

THE EMERGING ROLES OF ACADEMIC LIBRARIANS IN THE ELECTRONIC INFORMATION ENVIRONMENT AT KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY (KNUST), KUMASI

M. Ahenkorah-Marfo

University Library

Kwame Nkrumah University of Science and Technology, Kumasi.

ABSTRACT

This paper discusses the traditional and emerging roles of the academic librarian. It sees the traditional roles as functions that have enabled the librarian to provide the needs of his clientele mostly within the walls of the academic library. It also enumerates and expatiates on the roles of the academic librarian in the Electronic Information Age with its attendant explosion of knowledge. It emphasizes the fact that infrastructural boundary is virtually non-existent in provision of information today. Finally, it uses the situation of the KNUST to establish parallelism between the conventional and emerging roles of the academic librarian and also the importance of library professionals in information provision.

Keywords: *Traditional Roles, Emerging Roles, Parallelism, Electronic Information, Academic Librarian.*

INTRODUCTION

The fast development and adoption of modern information technologies are changing the traditional ways of library practices in the academic world. The Internet is gradually realising the concept of virtual library. Thus virtual library, digital library and electronic library, though amorphous and undefined have become buzzwords or fashionable words in the profession. The reality of a virtual library though still far from real seems to be the way we are unavoidably heading. Library catalogues are expected to be accessible through networks all around the world and CD-ROMs and other electronic materials previously only in print are commonly accessible from workstations linked to universities' networks. Internet services cover an increasing number of electronic publications and informa-

tion that traditionally have been accessible only on the premises of libraries. It is believed in academic circles that complete transition from print to electronic medium will endanger the academic librarian in the scholarly communication chain. Many academics and publishers believe that electronic journals and other scholarly materials will be delivered directly from publishers to users' desktop giving no role to librarians.

There are some academics, like Twist (2004), who thinks robot librarians can be trained to man libraries. They intimate that robot can read the labels and position of the book using its image processing and optical character recognition software. They have forgotten that robots cannot communicate on person-to-person level. And this is very essential in reference services.

It is worth noting that even though new channels of information delivery are emerging, the old ones are not necessarily disappearing, rather

they are getting new features. The skills of the academic librarian therefore are still relevant as they have ever been so as to meet the demands of the paradigm shift in the approach to service delivery.

In Ghana academic libraries are feverishly gearing themselves up to meet the challenges of the new information age. Library catalogues are being computerised and plans are far advanced to build a consortium that will make all the academic library catalogues in Ghana accessible through networks.

The function of the KNUST library, like any other academic library, is to bring together information or knowledge in the form of books, journals, CD-products, etc. that will enhance teaching, learning and research in its parent institution (Bani, 2003). Traditionally, this has been done through certain library practices or functions. These include:

- Collection development and acquisition;
- Cataloguing and classification;
- Circulation and user education;
- Reference work;
- Preservation and
- Serials management

In this script the conventional and emerging roles of academic librarians at KNUST library from personal observation and interviews with sectional heads are compared and conclusions drawn on how parallel and important the roles are.

THE CHANGING ROLE OF THE ACADEMIC LIBRARIAN

Over the years, the academic librarian has been seen as the curator of the available print resources of the university library with the simplistic role of providing information - books and journals - on demand. Librarianship is academic and a learned profession. It is more involving than just preserving books and journals. It behoves on the librarian as an academic, to create

knowledge by conducting research and publishing the outcome of his research. This role of the Ghanaian academic librarian is a model on the examples offered by the developed countries and is derived from the mission of the library as an academic department of the university. (Rascroka, 1999)

Indeed the academic librarian in this information age is no longer a curator and libraries are no longer just repositories of print material accessed by card catalogue. Rapple and Sarkodie-Mensah (1999) observed that librarians developed some of the online databases and the immense resources on the Internet that provide researchers with unimaginable wealth of information. The greatest challenge of the academic librarian today, therefore, is how to manage the transition from locally housed print resources to acceptance and use of virtual information considering the historical and current difficulties of maintaining print libraries (Rascroka, 1999).

THE FUNCTIONS OF ACADEMIC LIBRARIANS AT KNUST LIBRARY

Six sections traditionally have worked together to perform the functions of the academic library. The Acquisitions and Serials Sections collaborate to acquire and build up collection. The Cataloguing Section provides access to the available stock while the Lending Section supervises circulation and undertakes user education to equip clients to effectively exploit the library. The Reference Section is responsible for answering users' queries while preservation and conservation have been the preserve of Serials, Reference and the Lending Sections. This is because preservation transcends the roles of the three sections. The trends have been so mainly because intellectual record has largely resided in print literature - books and journals.

All these sections still exist in the electronic environment. However, the electronic environment seems to have re-assigned roles and changed the approach to service delivery to meet the ever

changing and more challenging functions of the library.

A new Electronic Information Section has been created since the year 2000 in the KNUST library, which gives support to all electronic related activities in the library. This section has the oversight responsibility of networking all the other sections for efficient service delivery.

Different functions of user services have now approached each other: reference work, user education and circulation are getting more and more tied up. Though some members of staff have been assigned the role for user education, all other staff members have been trained to help users to improve upon their information skills.

SELECTION AND ACQUISITION IN THE KNUST LIBRARY

Academic librarians at KNUST Library have mainly relied on the subject background of professional librarians in the selection of materials for the library over the years. In consultation with faculty, materials are selected and acquired for use in the university library. The library however, makes the final decision on how many materials to acquire and they are factored into the library's budget. Monographs are purchased from publishers either directly or through book-sellers and supply companies. In a third world economy like Ghana, it must be noted that a large percentage of materials that are acquired for the library are through donation. This can impact negatively on the richness of the collection.

In the electronic environment, the university library no longer relies solely on materials within the walls of the library building. Needs of patrons are increasingly met through the use of digital, electronic or virtual resources as well as mailing groups. The input, however, remains the same; that is to collect, organize, make accessible and preserve information. The role is even more emphasized in the electronic environ-

ment. Functions involved in selection and acquisition now include:

- Estimating the quality of information especially on the internet;
- Finding links to high-quality documents;
- Developing registers;
- Acquiring knowledge about information systems, resources and communication;
- Licences and contracts;
- Collaboration with other libraries to make the information provision more effective;
- Teaching information skills and instruction on information systems;
- Acquisition of computers;
- Production of information on databases and
- Acquisition of information and literature in different media etc.

CATALOGUING AND CLASSIFICATION IN THE KNUST LIBRARY

Cataloguing and classification have been concerned with providing tools to help patrons find their information needs within the library's "Built-in Orderly Organised Knowledge" or BOOK for short. Tools that have hitherto been used to provide these services include the catalogues - card and sheaf - and the indexes. The card and sheaf catalogues include only the entries of books.

In the electronic environment an electronic database has been developed not to replace the print catalogues but to supplement them. Through the use of the Windows version of the CDS/ISIS software, a huge database of records of over 22,000 books processed since 1994 is accessible to users and readily available to be put on the university's imminent Intranet. This forms the basis of the library's Online Public Access Catalogue (OPAC). Through networking, all computers in the Cataloguing Section communicate, making entries and editing in the database more flexible. Thus it is now possible for users to access records at strategic points in the library whilst the main server is in the Cataloguing Section. Cataloguing and classification of books

have also been made faster by the use of Bibfile ITS for Windows cataloguing software.

Yet the use of the printed version of the Library of Congress Schedules and Subject Headings in cataloguing and classification has not been completely ignored. And the main principle of creating access for the materials in the library has not changed.

REFERENCE WORK

Reference service is one of the most rigorous and involving roles of the academic librarian. In reference interview, users explain to the academic librarian their information needs and in response the librarian tries to find the best possible strategy to assist them. In most of the times what patrons claim they need turns out to be a completely wrong description of their actual needs. Here the knowledge of the subject matter is very important. This is because it is difficult for the academic librarian to advise on information sources on a subject that is not well understood. The librarian's in-depth knowledge of the available or existing resources to a large extent determines his or her efficiency.

The proliferation of electronic information sources has greatly increased the contribution of academic librarians to reference service at KNUST.

Many users are not able to use all the available resources of the library unaided. Only few users can make optimal use of the variety of bibliographic databases and the general Internet sources on their own. Academic librarians have helped a great deal in the handling of software and other facilities available in the university library.

Reference services also involve searches and book-marking them, keeping a database of sources of information, URLs, Search Engines, etc.

CIRCULATION AND USER EDUCATION

Circulation involves lending materials to the clientele, making reservations for them and retrieving to the library materials loaned out. Though circulation has not seen much of computerisation, the user education offered by the Lending Section has largely been affected.

The ability to find information is essential for success particularly in school and generally in life. The library user education programme at KNUST is designed to teach students and other users the skills they need to find information in the library.

At the beginning of every academic year and occasionally in the course of the academic year, organised freshmen are given orientation/user education through the Main Library. The goals of this user education/orientation are:

- To introduce users to the physical layout of the KNUST library;
- To reduce user anxiety of a large research facility at KNUST library;
- To promote/market the availability of helpful services at KNUST library.

In this orientation, students are divided into small groups for instruction. Instruction is usually in the use of the catalogues and indexes and other helpful guides such as fact sheets and research guides. Students are advised to make good use of call numbers, reservation, popular magazine and scholarly journals. The rules and regulations governing the use of the library are also spelt out to users. This group work is usually followed by a walking tour through the Main Library for familiarization. After this orientation, these new users are registered and given borrowing rights. A library guide containing a summary of what is involved in the user education is given to each student upon registration.

In the traditional user education students were fairly a uniform group: they were all technically

literate, able to read, even if other information skills varied. In the new situation, technological literacy is often most uneven. The library's role in guidance follows the different types of users. The library's role in user education is oriented towards information content rather than technology as compared to computing centres.

New trends in user education allow users to be trained in the use of the Internet in search of quality information and also access to online journals for articles.

Instruction goes beyond the library basics to include searches using Boolean operators, truncation and wild cards, evaluating print and web resources and also citing resources. These have become necessary because the nature of university education now demands that the library, and for that matter its users, should not depend solely on information within its walls.

ELECTRONIC INFORMATION DELIVERY

The newly-created Electronic Information Section is one section that has performed exceedingly well in the prevailing environment. Apart from assuming oversight responsibility of coordinating all electronic related activities in the other sections, it plays a major role in the training of both staff and users.

It is on record that after 10 professional librarians were given trainers' training in the year 2000, about 70 other staff members of the library have been trained in effective use of the Internet for research. It is also on record that the section has trained about 100 lecturers and 90 postgraduate students in effective use of the Internet for research. This training programme is ongoing and is aimed at training the entire faculty, researchers and postgraduate students in the short term and all undergraduate students in the long term.

The section also coordinates the Programme for the Enhancement of Research Information (PERI). Through this programme users of the library have access to about 8000 research articles (most of them full text) the licence of which has been sponsored by the Danish International Development Agency (DANIDA), Department for International Development, UK (DFID) and other donor Agencies through The International Network for the Availability of Scientific Publications (INASP).

It is worth noting that the response of about 90% of all trainees stated above on the question of "how did the training help you?" was "very helpful".

The Section also offers E-mail services. This facility has immensely helped users, both students and faculty, to communicate effectively with their peers. It is also a major source of income to the library.

PRESERVATION

The KNUST library, like all other academic libraries, has a role of protecting humankind's cultural and intellectual record from damage or loss.

Traditionally, preservation at KNUST has dealt with activities associated with maintaining literary materials for use either in their original physical form or in some other usable forms that can stand the test of time, for example, films. Photocopy services are also rendered to especially reduce pressure on rare and inadequate copies of materials. Over the years attention of users has been drawn to the nature of library materials and what has constituted the greatest enemy to them – human abuse, for example, excessive photocopying and reluctance to return books borrowed on dates due. This is aimed at enhancing users' awareness of preservation issues. The intellectual, cultural and monetary values of the collections are highlighted. The major concern of the academic librarian in the preser-

vation of the stock has been the repair and restoration of the damaged ones.

At KNUST, damaged books are normally sent to the University Printing Press for the needed attention. This is because the library, unlike most other academic libraries, does not have its own bindery. Periodically, sets of serial collections are also bound into volumes and conserved for posterity. It must be noted that apart from damaged books new books with soft covers that cannot withstand the pressure of daily use are also given new stronger binding.

In the electronic medium the academic librarian saddles himself with the problem of preserving in addition to the print media, electronic materials referred to as "intangible" resources such as CDs. The unsettled issue on the establishment of archival component of the library facilities is therefore worth projecting.

Obviously some major problems have been encountered at KNUST, which are of concern to the academic librarian. The first of such problems is obsolescence of hardware and software products. As a result of constant improvement in software development there is a quick turnover of software. This makes even one year old software look so obsolete and as such the user will always need update to keep abreast. This, however, tells on the already limited finances of the library. Another major problem of concern is bibliographic control. For example, if a print journal is subscribed to for over one year only, the issues can be consulted in perpetuity but if an electronic project licence is subscribed to for one year and then discontinued, the library may end up having nothing to retain. Typical examples the KNUST has encountered are the subscription to the Bibliofile ITS for Windows cataloguing tool and the access to the Online Computer Library Catalogue (OCLC). In the case of the OCLC the licence expired about two years ago and the library has not been able to renew it so it is simply inaccessible. There is an enslave-

ment to the Bibliofile because like the OCLC, inability to renew it will simply prevent the library from accessing even books that have already been processed with it which means subscription should be renewed each time in order to have access to existing materials. So, the issue of African academic libraries to archive their e-resources should be decided upon without delay. Again, print products can be easily read in fifty years time as they are now, but people may not be able to access readily the current Cassettes in 50 years time. Newspapers of 1961 are easily accessed in the Serial Section of the library but radio broadcasts of 1961 may be accessed with some difficulty. Thus academic librarians emphasize the prudence to maintain both traditional and electronic materials perhaps in all academic libraries.

SERIALS MANAGEMENT

Serial is concerned with managing the aspect of collections or acquisitions that are in successive parts and by their nature are supposed to continue indefinitely. They include journals, magazines, proceedings (of frequent congresses), newspapers, etc. Because of dwindling budgetary allocation, journal titles used to be prioritised and only core ones were subscribed to and stocked in the KNUST Library. Unfortunately, however, the library is not able to subscribe to core journals due to financial constraints.

Hitherto all journal titles in the Serials Section and their other bibliographic records were put on cards and filed in drawers just as the monographs. Indexed articles from newspapers and other journals were also recorded on similar cards to help patrons in their search.

In the electronic environment it is possible by the touch of a key to get all the titles and other information on them at the Serials Section. Besides this all the indexed articles have been scanned. This saves patrons the trouble of going through the original hard copies of the articles they may be looking for. Above all it is also pos-

sible to print the scanned indexed article upon request by patrons. Currently, the records of about 14,000 newspaper articles emanating from Ghana have also been put on an electronic database called NINDEX.

COLLEGE LIBRARIES

The KNUST library system consists of the Main University Library with six other College Libraries. These are the libraries of the Colleges of Agriculture and Renewable Natural Resources, Architecture and Planning, Art and Social Sciences, Engineering, Health Sciences and Science.

All these umbrella libraries, like the Main Library use the CDS/ISIS software for their database. Thus the necessary groundwork has been done to hook all the departments of the university to a common server, which will enable a user to access entries in the Main Library as well as one another department.

The constraint however is the necessary funds to network the university as a whole.

PARALLELISM AND DIFFERENCES BETWEEN PRINT AND ELECTRONIC INFORMATION

The essential differences between the electronic information offered by networks and the printed information bother mainly on:

- Availability
- Evaluation criteria and
- Physical presentation

While published information is available through libraries for a long time, the supply of information on the Internet changes constantly. What was available yesterday may have completely vanished today. New services are created all the time and what was earlier free of charge may now be available for a fee. Again the evaluation criteria we are used to with traditional information carriers may not be valid for those of electronic publication. In the physical presen-

tation we realise that there are more and more multimedia materials on the net, for example the documents are not necessarily linear in the way we are used to.

In spite of these differences, there is some parallelism, for example, the centuries - old tools that have helped in the management of the printed publications have their corresponding tools. There are already electronic forms of directories and directory of directories, bibliographies and bibliography of bibliographies for both general and field - specific. Navigation tools also allow Keyword - based information retrieval. Thus in the same way as the use of traditional information is encouraged through user education provided by academic librarians, they are also responsible to encourage and enhance the use of these new information resources and search methods.

THE FINANCIAL CHALLENGES OF THE NEW INFORMATION ERA

The resource implications for the new information era are enormous for academic libraries and the KNUST is not an exception. Acquisition of computers, the training of both staff and users and the rapid turn over of computers and accessories are having a telling effect on the already weak finances of the parent institutions in general and the libraries in particular.

Payment for licences and subscription to on-line journals are no doubt very expensive and donor fatigue is naturally catching up with sponsors. Thus in spite of all the new orientation and efforts being made to be abreast with current developments academic libraries and for that matter academic librarians lag behind their professional counterparts in the advanced world.

It is therefore hoped that the needed financial support will be given to the academic libraries so that their librarians can perform better in the new information environment.

CONCLUSION

The university community, especially the faculty, researchers and postgraduate students largely depend on librarians for awareness of new developments and progress in their research fields and also for identification of potential areas of research. Through selective dissemination of information, the academic librarian is able to give the needed academic support material ranging from textbooks to the current published materials and suitable Internet sites. This is because academic librarians have a parallel role of supporting teaching and learning by searching, identifying and making known to faculty, available and accessible academic support materials relevant to a given curriculum.

With respect to the Internet, most users agree that the Internet is chaotic and time consuming since one can waste precious time in fruitless search for exact information. There is no doubt that in spite of the popularity of the Internet and the user-friendliness of the World Wide Web described as information super highway, users need guidelines more in using electronic resources than they do in the print milieu.

Again, Rowland (1988) observed that not all academics and researchers have the technical expertise to deal with the range of hardware and software required to access a variety of relevant electronic products. Even if they have, these individuals will not wish to purchase, out of their pockets, the range of titles required for their search and therefore some form of central purchasing, to be supervised by the library, is required.

Moreover, academics and researchers will not want to commit themselves to the signing of complex licence agreements for campus networking. Even if they do, the library will still have to be responsible for implementing the security requirements involved.

Thus, whether in print or electronic, the stark reality is that there is explosion of knowledge; knowledge therefore must be organized and academic librarians are the best in the university set-up to do so.

RECOMMENDATIONS

It is recommended that there should not be the blind belief that:

- 1) Materials will magically digitize and organise themselves;
- 2) The Internet will automatically upgrade itself to a superhighway all over the world;
- 3) The average person can handle the vast information resources that become available to him or her and that
- 4) The "information poor" will suddenly become "information rich".

It is also recommended especially to academic librarians that:

- 1) They avail themselves of refresher courses so as to be abreast with new trends in the profession;
- 2) A preservation librarian (in the case of KNUST) be appointed who will take care of all issues concerning preservation of library materials - print and electronic;
- 3) They recognise their discipline as service oriented so as to deliver, no matter how challenging the future will be.

It is believed that if academic librarians adhere to the recommendations given, they will not be onlookers but full stakeholders in the current knowledge revolution.

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