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Grey Literature Acquisition and Management: Challenges in Academic Libraries in Africa

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Introduction

The term "grey literature" brings connotations of bleakness, apathy, indifference, and questionable authority to mind (Mason, 2009). Upon investigation, this is far from truth, unless you find research papers from eminent researchers to be boring. Grey literature has some connection to the brain's "grey matter" since so much of it seems highly intellectual and is significant for research and development in many subject areas. Grey literature is used to describe publications not published commercially or indexed by major database vendors. It is occasionally the sole source for specific research questions. This is why it is highly imperative for academic libraries in Africa to acquire these resources against any challenges. Due to the nature of these literature, academic libraries have had challenges with their acquisition as well as making them accessible. Their management is also a source of worry to academic librarians. This is because it may be ephemeral but it continues to have impact in research, teaching and learning, on which the goal of academic libraries revolves

It is difficult also to define grey literature precisely. Organisations which produce grey literature prefer to describe it rather than defining it (Gokhale, 1999). Grey literature is so called because of its semipublished status and can be difficult to locate, which is why researchers refer to it as the "fugitive literature". They are usually regarded as materials which connote bleakness and questionable authority, but this may not be always true. Most grey literature emanate from government departments, academia, trade unions, research establishment, churches, associations, etc. They are not usually published (resulting in lack of International Standard Serial Number/ International Standard book Number) through the conventional mainstream publishers and they are usually in format restricted and limited in scope. Information World Review (1996) calls grey literature "the unsung hero, the foot soldier, the foundation of the building."

GreyNet (1999) defines grey literature as "that which is produced on all levels of government, academics, business, and industry in print and electronic formats, but which is not controlled by commercial publications". Also, Debachere (1995) opines

that "collectively, the term covers an extensive range of materials that cannot be found easily through conventional channels such as publishers, but which is frequently original and usually recent".

Hirtle (1991) also, defines grey literature as "the quasi-printed reports, unpublished but circulated papers, unpublished proceedings of conferences, printed programmes from conferences, and other non-unique materials which seem to constitute the bulk of our modern manuscript collection". In general, grey literature publications are non-conventional, fugitive, and sometimes ephemeral publications. They may include, but are not restricted to reports (preprints, preliminary progress, and advanced reports, technical reports, statistical reports, memoranda, state of the art reports, market research reports, etc), theses, conference proceedings, technical specifications and standards, non-commercial translations, bibliographies, technical and commercial documentation, and official documents not published commercially (Alberari, 1990).

From the understanding of various definitions of grey literature, the acquisition and management of grey literature in African academic libraries become an issue the librarian must exploit. These clarifications are important because they provide guidance to acquisition librarians who need to know what kind of information their users want. The key point here is that since grey literature is not well-covered by conventional book trade channels, the acquisition librarian is faced with such difficulties as to: identify, acquire, process and access these literatures than the conventional literatures. Hence, academic libraries in Africa desiring to use grey literature as a source of information, must be prepared to accept challenges and decide on their collection due to the ever dwindling fund allocation to libraries.

Historically, grey literature is not a new phenomenon of the late twentieth century, but something considered a genre since at least the 1920s, particularly in Europe among the scientific circles (Augur, 1989). Grey literature was for many years synonymous with 'reports literature.' At the turn of the century, documents evolving out of research and development, particularly from the aircraft and aeronautics industries were a very important means of communicating the results of research test (Augur, 1989).

However, it was the onslaught of World War Two which had the greatest impact on the report literature, transforming it into a major means of communication. The hallmark of that war was the development of technologicallyadvanced weaponry, from sophisticated tanks to the atomic bomb. These breakthroughs in science made accurate and speedy communications a necessity. The technical report was widely used to disseminate information (White, 1984). The decades that follow saw the continuation of staggering amounts of scientific and technological research, which was amassed to improve both military and communication system. According to Augur (1989)

> "one thing that made grey literature so attractive and attained its importance as a separate medium of communication was because of an initial need for security or confidentiality classification which prevents documents being published in the conventional manner"

Presently, grey literature has continued to grow but the acquisition of grey literature is like finding a needle in a haystack, making it a challenge for libraries all over the world.

Literature Review

The Nature of Grey Literature

Grey literature publications are important materials that libraries, especially academic libraries must acquire in order to support research. Although not rigorously peer reviewed, they contribute greatly to national development since they sometimes originate from scholars. Grey literature materials do not have any ISBN or ISSN and so cannot be easily tracked down or accessed by a large group of clients except

some concerted efforts are made. This explains the reason why it is called grey. Grey is used to connote something that is not clear, wholly, that is different. While literature in this context means publications. This view was strongly supported by Mason (2007) who wrote that the term grey literature brings connotation of bleakness, apathy, indifference and questionable authority to mind. They are not controlled by commercial publishing interests because they are usually issued by government, academia, pressure groups, trade unions, industries etc. Grey literature materials are publications without commercial purpose; articles and information published especially on the Internet, without a commercial purpose or the mediation of a commercial publisher. Generally, they are materials which are not attainable through the conventional channels and not available through normal book selling channels.

In defining grey literature, there are some disputes over its borders, but differences of opinion on which documents may or may not be classified as grey literature are not really significant, as these definitions differ very little in their essence (IFLA, 2001). Wood, ( ) defines the literature as "material that is not available through sale". For the "Interagency Grey Literature Working Group", as noted in the Grey Information Functional Plan dated January 18, 1995, "Grey literature is domestic or foreign ostensive matter that is usually available through specialized channels and that cannot enter the normal channels or publication and distribution systems, nor fall under bibliographic controls or acquisition schemes by book-sellers or subscription agents". For Curràs (1998) grey literature may be obtained publicly, as its content is not conventional and its publication is not firmly controlled, and it is not accessible through the normal distribution channels, which makes it hard to locate and obtain. Moreover, these are documents of many different types ranging from unrevised pre-prints through to documents with very concrete content. Población,(1995) asserts that grey literature documents are fleeting and transparent (not seen in publishers' catalogues, bookshops, libraries, etc.) that are hard to locate but which, in most cases, contain relevant and important data.

It is obvious that the common trait running through these definitions is the fact that grey literature is neither produced by nor distributed through retail channels. These include academic works, pre-prints (understood here as research records distributed among scientists prior to formal publication), committees' reports, commission reports, technical reports, government reports, research reports, travel reports, conference papers, technical standards, dissertations, theses, non-commercial translations, market surveys, news bulletins, company documents, working documents, web sites, virtual discussions, data sets, e-mail and electronic simulations (Altmeyer, 2000). Others are memoranda, conference proceedings, technical specifications, bibliographies and maps (McGlamery, 2000).

Characteristics of Grey Literature

1. Not primarily produced for commercial publications
2. Production as a means of getting a message across rather than publishing as a commercial venture (for project or otherwise)
3. Difficult to acquire
4. Not part of a major distribution channels
5. Few, if any bibliographic controls e.g. lack of ISBN or ISSN
6. Not peer reviewed
7. Transient or ephemeral in nature
8. Difficult to find because historically, it is not included in commercial abstracting and indexing database

Importance of Grey Literature

Grey literature has emerged in scope and importance in recent years due to the proliferation of critical information now readily available to organize from e-publishing ventures. Grey literature is an important source of information. It can often be

produced more quickly as it has greater flexibility. It serves scholars and lay readers alike with research summaries, facts, statistics, and other data that offer a more comprehensive view of the topic interest. In future, grey literature will be more important. In a world in which free trade and instantaneous communication have eliminated many of the barriers to information flow, grey literature is gaining greater importance as a source of information for much of the world's population. The following are some of the importance of grey literature publications as postulated by Soule and Ryan, (1999)

- It can provide information that is often unavailable in published open sources
- It is often available on more timely basis than conventional literature. Conference papers, for example, are available long before any follow-up, published article will appear, yet the information content of the two versions may not differ significantly.
- It can corroborate important assertions found in other sources, which is always paramount in intelligence analysis.
- It may have a concise, focused, and detailed content. This is particularly true of technical reports and unofficial government documents, whose information content will be greatly reduced in the published form.
- The literature is always free, relevant and unique.
- It is becoming a common means of information exchange, particularly as personal publishing software improves and Internet access expands.

Generally, grey literature is the main source of indigenous information, therefore, it is very relevant in carrying out researches that are home based. Lecturers, researchers and students in universities rely heavily on these literature materials like theses, projects, and conference papers, in order to gain first hand information on topics under study. Other benefits are that, grey literature is more likely to report studies that ceased prematurely, as well as innovative pilot projects

Grey Literature and Academic Libraries in Africa

The grey literature documents in Africa are mostly produced in limited numbers, and have limited circulation even within the institutions where they are produced. The situation is made worse by the fact that grey literature on the continent is inadequately documented and there is a general absence of national or regional bibliographic databases that can be accessed to find out the grey literature that exists on the continent and where to access it. (Chisenga, 2006). Where the databases exist, it is usually very difficult to get access to the actual documents unless one visits the institutions where the documents were produced. There is also lack of capacity, both human and institutional, for managing grey literature which increasingly is being generated in digital format. The result is that much of the grey literature being generated in research institutes is not being shared and in most cases the results of scientific and technological research are not being developed further beyond field and laboratory research. Very useful and valuable technological and scientific information and knowledge remains unexploited and in some cases is lost.

The phenomenal advances in research and learning, relatively small and fragile publishing sector, recurring shortages of conventional publications, and persistent shortfalls in library acquisitions budgets have, in recent times, brought to the fore, the significance of grey literature in supporting ongoing initiatives aimed at improving living standards in developing nations (Muswazi, 2001). Following the first international conference on grey literature held in Amsterdam in December 1993, several articles on the subject have appeared. In particular, Sturges and Debachere address the problems of obtaining grey literature and allude to possible models emanating from Sierra Leone, Sudan, Benin, Lesotho, Senegal, Botswana, Zimbabwe and Tanzania. At a general level, the adaptation of appropriate knowledge from the global information market place is, among other things, advocated to help meet information needs in African academic libraries. Related works deal with the positive impact of the World Wide Web (WWW) on the acquisition, control and provision of grey literature in

academic libraries.

The main arguments advanced being that: the Internet has great potential as a source of grey literature; grey literature is benefiting from the increase in self publishing via the WWW and enhanced access through direct online distribution; and, because an increasing mass of Internet documents, mainly grey literature, is available to a growing number of users especially in developed nations like the European Union (EU), the concept of grey literature no longer applies. Evidently, the grey literature debate on African experiences focuses on a limited number of countries while the discussion on the impact of the WWW is mainly based on the experiences of developed nations. Not much is documented about the situation in many other developing nations of Africa.

Historically, many academic libraries in Africa have shown little or no interest on grey literature for a variety of reasons. When attention has been paid, academic concerns about collection development and grey literature tend to focus on external collections from industries or agencies and, more often than not, these collections are oriented to a particular subject or discipline. One reason, even within the world of libraries, for these varied responses, is that, this is not a subject generally dealt with in formal library training. Excellent cases have been made for the inclusion of this area in Library and Information Science curriculum, but have not seen its explicit integration to date (Aina, 1998).

In university libraries, many categories of subjects, independent grey literature materials are collected; they are not just thought of as being 'grey'. For example, student theses and dissertations are collected, as well as quite a lot of government documents. Scholarly conference proceedings in subject areas of interest are also collected, and when looking at the academic environment in aggregate, it would not be surprising to find that better than 95% of these are held in college and university libraries. (Siegel, 2004). Many professional society publications are also technically considered 'grey' under the present definition. Libraries, however, would rarely make this distinction. These are just several examples of things that most academic libraries think of as just the normal literature that needs collecting and it does not tend to be seen as 'special'. Other types of scholarly grey literature include that which is produced as a result of scholarly study or inquiry, but which is not published through the traditional channels of books or journals (commercial or society). Since it receives limited distribution, it is often not given an opportunity for wider dissemination through traditional bibliographic treatment (that is collection, cataloguing, and inter-library lending). However, this material does on occasion get cited in scholarly works. This, in turn, leads subsequent researchers down the very frustrating and often futile path of location and procurement.

Identification and Acquisition of Grey Literature

With regard to identification and acquisition, the so called grey literature is an intermediate between published and unpublished works. Grey literature is published literature, but it is not published by commercial publishers. The publishers can be individuals, a company, a government institution, a research institute, or a foundation. As a general rule, non-commercial publishers are not members of a publishers' association. By definition there are multiple copies and the work is not rare – at least not in the beginning of the publishing process. The context of the text, the book with its binding, title page etc., will normally stay with the text. Because the author, as a rule is mentioned somewhere and because the context stays intact, the risk of losing this information is smaller than in unpublished works. But the non-commercial publisher is quite hard to find. The publications themselves often do not give any clues where to find the publisher. This means that a diligent search again is more time consuming, because the search for the publisher is more difficult. The collecting society might know the author, but it is likely that a smaller percentage of authors of grey literature are represented by collecting societies than authors of commercially published books.

The Internet has improved the visibility of grey literature through search engines and visitation of websites such as www.scirus.com, www.science.gov, www.osti.gov/gra, etc. The Internet and electronic access to materials have improved the visibility and accessibility of grey literature in Africa. Grey literature comes in varying shades: relative and subjective. What one library/librarian considers being grey, another may not.

Collection Development Policies

Opinions vary about the utility of collection development policies with some contending that they quickly become inflexible and outdated (Snow, 1996). Most people see collection policies as devices that help libraries target resources perceived to be useful to their parent institutions (Intner, 1996; Lee, 2003; Mack, 2003 and Spohrer, 2003). To the inexperienced librarian or one taking over a new subject area, collection development policies can be lifelines while gaining familiarity with a discipline and its local audience. Collection policies traditionally address grey literature tangentially. They describe sources (e.g. societies, government), and formats (e.g. reports, proceedings). They may give geographic scope and language limitations that direct a selector away from some sources and towards others. In general, collection policy statement literature focuses on acquisition decisions involving expenditures, neglecting the plethora of free, digital grey literature.

The policies also address the selection criteria of the prospective literature. Grey literature materials are selected according to the same criteria as any other item: relevant to the subject and demand by the academic users. Outside of relevance as a criterion, knowing that an item could be catalogued is the second highest factor affecting selection.

Acquisitions Process

Acquisition, organization and maintenance of grey literature are one of the toughest tasks for librarians in Africa. The tracing of these micro documents need the subject expertise on the part of librarians and other library staff. Documentation work has highlighted the importance of these documents and the digital technology facilitating their availability nationally and internationally (Tella, 2006). Before librarians can acquire grey literature, they must identify them and locate a source of supply for them. Thus, finding out about the publication is the first and most basic step in the acquisition process, and perhaps the most difficult where grey literature is concerned, for by definitions, it does not receive coverage in the usual places where librarians learn about new books, like the publishing trade press or bibliographic listing (Berita,). In searching for grey literature, the acquisition librarian scan daily newspapers, looking for report on conference, seminars and workshops etc. which may publish proceedings or issue papers and reports. Traditionally, the news media is a vital source of information on this events, as well as monitoring published sources like Journals, Newsletters and Accession list.

Reaching other academic institutions and private contacts is invaluable in monitoring new literature or ephemeral publication. In the academic setting like Africa, word of mouth is an important way of learning about a new publication or report or project which may generate publication. Making contact with academic world, researchers, project workers (including post graduate students) and librarians are important to stay in contact to these materials. Finally, an important attribute of any acquisition librarian is a strong sense of curiosity and a willingness to ask questions which is a very important way of finding out about new publication on grey literature.

Methods of Acquisition

Purchase: This is done through a vendor who goes round to source for conference proceedings, bulletins and other grey literature materials which are relevant to the

university curriculum/research.

Gifts: Corporate bodies and individuals who are friends of the academic libraries send their publication to the library. This has helped a lot to boost the grey literature collection of the library.

Legal Deposit: The major avenue for the collection of grey literature publication in the library is through legal deposit. Students/researchers are mandated to drop the hard and soft copies of their theses and dissertations in the university libraries. Also, papers presented at the departmental seminar, public lectures delivered in the academic environment and conference proceedings of conferences held in the institution are all deposited in the library.

Subscription: acquisition librarians subscribe to subscription agents who collect grey literature either in digital format or print copies. This can also be done through the Internet either free or premium subscription.

Resource Sharing: libraries engage in resource sharing through the formation of a library consortium. Here, the academic library can go into agreement with other institutions for the purpose of sharing or exchanging grey literature emanating from the participating institutions. The current trend for sourcing grey literature materials is through the use of information technology (IT). Most information professionals have come to set up a listserv that enables them exchange information in grey form through file attachments. Also, academic libraries have formed electronic groups that enable them share and know about the existence of grey literature materials.

Online Search: Internet search is another way of collecting grey literature. This is because transitory and invisible materials on the web are obviously grey and the Internet provides access to materials. Therefore, a librarian can search for relevant literature which can meet the needs of the users. Generally, the librarian can make contacts with publishers, institutions, and organization where grey literature emanates through telephone, fax, email, letter, and subscription.

Management of Grey Literature

The management of grey literature through cataloguing, maintenance and preservation is a core issue to be considered on library to library basis in Africa. Although, it would appear that special libraries are primarily concerned with this literature, but academic libraries will have their share, depending on their academic scope. It is imperative for libraries to catalogue and create access to this literature unlike the small libraries that may not catalogue at all but choose to file them in a pamphlet or vertical collection (Augur, 1989). Anglo American Cataloguing Rules 2 is available, which specifies how to catalogue under corporate body if possible.

In managing grey literature materials in the library, all the routine procedures in processing library materials are followed. This implies that they have to be stamped, accessioned, catalogued and classified. However, with regards to the nature of this literature, they are expected to be filed on separate shelves to enhance greater accessibility and retrieval process. According to Salanje (2007), in some African academic libraries like that of Malawi, efforts aimed at managing grey literature is through digitization so as to:

- have the information accessible widely
- increase local content available online
- preserve/save the documents

In a more positive outlook, one cannot disregard that those who are charged with the tasks of acquisition and cataloguing will tend to see it more as a problem. This is where it becomes helpful to develop clear collection development policies, as well as guidelines for acceptable cataloguing that are perhaps less rigorous than what might be applied toward more mainstream or 'white' literature. In an article by Alison, the

argument is made that vendors could organize bodies of grey literature in a way that would be marketable to libraries, and then libraries would buy it because it would be on the acquisition 'radar screen'. While this idea has merit, it presumes that the materials librarians want to collect are all generated externally, and that all grey literature has 'marketability'. In fact, all of the literature on collection development of grey literature seen so far, discusses bodies of literature produced external to the academy that need to be included in subject collections. While internally produced academic grey literature does not likely share the marketability of certain agency produced scientific reports (the sort that would lend itself possibly to Alison's

proposal), it is still valuable scholarly output that needs to be collected. Therefore, other ways are needed to get it onto the acquisition radar screen.

Use of information and communication technologies (ICTs) for the management and distribution of grey information and knowledge resources will enhance access and sharing of these resources by students and researchers in the continent and contribute to the development of Africa. It will also open up Africa's scientific and technological knowledge which currently is not easily accessible both to the local and international scientific communities. In this light, coordinated acquisition and management of grey information repositories, by academic libraries through online and offline access could go a long away in increasing accessibility and usability of grey literature outputs from Africa, and could provide raw materials needed for research and development of most countries. At the same time it will assist in contributing to the development of Africa's content on the global information infrastructure.

Challenges

The identification and acquisition of grey literature poses difficulties for academic librarians and other information professionals for several reasons. Poor bibliographic information and control, non-professional layout and format as well as low print runs are the major setbacks of this literature (Augur, 1989). Bibliographic control implementation has had so much influence on open source materials, but little or no impact on grey literature. This is because the reports making up the lion's share of grey literature, do not as a rule use ISBN, which requires a depository. In reducing these challenges, report numbering was initiated to enable standardization. The problem is that these numbers are designed to include subject matter, date, form, agency, security classification, location and additional data which eventually make the numbering too long and confusing.

In addition, non availability may be due to incomplete or incorrect identification, since accession or report numbers must be correct to attain access. Dabechere (1995) points out that problem arise in libraries when a patron requests a particular document, and it is not apparent on where to begin the search. Librarians and institutions in the western world have made many attempts to provide sourcing for grey literature. This includes the Griseli Project in France, the Russian union catalogue of grey literature and system for information on grey literature which is managed under the auspices of European Association for Grey Literature (EAGLE). Despite these efforts put by the European communities, very few up to date documents are found in these databases (Mason, 2009).

African research outputs are usually disseminated through two broad categories: research outputs published in the world scientific peer reviewed learned journal and research output published as grey literature which is mostly generated by research and academic institutions (IAALD, 2009). Although, some communicate their work directly on the web through blog, wikis, etc. incidentally, much of the scientific research outputs from Africa are in form of grey literature document which are produced in limited numbers, limited circulation and visibility even within the parent institution of the academic library where they are produced. Consequently, such literature is not only inadequately documented in Africa institutions, but also there are no national or regional databases that academic libraries can use to have access to them. The result is that the inability to identify and acquire them makes the

technical/research information and knowledge remain unexploited and in some cases, lost forever. The situation is worse regarding digital born research outputs. Many research/academic libraries do not have policies and strategies to facilitate the capture of digital grey literature, their management, storage and dissemination. In Africa, the development of consortium among academic libraries with a formidable ICT infrastructure can enhance accessibility to these resources for the benefit of the users as well as facilitating the knowledge by scholars and scientist in the continent with the global academic community.

In the course of selection and acquisition, grey literature is difficult to search for, identify, and acquire. This puts significantly more burden on the traditional "collection" stage of the academic library. For example, the only way to learn about or to acquire some trade literature and unpublished conference papers is to attend the functions at which they are made available. Collection networks in the academic library must identify the event before it takes place, and coordinate attendance and literature acquisition during the event. Second, open source information already suffers from the problem of a low signal-to-noise ratio, i.e., there are very few nuggets to be sifted from a large body of information. This problem is exacerbated in the grey literature domain because thousands of organizations generate literature, while only a fraction of these producers and their products are of interest to the academic libraries. The situation worsens daily as the availability of information from myriad Internet sites increases.

Grey literature is more difficult to process than other open source types because of its predominantly nonstandard formats. Product brochures, for example, rarely provide adequate information to allow them to be catalogued or retrieved easily. Important information, such as author, title, place and date of publication, and publisher, often are lacking from other grey literature types, as well. In addition, much grey information remains available only in hard copy. Although this is changing as Internet distribution expands, the absence of standards and keyword indexing will make it difficult to find information on this electronic forum with other than direct character matches. Fourth, grey literature varies radically in quality since it is often unrefereed. Integrity is an issue with Internet data, since electronic data are easy to alter. Grey literature is resource intensive for an academic library to acquire which is one of the main obstacles to an effective programme of acquisition. The dexterity required to locate grey literature highlights the value of having citations in one place. Even after grey literature is identified, the documents can be expensive to obtain, not due to exorbitant subscription costs but rather due to poor distribution mechanisms. The unsettling result is that much valuable research becomes relatively inaccessible. Also, not only staff time and efforts are required to identify and locate grey literature, but a high level of subject knowledge, professional skills and personal dedication have to be devoted to the task. Not all academic libraries or librarians have these capacities, and if they do, they will be directed to tasks other than acquisition.

Preservation is often an issue for libraries with grey literature often taking a loose-leaf format, or being simply stapled pages. Nothing deteriorates faster on the library shelf or disappears faster than unbound pieces which do not stand up right on the shelf. Another major challenge is the lack of consensus among librarians on a definition of grey literature. Also, is the failure of collection policies to adequately address grey literature, especially in light of the digital environment.

Techniques for Improvement

Grey literature is an important source of information that the academic library needs to acquire and make them accessible for their users. Ways aimed at improving acquisition and management of grey literature will be explained below:

Acquisition

The low signal-to-noise ratio of grey literature necessitates that identification and

acquisition be considered as separate steps in the collection phase, because a vacuum cleaner approach is not possible with grey literature. (Manson and Ryan, 1999) Acquisition instead must be demand-driven. Help is needed from the IT to relate grey literature availability to user requirements, as well as to share awareness of interagency holdings to reduce duplicate acquisitions.

Processing

Much ongoing work in the Government is aimed at improving scanning, machine-aided indexing, optical character recognition, and machine translation, which will benefit all open source exploitation. In grey literature, a tiered processing system needs to be designed so that resources commensurate with the demand for a grey literature product are expended on its processing.

Dissemination

This is not generally an issue with grey literature since its real difficulties stem from its acquisition and processing. Still, issues of copyright and electronic document dissemination are important. The size of some technical reports make them harder to transmit or store electronically, while copyright becomes a nightmare as thousands of producers must be tracked down for royalty purposes. Use as with processing, much work is ongoing to provide the analyst with tools to analyze digital information. Metrics are needed to evaluate the cost effectiveness of grey literature as a marginal source of intelligence. If it is not providing significant value, then acquisition and processing methodologies must be rethought.

Grey literature is sometimes available through exchange agreements with other organization or by subscription. Annual subscriptions are expensive, but convenient if complete subject coverage is needed. Other facilities used in sourcing for Grey literature include UNESCO book coupon and currently many items can be purchased through bookseller and subscription agents as the scope of the literature is growing.

Generally, there are some important points if there is to be a request for grey literature, namely: if there is known ISBN; use it; reports are often issued with accession/report numbers that can be crucial for identification and data; author title and the original body will be expected. In the aspect of organizing the literature, there are many possibilities of course but it would be more practical for some kind of universal procedure to be used to ensure that bibliographic access is available for who need it. Academic libraries in Africa are expected to get connected to the Internet so as to reduce the stress of sourcing for these materials. This is because Mason opined that the Internet will revolutionize access to some kinds of grey literature, despite that it is so easily lost in chaos that very few people can sift through all the information. Therefore, solutions for its identification, acquisition, and cataloguing are far from solved, and need universal cooperation and consensus.

The potential of open access publication to increase accessibility to peer-reviewed literature is cause for celebration. As we celebrate, we should not lose sight of the longstanding challenge of acquisition and providing better access to the grey literature that act as an essential complement to peer-reviewed findings. We do not need to launch an open access movement to obtain this material, due to its lack of commercial significance. Instead, the challenge is to develop bibliographic resources of comparable depth as those available for the peer-reviewed literature (Banks, 2004).

Conclusion

The reasons grey literature is difficult to identify acquire and manage is due to lack of strict bibliographic control., make those that exist more complete and more accessible, and cooperate with other special libraries to accomplish these goals. All grey literature is not worth collecting, but much that is worth collecting, is still falling through the very

large cracks of It is recommended that special libraries contribute to grey literature depositories, create more cataloging records standard academic library acquisition practice (Siegel, 2004). The ease of 'acquiring' access to open source content easily outstrips that of acquiring other grey literature, and this may, in part, account for the frustration faced by African academic librarians. This acquisition and management dilemma of grey literature present yet another type of 'information divide' that is worthy of some attention.

Another consideration is that university libraries are increasingly asked to collect, catalogue, and house grey literature collections that are externally produced, though of interest to the primary and secondary clientele of the library. While in many cases, this is an excellent service to provide, it seems that the first step in such a programme should be to capture that which is produced by the home institution (Siegel, 2004) Since it cannot be anticipated that some 'other' university will be interested in collecting all that is produced on one's campus, it is important that university libraries capture as much of this locally produced scholarly literature as possible, regardless of format. If this is done, interlibrary loan departments everywhere will be grateful. Once this kind of housekeeping is in order, the library is then in position to consider community-based grey literature collections that may be appropriate to the mission of the university.

A third consideration is of course the collection of suitable scholarly output generated by students. In this realm, well crafted definitions will be of extreme importance. Depending on the size and scope of these collections, it may be most suitable for this body of literature to be captured electronically through the increasingly popular 'web portals' that are appearing on university websites.

References

Aina, L.O. (1997) "The Management of Grey Literature as a Component of a Library and Information Science Curriculum." *Third International Conference on Grey Literature, November 13-14, 1997, Luxembourg*, (Amsterdam: GreyNet, 1998)

Alberani V, Pietrangeli PDC, Mazza AMR (1990). The use of grey literature in health Sciences: a Preliminary Survey. *Bulletin of the Medical Library Association 78(4)*

Altmeyer, D.J. (2000) Using an Online Stock Market Simulation as a Cross-Disciplinary Learning Enhancer: Simulation as an Example of Grey Literature. *The International Journal on Grey Literature, Vol I, Issue 3.*

Atomic Energy Commission, (2001) " Microsoft® Encarta® Online Encyclopedia 2001 http://encarta.msn.com

Augur, C.P. (1989). *Information Sources in Grey Literature.* London: Bowker-Saur.

Dabechere, M.C. (1995). Problems in Obtaining Grey Literature. *IFLA Journal 21(2)*

Chisenga, Justin (2006). Development and Use of Institutional Repositories and Open Access Archives for Research and National Development in Africa: Opportunities and Challenges. www.uneca.org/disd/events/2006/wsis-library/presentations/Development

Elizabeth, N (2006) Grey Literature: A Hidden Resource "Presentation Transcript"

Engineering Information for Today and Tomorrow.

Gelfand, J. (2000) Interview with Laura Isenberg. *The International Journal on Grey Literature, Vol 1, Issue 3.*

Gelfand, J. (1997) "Academic libraries and collection development implications for grey Literature." *Publishing Research Quarterly* 13.

Gelfand, J. (1997) "Teaching and exposing grey literature: what the information profession needs to know: examples from the sciences." *Third International*

Conference on Grey Literature, November 13-14, 1997, Luxembourg, (Amsterdam: GreyNet, 1998),

Gelfand, J. (2000). Grey Literature Poses New Challenges for Research Libraries. *Collection Management* 24(1/2)

GL'99 Conference Program. (1999) Fourth International Conference on grey literature: New Frontiers in Grey Literature . *GreyNet,* Grey Literature Network Service. Washington

D.C. USA, 4-5 October 1999.

Gokhale, P.A.(1998). Grey Literature Varieties–Definitional Problems. In *Third International Conference on Grey Literature: Perspectives on the Design and Transfer of Scientific and Technical Information*. Amsterdam, the Netherlands; Transatlantic GreyNet.

Hirtle, Peter (1991) *Broadsides vs. Grey Literature*. In http://www.moyak.com/papers/grey

technical-literature.html (Accessed 12/2/12)

IAALD (2009) Towards opening access to information and knowledge in agricultural sciences and technology in Africa. Accra, Ghana .www.iaald.org/themes_en.html(13-7-09)

IFLA (2001) Grey Literature and its Contribution to Knowledge Society. *67th IFLA Council and General Conference August 16-25, 2001*

Information World Review (1996). What is Gray Literature? Available in http://info.learned.co.uk/li/newswire/l196/will96.htm,

Lee, Hur-Li (2003). Collection Development as Social Process. *Journal of Academic Librarianship* 29(6) In:*http://ir.library.oregonstate.edu/xmlui/bitstream/handle/1957/15/Lehman Webster.pdf.txt?sequence=3* (Accessed 5/3/12)

Mason, M.K (2009) Grey Literature: History, Definition, Acquisition and Cataloguing. http://www.moyak.com/papers/grey-technical-literature.html (Accessed 2/2/11)

Matthews, B. (2004) Gray Literature: Resources for Locating Unpublished Research *C&RL News, vol. 65 No.3*

McDermott, J. C. (1995) "Defining Grey Literature for the 21st Century." *Proceedings of the Second International Conference on Grey Literature, 2-3 Nov. 1995, Washington DC*, (Amsterdam: GreyNet, 1996)

McGlamery, P. (2000) Lifting the Fog: Maps and Spatial Information Emerging as Grey Literature. *The International Journal on Grey Literature,* Vol. 01, Issue 1*.*

Muswazi, Paiki (2001) Illusion of Internet Grey Literature Boon for Developing Nations: a Case Study. http://www.orge.fh-potsdam.de/-IFLA/INSPEL/01-4mupa.

Población, D. et al (1995) Literatura Cinzenta versus Literatura Branca: transição dos autores das comunicações dos eventos para produtores de artigos.

Población, D. (1992) Literatura Cinzenta ou não Convencional: um Desafio a ser Enfrentado.

Salanje, G.F. (2007) Managing Grey literature in Fisheries and Aquaculture Information: Experiences in Malawi.

Siegel, G. (2004) Capturing Academic Grey Literature – Starting at Home Portland State University,USA. www.greynet.org/images/GL5_Siegel.ppt (Accessed 13-07-09)

Snow, Richard(1996). Wasted Words: The Written Collection Development Policy and the Academic Library. *Journal of Academic Librarianship* 22(3):191-4. http://ir.library.oregonstate.edu/xmlui/bitstream/handle/1957/15/LehmanWebster.pdf.txt?sequence=3

Spohrer, James (2003). The End of an American library Dream: The Rise and Decline of the Collection Development Policy Statement at Berkeley. In Mark (ed.), *Collection Development Policies: New Directions for Changing Collections*. Pp.33-47 Binghampton,

New York: Haworth Information Press*.* http://ir.library.oregonstate.edu/xmlui/bitstream/handle/1957/15/Lehman-Webster.pdf.txt?sequence=3

Soule, Mason, H. and Ryan, R Paul (1999) Grey Literature: Technical Briefing Information. *Information Technology summit* www.dtic.mil/summit/tb07.html

Sturges, P. (1994) "Using Grey Literature in Informal Information Services in Africa, *Journal of Documentation*, 50 (4).

Tella, R.D (2006) Access and Use of Grey Literature in Social Science: Problem and Prospects. Ess Publication. www.bagchee.com/en/books/view (Accessed 6-07-09)

White, G.W. & Crawford, G A. (1997). Developing an Electronic Information Resources Collection Development Policy. *Asian Libraries* 6(1/2)