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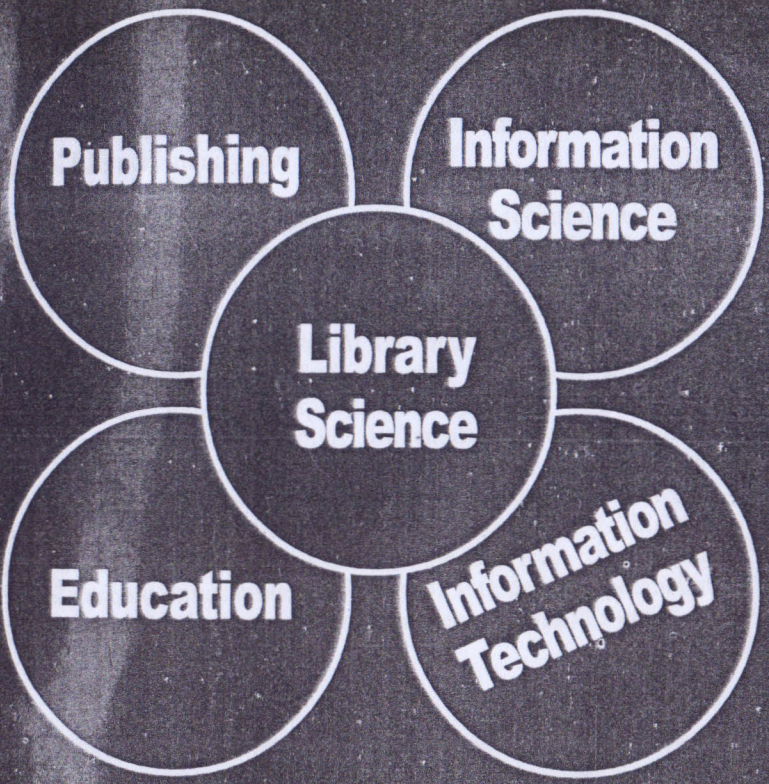

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LIBRARY AND INFORMATION SCIENCE PROFESSIONALS AND SKILL SETS FOR THE ELECTRONIC INFORMATION ENVIRONMENT

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ABSTRACT

This paper discusses the need for library professionals to acquire core competences and new skills relevant for the management of the modern-day library and also, capable of making them relevant in the present competitive electronic environment. It also discusses the impact of emerging changes on the role of libraries. It further explains different skill sets required by library professionals for the electronic environment. This article stresses that the growth and continued existence of librarians in this technology based environment is dependent on their ability to acquire new skill sets to navigate the electronic environment effectively and also compete favourably with counterparts from other disciplines who want to hijack library responsibilities from the librarians.

Keywords: Electronic Information Environment; LIS Professionals; Skill sets; New Skills; Information Technology.

INTRODUCTION

Traditionally, library and information services have always been concerned with the collection, organisation, storage and dissemination of information materials to users with the aim of satisfying their information needs. The client in this era is required to physically visit the library or information centre as the case may be, before he or she can be a beneficiary of these services. The advent of new technologies in the information world has affected the information generation, processing, storage and distribution patterns. It has created diversified channels for access and

distribution of information and knowledge, collapsed the waiting time for users and also provides users with more tools in terms of information resources and access point. The electronic information environment which evolved as a result of the emergence and utilisation of these information technologies in the information world has brought with it opportunities and challenges for library and information science (LIS) professionals. For instance, we are no longer just encumbered with the role of collection development in the conventional approach of acquisition of print based or tangible resources and their processing but also building digital collections. We are expected to navigate through the quantum of information provided particularly by the Internet, index and circulate them to the users. More so, the exposure of users to various kinds of information from different sources and in various formats in this electronic information era has equally affected their information seeking behaviour. Users are no longer required to visit the libraries before their information needs are met. Instead, services are rendered to them even from remote places. Hence Kinengyere and Tumuhairwe (2009) stated in regard to academic libraries that, "libraries will continue to be dynamic in the coming years, because as the needs and expectations of the academia evolve, so too does the expertise and services of the LIS community and the profession".

It is common knowledge that even when these technologies and accompanying resources in electronic formats are acquired by libraries particularly, in developing nations, the challenge of getting skilful personnel to man these equipment and resources still arises. Most often, this has caused libraries to hire and be at the mercy of consultants in relation to the management of its facilities and resources, which is inappropriate. This has generated speculation by some individuals, especially those enamoured with high Information Communication Technology devices, that the Internet will displace libraries and information centres. They believe that the present era of electronic information is meant to replace libraries. The questions that need to be answered are: Is this era actually meant to replace libraries? What are the services required of librarians in an electronic environment? What skill sets and competencies are required of library and information science professionals in this era?

THE CONCEPT OF ELECTRONIC INFORMATION ENVIRONMENT AND SERVICES OF LIBRARY AND INFORMATION PROFESSIONALS

The electronic information environment connotes an environment where the information resources are in electronic format and, are handled, processed, circulated and, communicated electronically. Sloan, (1997) as cited by Kena, (1998) stated that electronic information environment which can also be referred to as the "virtual environment" or "digital environment" implies an information situation where collections are merely in electronic formats with the technology needed to utilise and explore them. The kind of resources usually found in this setting include; direct access CD-ROMs, remote access online database, electronic journals, electronic books, digitized materials, and other Internet resources such as reports, proceedings, information from blogs and organisational websites, etc.

The abode of knowledge is in transition mode from repositories to open access. There are dramatic and drastic changes in acquisition, processing, storage and dissemination of information. Libraries have been significantly transformed with the advent of Internet and the ability to provide resources to people who may never visit a physical building, but use resources intensively in their own homes or work places. Libraries are adopting new means of technology in all activities of print to e-environment like printed library card catalogues have been replaced by OPAC with a variety of web-based graphical user interface (GUI) functions, online accessibility for 24/7, availability of numerous e-databases, e-journals, and other information resources and services for users. To face the new information explosion, libraries will have to meet even more challenges and opportunities to serve the varying range of users, all with many expectations and more demands triggered by the growth of emerging and cutting edge technologies in the present information environments. (Li, 2009).

In the electronic environment, our role comprises at least three major working areas: We offer services for those users who want to be guided to the most suitable information resources; we provide research assistance for those who prefer to conduct searches themselves and only turn to librarians in case their repertoire of search and retrieval techniques did not lead to satisfying results; and we closely collaborate with Information Technology

(IT) departments (Kena, 1998). These working areas encompass the following aspects:

1. **Information Access Provider:** Librarians provide access to the most important information resources on the network, making use of current technologies (WWW and others). Electronic resources must be organized in a logical, easily understandable manner, integrating existing systems documents and services that belong logically together. The purpose of value-added services like subject-oriented clearinghouses is ``not only to save the researcher time and effort in searching for appropriate sources in the vastly unordered, unstructured Internet, but also to provide him or her with a pre-assessed, semi-ordered, annotated list of sites with activatable links" (Rusch-Feja, 1997) which match or supplement the targeted group's information needs. Libraries should not limit themselves to using new technology for the automation of library functions but utilizing technology for the enhancement of information access and delivery of items not physically contained within the four walls of the library

2. **Research Assistant:** The second aspect of their role encompasses identifying, locating and obtaining publications not owned or leased by the library. No resource, be it electronic or paper, can be called ``complete" today, and if we don't find particular information on the Internet, it does not mean that it doesn't exist. It is the librarian's duty to know which additional sources can be queried to make a search as complete as possible. Publications ``not imbedded in a formal journal context" (Rusch-Feja, 1997) as well as electronic equivalents to today's ``grey literature" need to be retrieved, which requires the librarian's experience in locating information as well as technological skills. Research assistance in this sense also includes helping users to become familiar with handling new technologies. Various methods for providing user support for networked library services can be developed, for instance distance support (by telephone or e-mail), printed or online manuals, and on-screen instructions. Face-to-face end-user training already has become an important part of librarians' work.

3. **Collaborative System Designer:** Librarians are in direct contact with users of information retrieval systems. Often users report

difficulties which they encountered while using a system, or we recognize what needs to be redesigned while we are explaining a system to our users. When IT departments design new databases, application programs and user interfaces for us, librarians must be able to explain precisely to them ``how language works and how to use layout, typography and design principles" in order to provide the required functionality. The information flood can only be mastered with appropriate tools that are capable of matching user needs with the available information, no matter whether these tools will be operated by librarians or users in the end.

Brophy (1998), wrote that "The electronic information environment is more than just an agglomeration of datasets" hence, the functions in an electronic information environment encompasses-

- Access negotiation
- Resource capture, storage and access
- Advisory services
- Resource discovery
- Resource delivery
- Resource utilisation
- Infrastructure provision
- Resource preservation

Although these functions are also part of the traditional information environment. In the electronic environment, they take on new levels of complexity especially, when information resources are no longer solely owned by the library.

Besides the functions listed above, other services rendered in an electronic information environment include categorisation, filtering, translating, publishing, information repackaging, assistance in finding information, user education, e-mail enquiry services and electronic redistribution.

Pinfield (2004) summarised the services, which he termed "roles of electronic information environment librarians", as follow:

- Multi-media user – being comfortable with a wide range of formats.
- Intermediary role – with a good knowledge of sources and user requirements.
- Enabler – proactively connecting users with information they require.
- Metadata producer – creating records of information sources in a variety of schemes.
- Communicator – formally and informally liaising with users.
- Team player – working with colleagues in library, IT services and academics.
- Trainer / educator – taking on a formal role to teach information skills and information literacy.
- Evaluator – sifting free and paid for resources on behalf of users.
- Negotiator – dealing with publishers and suppliers.
- Project manager – leading on development projects to enhance the service.
- Innovator – not just following the routine but also looking at improved ways to deliver the service.
- Fund-raiser – working for greater income from the institution and beyond.

In summary, library and information science professionals are required in an electronic environment to function as database managers, user interface designers, website creators and designers, information

technologists, computer technologists, network managers, cataloguing and metadata experts, project managers, digital archivists, etc.

SKILLS FOR THE LIS PROFESSIONALS IN AN ELECTRONIC ENVIRONMENT

Skills are abilities or proficiencies required of a person in position to plan and execute an action geared at accomplishing some tasks or achieving some goals. The Longman Dictionary of Contemporary English (1991) defined skill as "special ability to do something well, especially as gained by learning and practice". They are the learned capacity to carry out pre-determined tasks with the minimum outlay of time and energy.

The basic goal of library and information profession has always been the satisfaction of the information needs of the library users through the provision of various forms of information resources. The activities aimed at actualising this goal have evolved and transformed over the years. In the present electronic environment, librarians are required to work both independently and as a team to deliver service-oriented and user-centered applications, instructions, programmes, projects and services. In addition to general traditional library educational qualification and requirements, a commitment to excellent user centered services, effective oral and written communications, as well as team collaborator, librarians in the electronic information environment must also possess additional capabilities, experience, knowledge and skills. Such skills include:

- Expertise in the use of innovative emerging technologies to design and develop web-based applications, programmes and services.

- Assist users to locate, access, store and transform electronic information resources, services and, instructions across multiple applications, databases, networks, platforms and systems.

- Having knowledge of designing, developing, launching and maintaining of digital content management and assess, evaluate, recommend and test various methodologies, policies, and standards for utilizing computer software in the process of creating and preserving digital collections and resources.

- Assess, understand, think and adopt changes fit to the requirements rather become blind follower of versatile technological developments. (Li, 2009 as cited by Kumar, 2009).

Singh and Pinki (2009) categorised the skills required for electronic environment into three (3) broad groups, namely;

a) Generic skills,

b) Managerial skills and,

c) Professional skills.

Professional skills, which is the concern of this paper is further sub divided into:

i) **Information technology skill:-** this include hardware/ software and networking skills, presentation skill, library automation skill, database creation skill, general internet skills, intranet skill, networking skills, desktop publishing skill, content development and digitization skill, web based services and virtual learning skills

ii) **Information Literacy Skills:** this has to do with the ability to locate, evaluate and use effectively needed information. Information literacy forms the basis for lifelong learning and enables learners to master content and extend their investigations to become more self- directed, thus assuming greater control over their own learning. Promoting information literacy, both formally and informally. There has to be a concern of librarianship in this era. This is not just for librarians in educational institutions alone. It is also for special librarians in their day to day client service provision. And it is also very much for public librarians.

iii) **Technical professional skills-** such as, information resource management skill, system development skill and, metadata standards skill required to describe the content and attributes of any particular item in the digital library.

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