preferred to publish their works; highly preferred journals in which information seeking behaviour related works are published; and the impact of information seeking behaviour related literature.

Chapter 8: Indexing and Abstracting as Tools for Information Retrieval in Digital Libraries: A Review of Literature, by Olaronke O. Fagbola

Indexing and abstracting are like siamese twins in the information retrieval process. Indexing and abstracting are the two approaches to distilling information content into an abbreviated, but comprehensive representation of an information resource(s). They are knowledge organisation tools which usually provide detailed and accurate maps and road signs in the information superhighway. Digital libraries are characterised by an electronic stock of information which can be accessed via computers, and are extension and augmentations of physical libraries in digital forms. They are information retrieval systems (a device interposed between a potential user of information and the information itself) which provide opportunities to access and retrieve information that is often accessible for a variety of reasons. This chapter presents a literature review on indexing and abstracting, information retrieval process, digital libraries pointing out the importance of indexing and abstracting in the information retrieving process and then highlighting the roles played by indexing and abstracting as tools for information retrieval in digital libraries. The chapter posits that indexing and abstracting plays a significant role as information retrieval tools in digital libraries.

Chapter 9: Demographics, Socio-economic and Cognitive Skills as Barriers to Information Seeking in a Digital Library Environment, by Felicia Yusuf, Sola Owolabi, Ayooluwa Aregbesola, Sunday Oguntayo, Foluke Okocha, and Toluwani Eyioluronse

The chapter considers the importance of demographic and socio-economic factors as well as cognitive skills to information seeking in a digital library environment. Demographic factors such as age and gender were considered. Younger adults were found to respond positively to the demands of information seeking in the digital environment while their older counterparts are still struggling to come to terms with the changes. In the same vein, studies have revealed that the value placed on technology by men and women varies. While men express high level of confidence in navigating the digital environment, women still suffer low self-confidence in doing same. Identified socio-economic factors that also constitute a barrier to information seeking in a digital environment include income level, level of education, non-availability of ICT infrastructures and epileptic power supply especially in Africa among others. Unwillingness to see one’s needs as information needs, inability to articulate one’s information needs, unawareness of information sources, low self-efficacy, poor search skills among others were identified as cognitive barriers to information seeking in the digital environment. Based on the findings of this chapter, the study recommends that for persons who are adjudged to be the older generation, it is im-
perative for them to acquire requisite ICT skills that will make it easier for them to navigate the digital environment. There is also a clarion call on African leaders to provide infrastructures that will enable ICT to thrive as the digital environment is fast replacing the hitherto traditional one.

**Chapter 10: Information Seeking Behaviour of Trade Unionists: A Review of Associated Challenges in Digital Era, by Joel O. Afolayan and Michael Imoudu**

Trade Unionism is mostly like a reactive movement rather than proactive. Its activities and programmes have witnessed setbacks overtime, notwithstanding the originality of intent and positivity of disposition to democratic process. Trade union is a major component of the system of modern industrial relations in any nation. Constitutionally, it has own set of objectives or goals to achieve. Change in the political, social and educational environment gives it an interface of a forum that protects and advances workers’ interests, improves the quality of life and condition of workforce, enlarges their traditional capacity of establishing terms and conditions of employment. This chapter entrenches trade unionists information needs in terms of capacity building towards organizational productivity as well as the seeking behavior using digital sources. The challenges of meeting up with the needs and management of information by Information Resource Centre of Michael Imoudu National Institute for Labour Studies’ (MINILS) in the era of digital divide is review with recommendations.

**Chapter 11: Usability of Digital Resources: A Study of Francis Sulemanu Idachaba Library University of Agriculture Makurdi, by Michael Terver Upev, Kwaghga Beets, and Joy Asibi Idachaba**

This chapter basically examines usability of digital library resources in institutions: A study of Francis Sulemanu Idachaba Library University of Agriculture Makurdi. The population for the study comprised of all the 124 library staff of the Francis Sulemanu Idachaba Library University of Agriculture Makurdi. Sample for the study was 118 respondents. Data was collected using structured question. The data collected was analysed using descriptive statistics; precisely arithmetic mean. Findings revealed that there are little types of library resources digitized in Francis Sulemanu Idachaba library. There are also criteria used for the selection of library resources digitized in Francis Sulemanu Idachaba Library, University of Agriculture Makurdi. The findings also revealed that there are challenges and problems face in the process of digitization of library resources of Francis Sulemanu Idachaba Library of University of Agriculture Makurdi. The study concluded that latest advancement in the field of information technology have compelled libraries to embrace automation as the facilities provided by automated libraries go far beyond the activities of traditional libraries. It was recommended that the library management to provide effective solution to the problems faced in the digitization unit by purchasing more equipment for the services such as digital camera, Photoshop software, a standby generating set, standardization on the supplied paper size and CD-ROMs, upgrading of the systems in other to meet the needs of modern day’s technologies.
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Chapter 12: Information Need and Seeking Behavior of Farmers In Laduba Community Of Kwara State, Nigeria, by Femi Titus Akande and Akinade Adebowale Adewojo

The study adopts a survey research design using simple random sampling technique to select 28 respondents (farmers). Structured questionnaire was designed for the collection of data. It was discovered that majority of the farmers were illiterate and were of the middle aged group between 31-40. The farmers plant many crops, but it is noticeable that the farmers plant cassava mostly, the area which the farmers indicated they need information most is on agriculture, it was also observed that the farmers access information from colleagues (co-farmers), friends and relatives, agricultural extension workers. The information needs of the farmers includes how to prevent diseases for their crops on the farm and after harvesting, the farmers also stated that they need information on how to seek for loan, where to get the best market to sell their farm produce and how to get the best agro-chemical for effective use. In this study it was discovered that the challenges the farmers face in acquiring information includes, the inability to read and write in English language, lack of constant electricity supply, conflict among members of various associations and lack of access to agricultural extension workers. It is recommended that the farmers should be given effective adult education, provision of information centre with necessary personnel and information media to boost information accessibility. Also the government was encouraged to negotiate with mobile telecommunication operators to subsidize services so that the farmers who form majority in the rural areas can access information and communicate easily through their mobile phones.

Chapter 13: Role of Social Networking for Information Seeking in a Digital Library Environment, by Adigun, Ganiyu Ojo

Chapter 14: Barriers to Information Seeking in the Digital Libraries, by Ayo Oluwaseun Ajayi

Chapter 15: Digital Libraries: Information Superhighway, by Prakash Dongardive

During the decade of 1990s the term digital libraries become a recognized phrase for describing libraries that offer access to digital information by using by using a variety of networks, including internet and world wide web. Other synonyms used interchangeably digital libraries are library without walls and electronic and virtual libraries because every online or virtual source of information is electronic source of information but every electronic information sources are not online or virtual form, so digital or electronic library includes digital contents and that can be delivered any time anywhere to the networked computer. Digital libraries provide remote access to the contents and the services of the libraries and other information sources combining an onsite collection of current and heavily used materials in both print and electronic form with an electronic network which provide access to and delivery for worldwide libraries and commercial information and knowledge sources. Basically the digital libraries are the metaphor for the networked libraries.