LIBRARIES AND INFORMATION SERVICE IN FACILITATING KNOWLEDGE PRODUCTION AND MANAGEMENT FOR THE MILLENNIUM DEVELOPMENT GOALS

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Abstract

All types of libraries and information services particularly those of the developing countries of Africa are often questioned about their efficacy in contributing towards the reduction of poverty, improving the living conditions of its people and development in general. The millennium development goals (MDG) have been identified by African countries including those of east, central and southern African region “…as a tool within their wider development planning framework… to end the tragic conditions in which so many Africans are deprived of their basic human rights, such as health, education, shelter and security…as tools for coordinating development policy, within broader development priorities, [Africa through the MDGs] …can tackle the extreme poverty that is hobbling [its] people, make…countries more productive and reduce the risk of conflict” (Economic Commission for Africa, 2005). The complexity of the development issues to be addressed in the MDG requires manipulation and combination of existing varied knowledge and production of new knowledge. The knowledge produced and available both locally and internationally must be appropriately used to make meaningful contribution to a country or community. Knowledge management facilitates knowledge production and utilization. This keynote paper identifies opportunities for and challenges African libraries and information services’ role in knowledge production and knowledge management in contributing to achieving the millennium development goals.

1. Introduction

It has been eight years since the Millennium Development Goals (MDGs) were adopted by the United Nations at the Millennium summit “…as a tool within their wider development planning framework in order to end the tragic conditions in which so many Africans are deprived of their basic human rights, such as health, education, shelter and security. By making the Goals work as tools for coordinating development policy, within broader development priorities, Afri-
can leaders can tackle the extreme poverty that is hobbling their people, make their countries more productive and reduce the risk of conflict” (Economic Commission for Africa, 2005:1). Individual countries have from time to time been monitoring and reviewing the extent to which they are meeting these goals. Specific sectors in African countries and continent generally should also monitor and in effect chart their contributions to meeting the millennium development goals.

The library and information services sector particularly in Africa is often questioned about its efficacy in contributing to the reduction of poverty, improving the living conditions of its people, supporting human rights and development in general. The millennium development goals provide a framework for libraries and information services to develop and align their strategies and assess their contribution towards their countries, and African development in general. It is therefore most fitting that the theme of this year’s Standing Conference of the Eastern, Central and Southern African Librarians (SCESAL) Libraries and Information Services towards the Attainment of the Millennium Development Goals (MDGs)” is rooted in the Millennium Development Goals.

The complexity of the development issues that the MDGs framework aims to address requires a variety of resources and inputs. Apart from the financial and material resources, a manipulation and combination of existing knowledge its component parts, information and data, the production of new knowledge and skilled human resources to facilitate the use of this knowledge are critical to achieving the MDGs. While knowledge has been vital all along – in previous eras, trade secrets inventions or other pieces of highly valuable business knowledge could yield a competitive edge that would endure for many years. However, today, “knowledge edge” has a much shorter life span. Therefore, to facilitate efficient and effective knowledge generation and utilization and gain competitive edge over a country’s own national development challenges and over other countries requires an environment in which creating knowledge, managing its transfer and its application or use is efficiently and effectively done. To do this requires knowledge management. Libraries deal with and manage intangible resources, namely:

- knowledge and its constituent parts, information and data,
- their (knowledge) artifacts (or carriers) and
- skills to facilitate their use.
This paper addresses challenges and opportunities of all types of African libraries and information services’ – in effect their role in contributing to meeting the millennium development goals. It addresses the role that African libraries, librarians and information specialists can and should play in facilitating the production and management of knowledge – both the so called-scientific and indigenous knowledge for meeting the MDGs.

One is aware from the programme of this conference that several papers will discuss in more specific and detailed form some of the issues that this paper will only provoke and or simply touch on. It is hoped however, that this paper will also raise issues that may not necessarily have been addressed in the papers that will follow, but that can be used for discussions in various groupings at this conference, other future for a, and among individual libraries and information services themselves as they set their strategies.

2. Millennium Development Goals

The theme of this conference is rooted in the millennium development goals. One therefore anticipates that several papers will address and expound on these goals in varied detail. However, in order to contextualize this paper, it is necessary to highlight the key elements of the MDGs before proceeding to discuss the role of libraries and information service in knowledge production and management for meeting these goals.

In 2000 the United Nationals adopted the millennium declaration which established eight goals – that is, the Millennium Development Goals – each with quantified targets and forty-eight (48) related indicators, to be achieved by 2015. The goals and their targets (in alphabetical bullets below) are aimed at:

i. Eradicating extreme poverty and hunger:
   a. Reduce by half the proportion of people living on less than a dollar a day;
   b. Reduce by half the proportion of people who suffer from hunger

ii. Achieving universal primary education:
    a. Ensure that all boys and girls complete a full course of primary schooling

iii. Promoting gender equality and empowering women:
    a. Eliminate gender disparity in primary and secondary education preferably by 2005, and at all levels by 2015
iv. Reducing child mortality:
   a. Reduce by two thirds the mortality rate among children under five
v. Improving maternal health:
   a. Reduce by three quarters the maternal mortality ratio
vi. Combating HIV/AIDS, malaria and other diseases:
   a. Halt and begin to reverse the spread of HIV/AIDS;
   b. Halt and begin to reverse the incidence of malaria and other major diseases
vii. Ensuring environmental sustainability:
   a. Integrate the principles of sustainable development into country policies and programmes;
   b. reverse loss of environmental resources;
   c. Reduce by half the proportion of people without sustainable access to safe drinking water;
   d. Achieve significant improvement in lives of at least 100 million slum dwellers, by 2020
viii. Developing a global partnership for development:
   a. Develop further an open, rule-based, predictable, non-discriminatory trading and financial system;
   b. Includes a commitment to good governance, development, and poverty reduction — both nationally and internationally;
   c. Address the special needs of the least developed countries Includes: tariff and quota free access for least developed countries’ exports;
   d. enhanced programme of debt relief for Heavily Indebted Poor Countries (HIPC’s) and cancellation of official bilateral debt; and more generous Official Development Assistance (ODA) for countries committed to poverty reduction;
   e. Address the special needs of landlocked countries and small island developing States;
   f. Deal comprehensively with the debt problems of developing countries through national and international measures in order to make debt sustainable in the long term;
   g. In cooperation with developing countries, develop and implement strategies for decent and productive work for youth;
   h. In cooperation with pharmaceutical companies, provide access to affordable essential drugs in developing countries;
   i. In cooperation with the private sector, make available the benefits of new technologies, especially information and communications
These are very complex development issues. It is acknowledge that libraries and information services, and librarians and information specialists in themselves are unlikely to eradicate extreme poverty; achieve universal primary education; reduce child mortality or develop global partnership. It can also be equally argued that however-many millions of Euros or American dollars are “thrown” at these eight challenges they will not in themselves achieve the goals. These goals require integrated, multi-resourced and multifaceted solutions. Important among the key resources for addressing the millennium development goals are appropriate knowledge and its constituent components, namely, information and data.

Two of the key challenges identified in the report to the Dutch government on *Mobilizing knowledge to achieve the millennium development goals* (2005: 1) are:

i. Lack of capacity for knowledge-based development in the South: The report argues that the need to help build and strengthen capacities and infrastructure for MDG-related knowledge production in the developing world is of paramount importance and should be at the centre of the government’s research aid policy;

ii. The gap between the production and the use of knowledge: That is, there is a gap between the production and the use of knowledge in policy and practice. This, the report argues, is due to weak linkages between knowledge producers and knowledge users, and between knowledge production and innovation. The report further argues that knowledge networks are an important vehicle for involving people from different disciplines, institutions and sectors in the production and application of knowledge, and for creating dynamic linkages in the knowledge and innovation system.

Knowledge [information and data] as indicated above is the key resource that libraries and information services work with. While there is existing knowledge and or solutions to development some of the challenges posed by the MDGs, new knowledge and solutions must be produced and or manipulated to deal with these challenges. Furthermore, progress towards meeting these development goals must be closely monitored and reported on.

3. Knowledge production and knowledge management

It is now universally accepted that in today’s knowledge society and global economy “…the sources of productivity, competitiveness [and solutions for de-
development challenges] are increasingly dependent upon [quality and appropriate] knowledge and information…” (Bawa and Mouton 2000: 296). Quality and appropriate knowledge, research or knowledge production which is defined by the Organization for Economic Cooperation and Development (OECD) Frascati Manual (2002:30) as “…creative work undertaken on a systematic basis in order to increase the stock of knowledge, including knowledge of man [in collective sense], culture and society, and the use of this stock of knowledge to devise new applications”. Knowledge includes theories, practical everyday rules and instructions for action. It is used to explain phenomena, understand the world and at the more practical level, solve problems and or deal with challenges of the world. Knowledge is an accumulation of data and information.

To better appreciate the arguments advanced in this paper, it is necessary to briefly define and discuss the two constituent components of knowledge, namely, data and information. Data are the foundation of knowledge. They are a set of symbols to which rules of syntax are applied. Data are observable facts of a situation or ingredients that make up an event. They are unstructured, isolated, and context independent, but they are capable of being integrated within a particular context. When data are contextualized, they are converted into information.

Information is defined as ideas, imaginative works of the mind, and data of value that are potentially useful in decision making, question answering, and problem solving. Information makes one aware of the application of available data. The acquisition of information and its appropriate application can lead a person to a state of knowledge. Being informed is central to the generation of new knowledge, or the understanding of a particular situation.

In a paper presented at the International Symposium on Open access and the public domain in digital data and information for science this author explained that “When information is transferred from source to recipient, or seller to buyer, it remains available to both”. (Kaniki: 2004: 81) Unlike the sale of a material product, an information transfer does not give the recipient the right of exclusive use, nor are there usually any effective ways of barring deliberate sharing of the information, in spite of intellectual property rights such as copyrights, patents, trademarks, and related regulations. Information is usually only wanted because it potentially contributes to someone’s activity; it is rarely required for itself alone.
In the same paper just referred to above, this author went on to further argue that: “…Unlike information and data, knowledge is bound to individuals. It is constructed by individuals and represents their beliefs and causal relationships. Therefore, knowledge is dynamic; it is fluid and ever-changing. There is a lot of it that is intuitive and mutable. It is expressed through use in a moment of making a decision, teaching, or learning. Knowledge can often be captured and structured.

In research or knowledge production, data, information, and knowledge are complementary and depend on each other. The availability of relevant data that can be appropriately contextualized is crucial to knowledge production. Knowledge, on the other hand, provides a person who has the know-how, [the] ability, and skill to make judgments and act on given problems” (Kaniki: 2004: 82)

It must be pointed out that knowledge that is not used and optimized for solving problems and or generating new solutions is less useful. Knowledge optimization in part amounts to the production and or refining knowledge to address local issues, like those reflected in the MDGs. An effective knowledge production process requires an awareness of who is doing what, what kind of research or knowledge is being produced within a particular field and the data and knowledge that have been generated. In other words, optimization of explicit knowledge can be achieved through a consolidation of and making knowledge artefacts, data and information resources available, accessible and usable. It means an efficient and effective management of records, documents and information, and their use. This process is one of the traditional and major activities of library and information services. Optimization of knowledge is further enhanced through the creation of communities of practice, expert networks and learning environments with systems and processes that facilitate the holding and sharing of knowledge, and allows the knowledge to grow. This requires change in values and attitudes of members of a given community, country and the continent. The application of varied media, including information and communication technologies is essential in facilitating and promoting organizational, community and country effectiveness in knowledge optimization. In essence all these component parts constitute what we refer to as knowledge management.

Snowden (1999: 8-9) has defined knowledge management as the “identification, optimization and active management of intellectual assets, [that are] either in the form of explicit knowledge held in artefacts or as tacit knowledge possessed by individuals or communities … developing a body methods, tools, techniques and values through which organizations can acquire, develop, measure, distribute
provide a return on intellectual assets. The building blocks of knowledge management involves setting knowledge goals for the organization or community within which the knowledge management will take place. Community or organizational knowledge goals are determined by the environment within which the organization, community and or country operate and they or must be based on the organizational and or community knowledge and information needs. Once knowledge goals have been set, the six (6) core processes of knowledge management, namely, knowledge Identification; knowledge acquisition; knowledge development; knowledge sharing and distribution; knowledge utilization; and knowledge retention can take root and executed. It must be stated that while these knowledge management processes are standard, each organization and or community will interpret and emphasize them differently. For example at the National research Foundation (NRF) in South Africa knowledge management processes been defined as:

i. [Knowledge Identification]: Establishment and maintenance of internal and external data and information picture – analyzing and describing organization’s knowledge environment (internal and external);

ii. [Knowledge Acquisition]: Acquisition of and access to data and information – communities, organizations and institution in the course of doing business “import” knowledge from outside and or they may not necessarily have the capacity to store everything, but access remotely;

iii. [Knowledge Development]: Data curation, archiving and transformation – may include generation of new skills, better ideas, new ways of doing things – complements knowledge acquisition

iv. [Knowledge sharing]: Knowledge sharing and distribution – communities of practice – this is a vital precondition for turning isolated information or experiences into something that the whole organization or community can use – who should know how much and how can it be facilitated?

v. [Knowledge Utilization and Retention]: Use and retention of knowledge assets – Records and documents management – the selective retention of information, documents and experiences (corporate memory!)

While the execution and implementation of knowledge management processes is systematic, the process is not linear. As knowledge processes are executed within an organization, community or country, the outcomes need to be assessed
It is this author’s strong contention that knowledge management and its processes enhance and facilitate the knowledge production. In the natural sciences for example astronomy, the generation and sharing of new data, combination of these new and old data provide new interpretations and understanding of the galaxy. The need for a virtual observatory for the study of astronomy is considered critical. As the Committee on Data for Science and Technology (CODATA) as argued, large-scale data and information collections open new avenues for research and development based on the completeness and quality of the collections” (CODATA: 2004:12). Increasingly more and more research facilities are maintain research data repositories that researchers can access, conduct further secondary data analysis and or combine with other new data to generate to interpretations and knowledge. Traditionally, it has been accepted that awareness and understanding of the state of knowledge on a particular problem, or in a field is a pre-requisite for developing new insights and solutions to the problem(s). Libraries and information services are well positions to support and facilitate process.

4. What challenges, opportunities and role for meeting MDGs?

Scholars in development studies and some of us who simply flirt with development issues agree that development is a complex process. There are no simple and straightforward solutions to development. It is for this reason that there are no simple solutions to MDGs. However, all of us should also agree that every sector of society has a role to play in development and by extension, contribute to the MDGs. Each sector should identify and coordinate opportunities and its niche for contributing to development and MDGs. As indicated earlier, MDGs should be used “…as a tool within their wider development planning framework in order to end the tragic conditions in which so many Africans are deprived of their basic human rights … [they should] work as tools for coordinating development policy, within broader development priorities…”.

It is perhaps worthwhile beginning this section of challenges, opportunities and the role that libraries can play, with a simple but challenging question to all sub-sectors (i.e. public, university, national, school, special libraries) of the library and information services sector represented at this conference: How many libraries keep or have access to information and data on the Millennium Development Goals, its targets and indicators? Perhaps this is where all libraries should begin
– by identifying the availability, collecting and or providing access to data and information about the MDGs at appropriate levels of complexity and need.

Although of course the development of information and communication technologies (ICTs) is providing easy remote access to resource for some through the use of the internet, it is also a known fact that a number of countries and or institutions face challenges of connectivity. Where problems of connectivity exists alternative means such as the use of CD-Rom for distribution of data and information should be explored.

Interventions such as MDGs create a lot of expectations and attract a lot of country and world resources. They therefore require monitoring and evaluation to ascertain whether or not they are indeed making a meaningful difference. Monitoring and evaluation frameworks and processes require that goals, objectives, and targets are clearly defined and appropriate indicators identified. The Millennium Development Goals have done this. However, reliable and accurate data (of outputs and outcomes) on the indicators must be collected regularly. Researchers and general users must access these data, they must be analysed from time to time to assess the progress being made about specific goals and targets, and after a concerted period, an assessment of the impact of the intervention can be determined. Through this process we can learn lessons about our communities and countries, and as indicated above new knowledge can be generated to address similar problems that may affect other parts of our own societies and those that are similar to us. In this respect one is bound to ask: to what extent do different types of libraries and information services in Africa facilitate access to the data required for monitoring and evaluation of the progress and impact of MDG activities?

The article by Forsyth (2005) entitled: *Public libraries and the millennium development goals* is very instructive. Although devoted to public libraries, it is this authors view that most of the issues and suggestions she raises, and the “framework” she generated and used to assess contribution, can be extended and adapted to all types of libraries. It is worth borrowing her table below of the roles that libraries can play in their communities [using communities in the wider context] and their relevance to the MDGs.
Table 1: Summary of Library roles and the Millennium Development Goals
(Forsyth 2005: 321)

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<tr>
<th>Community roles</th>
<th>Millennium goals</th>
<th>Millennium goals</th>
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<tbody>
<tr>
<td>Community info</td>
<td>i-viii</td>
<td></td>
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<tr>
<td>Local studies</td>
<td>i-viii</td>
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<tr>
<td>Story telling</td>
<td>i-viii</td>
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<tr>
<td>Health info</td>
<td>I, ii, iv, v, vi, viii</td>
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<td>Legal info</td>
<td>iii, vii, vii</td>
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<tr>
<td>Community space</td>
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<td>Access to books</td>
<td>i-viii</td>
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<tr>
<td>Goals</td>
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<tr>
<td>Access to audio-visual material</td>
<td>i-viii</td>
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<td>Meeting spaces</td>
<td>i-viii</td>
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<tr>
<td>Literacy training</td>
<td>ii, iii, vi, vii, viii</td>
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<td>Access to librarians</td>
<td>i-viii</td>
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<td>Safe place to go</td>
<td>i-viii</td>
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<tr>
<td>Makers of cultural records</td>
<td>I, ii, iv, v, vi, vii, viii</td>
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<tr>
<td>Preservers of cultural records</td>
<td>I, ii, iv, v, vi, vii, viii</td>
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<td>Social inclusion</td>
<td>i-viii</td>
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<tr>
<td>Learning the fun of reading</td>
<td>ii, iii, vii, viii</td>
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<tr>
<td>PC access (Internet/databases/email/word processing)</td>
<td>i-viii</td>
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<tr>
<td>Employment opportunities Goal 3</td>
<td>iii</td>
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<td>Environmental information Goals 7, 8</td>
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In discussing the linkage between knowledge and information, it was stated that being informed leads one to a state of knowing – that is having the know-how and or ability to generate innovate ways of addressing challenges similar like those posed by the millennium development goals. Libraries and information services through the knowledge management framework and processes should
facilitate knowledge acquisition and utilization. To be competitive, knowledge
needs to be quickly utilized.

To address the knowledge gap referred to in the report to Dutch government
above and effectively address MDGs may entail knowledge sharing and learning
from the lessons of other. The ECA report on the progress and challenges that
African countries have made and faced respectively, in addressing the MDGs
states that fourteen (14) African among the 30 managed to reduce poverty by
25%. (ECA, 2005: 5) The immediate question one would ask is how did they do
it? Do libraries in these countries have information and lessons as to how these
reductions were achieved? How best can libraries and information services fa-
cilitate the sharing of knowledge and or sharing of lessons?

5. Conclusion

The African continent faces major development challenges. These are reflected
in the Millennium Development Goals that also in effect provide a framework
for addressing development challenges. While it is acknowledged that MDGs
pose complex challenges that require existing and new knowledge, libraries and
information services have a unique advantage to facilitate knowledge production
and its use. To facilitate efficient and effective knowledge generation and utili-
зation and gain competitive edge over a country’s own national development
challenges and over other countries requires an environment in which creating
knowledge, managing its transfer and its application or use is efficiently and ef-
fectively done. Through knowledge management processes and ethos libraries
and information services can facilitate effective knowledge optimization. Afri-
can Library and information service should review and as much as possible re-
align their strategies with the MDGs in order to be relevant!

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