ENHANCING ACCESS TO ANIMAL HEALTH INFORMATION: ROLE OF INFORMATION SPECIALISTS IN ZAMBIA

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ABSTRACT: *This paper is a product of a larger study conducted between 2002 and 2004 on the state of libraries and use of Information Communication Technology (ICT) in research and academic libraries in Zambia. It examines the role of information professionals in enhancing access to animal health information under prevailing conditions. Animal health is an integral aspect of the agricultural sector, which has potential to contribute to the economic growth of the country. Sources of information on animal health include libraries, personal collections, colleagues and the Internet. The paper explores existing information services that facilitate access in order to meet the diverse information needs of different user groups ranging from farmers, researchers, lecturers, students, to extension workers and wildlife workers.*
It discusses challenges and opportunities in facilitating access to animal health information in the Information Age. A primary factor contributing to the poor state of libraries is a lack of appreciation of their place in research, services and development by policy makers at national and institutional levels. For instance, a number of government departmental libraries are left to become dilapidated and are only resuscitated when some externally funded projects include conditions to reorganize the library services. Other challenges include unqualified staff employed to manage the libraries, lack of skills (ICT), poor IT infrastructure, and poor linkages of information systems.
The Internet provides access to a wide range of information available for free and at a cost on the web. Information professionals are equipped with skills that are relevant and could be applied to the electronic information environment. These include identifying, evaluating, selecting, acquiring, organizing, storing, retrieving, and disseminating information. This paper describes some efforts towards harnessing free information resources and making them easily accessible by creating simple link collections of resources on the web, and then using document delivery by email and print copies to users.

Introduction

The information scenario has changed, prompting some transformation in information services provided by information specialists. Information specialists provide and facilitate access to information for their different user groups. This information may be accessed through available media and document formats. The paper and audio-visual information resources have been the main sources of information in most library and information centers. However, increasingly electronic information is being harnessed and made available /accessible.

This paper is partly a product of a study conducted between 2002 and 2004, and includes information from document analysis. The paper examines the role of information professionals in enhancing access to animal health information within the prevailing information scenario in Zambia. Animal health is an integral aspect of the agricultural sector. In addition, the paper explores existing information services that provide access to animal health information for different user groups which may include livestock farmers, extension service providers, researchers, and wildlife workers.

Background

Institutions dealing with animal health issues in Zambia can be grouped into five categories: government, semi-public, private, academic, and non-governmental organizations. These are described in table 1 below.
Most institutions have libraries or information centers responsible for collection, organization and management of information services. The libraries experience difficulties in their efforts to provide information services. Problems related to provision of information services include:

- Poor funding for purchase of latest technical textbooks and subscriptions to periodical literature. This is a result of low government spending on poor institutions.
  This has a trickle effect on library and information services which happen to be among the services targeted for budget cuts by institutions when faced with inadequate financial resources (Simui and Kanyengo, 2004).

Table 1: Categories of agricultural institutions

Category	Description	Examples
Government	Agencies directly administered by government	Research departments within a Ministry
Semi-public	Agencies partly controlled by government and with no explicit profit making objective.	Research institute under a management board
Private	Agencies whose primary activity is production of goods and services for profit	Agricultural machinery or chemical company
Academic	Agencies that combine university-level education with research	Faculty of agriculture veterinary medicine
Non-governmental organizations	Agencies that deal with communities in developmental activities (national or international)	A farmers union or association

Source: Adapted from Roseboom and Pardey, 1995.

- Access to sources of information is limited, especially access to local research. Most journals published by research and academic institutions have stopped and a few titles that still exist are published at irregular intervals. Research conducted and produced by government departments ends up gathering dust on the shelves, because government researchers are not compelled to publish as are their counter-parts in academic and research institutions.

- Inadequate staffing affects effective provision of information products and services. Most staff employed in government departmental and semi-public research libraries possess basic qualifications, diplomas and certificates, adequate just for routine work. This negatively affects innovation and effective delivery of intended information services.

Diffusion of information and communication technologies (ICT) as tools for production, management and dissemination of information has been slow in most institutions. Universities and semi-public research institutions tend to be ahead of government institutions in adoption of new technologies. A study conducted by Simui (2004) revealed that at the bottom of the list of ICT adopters are government departmental libraries. Institutions where ICTs are in place experience slow connectivity due to small bandwidth affecting access and optimum utilization of the resources and services such as those offered under programmes like PERI (Programme for the Enhancement of Research Information), AGORA (Access to Global Online Research in Agriculture) and HINARI (Health InterNetwork Access to Research Initiative).

Animal Health Information Users

This paper considers four major categories of animal health information users: farmers (livestock keepers), extension service workers, wildlife workers, and researchers. They all need information relevant to their activities. The animal health workers are affiliated with government departments, in private practice, research and training institutions, and operate in urban and rural areas.

Many farmers engaged in livestock husbandry live in rural areas. Their main challenges constraining livestock productivity include poverty, illiteracy and the animal disease outbreaks, which have become prevalent (International Fund for Agricultural Development (IFAD), n.d.). Government programmes that aimed at providing curative (drugs) and preventive (vaccinations and dip tanks) measures were discontinued in the early 1990s. This was the period when economic reforms were instituted, liberalizing service provisions while government interventions were withdrawn. Many farmers lost their livestock to disease. In addition, movement of the animals was restricted, exacerbating their poverty situation. Providing relevant information at the right time and in the right format to farmers can have a significant impact on the welfare of animals and rural poverty alleviation. Most of the livestock farmers may be illiterate, hence the need to provide information in a format that they can easily understand. They are far away from library and information centres; in any case, information sources in the centers are in a language livestock farmers may not comprehend.

Livestock farmers have practiced traditional remedies in managing their flocks. There should be strategies to tap and/or integrate indigenous knowledge systems and formal information services to ensure a two-way information flow in animal health management. This will ensure "veterinary services in Africa being better able to operate conventional livestock and wildlife health information … and improved integration of … technical knowledge systems" (Catley and Croxton, 2001).

Extension service workers, who in most cases reside in rural areas or peri-urban areas close to the populations they serve, assist livestock farmers. Agriculture or veterinary extension workers fall under the Ministry of Agriculture and are responsible for communicating government policy, expert advice, and animal health information for the welfare of livestock of the communities served.

Extension service workers may have access to public libraries in peri-urban areas. However, public libraries are poorly funded and rarely hold materials relevant to the needs of local communities. Most extension service workers do not have access to computers, let alone the Internet. Rural areas are still neglected in terms of provision of information communication technologies. Radio is the only technology that dominates in rural areas. Mobile phones adoption is on the rise in peri-urban towns, as service providers mount their communication equipment in these areas.

Wildlife workers operate from the bush, most of the time managing, protecting, and conserving natural resources. They are far removed from information centers and have no access to the Internet. This user category is comprised of regional game rangers, area wardens, and researchers (ecologists, conservationists, veterinarians, etc) as discussed below.

Researchers are a diverse group belonging to different institutions and pursuing studies in various disciplines. There are researchers affiliated with government departments, semi-public research institutions, universities, and private organizations. Researchers tend to prefer consulting personal collections of literature, the Internet, or to contact colleagues/experts, and rarely visit libraries for information searches (Nweke, 1993; Simui, 2005). Among reasons advanced for less usage of libraries are lack of time and outdated library collections. Statistics of electronic information resources usage among institutions in Zambia are quite low, an indication that researchers are not making use of these resources. There are many factors preventing optimum use of resources. They include poor ICT infrastructure, no computers in some institutions, and lack of skill among researchers to effectively search, retrieve and manipulate information on the web. Another reason could be attributed to ineffective marketing strategies of the available resources.

A recent study indicates that animal health workers, in particular field workers who operate in rural provinces, experience limitations in terms of logistics and facilities in their operations. Among the limitations is lack of current scientific information. Most animal health field workers "complained of difficulties in accessing the much needed technical information …the majority still relied on some outdated textbooks, magazines and journals" (Namangala, 2003). Conferences, which some animal health workers attend infrequently, were cited as one source of technical information. The few animal health workers who had access to the Internet operate from urban areas.

Library and Information Services in Zambia

Libraries and information centers provide access and disseminate animal health information. Libraries build collections of information resources after careful analysis of institutional programmes and user needs. Most of them are concentrated in urban areas, while rural provinces are serviced by public libraries located at provincial headquarters. Public libraries hold outdated collections, are poorly funded and experience shortage of qualified staff to manage them. The poor funding situation affects almost all types of libraries, with variations in levels. The poor funding situation has affected many libraries in Zambia leading to non-replenishment of collections for many years.

Nevertheless, the introduction of the Programme for the Enhancement of Research Information (PERI), HINARI and AGORA that facilitate access to electronic resources at subsidized rates provided an opportunity for institutions in Zambia to access current information resources. The time was right for institutions to discuss and map out a strategy for resource sharing and be able to sustain access to the resources once donor support came to an end. In 2003, the Zambian Library Consortium was born, a national consortium of all types of libraries and information centres, including animal health information systems.

Access to electronic resources was enabled through PERI and supported by development agents like DANIDA. Three years down the line, Zambian institutions took up the responsibility of subscribing to e-resources using their own funds. Through the consortium, institutions agreed to contribute funds towards subscription of e-resources for the year 2005. The beginning has been rough, as some institutions took a long time to remit their contributions. It is a start and things may pick up as the consortium gets established.

In addition to library services, government through the National Agricultural Information Services (NAIS) repackages and disseminates information to rural communities using various means. Other activities of NAIS are to:
- Educate farmers and other stakeholders on agricultural policy directives and reforms,
- Sensitise the farming communities when there is a disease outbreak,
- Hold discussions on topical issues,
- Offer answer-question service, and
- Provide up-to-date technical information to the agricultural sector to ensure that the target group is kept abreast with developments in the environment and other matters.

NAIS disseminates information through:

- Radio programme ('rural notebook') presented in English and the seven major local languages;
- Television programme ('lima time') presented once a week on Zambia National Broadcasting Services and radio in English; and
- How-to-do-it booklets on animal husbandry in English and the seven major local languages. Other products by NAIS include farmers notebook, farm magazine, and filmstrips (Simwanza, 1998).

The Role of Information Specialists

Given this situation what do information specialists need to do to deliver information services to meet the needs of the animal health workers?

Information specialists have for many years learned to cope and play a major role in providing information products and services within the prevailing economic environment. Information specialists increasingly combine the traditional roles of acquiring/ harnessing, processing, storing, searching, retrieving, and disseminating information with tasks involving new technologies. Almost everything that information specialists do is to facilitate access to information. The roles of information specialists can range from collection development, dissemination and delivery of information, marketing information products and services, training and user education, and research.

Collection Development

In collection building and management, information specialists carefully select, evaluate, acquire, harness web resources, catalogue and classify, index and abstract (using standards adopted by a particular library or information center), and organize information resources for easier location and retrieval. Collection building is done through purchasing and subscribing to periodical literature and other resources. Information specialists subscribe to periodical literature as individual institutes and/or as a consortium of libraries to ensure access to current information.

It is important to create access tools for purposes of locating and retrieving the information in the collection. Information specialists compile bibliographies, catalogues, and indexes. In the ICT environment information specialists create databases, both bibliographic and textual. For information on the web, information specialists build subject gateways by cataloguing and indexing web-based resources. Information specialists create or acquire search interfaces to simplify the search, interact with the system, and retrieve information. For instance the use of the Open URL Technology makes it easier for users to follow links and get what they want.

Information specialists play a role in preserving culture, as the preservation of information resources means that future populations will have a foundation from which to build and be creative. Therefore, preservation of information leads to preservation of culture.

Dissemination and Document delivery

Information specialists provide information services such as searching, locating and retrieving information; information repackaging; reference service; circulation service; reprographic services; inter-library loan service; and document delivery of print and/or electronic formats of information.

Institutions in Zambia have an account at the British Library for document delivery, and this facility is used to deliver information that may otherwise not be found anywhere else. Since most animal health institutions have no IT facilities, it was decided at one of the stakeholder meetings that "better off" libraries like the two university libraries should open their doors to librarians from other institutions to use IT facilities for purposes of searching and providing information to researchers in various institutions where IT facilities are still not developed. This offer is still valid but very few librarians have taken advantage of this.

Researchers and other users are encouraged to register for alerts from subscribed electronic databases. Document delivery for articles published in African journals through AJOL (African Journals Online) is provided. The PRAIS (Programme for Agricultural Information Services) newsletter is displayed in the libraries as a way of encouraging users to access the document delivery service.

Marketing information services

Information specialists need to publicise, promote, announce, and advertise the information products and services available in own collections or anywhere they can be accessed. Marketing and promotion of information resources has been done through print brochures, leaflets, newsletters, verbal presentations at meetings, posters, displays, email, bulletin boards, and institutional websites. Information products and services have been promoted at exhibitions and displays during the national library week in September.

Marketing is an area of concern among information specialists. It is envisaged that marketing of resources could enhance their usage. Short courses and training programmes would assist in preparing professionals for this task.

Training/ User Education

It is the responsibility of information specialists to conduct training programmes and user education on how to use access tools and use of Internet resources. Where illiteracy becomes a limitation to the use of information, information specialists have a duty to mount campaigns, collaborate with other interest groups and get involved in improving the population's literacy rates. There is a need to teach literacy in terms of numeracy and reading as well as computer and IT literacy, to different categories of users.

The University of Zambia Library has organized training workshops in 'Using the Internet', 'Management of

electronic journals and library information resources' and 'Web authoring' training programmes through PERI. Information specialists conduct training for university and college students in study skills, literature searches and use of electronic resources.

Information specialists in the electronic environment need to conduct training and user education for effective utilization of information resources to all categories of information users. Users need to be trained in using digital resources and the Internet, an expanded source of information. The Internet has also improved the speed at which information can be delivered, and users need to be acquainted with the electronic document delivery, a quick mode of information delivery.

Training workshops in the use of electronic information resources have proved quite effective both as a way of imparting skills and as a promotion tool for resource utilization. In the case of researchers and academic staff, the approach has been demonstrating access to electronic resources. The workshops and demonstrations encourage usage, as users would have had hands-on practical feel of how to search and download information. These methods have proved quite effective.

Research

Research helps information specialists establish the usefulness of the resources and services provided. It also provides information on the needs of users in this ever changing information and IT environment; information that information specialists could use to improve service delivery. Research may include analysis of users' needs to determine what is appropriate, evaluation of services and products to determine relevance to needs of user communities, and literature analysis/ document analysis for purposes of preparing information briefs or repackaging information, as well as answering the information queries.

Conclusion and Recommendations

Regardless of the situation in which information specialists find themselves, they have a role to fulfill in enhancing and facilitating access to information resources. Information specialists need to be proactive and radical in their efforts to be able to provide satisfactory and appreciable products and services. Challenges will always be the driving force to delivering quality service.

It is recommended that there should be continuous training and retraining of information specialists to equip them with skills to cope with demands of any given time. Information specialists should encourage collaboration among themselves to share ideas and resources where possible. Staff exchange programmes would expose information specialists to other means of doing things, thereby encouraging and motivating them to improve services at their institutions.

Collaboration could be pursued in building virtual collections by cataloguing and indexing web based electronic information resources and creating subject gateways.
There is also a need for information specialists to create relationships with users, information professionals, and other stakeholders in information service delivery.

Information specialists should be involved in advocating for the availability of reliable IT infrastructure in their institutions, administrative support for access to information resources, and
institutional information and IT policies.

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