

UNIVERSITY OF ILORIN



THE ONE HUNDRED AND THIRTY-SECOND (132ND)
INAUGURAL LECTURE

“INFORMATION, KNOWLEDGE AND
THE GATEKEEPER”

By

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My Lords: Spiritual and Temporal,
Members of my Family, Nuclear and Extended,
My Dear Friends,
Distinguished Invited Guests,
Great Students of the University of Ilorin, particularly CISSA,
Gentlemen of the Press,
Ladies and Gentlemen.

Preamble

Inaugural lecture has many traditions. In one tradition, an inaugural lecture serves as a launching pad for a newly promoted professor to launch his arrival into the professorial status. Another tradition views an inaugural lecture as an occasion for breaking news about ground breaking research or any discovery/invention that is beneficial to mankind, like finding a cure of HIV/AIDs. Yet in some traditions, it is an occasion to launch a new discipline, a new field of study or practice in a university. To us in the university community, an inaugural lecture is often associated with a newly promoted

professor, justifying his Chair by presenting an inaugural lecture. It is regarded as a debt every professor owes his/her university. My own inaugural lecture today is neither the inauguration of a newly promoted professor, the news of a ground breaking research, nor an announcement of a new discipline. It is a debt I want to pay to my university.

According to Agaja (2010), a professor could belong to one of the following five categories based on the length of time one has been a professor: (1) Baby professors, 0-4 years; (2) Young professors, 5-9 years; (3) Adult professors 10-14 years; (4) Old professors, 15 -19 years; and (5) Aged professors, 20 years and above.

Mr. Vice-Chancellor Sir, I fall into the category of “old” professors, having been promoted a professor since January 1998. So I should have delivered my inaugural lecture in 1998 or thereabout. Why has it taken me fifteen years to deliver my inaugural lecture?

I was promoted a professor in far away University of Botswana. As at that time, most of the professors in that University were those who were already professors in other universities before they were appointed at the University of Botswana. I was one of the few professors that were promoted from within. The culture of inaugural lecture was not entrenched in the University then. By the time inaugural lecture was integrated into the university system, the atmosphere was no longer conducive. As a professor delivering an inaugural lecture, one is expected to espouse one’s discipline, its benefit to the immediate society, the challenges and areas of improvement. As an expatriate professor you do not want to offend your host community by criticising the government publicly, otherwise you may be deported. Thus, most expatriate professors refrained from delivering inaugural lectures. I therefore wish to sincerely thank the University of Ilorin authorities for providing me the platform with which to deliver my inaugural lecture.

Mr. Vice-Chancellor Sir, this is the first inaugural lecture from the Department of Library and Information Science and also the first from the Faculty of Communication and Information Sciences.

I have had my interest in library and information science discipline since 1969 when I was employed as a library assistant at the Nigerian Institute of Social and Economic Research (NISER), University of Ibadan. After obtaining B.Sc. (Hons.) Chemistry from the University of Lagos in 1974, I proceeded to the University of Ibadan for the Postgraduate Diploma in Librarianship (PGDL), immediately after my national youth service year in 1975. After my graduation as a librarian in 1976, I became one of the few librarians in Nigeria with a subject background in science. I was appointed an assistant librarian at the University of Ibadan Library, I was responsible for cataloguing science books. I later moved to the Department of Library Studies, University of Ibadan in 1978 as an assistant lecturer.

Mr. Vice-Chancellor Sir, the library and information science discipline has grown over the years, especially with the information deluge which is sometimes called information explosion. Unfortunately, in Nigeria, there is a wrong perception of library and information science profession. This is best demonstrated by my personal experience and the experience of another colleague. After completing the national youth service programme, a friend of mine, right from my university days asked me when I was going to assume duty in Lagos at the Food and Drugs Unit of the Federal Ministry of Health, because I had been employed as a food and drugs inspector. I told him, I was going in for a postgraduate programme at the University of Ibadan to study library and information science. He was furious. His comments:

How can you spend years in the university going to the laboratory every day to perform experiments, and after

graduating with a B.Sc. (Hons) in Chemistry you want to end up arranging books on the shelves?

The second experience about the misconception of library and information science happened to one of my colleagues, who is a professor. She was invited to start the library and information technology programme of one of the federal universities of technology in Nigeria. One of her students in the maiden class stated that his parents (well educated) were unhappy that he was studying library and information science. They asked him the question below:

What is in a library that you are going to study for five years?

From the experiences I have narrated, it is obvious that even people who are highly educated in the society do not know what library and information science is all about.

I hope that at the end of this lecture, I would have convinced you enough to know that library and information science is the mother of all disciplines (Atinmo, 2012).

2.0 Introduction

Information and knowledge are concepts that are interwoven and they constitute the building blocks for development. In his book *Profit from information: a guide to the establishment, operation and use of information consultancy*, White (1979) quoted Benjamin Disraeli, a one-time British Prime Minister, as stating that: "As a general rule, the most successful man in life is the man with the best information." Diebold (1979) in an article published in a journal entitled *Information Systems* predicted that: "Information, which in essence is the analysis and synthesis of data, will unquestionably be one of the most vital resources in the 1980s. Information will be treated as an asset. The corporations that excel in the 1980s will be those that manage information as a source." There is no doubt, that even in this millennium, information has become

more critical as we are all moving towards becoming an information society. Martin (1995) described information as the life blood of society.

Knowledge, on the other hand, promotes creativity, innovation and development. That is why there is the knowledge economy. Knowledge is pivotal in the economic growth of any nation. According to Civi (2000), knowledge is an important resource that is worth more than land, labour and capital, because it does not have diminishing value like the other traditional assets. World Bank (1999) stated that “poor countries and poor people are left behind by rich ones, not because they have less capital, but because they have less knowledge.” The more one is equipped with knowledge, the more productive one becomes.

2.1 Explanations of Some Concepts

There is the need to explain some concepts as part of the background to this lecture.

2.1.1 What is Information?

As innocuous as this question is, it is one of the most complex questions that confront mankind. This is because information is omnibus, intangible and yet all pervasive in all human activities. There are many definitions of information today. As far back as 1983, Machulp and Mansfield (1983) provided 30 distinct definitions. In an article entitled “Conceptual approaches for defining data, information, and knowledge” published in 2007, Zins (2007) reported a critical Delphi study carried out between 2003 and 2005 involving 57 leading scholars in information science from 16 countries, forty-five of the scholars provided 130 definitions of data, information and knowledge.

Owing to the nature of information, it has many perspectives as the human discipline. The way telecommunications engineers view information is very much

different from geneticists, lawyers, librarians, etc. According to Aina (2004), “the telecommunications engineers associate information with bits and data, while librarians associate information with recorded knowledge and the microbiologists consider information as genes in DNA, which are transmitted from one generation to the other.” “Practising journalists relate information to news; computer scientists consider processing of data as information”. As of today there is still no consensus definition of information.

2.1.2 Nature of Knowledge

Just like information, it is difficult to define knowledge as demonstrated in the different definitions in the Delphi study of Zins that involved 45 experts providing 130 definitions. These definitions include:

Knowledge is the general understanding and awareness garnered from accumulated information, tempered by experience, enabling new contexts to be envisaged.

Knowledge is a combination of information and a person's experience, intuition and expertise.

Leonard and Sensiper (1998) refer to knowledge as information that is relevant, actionable, and based at least partially on experience. Knowledge is more personal, as it is acquired largely through experience. Evers and Gerke (2005) have described knowledge as the main driving force for innovation and development. The World Bank (1999) reported that the difference between developing countries and industrialized countries can be attributed to knowledge. In the same World Bank Report, it was reported that about 80% of knowledge created is from the industrialized countries.

2.2 Relationship between Information and Knowledge

As earlier stated, information and knowledge are interwoven, as one leads to the other. This harmony is best illustrated in the Information Continuum, as demonstrated by Rubin (1998) when he provided the relationship between data, information, knowledge and wisdom. He described the continuum this way: “Data are raw and unprocessed, information is processed data from which meaning arises and it is communicated, and knowledge is further processed information that is organised and interrelated and more broadly understood and applied. Wisdom is knowledge applied to the benefit of humanity.”

The Information Continuum is, therefore represented as follows:
Data → Information → Knowledge → Wisdom.

Liebowitz (2003) has provided a relationship between data, information, knowledge and wisdom as a pyramid. Wisdom constitutes the apex of the pyramid. Thus, there is sufficient evidence that information and knowledge flow from one to another. And it is important for any society to have access to these critical commodities.

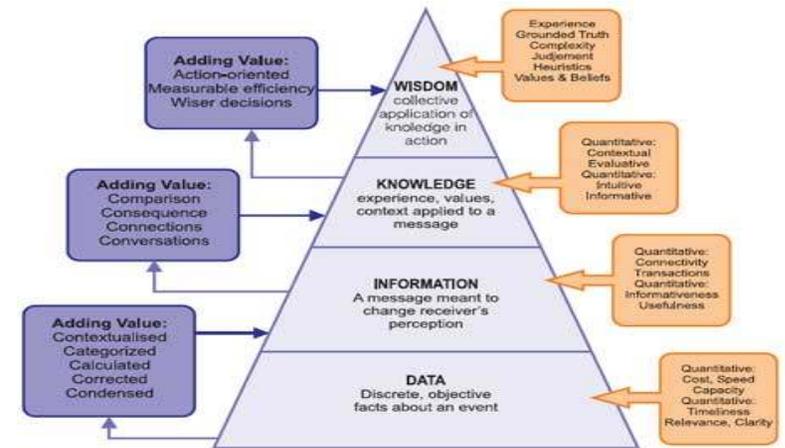


Figure 1: Relations between data, information, knowledge and wisdom. Source: (Liebowitz, 2003)

2.3 Gate-keeping and the Gatekeeper

Mr. Vice-Chancellor Sir, gate-keeping in information and knowledge is the process through which a small fraction of information is filtered from plethora of information for the purpose of dissemination to end-users. It is, essentially, an activity of controlling, and usually limiting general access to information and knowledge. According to Pessach (2007), “Libraries’ gate-keeping begins with their selection and indexing functions. Librarians are constantly engaged in a discretionary decision-making process, deciding which knowledge to preserve and according to what parameters. In a similar manner, libraries’ methods, of classifying, indexing, and organizing knowledge also involve gate-keeping practices.”

Librarians and information professionals have traditionally controlled the access to information and knowledge. In controlling access to information, they perform the role of a catalyst. Gatekeepers add value to any activity that will meet the

needs of an information user. Librarians and information professionals perform this role creditably by providing optimum services to their clients. Such services include selection of books and periodical titles, audio-visual materials, preservation and distribution of information, organisation of knowledge (cataloguing and indexing), compilation of metadata, reference services, selective dissemination of information, current awareness service, and provision of information literacy programmes. The ultimate aim of a gatekeeper is to connect users with appropriate information.

A modern definition of a library is “a place where print, digital and other non-print materials are collected, organized and made available for access and use” (Aina, 2012a). The library may be made of walls, where these materials are stored; or it could be virtual, where all the information needed is stored on a computer with Internet facilities, which will be accessible to its users. The ultimate aim of a library is to provide information, which when accessed and used, could lead to knowledge generation and national development.

There is generally no distinction between “librarianship”, “library science” and “library and information science”, except that the three concepts emerged in response to rapid social and technological developments. The profession has evolved from librarianship to library science, and to library and information science.

Today, libraries have moved from physical libraries to virtual libraries, where the collections are not provided within walls but within the computer using digital resources. Libraries have evolved from ancient times, when they consisted mainly of clay tablets and papyrus rolls to a situation where they provide public facilities for access to their electronic resources including the Internet.

3.0 Gate-keeping in Library and Information Science

Mr. Vice-Chancellor Sir, I have already identified the role of the gatekeeper in information and knowledge gathering, documentation, and dissemination. Librarians as gatekeepers perform the role of information and knowledge gate-keeping, as they serve as intermediaries, between information and knowledge resources and the users.

Many laws, models, and applications on gate-keeping, have evolved since the beginning of the profession. Among these are:

- (i) Ranganathan’s Five Laws of Librarianship
- (ii) Bibliometrics/Webometrics
- (iii) Eugene Garfield’s Impact Factor and other Evaluation Measures
- (iv) Information Needs and Seeking Behaviour Models.

3.1 Ranganathan Five Laws of Librarianship

A famous Indian librarian, Prof. S. R. Ranganathan, formulated five laws based on library values in 1931. They are as follows:

- (1) Books are for use.
- (2) Books are for all.
- (3) Every book its reader.
- (4) Save the time of the reader.
- (5) A library is a growing organism. (Ranganathan, 1931).

These laws serve as the core guidelines for a librarian to perform his/her gate-keeping duties. Gorman (1998) refers to these laws as the intellectual framework for understanding all aspects of library work. Ranganathan’s laws are essentially for traditional libraries. These laws were modified by Gorman (1995) to incorporate the use of technology, taken into account that the laws will apply to the modern library and Noruzi (2004) modified it to suit web resources. These laws form the philosophy of the librarian so as to serve effectively as intermediaries between the information sources and the users.

3.2 Bibliometrics

Allan Pritchard first coined the word Bibliometrics when he published his paper entitled “*Statistical Bibliography or Bibliometrics.*” According to Pritchard (1969), “Bibliometrics is the application of mathematics and statistical methods to books and other media of communication”

Generally, bibliometrics covers the study of the number of publications in a given field and characteristics of the subject field. It enables one to identify growth of knowledge, core authors and most productive journals in a field. Bibliometrics can also be used to provide the trends and future directions of a discipline.

The three most commonly used laws in bibliometrics are: Lotka's Law of scientific productivity, Bradford's Law of scatter, and Zipf's Law of word occurrence. Zipf's Law is not commonly used in library and information science.

3.2.1 Lotka's Law

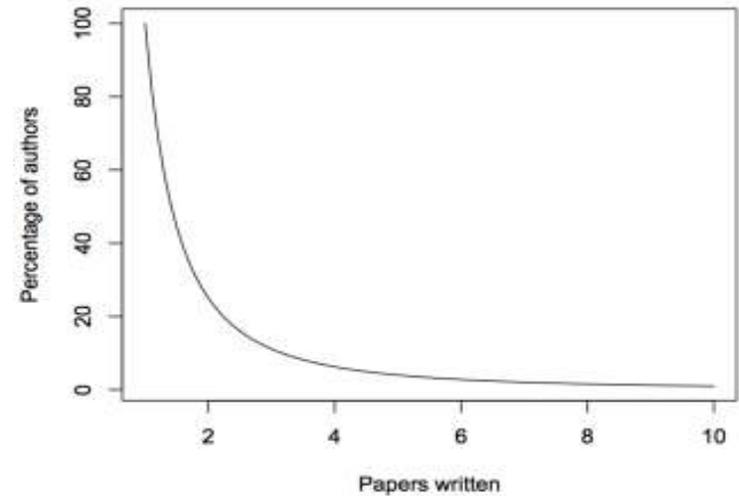
Lotka's Law states that the number (of authors) making n contributions is a constant C of those making one; and the proportion of all contributors that make a single contribution is about 60 percent" (Lotka, 1926).

This law can be explained as follows: that authors in any given field will have 60% of them just contributing only one publication in that field, while 15 per cent will have two publications ($1/2^2 \times 60$) and 7 per cent of authors will have three publications ($1/3^2 \times 60$), etc. Based on this law only six percent of all the authors will produce more than 10 articles.

This Law is applicable to estimating the frequency with which authors will appear in an online catalogue (Potter, 1988).

3.2.2 Bradford's Law of Scattering

S.C. Bradford, a chemist and a librarian at the Science Museum, London, observed a certain pattern in the distribution of papers among journals in Applied Geophysics and in



Lubrication Research. He compiled a bibliography on lubrication, 1931 - 1933 and applied geophysics, 1928-1931. It formed the backbone of the theoretical foundation of the Bibliometric study known as the "Bradford's Law of Scattering."

Bradford (1934) stated his law as follows: The mathematical relationship of the number of journals in the core to the first zone is a constant n and to the second zone the relationship is n^2 . Bradford expressed this relationship as 1: n : n^2 .

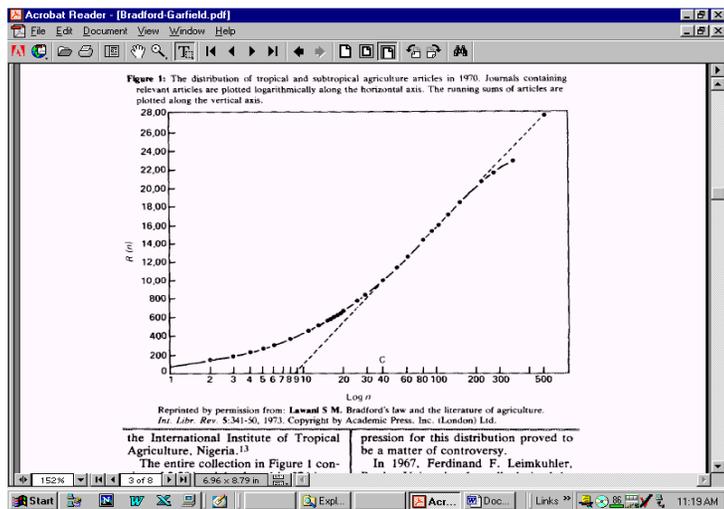


Figure 3: Graphical Distribution of Bradford's Law. Source: Lawani, S. M. (1973)

The Law can be explained as follows: journals in any single field can be divided into three parts, each containing the same number of articles: (1) a core of journals on the subject, relatively few in number, that produces approximately one-third of all the articles; (2) a second zone, containing the same number of articles as the first, but a greater number of journals; and (3) a third zone, containing the same number of articles as the second, but a still greater number of journals.

Through this Law, librarians are able to estimate the core journals of a discipline, and in selecting the journals in that field, it is easy to determine the core journals that the librarian will include in his/her collection. It is an objective measure of collection development, which is part of the librarian's gate-keeping role.

3.2.3 Citation Analysis

Apart from these three laws, citation analysis is frequently used by librarians to select journals. These are citations to articles that have appeared in journals and other publications. They form part of scholarly communication. One very common use of citation analysis is to determine the impact of a single author on a given field by counting the number of times the author has been cited by others. Its main application is the quantitative and qualitative evaluation of scientists, publications and organisations.

Librarians have extensively used bibliometrics laws in selecting journals and other collection development activities such as de-subscription of serials, weeding, etc. All these are to save costs and also to provide the most useful relevant information to the users. Through statistical analysis of borrowing records, one is able to identify frequently borrowed books, and such books will be placed on reserve or even multiple copies of the book can be purchased. If inter-loan records are analysed, one can identify books that are regularly requested for and that will be an indication that the book should be purchased by the library.

Webometrics is based on the principles of bibliometrics. The only difference is that while bibliometrics applies to print documents, webometrics applies to studying the relationship of different sites on the World Wide Web. The main drawback of bibliometrics/webometrics is that it mainly measures volume of the content of the subject field or a site, rather than the quality.

Its useful purpose is that it is indicative because it cannot be taken as a measure of quality. This is the main reason why many scholars take the webometric ranking of universities with a pinch of salt since it only measures the quantity of content of the Internet, rather than the quality. Unfortunately, it is only in Nigeria that webometric ranking of universities is celebrated.

3.3 Eugene Garfield's Impact Factor and other Evaluation Measures

Owing to the limitations of bibliometrics, several other measures for estimating the quality of journals have been put in place. In order to correct this anomaly, Eugene Garfield, a librarian, devised a measure for evaluating journals quantitatively and qualitatively. Thus, high quality journals in a subject field can be selected by libraries for purchase.

Mr. Vice-Chancellor Sir, that a journal is peer-reviewed is not enough, the journal has to be well received by the academic community. The articles in the peer-reviewed journal must be regularly cited by other scholars in the field throughout the world. Heavy citations of articles in a journal confer high quality status on the journal. That is why every academic is encouraged to publish in such journals.

Millions of journals in various subjects are produced every year, and libraries in their gate-keeping functions, can subscribe to only a fraction of journals existing in the world. Eugene Garfield founded the Institute for Scientific Information (ISI), now part of Thomson Reuters. Thomson ISI includes only high quality journals in its database and uses the database to publish citation indexes. They cover science, social sciences and arts.

To ensure that only high quality journals are included in the collection of library, he used the measure called the impact factor (IF) (Garfield, 1999). The IF of a journal is a measure reflecting the average number of citations to recent articles published in a journal. The higher the impact factor of a journal,

the higher the ranking of the journal. The assumption is that a journal that is widely available, read and cited must be an important journal in that field and hence would have a high impact factor. The limitation of this evaluation measure is that only journals covered by ISI have impact factors. Thus, journals that are not included in the ISI database would not have impact factors.

Other measures now exist to evaluate the quality of all journals. These are: h-index and g-index to measure the quality of journals. Hirsch (2005) proposed a measure that will enable one to measure the impact of a journal or an author. This measure is called the h-index.

It is defined as follows: A scientist has index h if h of his/her N_p papers have at least h citations each, and the other (N_p-h) papers have no more than h citations each.

Another index measure, called g-index, was proposed by Egghe (2006). It is defined as follows:[Given a set of articles] ranked in decreasing order of the number of citations that they received, the g-index is the (unique) largest number such that the top g articles received (together) at least g^2 citations.

Calculating h-index and g-index is easy using the *Publish or Perish* software designed by Harzing (2007). Thus, with measures such as impact factor, h-index and g-index, librarians are now able to select journals for a collection objectively.

These measures are now routinely applied for the promotion and tenure appointments of academic staff of universities and research institutes, and even in the ranking of research organisations. These are objective evaluative measures for assessing the quality of journals. This is why many top ranked universities all over the world spend the lion share of their budgets on libraries.

3.4 Information Needs and Seeking Behaviour

Mr. Vice-Chancellor Sir, as gatekeepers of information, librarians provide a variety of library and information services to users. According to Aina (2004), users include general users, specialist users, handicapped users, non-reading users, non-literate users. Thus, amongst the users of the library will be found kindergartens, children, professionals, researchers, policy makers and planners, politicians, artisans, pensioners, rural dwellers, etc. Given the variety and the backgrounds of library users, and the need to perform the duties of a gatekeeper, the librarian must know the information needs of library users and their information seeking behaviours. This will enable the library to provide satisfactory services to its users.

Information seeking behaviour deals with the need for information and how users make use of the library. Savolainen (2007) describes information seeking behaviour as a sub-discipline within the field of library and information science. Information seeking behaviour describes how people need, seek, manage, give and use information in different contexts. According to Case (2002, 2007), there are different components of information seeking behaviour. These are information need, information seeking and information behaviour. He describes information need as: "a recognition that your knowledge is inadequate to satisfy a goal that you have".

As gatekeepers, different studies have been carried out in this area, which, essentially, are to improve collection development and provide optimum services to clients.

Since we are dealing with different kinds of users with varying backgrounds, having different problems, many information seeking models/concepts have been proposed to explain information seeking behaviour. Some of the important models include those proposed by Belkin (1980), Dervin (1992), Kuhlthau (1991,1993), Ellis et.al.(1993), Ellis and Haugan, (1997), and Wilson (1981,1999).

4.0 Contributions to Library and Information Science

Mr. Vice-Chancellor Sir, in discussing my contribution to library and information science, I shall delineate it into two broad areas: (i) contribution to knowledge and (ii) contribution to professional development.

4.1 Contribution to Knowledge

4.1.1 Bibliometrics Analysis of Science and Agricultural Literature

My early research into library and information science started with bibliometrics. Through series of bibliometric studies, I was able to identify "core" (major) journals of science and agriculture disciplines in Nigeria. In the bibliometric analysis of scientific literature in Nigeria using Bradford's Law, I was able to identify both the "core" local and the international journals into which scientists publish their research findings. This provided a major signpost for scientific libraries in Nigeria, which ensure that they selected only journals that would give optimum service to their clients (Aina, 1980). Also, Lotka's Law, was tested with Nigeria's scientific literature and the law was found to hold for science literature. This was used to identify the major scientists contributing to knowledge in the field of science. This is a major application used by libraries to select documents in which major authors had reported their findings.

In 1983, citation analysis technique was used to identify core journals of agriculture in Nigeria. The results of the study were of significant importance to all agricultural libraries in Nigeria, because they were able to perform their gate-keeping functions objectively in selecting journals for their libraries (Aina, 1983).

Aina (1991) identified the directions of the information professions, using citation analysis technique, and found that library and information science continues to be interdisciplinary, as researchers cited documents in other subjects, such as

agriculture, education, communication, science and technology, rural development. The study also revealed that only few publications cited were published within five years prior to the research investigation. Similarly, Aina and Mabawonku (1997), used citation analysis and found out that about half the publications cited in library and information science were 11 years and above. The implication of this study was that a large number of publications for consultation in African libraries, by researchers in library and information science were outdated.

Aina and Mooko (1999), used bibliometrics to identify top researchers in library and information science in Africa. The findings reveal that top researchers in Africa, rarely collaborated in research. The study also, shows that top researchers in Africa consulted journals published outside Nigeria for their research work. Out of 15 journals consulted, only two: *African Journal of Library, Archives and Information Science* and *South African Journal of Library and Information Science*, were cited by five or more researchers in Africa. The main contribution, here, was that African libraries would need to collect major journals published outside Africa in their collections

4. 1. 2 Information Seeking Behaviour

Many researchers have worked extensively on the information needs and seeking behaviour of different library users. I have focussed on studies of users such as rural dwellers, farmers and artisans, given the fact that libraries in Africa have neglected serving majority of their potential users, especially rural dwellers, farmers and artisans. The information needs of other users have been extensively reported in Nigeria by other researchers.

Aboyade (1984, 1987) pioneered the study on the information needs of dwellers in rural areas in 1981, using the Badeku village near Ibadan, Oyo State, Nigeria as an experiment, I was part of the research team that investigated the information needs of rural dwellers in Badeku village, Ibadan.

This aroused my interest in the study on the information needs and seeking behaviour of rural dwellers. Aboyade's research report culminated in a publication entitled "Information Provision in the Rural Community".

In a survey of farmers in six villages in Ibadan area, I found out that most of the farmers, required information on a wide variety of subjects, but all were concerned with ways of increasing production. Information on fertilisers and pest and disease control was particularly important. Even though, villages that were near agricultural institutions were purposively selected for the study, none of the farmers had interaction with agricultural institutions that were near their villages. The contribution to knowledge was the need for librarians to fill the gap of meeting their information needs, since they are intermediaries between users and sources of information (Aina, 1985). In a study carried out by Dulle and Aina (1999) on dairy farmers in Tanzania, it was found that the findings were not too different from the Ibadan study. The use of agricultural libraries as an information source was very uncommon to the majority of the respondents with the major reason being lack of such a service

I also focussed on the information needs and seeking behaviour of artisans. One of the pioneer studies on artisans in Africa was by Mabawonku (2004). She found out that information needs were mostly in the areas of job-related activities, health, politics and financial matters. She concluded that formal information agencies, such as libraries, were rarely used as sources of information. Mooko and Aina (2007) studied the information needs and information seeking behaviour of artisans in Botswana; their information needs were mainly in job-related activities, health and sports. Information sources used mainly were radio, colleagues and newspapers. They did not use the library as a source of information.

All the research investigations aim to show that studies must be conducted to ensure provision of the desired information to users.

All my doctoral students have worked in the area of information seeking behaviour. My first and only doctoral student at the University of Ibadan, Dr. E. Camble, researched on quality information as a predictor of success in rural development programmes. He completed the programme after I had left Ibadan.

My first doctoral student at the University of Botswana, Dr. Damaris Odero, investigated factors influencing Kenyan university library employees' internet adoption and assimilation patterns. Incidentally, she was the first doctoral graduate produced in my department, as well as the faculty, in the University the fourth and first female doctoral graduate at the University of Botswana. My second doctoral student, Dr. Oladokun, worked on the information seeking behaviour of distant education students in Botswana. Majority of my 32 former masters' students investigated different aspects of information seeking behaviour.

Generally, it can be seen that libraries had made no conscious plan to serve rural dwellers, artisans and farmers. It has been established that the neglected majority of users in Africa, such as rural dwellers, farmers and artisans also have information needs, which we as gatekeepers must ensure that the right information is provided to them. Public libraries are expected to factor their interests in their collection development policies.

4.1.3 Agricultural Information in Africa

One of the major problems of agriculture in Africa is food insecurity. Africa has the largest labour force engaged in agriculture compared to other parts of the world, yet many countries in Africa, including Nigeria, import food. While lack of mechanisation has been considered as one of the major

problems militating against food production in Africa, it is believed that a major problem, which unfortunately has not been addressed, is the inadequate provision of agricultural information to agricultural stakeholders in Africa.

Agricultural stakeholders consist of farmers, extension workers, researchers and policy makers. My study on farmers revealed that agricultural libraries in Nigeria deliberately ignore farmers in the provision of agricultural information (Aina, 1985; Dulle and Aina, 1999, Aina, 2012b). Aina (1989) in his study on extension workers in Nigeria revealed that they were not served by librarians. Aina (2012b) also revealed that extension workers and policy makers were not provided agricultural information.

Mr. Vice-Chancellor Sir, agricultural libraries seem to concentrate only on researchers as revealed in the study by Chikonzo and Aina (2001) involving information seeking behaviour of veterinary researchers in Zimbabwe it was found that researchers were provided with required information by libraries. The same result was obtained with agricultural researchers in Botswana (Aina, 2012b). The findings reveal that their information needs were well articulated and are met by libraries. Thus, they are better served by the library. Of all agricultural stakeholders, only researchers seem to be considered by librarians in their service provision.

As a result of my research in this area of agricultural information, I collaborated with Professor Kaniki (then of the University of Natal, South Africa) and Professor J. B. Ojiambo (Moi University, Kenya) to write a standard book in this field, the first of its kind in Africa. It is entitled *Agricultural Information in Africa*. It was published in 1995. (Aina, Kaniki and Ojiambo, 1995). In addition, I was invited by two international organisations with the mandate of agricultural documentation to direct or serve as resource persons in capacity building workshops on agricultural information for agricultural librarians in Africa. These organisations are the Southern African Centre for Coordination of Agricultural Research

(SACCAR) Gaborone, Botswana and the Technical Centre for Agriculture and Rural Development (CTA) Wageningen, Netherlands. SACCAR facilitated the training course on the management of agricultural databases (1991) in Maseru, Lesotho and planning workshop for agricultural information system in Southern Africa (1993), Mbabane, Swaziland. CTA was responsible for workshops on micro-computer database management for agricultural librarians in the SADCC Region (1997), Lilongwe, Malawi; Expert Consultation on Agricultural Documentation (1997), Lilongwe, Malawi; and web publishing and use of web/database interface (2000), Gaborone, Botswana. In addition, I was sponsored by CTA/FAO (Food and Agriculture Organisation, to attend an international conference on the role of information in decision making in agricultural research and practice in Freising, Germany, in 1998. The University of Botswana was also responsible for my attendance of conferences on agricultural information in Budapest, Hungary in 1990, Dakar in Senegal (2000), and Seoul in South Korea in 2006.

CTA, in the late 1980s and early 1990s, pursued the need for library schools in Africa to incorporate agricultural information in their curricula, thus an expert meeting was conveyed in Libreville, Gabon in 1989 to which I was invited. We agreed to prepare modules for the course. At a subsequent meeting in Gaborone, Botswana in 1991, modules for agricultural information were produced. Some library and information science schools including the University of Botswana and Africa Regional Centre for Information Science (ARCIS), University of Ibadan, provide agricultural modules in their curricula.

Thus, my major contribution in this area is the sensitisation of librarians, as gatekeepers, to consciously provide information to farmers and other agricultural stakeholders.

4.1.4 Grey Literature

As mentioned earlier in this lecture, gate-keeping on information and knowledge dissemination is not restricted to books and other published materials only. There are some materials collected by libraries that are difficult to organise and yet they contain important information. They are called grey literature because they cannot be easily obtained unlike books and other published materials, which we refer to as white literature. Grey literature include annual reports, technical reports, consultancy reports, conference proceedings, theses and dissertations, government documents, etc. A lot of important publications in Africa come in the form of government documents; hence access to information in grey literature becomes very critical. Unfortunately, grey literature management is beseeched with a lot of problems: (i) bibliographic control is limited, (ii) they are unorganised, and (iii) they are generally inaccessible. They are very ephemeral, hence they are called grey literature. It is estimated that the proportion of grey literature in different subject areas varies between 10% and 60%.

Mr. Vice-Chancellor Sir, as gatekeepers, it is important that we provide access to important documents, whether grey or white.

An analysis of government documents usage at the University of Ibadan, 1974-78 revealed that an average of 10% of all publications consulted by users of the University of Ibadan Library during this period was grey literature (Alabi and Aina, 1980). I analysed the use of government documents by master's and doctoral graduates at the University of Ibadan. It was found that about 15% of total citations was grey literature (Aina, 1987). In another study on the use of government documents by researchers in agricultural economics and agricultural extension in Nigeria, it was found that government documents were cited by 20% (Aina, 1988). Social scientists (97%) at the University of Botswana claimed they consulted

government documents for their research. The study further revealed that government documents were not obtained from libraries by the users, but from their colleagues and from their personal collections (Mooko and Aina, 1998).

In a research work on access to development literature in Botswana, I found that literature in development studies in Botswana appeared in different formats, but primarily in the form of grey literature (Aina, 1992). As a result of this study, I became more interested in this area of library and information science. In 1993, an organisation, called Grey Literature Network, was formed in Amsterdam, Netherlands. It was coordinated by Dr. D. Farrace. The aim of the organisation was to ensure that grey literature was accessible. Four international conferences were held in Amsterdam, Netherlands (1993); Washington, D.C. USA (1995); Luxembourg (1997); and Washington, D.C. USA (1999). I attended all the four international conferences and presented papers. (Aina, 1994; Aina, 1996; and Aina, 2000). I was sponsored by the University of Botswana to attend all the conferences. The major outcome of these conferences was the need to put all grey literature on the Internet through digitisation. This would ensure that there would be a complete bibliographic control of grey literature and full texts of the publications would be available.

As a result of my involvement, along with others, in the management of grey literature, accessibility has now been enhanced. Many organisations now have repositories, where full texts of theses and dissertations, reports, inaugural lectures, etc. can be found. Librarians in Nigeria, as well their counterparts all over the world, now provide bibliographic control to documents, both grey and white. Even at the University of Ilorin here, the full texts of grey literature, including conference proceedings, inaugural lectures, newsletters, etc. can be found on the Internet.

4.1.5 Curriculum Development in Library and Information Science

Librarianship was imported wholesale into Africa, so was also the curriculum. In order to perform the role of the trainer of gatekeepers, there was a need to ensure that a curriculum that will address African problems was in place in library schools in Africa. I worked extensively in this area in order to ensure that an appropriate curriculum was designed for library schools in Africa at all levels, bearing in mind the need to reflect the peculiar African setting and incorporating international practices.

In the 1990s, there was an era termed the “emerging market”. The curriculum for the training of librarians needed to be restructured to incorporate the emerging market. This became necessary due to the fact that the rate of growth of libraries was slow compared to the number of librarians being produced. It was therefore thought that in order to accommodate librarians who would not be employed by libraries, the training had to accommodate trainees who would work in non-library organisations but with strong information component. As a result, a curriculum that would accommodate such courses as information and communications technology, information repackaging, information marketing, systems analysis and design, publishing, records management and journalism would have to be put in place. This became necessary when a study covering ten library schools in Africa revealed that only four of the ten library schools surveyed covered the emerging market substantially (Aina, 1993). From then on, I advocated the need for library schools in Africa to restructure their curriculum to include emerging market courses.

In 1995, I was invited by the University of Fort Hare, Alice, South Africa to serve as an expert on the curriculum development of its library school.

Most library schools based in universities in Africa have incorporated these courses in their programmes. A tracer study of the University of Botswana library school revealed that their training was relevant to their present tasks, even though they were employed by libraries and non-library organisations (Aina & Moahi, 1999).

In 2005, I designed an appropriate library and information science curriculum for Africa at the Master's level as a template for library schools in Africa. This has since been utilised by many library and information science schools (Aina, 2005).

I have a major imprint in the curricula of many library schools in Africa including the Universities of Ibadan, Botswana, Fort Hare (South Africa), Federal University of Technology, Minna and the University of Ilorin.

Mr. Vice-Chancellor Sir, today, as a result of my active participation in curriculum development of most library schools, we have fashioned out a curriculum at the University of Ilorin Library School, which is regarded as one of the best in the world.

4.2 Contribution to Professional Development

4.2.1 Training Materials

Mr. Vice-Chancellor Sir, one of the major constraints in the training of library and information science students is the lack of textbooks that are written with the African setting in mind. To reduce this constraint, I wrote a library and information science text with bias for Africa in 2004. The book entitled *Library and Information Science Text for Africa*, was an instant success as it is used in all the 26 university-based library schools in Nigeria, as well as library schools in other African universities, particularly South Africa, Botswana, Lesotho, Kenya, Uganda, and Zambia. It is appropriately tagged as the "Bible" of the profession. The book could be described as the most comprehensive text which covers most aspect of

information and knowledge gate-keeping. I also edited a book on research entitled *Research in Information Sciences: An African Perspective*. It is the main textbook used for research by postgraduate students in library and information science in Africa. Earlier on, I had written some chapters and edited the main text used for teaching agricultural information entitled "Agricultural Information in Africa" in 1995. In order to take care of emerging courses incorporated by library and information science schools in their curricula, I edited a text entitled *Information and Knowledge Management in the Digital Age: Concepts, Technologies and African Perspectives*. It was published in 2008.

4.2.2 Scholarly Communication

Gatekeepers have an important role to play in documenting and disseminating scholarly communication, given the fact that they have the mandate to provide latest information to their clients, research findings on new knowledge must be communicated to their users regularly. Research constitutes an important component in creativity and innovation hence governments all over the world place an important emphasis on research.

The journal is the major channel for disseminating research findings because it reports the latest developments in the field, and it is peer-reviewed. It, therefore, constitutes the principal medium for publishing research findings amongst scholars.

Journals published in Nigeria are not regular, hence they are not likely to be captured by international indexing and abstracting agencies. This will deprive researchers in other parts of the world the opportunity to read and cite research findings published locally in Nigeria. Thus, when local journals are irregular, researchers will resort to publishing their research findings outside the country. Journals published outside a country are not as accessible compared with those published

locally, at least in terms of cost. In such a case, researchers will be publishing for a wrong audience, as local problems that have been researched into in Nigeria may not be useful to researchers in the foreign countries where Nigerian researchers have published their research findings. On the other hand, Nigerian researchers, who may use the research findings published outside Nigeria by Nigerian authors may not access such journals because of prohibitive costs of journals published outside Nigeria.

The problem with Nigerian journals is that they are published by academic departments and professional associations that view journal publishing as just an additional responsibility. Many editors do not acknowledge that journal publishing is a serious business that needs total commitment and dedication. It is therefore not surprising that journal publishing is still in serious crisis in Nigeria.

Mr. Vice-Chancellor Sir, I was concerned about the situation of scholarly communication and I was convinced that given my training and background, I could start a journal that could be comparable in quality with international journals that are published regularly. This gave birth to the *African Journal of Library, Archives and Information Science*. I got the strong support of Professor (Mrs.) Iyabo Mabawonku (University of Ibadan), Professor Anaba Alemna (University of Ghana, Legon) and Professor Andrew Kaniki (then of the University of Natal, South Africa). The journal debut in 1991 appearing twice a year (April and October). I was the first Editor-in-Chief of the journal and Professor (Mrs.) Iyabo Mabawonku was the Associate Editor. Professors Alemna and Kaniki were editorial board members. Since 1991, it has been published twice a year regularly. Today, 45 issues have been produced, the latest issue being Vol. 23, Number 1 (April) 2013. The journal instantly became popular and it has become the medium for researchers in library and information science in Africa to disseminate their research findings. Today, it is the only journal in library and

information science in Africa that is listed by the world acclaimed Thomson/ISI Web of Science, and until last year, the only journal in Nigeria. Another Nigerian journal was selected for coverage just last year. Out of over 1000 journals produced in Africa, less than 50 are covered by Thomson/ISI Web of Science. *ISI. African Journal of Library, Archives and Information Science* is indexed/abstracted by seven international indexing and abstracting services.

Mr. Vice-Chancellor Sir, I am proud to present to you table below, which shows that *African Journal of Library, Archives and Information Science* has the highest h-index and g-index among major library and information science journals in Africa.

Table : Evaluative Measures of some African LIS Journals*

S/N	Title	Year established	h-index	g-index
1.	African Journal of Library, Archives and Information Science	1991	15	20
2.	South African Journal of Libraries and Information Science	1934	5	8
3.	Nigerian Libraries	1964	9	11
4.	Innovation: Journal of Appropriate Librarianship and Information Work in Southern Africa	1990	2	2
5.	Ghana Library Journal	1963	5	6
6.	University of Dar-Es-Salaam Library Journal	1999	3	4

*Measures taken on April 7, 2013

I researched into journal management and, in particular, *the African Journal of Library, Archives and Information Science*, pointing out the critical factors needed to have a successful journal. Some major considerations include peer review, prompt decision on manuscripts, funding and above all, commitment on the part of editor-in-chief and editorial board members. However, the most important factor in journal publishing is the sustenance of journal. (Aina,1994a; Aina,1994b; Aina and Mabawonku, 1996; Aina, 2002; Aina, 2003; Mabawonku and Aina, 2005; and Aina, Alemna and Mabawonku, 2005).

A journal that will survive should depend solely on subscription and sales. A journal that cannot be sustained based on subscription and sales after five years of being established should be allowed to die. By the end of the third year of its existence, *African Journal of Library, Archives and Information Science*, was already self-sustained. This was as a result of massive advertisement, promotion, marketing and distribution of the journal in Europe, the United States of America and Canada. Another important factor was the calibre of persons on the journal's editorial board. Those managing the journal are well known in Africa and beyond. Today, the journal has subscribers in more than 25 countries, particularly South Africa, the United Kingdom and the United States of America. There must be only a few libraries in Nigeria today, where one will not find a copy of the *African Journal of Library, Archives and Information Science*.

As a result of the success of the journal, I was invited by some international organisations, notably the International Network for the Availability of Scientific Publications (INASP), Oxford, UK, and the Technical Centre for Agriculture and Rural Development (CTA) Wageningen, Netherlands, to participate or direct training courses on journal management. I directed the Training Course on the Management of Agricultural Scientific Journals, in Addis-Ababa, Ethiopia in 1998. It was sponsored by the Technical Centre for Agriculture and Rural

Development (CTA) Wageningen, Netherlands. The International Network for the Availability of Scientific Publications (INASP), UK sponsored a training course on library and Information Science editors in West Africa in Ibadan, Nigeria in 2003, which I directed. The training courses were to empower editors of journals in Africa on how standard journals could be produced. In addition, INASP sponsored my attendance of the 48th Annual Meeting Council of Science Editors in Atlanta, Georgia, USA in 2005. I was the only library and information science editor from Africa that attended. INASP also sponsored an international conference on "Improving the Quality of Library and Information Science Journals in West Africa" in Ibadan, Nigeria in 2005. I was the co-ordinator of the conference.

From the success of the African Journal of Library, Archives and Information science, it has been established that a sustainable and well respected journal can be produced in Africa. I consider this as my major contribution to library and Information science profession.

Mr. Vice-Chancellor Sir, with due sense of humility, I feel fulfilled that I have contributed significantly to information and knowledge gate-keeping in Africa.

5.0 Present and Future

There is no doubt that information and communications technologies have revolutionized librarianship and the entire information profession. Globally, the profession is threatened by the Internet. "Today, the perception among many people is that they find decent amount of information on the Internet for their work or leisure without venturing into the library or gaining access into its vault of online resources or print collection" (Cheong, 2008).

Google has attempted to bypass the library by its Google Book Search as any user can perform a simple key word search and it will return the content that best matches the query. It is

believed in many circles that the Internet has completely replaced the librarian, as a library has no place in the provision of information and knowledge. Of course this is not true as the training of library and information professionals incorporates a substantial ICT component. The role of the librarian is more relevant now than before. With skills in designing appropriate metadata and subject headings, effective search strategies, etc. librarians are in a better position to organise information resources on the Internet for their users. As we know it, a simple click of a search term in any search engine will bring out more than six million hits, which are probably impossible to go through in order to look for limited relevant hits. By training, the librarian is equipped with search strategies skills that could enable refining search terms that could lead to the required relevant hits. I remember the interesting inscriptions I read on the T-shirt of a participant at the America Library Association Conference in Washington, D.C. America in June 2010. The front of the T-shirt reads:

“Librarians the original search engine”

The back of the T-shirt reads:

“Scan me (Librarian) for more information”

In Nigeria, the profession is threatened by the government, as its commitment to libraries is very negligible. For example, among the over 120 university libraries in Nigeria, one can hardly list up to five standard university libraries that can meet the scholarly needs of a university community. Unfortunately, the University of Ilorin Library is not one of them. As the President of the Nigerian Library Association between 2010 and 2012, I was in a privileged position to know the state of university libraries in Nigeria. Globally, the ranking of a university depends, to a large extent, on its library. A highly ranked university will necessarily have a quality university library. It is the repository of information and knowledge. The library is the intellectual heart of a university system. In the past, the National Universities

Commission (NUC) made it mandatory for federal universities to spend 10% of their budgets on their libraries. Unfortunately, many of the universities, in the last twenty years have ignored this directive. Rather than spending on university libraries, they are more engrossed with webometrics ranking of universities. No serious university anywhere in the world will focus on webometrics, because what it measures is the presence of a university on the Internet, that is, “the good, the bad and the ugly” content. I just hope that Nigerian press will stop reporting these rankings. In the Nigerian context, these rankings have no value, if the university libraries are not enriched with adequate library stock and first class services.

Special libraries in Nigeria are above average, as one can boast of many standard special libraries. Most libraries attached to international and private sector organisations are of high standard but libraries attached to research institutes and government departments are just like other government controlled organisations.

The National Library of Nigeria is well structured to perform its role, however, because of limited funds it has been handicapped. A national library is the depository of a nation’s information and knowledge, yet here in Nigeria, the depository law is not enforced. There is no significant development over the years. The massive National Library of Nigeria headquarters building in Abuja, which commenced several years ago is yet to be completed because of inadequate funding.

As for public libraries, we do not have any standard public library in Nigeria. What we have are just reading rooms. A public library is supposed to serve all categories of users earlier mentioned. As President of the Nigerian Library Association, I was so worried about the pathetic state of public libraries in Nigeria that the Council set up a committee in 2011 to see how public libraries could be revitalised. The state of public libraries in Nigeria, according to the Committee’s report, is unwholesome. Today, there is no public library in Nigeria that

serves kindergarten, artisans, and the majority of the masses who cannot read or write, etc. Similarly, standard school libraries are just not available. I am not aware of any standard public school library in Nigeria. A standard school library augments the role of a teacher in the classroom, as all forms of information resources including slides, audio and video materials on topics taught in the classroom are available in the library.

The cheering news, however, is the “Bring Back the Book Project” of President Goodluck Jonathan. At least, there is a signpost that the government is concerned. It is hoped that library development in Nigeria will be a by-product of the project. I also believe this will be the beginning of Nigeria having a high information society readiness index, as one of the parameters of an information society is free and rapid flow of information.

6.0 Conclusion

Mr. Vice-Chancellor Sir, in this lecture, I have espoused the role of gatekeepers in providing information and knowledge to users. There is no doubt that many challenges confront information and knowledge gatekeepers but they are surmountable. I will therefore end this lecture by giving the following concluding remarks:

- Information and knowledge are best managed by gatekeepers
- Access to constant information and knowledge is desirable given the fact that it will accelerate innovation and creativity thereby promoting development.
- There is considerable evidence that library development occupies a low priority in Nigeria, as only few university libraries in Nigeria can be regarded as standard university libraries. The rest provide mediocre services. The situation is even more pathetic with public libraries,

given my own estimation that they do not exist in Nigeria. Yet, in practical sense, judging with global standards, one of the critical factors that will accelerate educational development at the grassroots level is a well developed public library system.

- Bibliometric ranking of universities based on their web content does not provide a qualitative measure of ranking of universities, if it is not co-ordinated with library development.
- Objective measures, such as h-index and g-index, are now available to evaluate the quality of journals. Libraries are now in a position to include only journals that will be used by users in their collection. Also, with the objective measures in place, the wrangling usually associated with promotion of scholars and researchers should now be considerably reduced.
- The lack of provision of agricultural information to agricultural stakeholders in Africa is one of the major factors responsible for food insecurity.
- Creation of repositories by research organisations will promote access to grey literature.
- Given the rapid developments in the library and information setting, capacity building is very critical to the profession.

7.0 Recommendations

Mr. Vice-Chancellor Sir, the importance of information, knowledge and gate-keeping functions, cannot be over emphasised. In order to promote gate-keeping functions,

necessary recommendations need to be provided. I, therefore, make the following recommendations:

- (1) Federal, state and local governments need to encourage the establishment of public libraries in their domains. It is recommended that the Federal government should establish one standard public library in each of the 774 local governments in Nigeria. In addition, staff of public libraries must be motivated.
- (2) University appointments committee must be seen to be fair and consistent. Quality of journals can now be measured objectively using the "publish or perish" software, which is freely available on the internet. Assessors of professors and readers can also evaluate publications objectively using this software.
- (3) Scholars need to select appropriate journals for reporting their research findings. They could aim to publish their research findings in journals with high h-index and g-index. It is recommended that only journals with an h-index of 10 or g-index of 10 and above, whether local or international, should be used for reporting their research findings. This will ensure that their papers will be widely read and cited and this will give them international recognition.
- (4) All organisations in Nigeria, whether research, government or private, need to ensure that they have repositories of all their grey literature. This will ensure that such publications are accessible to those who need them.
- (5) Library schools in Africa are strongly encouraged to incorporate agricultural information modules in their

curricula. This will adequately prepare librarians to serve agricultural stakeholders better and more effectively.

- (6) Universities are to concentrate on other performance indicators that will enhance their rankings, such as availability of standard libraries, rather than concentrating on bibliometric ranking.
- (7) The National Universities Commission's directive of the 1980s and 1990s that mandated universities to devote 10% of their budgets to library development should be resuscitated. Universities that violate the directive, thereafter, should be sanctioned.
- (8) University of Ilorin is a great university but without a standard university library. I am appealing to the current Vice-Chancellor to focus his attention on the library. A university library should not be treated as just a unit or a department; it is the intellectual heart of the University, so it must be watered all the times with funds and highly skilled gatekeepers. Mr. Vice-Chancellor Sir, please make our University Library your priority so that after your tenure, we will all remember you for giving us a befitting university library.

8.0 Acknowledgements

One cannot but start this acknowledgement by showing gratitude to God for making me what I am today. To God be the glory. I sincerely appreciate my late parents who ensured that I grow up to their expectations.

Prof. Ade Adefuye, Nigeria's current Ambassador to the United States of America, has been a strong influence on me. He has been my role model in the last 50 years. I first met him in 1963 when I entered Molusi College, Ijebu-Igbo as a young boy. Since then, he has been guiding me all the way. My being a

university professor today is largely attributed to him. May God bless him and his family abundantly.’

I am indeed grateful to the former West Germany Government for giving me West Germany Academic Exchange Scholarship which I used for the B.Sc. (Hons) Chemistry degree programme at the University of Lagos.

The University of Ibadan, Nigeria, provided with me the opportunity to study librarianship course that was very dear to my heart, as well as assisting me to make a success of it. It was the only university in Nigeria at that time where one could do a postgraduate programme in librarianship. I am therefore grateful to Professors Adetoun Ogunsheye, Bimpe Aboyade and Wilson Olabode Aiyepeku, who were my lecturers at the Department of Library Studies, for stimulating my interest in the programme. In particular, I will be ever grateful to Professor Aiyepeku, who supervised my doctoral thesis. I am grateful to late Mrs. Tinuade Odeinde, the former University Librarian of the University of Ibadan, who employed me as an assistant librarian at the University Library immediately I graduated in June 1976.

Professor Bimpe Aboyade spotted the potential in me and encouraged me to transfer to the Department of Library Studies as a lecturer. I moved to the department in 1978 as an assistant lecturer. I will like to express my appreciation to some of my colleagues, whom I met in the Department of Library Studies. They are: Professor Philomena O. Fayose (now at Kwara State University), Professors Bunmi Alegbeleye, Morayo Atinmo and Iyabo Mabawonku (all still at the University of Ibadan), Professor Gbade Alabi (who recently retired from Walter Sisulu University, Umtata, South Africa), Professor Briggs Nzotta (formerly of Western Cape University, South Africa), late Professor Benson Edoke (formerly of the University of Nsukka, Nigeria), Mrs. Ronke Fetuga (a successful entrepreneur in information business) and Kathy Okpako, (then the Training Librarian), for the camaraderie we enjoyed together in the department in the 1970s and 1980s. I really enjoyed the

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My sojourn at the University of Botswana has been a watershed in my life. My career blossomed in the University as I had access to first class facilities and funding. The University has an excellent library with modern ICT facilities for research, which contributed substantially to my growth in the profession. I was sponsored to attend relevant conferences all over the world. I wish to thank all the three vice-chancellors (late Professor Thomas Tlou, Professor Sharon Siverts and Professor Bojosi Otlhogile), deans (late Mr. Tom Kwame, Dr. Brian Mokopagosi and Dr. (Mrs) Nobantu Rasebotsa) and heads of departments (late Professor Harvard Williams, Professors Amos Thapisa and Kgomotso Moahi) throughout my eighteen years sojourn in the University. In particular I wish to appreciate late

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