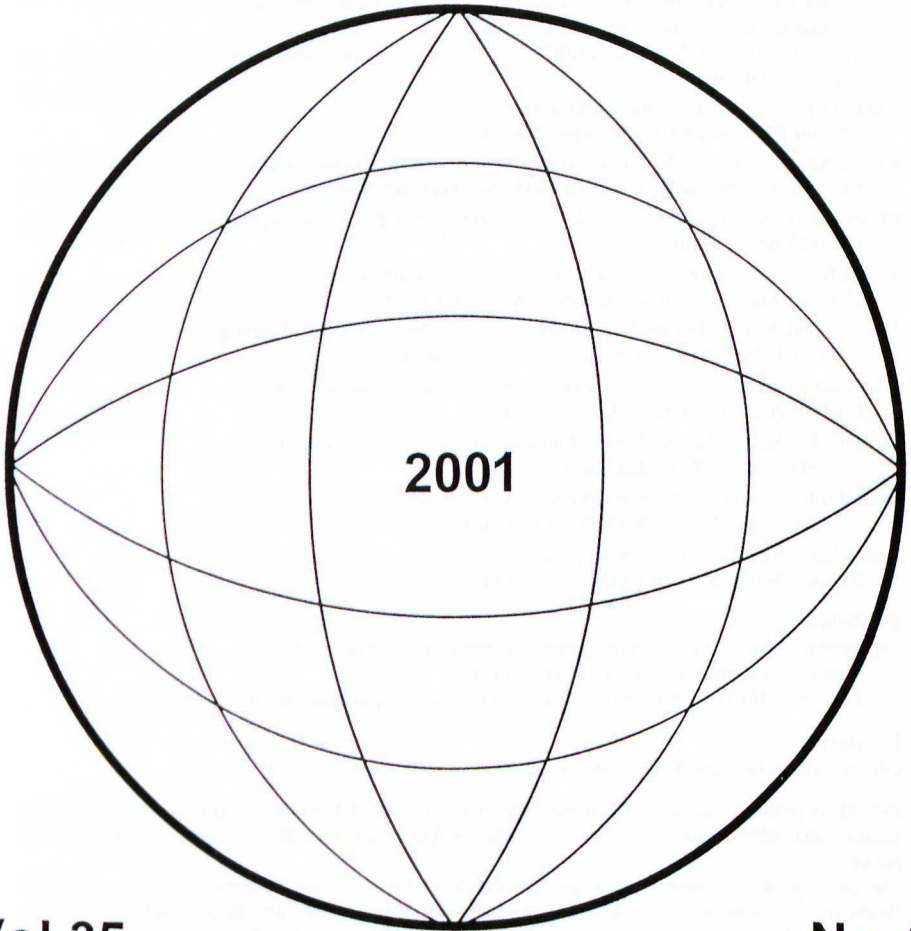


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ILLUSION OF INTERNET GREY LITERATURE BOON FOR DEVELOPING NATIONS: A CASE STUDY

By Paiki Muswazi

Abstract: The study examines the print and electronic situation in the Swaziland grey literature information system. With data from sample special collections and Web sites, it is observed that: (i) print Swaziana grey literature is more prevalent than electronic materials in terms of relevant thematic coverage, quality, and relative access, and (ii) to date, there is little substantive electronic Swaziana grey literature on the Web and in the absence of coordinated intellectual control thereon, the Internet has not significantly enhanced access. The study proposes, inter alia, cooperative bibliographic control and awareness raising as essential building blocs to a Web portal to Swaziana grey literature. It concludes by emphasizing the continued complementarity of print and electronic materials and the need for more studies on African experiences to help shape the continent's contribution to the evolving global virtual library.

Introduction

The phenomenal advances in information and communication technology, relatively small and fragile publishing sector, recurring shortages of conventional publications, and persistent shortfalls in library acquisitions budgets has, in recent times, brought to the fore, the significance of grey literature in supporting ongoing initiatives aimed at improving living standards in developing nations. Following the first international conference on grey literature held in Amsterdam in December 1993, several articles on the subject have appeared. In particular, Sturges¹ and Debachere² 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 developing countries³.

Related works deal with the positive impact of the World Wide Web (WWW) on the acquisition, control and provision of grey literature, the main arguments

¹ Sturges, Paul. "Using grey literature in informal information services in Africa, *Journal of Documentation*, 50 (4), 1994, 273-290

² Debachere, M.C. "Problems in obtaining grey literature", *IFLA Journal*, 21 (2), 1995, 94-98

³ World Bank. World development report : knowledge for development 1998/99. Washington, D.C., World Bank, 1999

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.

The purpose of this study is to broaden the discourse on the theory and practice of grey literature by focusing on Swaziland. Specifically, the objectives are to: (a) attempt to determine the availability, accessibility and proportion of Internet and print Swaziana grey literature, and (b) test the foregoing arguments on the impact of the Internet on Swaziana grey literature knowledge in the context of the topical debate on the evolution of a global virtual library.

Keenan⁴ defines grey literature as semi-published literature which is not formally listed or priced but is nevertheless in circulation. Debachere⁵ on the other hand identifies the materials falling within the domain of grey literature. The two definitions provide the guidelines for this study. The only addition to Debachere's list is graduate and undergraduate dissertations which, due to scarcity of readily available materials on various subjects, are a major component of the Swaziland grey literature system. The term Swaziana refers to all materials relating to Swaziland.

Data Collection

The data for this study comes from an examination of a representative sample of Swaziana special collections in the Swaziland information system, namely: (a) special collections at the University of Swaziland Library, Kwaluseni (UNISWA) as reflected in the Swaziland National Bibliography (SNB), the former University of Swaziland Social Science Research Unit (SSRU) accessions bulletins and the corresponding holdings, Umtapo waBomake/Women's Resource Centre (WRC), Manzini, United Nations Development Programme Library (UNDP), Mbabane, and Swaziland Environment Authority Library (SEA), Mbabane; (b) analysis of Swaziana content at Web sites that include Swaziland's Internet portal, Swazi.com at <http://www.swazi.com/government/>, Southern African Research and

⁴ Keenan, Stella. Concise dictionary of library and information science. London, Bowker Saur, 1996

⁵ Debachere, M.C., *op. cit.*

Documentation Centre (SARDC) at <http://www.sardc.net>, UNISWA online public access catalog (OPAC) at <http://library.uniswa.sz>, World Development Sources at <http://www.wds.worldbank.org> and surfing the Internet for Swaziland materials from the Swaziland Internet Service Provider, Real Image at <http://www.realnet.co.sz>, and using the search engine Ananzi (from neighboring South Africa) at <http://www.ananzi.co.za/>, during the period December 2000 to February 2001; (c) discussions at and consultations after Global 2000 : Second World Wide Conference on Special Librarianship, Brighton, UK, 16 - 19 October, 2000; and (d) personal experiences in developing and managing Swaziana information services. Care was taken in selecting reputable and trusted Web sources to minimize the impact of un-authoritative Web content.

Findings

Print Swaziana Grey Literature

Table 1: *Print Swaziana Grey Literature*

| Source | Estimated Documentation | Characteristics | Thematic Areas |
|---------|-------------------------|--|---|
| WRC | ca73 ⁺ | Studies & research reports by Swazi & external experts, and government & NGO* reports | Women in development, human rights, gender, HIV/AIDS, energy, informal sector, poverty alleviation, training, desertification, drought relief, conservation |
| UNDP | ca50 ⁺ | Studies & research reports by Swazi & external experts, Swaziland government, international partners, consultants, commissions of inquiry & missions, & operational & action plans | NGO capacity building, physical infrastructure, agriculture & rural development, women in development, tinkhundla (local government), indigenous enterprises, civil service, tourism, land tenure, poverty alleviation, & food & income security. |
| SEA | ca100 ⁺ | Government, consultancy & mission reports, position papers, policy documents, strategy & action plans, & workshop proceedings | Environmental impact assessments and mitigation plans & reports on projects covering roads & bridges, urbanization, sanitation, dams, mining, erosion, correctional services, electrification, tourism, sports, conservation, energy, desertification, poverty alleviation, health & agriculture. |
| UNISWA | ca 4525 ⁺ | Studies & research reports by Swazi professionals, external experts, consultants, government, commissions of inquiry, & international partners, official speeches, theses & dissertations & conference proceedings & papers. | All the above plus politics, investment, history, language, geography, geology, transportation, housing, education, trade unions, income generation, foreign relations, librarianship, race relations, etc. |
| SUMMARY | ca. 4748 ⁺ | Indigenous grey literature from authoritative government sources, local experts, consultants, NGOs and international partners. | Cross - cutting topical national development issues. |

NGO* = Non - governmental organisations

Table 1, *Print Swaziana grey literature*, indicates that the volume of hard copy grey literature available in the four sample special collections is in excess of 4 748 quality documents, 95% of which is at UNISWA. The documentation is a result of local research and studies carried out by credible and authoritative researchers featuring experts from the Swaziland intelligentsia, consultants, Swaziland Government Ministries, NGOs and international organisations working in Swaziland, including the United Nations, World Bank, United States Agency for

International Development, European Union and World Tourism Organisation. Overall, the documentation collectively represents a significant indigenous knowledge data bank supporting a wide cross - section of Swaziland development information needs, the key areas being poverty alleviation, food security, women in development, agricultural and natural resources development, urbanization, informal sector development, energy, sanitation, water supply, public health and education.

Several factors account for the foregoing print Swaziana grey literature situation. The outstanding UNISWA print contribution is partly due to its legal depository status, national information service role, research output excellence, and the SSRU documentation initiative launched in 1981. Until its incorporation with the main UNISWA Library in 1995, the SSRU stands as an exemplary initiative in the acquisition, control and provision of and access to Swaziana grey literature. Dedicated financial, physical, human, technological and material resources were invested into the SSRU documentation service. Its specific mandate was to collect, classify and store available information on social, economic and cultural developments on Swaziland for easy retrieval when needed. By 1989, it was recognised as the most comprehensive source of indexed contemporary Swaziana documentaion⁶. Also, some key reports and documents are duplicated within the Swaziland information system. Further, though Swazi society is steeped in its strong culture, customs and oral traditions, indigenous based writing and printing has a relatively long history in the country dating back to around 1931⁷. This partly accounts for the larger cumulated volumes of Swaziana hard copy documentation. It is also noteworthy that though a considerable number of the printed reports from the United Nations system and the World Bank have a regional flavor, the diversity of ideas, experience and knowledge which they contain imparts a richness of content and quality to Swaziana grey literature. This complements the quality inherent in the relatively high volume of research reports in the entire Swaziana grey literature print system.

The drawback is that coordinated national bibliographic control is lacking and access is not optimal. However, to the extent that representative and seminal key reports are duplicated and to the extent that UNISWA listings and holdings are a microcosm of the grey literature system in terms of availability, quality, coverage

⁶ University of Swaziland. Social Science Research Unit. Documentation Centre. *Accessions bulletin*, (4), 1989

⁷ Nhlapo, M.M. *The state of printing and publishing in Swaziland : a case for the university*. Paper presented at New Technology for African Scholarly Publishers : an International Conference and Third General Assembly of the African Association of Science Editors (AASE), 1-5 February, 1988, Addis Ababa University, Ethiopia.

and access, it can be argued that the printed documentation is, to a considerable extent, being disseminated and therefore comparatively accessible.

Internet Swaziana Grey Literature

Table 2: *Internet Swaziana Grey Literature*

| Source | Estimated Documentation | Characteristics | Thematic Areas |
|------------|-------------------------|--|--|
| Swazi.com | ca15 ⁺ | Government official speeches, policy documents & press statements | Public enterprises, public service, & socio-economic development |
| UNISWA | -ca. 1492* | Bibliographic database giving information on UNISWA holdings, mainly scholarly research, government & consultancy reports, theses & dissertations, & conference papers | Microcosm of all subjects of interest to Swaziland |
| Real Image | ca. 21 ⁺ | Corporation annual reports, graphics, and summary reports relating to Swazi fiction. | Arts & crafts, tradition & culture, & industrial development |
| SARDC | ca. 75 ⁺ | Bibliographic databases citing sources of grey literature produced by scholars & researchers, curriculum vitae of environmental experts, & projects. | Environment, population, natural resources, labour migration, women in development, HIV/AIDS, poverty alleviation, gender, & democracy |
| WDS | ca. 11 ⁺ | World Bank abstracts & full text of researched project papers, reports & studies | Agriculture, education, poverty alleviation, finance, energy, urbanization & water resources development |
| Ananzi | ca. 9 ⁺ | Abstract of conference paper, consultancy & other reports, agreement & memorandum of understanding | Conservation, Internet, librarianship, human rights, politics, & HIV/AIDS |
| SUMMARY | -ca. 1623 | Substantive reports from international partners, Swaziland government & organizations & individuals, & bibliographic records. | National development issues reflected mainly in bibliographic records and small volumes of full text documents. |

* The results of the database search include some duplicated records arising from multiple access points.

Table 2, *Internet Swaziana Grey Literature*, shows that from the sample of six Internet sites visited, a smaller volume of approximately 56 full text items are identifiable as compared to the ca. 4 748 printed documentation. This imbalance is also mirrored at UNISWA, which has only –ca. 1 492 electronic bibliographic records as opposed to the 4 525 hard copy documents.

An analysis of a sample of 600 matches of the over 3 900 Ananzi hits for Swaziland shows that only nine matches fall within the grey literature ambit. Of these, three documents are traceable to sources outside Swaziland, namely, the US State Department, Amnesty International and the African National Congress of South Africa, while the balance of six emanates from Swaziland. The nine documents are littered and orphaned in a sea of flimsy materials which lack the intellectual resilience common in the printed materials in the study sample. This trend is duplicated at the Real Image site.

With respect to the authoritative Web sites, WDS gives full text access to its only ca. 11 Swaziana reports out of a total of over 6 000 World Bank reports on the site, while Swazi.com gives full text access to ca. 15 official Swaziland government documents. The SARDC and UNISWA sites have a higher number of bibliographic references reflecting depth and breadth in subject coverage.

Evidently, intellectually resilient electronic materials are still few and far between. While significant amounts of quality electronic grey literature relating to continental Africa is available on the Web, small nations like Swaziland are marginalized. In addition, it is a matter of further research to establish whether or not the continental coverage sufficiently meets specific regional and/or national needs. It is pertinent to note that continental Africa is a heterogeneous cultural, economic, social, political and geographical complexity.

Three factors account for the paucity of Internet Swaziana grey literature, namely: (a) Internet publishing in Swaziland is only in its nascent stages and the information technology (IT) learning curve is increasingly steeper as developed nations rapidly forge ahead with new applications, (b) recent Internet Swaziana publishing efforts are populating the Web with “soft”, flimsy and often repetitive and disorganised tourist and advertising related information, and (c) neither the bibliographic records nor the full text of the Swaziana grey literature materials at WRC, UNDP and SEA are accessible on the Internet.

The limitations in electronic Swaziana grey literature are further compounded by inherent access constraints, namely: (a) lack of an organised “one stop shop” or portal to this knowledge, (b) low IT penetration in Swaziland, (c) high profile initiatives like the print SSRU are absent in the electronic environment, and (d) the

UNISWA Web OPAC and SARDC give only bibliographic information which in the absence of digital imaging and online linking, falls short of instant online access to content, which, presumably, is associated with Internet grey literature.

It is however conceded that some materials not readily available in the print environment are accessible on the Internet. Notable are official government speeches and some few World Bank reports and working papers relating to Swaziland. By and large, the study suggests that Internet Swaziana grey literature publishing in and on Swaziland is low key, the volume of qualitative electronic documents is negligible and, to date, the Internet has not significantly enhanced access thereto.

On balance, of the 6 371 print and electronic materials netted in the study, full text electronic Swaziana grey literature represents only 0,88%. The combined percentage for electronic full text and bibliographic records is 25,47% of the grey literature population covered in the study. It is clear that there is limited full text Swaziana grey literature on the Internet compared to the relative wealth of printed materials. Regarding access, it cannot be categorically stated that Internet Swaziana grey literature is more accessible than the printed collections, though the Web developments at UNISWA, SARDC and WDS represent considerable enhancements.

The challenge

Undoubtedly, the Internet is an opportunity to address the issues of availability, control and access of/to Swaziana grey literature knowledge. The apparent and immediate challenges are: (i) awareness raising in relation to the potential contribution of the abundant Swaziana grey literature knowledge to development, (ii) compilation and updating of catalogues of the materials and consolidation into a national union list, (iii) stimulating the production of local Internet publications and retrospective digital imaging of print texts and related bibliographic records, and (iv) development of a Web based portal to enhance access to the resultant virtual indigenous Swaziana grey literature “melting pot”. It is suggested that structures such as the Swaziland Research Council, and the University of Swaziland Research, and Consultancy and Training Centres, with their expertise and established support networks, in collaboration with UNISWA, Swaziland National Library and key partners could appropriately spearhead the national initiative to deal with the foregoing challenges.

Conclusion

This study indicates that from the point of view of developing nations like Swaziland, the impact of the Internet on the availability of and access to pertinent grey literature is only modest. The reality is that:

- In the absence of much qualitative Internet Swaziana grey literature, and, access constraints, the enduring importance of hard copy materials should not be underestimated.
- The technological disparity between developed and developing nations is too profound to dismiss the concept of grey literature if the global virtual library ideal is to be representative of the totality of human cultures and civilization.
- For developing nations, the foreseeable future will most likely be characterised by the continued complementarity of hard copy and electronic materials, rather than the diminishing and replacement of the former, in grey literature conceptualization and practice.
- More grey literature studies covering other developing African nations are necessary in shaping the continent's contribution to the evolving global virtual library.

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NETWORKING OF AGRICULTURAL INFORMATION SYSTEMS AND SERVICES IN INDIA*

By Vayyavuru Sreenivasulu and H.B. Nandwana

Abstract: The paper provides an overview on the networking of the Agricultural Information Systems and Services in India. Covers a range of issues related to Agricultural Research Information System (ARIS) of ICAR in India. It discusses in detail the Agricultural Research Information System Network (ARISNET) for India and its modules consists of Agricultural Research Personnel Information System (ARPIS), Agricultural Research Financial Information System (ARFIS), Agricultural Research Library Information System (ARLIS), and Agricultural Research Management Information System (ARMIS) and ARISNET management. It reviews the strength and development of Agricultural Libraries in India including institutional system of ICAR, State Agricultural Universities, and ICAR Institute Libraries. It also covers information technology applications in agricultural libraries and information technology infrastructure in the Agricultural Libraries in India.

1. Introduction

India is essentially an agrarian society and basically depends on agricultural outputs. It is therefore essentially that the technology thrust should lay greater emphasis on the transfer of scientific and technological information from the research institutes to its actual users. Libraries and Information Centres are playing a very important role in providing information to the users by building print and electronic collection. In India, direct application of computerized information systems to the farmers is not feasible in the present conditions. Utilization of information system has been demonstrated by Annon¹ and graphically presented in Figure 1.

* This paper is developed and it is the result of some extracts from my Ph.D. thesis on "Information Psychology of Agricultural Scientists of Rajasthan (India)" and Figures and Tables are extracted from the Thesis.

¹ Annon. Guidelines for ARIS network. ISNAR, The Netherlands, 1993.

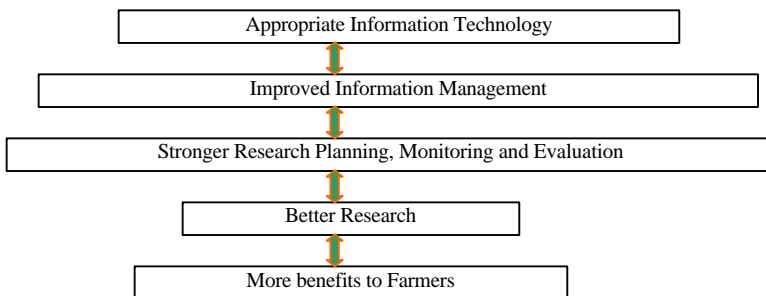


Figure 1. Flow Diagram of Information System utilization

2. Agricultural Research Information System (ARIS) OF ICAR

It is essential that scientists in the Indian National Agricultural Research System (NARS) should have a quick access to and free exchange of information at local, national and international levels. NARS through its vast network of 30,000 scientists working at ICAR's 49 Central Institutes, 10 Project Directorates (PDs), 27 National Research Centres (NRCs), 86 All India Coordinated Research Projects (AICRPs), 261 Krishi Vigyan Kendras (KVKs), 29 State Agricultural Universities (SAUs), 120 Zonal Research Stations (ZRS), one Central Agricultural University (CAU), numerous (1000 plus) regional stations and other research centers has been catering to the agricultural research and information needs of the farming community. The ICAR during eight Five Year Plan embarked upon a project called Agricultural Research Information System (ARIS) to bring the power of information technology to the NARS. Its implementation started with the financial aid from World Bank under National Agricultural Research Project (NARP).

3. The proposed Agricultural Research Information System Network

Keeping in view the total agricultural and rural development system, constraints and limitations, and information requirements at different levels, following objectives are proposed in formulating a comprehensive information system² (Fig 2.) for collective agricultural and rural development:

- Improved research and planning
- Checking the duplication of research and extension projects and programming
- Dissemination of research findings

² Report on strategy for development of an agricultural research information system (ARIS) for the Indian Council of Agricultural Research in cooperation with ISNAR, October 1994.

- Improvement of feedback mechanism
- Better coordination and linkage between and among different rural development agencies and banking institutions like Department of Agriculture (DA), Department of Rural Development (DRD), NABARD, lead banks, NGOs, and private sector
- Evolving effective information sharing mechanisms
- Electronic interface among scientists, development agents and farmers.

The project "Agricultural Research Information System (ARIS)" is being implemented to bring information management culture to National Agricultural Research System (NARS) so that agricultural scientist can carry out research more effectively by having systematic access to research information available in India as well as in other countries; for better project management of agricultural research; and for modernization of the office tools. The basic infrastructure required for linking all ICAR institutes has already been created. The E-mail connectivity has been established to 72 out of 86 ICAR institutes by linking through dial-up including six institutes with VSAT connectivity using NICNET and ERNET services.

4. Agricultural Research Information System Network (ARISNET)

To exploit the potential of modern computing power in planning and management of agricultural research and scientific communication, ICAR started an Agricultural Research Information System Network (ARISNET)³. Basic guidelines to implement this project were provided by a team of experts from ICAR and International Service for National Agricultural Research (ISNAR). A phased implementation is recommended to create infrastructure for ARISNET, a national Wide Area Network for agricultural research with its headquarters at ICAR, New Delhi. ARISNET is being implemented in phased manner as indicated in the following Figure 2.

³ Singh, Gajendra; Pal, Kuhal and Muralidhar, U. Strategies for development of agricultural research information system: ICAR experience. Paper presented in Project Planning Meeting on Research Management. ISNAR, Tsukuba, Japan, March 24-27, 1997.

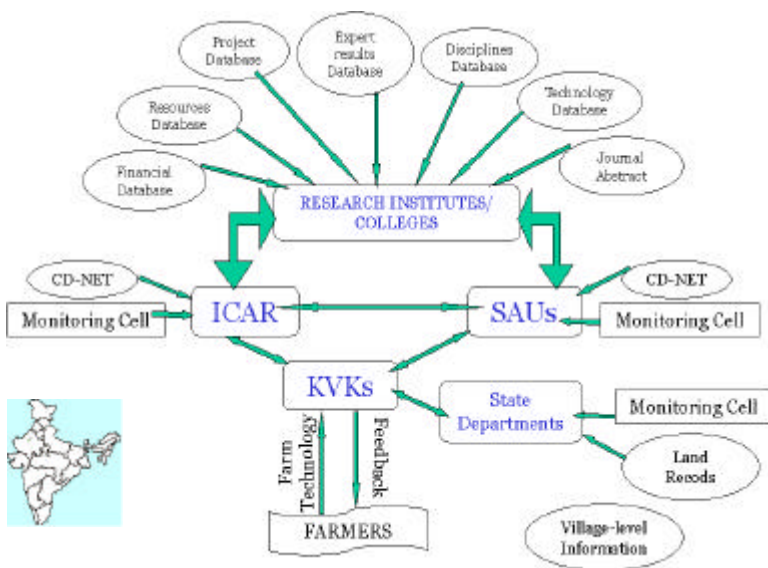


Figure 2. Information Network for Agriculture and Rural Development for India

5. Modules of Agricultural Research Information System Network (ARISNET)

Besides creating the infrastructural facilities, the four information modules in Figure 3, are designed for ARISNET⁴ to standardize usage of the different software for the day-to-day activities of the scientists and office automation. ARISNET has four information modules namely Agricultural Research Personnel Information System (ARPIS); Agricultural Research Financial Information System (ARFIS); Agricultural Research Library Information System (ARLIS) and Agricultural Research Management Information System (ARMIS).

⁴ Sharma, R.D. The Agricultural Information Network for India. New Delhi: Society for Information Science, 1989.

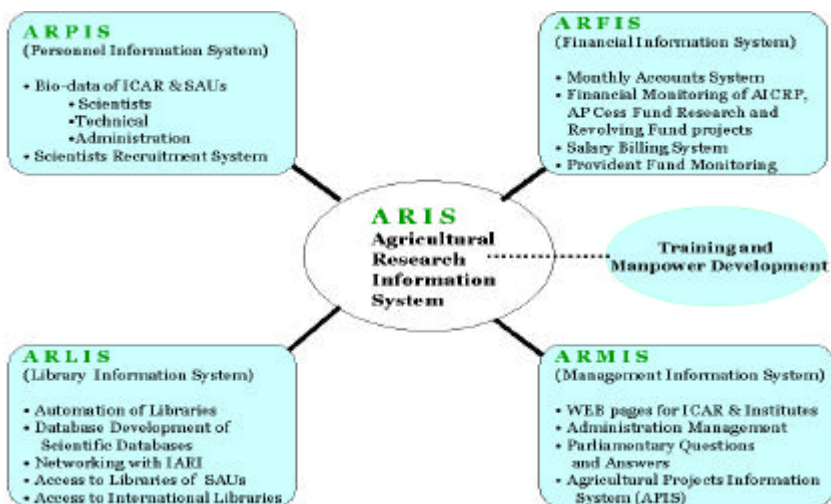


Figure 3. Modules of ARISNET

Besides modernization and networking of libraries of ICAR institutes and SAUs, the creating, databases and CDs on both national and international agricultural research information contents, will be a major work under ARLIS. Agricultural Research Information Centre (ARIC), New Delhi is involved in compilation of information on AP Cess Fund Schemes and other research projects funded by ICAR. Also ARIC is serving as National Input Centre for International Information System (AGRIS) for the Agricultural Sciences and Technology, Current Agricultural Research Information Systems (CARIS) projects of Food and Agriculture Organization (FAO) and SAARC Agricultural Information Centre (SAIC).

Table 1: Summary of Computer Equipment to be provided to State Agricultural Universities (SAUs) and ICAR Institutes under ARISNET:

| Equipment | | Supplied under NARP | Proposed under NATP |
|---------------|-------------|---------------------|---------------------|
| | 32 Users | 12 | 45 |
| UNIX Servers | 14 Users | 23 | 20 |
| | 8 Users | 23 | 0 |
| Total | | 58 | 65 |
| | 32 Users | 46 | 180 |
| UNIX Servers | 14 Users | 92 | 83 |
| | 8 Users | 92 | 0 |
| Total | | 230 | 263 |
| Workstation | | 745 | 4250 |
| Laser Printer | Heavy Duty | 0 | 200 |
| | Medium Duty | 230 | 220 |
| Total | | 230 | 420 |
| UPS | 5K | 57 | 0 |
| | 3K | 172 | 300 |
| Total | | 229 | 300 |
| Modem | HS | 115 | 88 |
| | MS | 230 | 0 |
| Total | | 345 | 88 |
| AC | | 378 | 126 |
| Router/Switch | | 30 | 119 |
| VSATs | | 0 | 140 |

Apart from providing wide area network services, it is essential that each campus is equipped with good local area network facilities. Under the ARISNET programme most of the ICAR and SAU's are provided with suitable servers and nodes. Six institutes are already having VSAT connectivity for more than two years and 11 more have been provided VSATs during March 1997. The e-mail connectivity has been established to 73 ICAR institutes (47 institutes, 9 PDs and 17 NRCs) out of 86 by linking these institutes through dial-up, including 17 institutes with VSAT connectivity, to the nearest National Informatics Centres (NIC), a Government owned national service provider. It expected that all of the ICAR institutes and SAUs would have Local Area Network and access to the Internet either by VSAT or by dial-up facility by the end of 1998. To provide effective satellite connectivity 140 more VSATs will be added to the network during next three years.

6. Management of ARISNET

To keep the ARIS Network up and running, it is important that a few people from each campus are provided with adequate training to manage the equipment installed at their institutes as part of the network. This will include monitoring the e-mail flow, the modem, VSAT and routine operations, the LAN and UNIX server operations, and the various software installed on the campus under project ARIS. Minor problems then can be corrected locally. Also, if the problems are beyond the capabilities reported to appropriate external agency by the management level will include networking, setting up various information servers and online databases, and administration of Novell Netware and UNIX networks. It will also include modem, VSAT and router management, basic PC hardware configuration and trouble-shooting.

In ICAR system, there are two main institutes i.e., NAARM and IASRI offering computer related courses to the scientists of the NARS. Under ARIS programme so far about 800 scientists have been provided training on topics like PC trouble-shooting, networking, e-mail, MS-Windows, library information system and general PC use. Training facilities are being further strengthened to provide computer-training courses also. The development of databases and necessary infrastructure is one side of the coin. After establishing initial infrastructure including hardware, software and networking, smooth running of the information system is entirely dependent on the type and quality of monitoring. An information system (IS) Unit consisting of Assistant Director-General (ADG), Principal Scientist, Senior Scientists and Technical staff is being created at ICAR headquarters to look after the integration of installed equipment into ARIS network. The IS Unit will also coordinate among ICAR institutes, State Agricultural Universities and Zonal Research Stations for creation of databases and to ensure free and useful information exchange over this network.

The IS Unit will also play a major role in further planning of the ARIS Network since no network is static. New nodes will come up, new services will be offered, traffic volumes will grow and new connectivity options will become available. Thus, deciding evolution strategy, creation of databases, evaluation of new connectivity options and implementation of them as and when required will be some of the major tasks of the IS Units. Creation of Monitoring Cells is also planned at each NARS institution.

7. Networking of Agricultural Institutional Information System

The State Agricultural Universities are major partners in growth & development of Agricultural Research and Education under National Agricultural Research

System. Today, the Indian Agricultural System under the ICAR is one of the largest in the world comprising of research institutes, project directorates, schemes, programmes, etc.

Table 2. Institutional System of ICAR⁵

| Institutions | Number |
|---|--------|
| Agricultural Universities | 31 |
| Deemed Universities | 4 |
| ICAR Institutes | 45 |
| National Research Centres | 30 |
| Project Directorates | 10 |
| National Bureau | 4 |
| All India Coordinated Research Projects | 80 |
| Krishi Vigyan Kendras | 262 |
| Trainers Training Centres | 8 |
| National Research Centre in Agriculture For Women | 1 |
| Operational Research Projects | 400 |
| Other Schemes and Projects | 26 |

SAUs work under the control of state administration. They are founded up to 90 percent by the ICAR and rest of the their budget is met by state government. Since agricultural research, education and extension is the primary responsibility of states, the growth of SAUs has been faster.

Table 3. State wise State Agricultural Universities in India⁶

| STATES | NUMBER OF SAUs | STATES | NUMBER OF SAUs |
|------------------|----------------|---------------------------------|----------------|
| Andhra Pradesh | 1 | Kerala | 1 |
| Assam | 1 | Maharashtra (including CIFE) | 5 |
| Bihar | 2 | NEH Region (Central University) | 1 |
| Delhi (IARI) | 1 | Orissa | 1 |
| Gujarat | 1 | Punjab | 1 |
| Haryana | 2 | Rajasthan | 1 |
| Himachal Pradesh | 2 | Tamil Nadu | 2 |
| Jammu & Kashmir | 1 | Uttar Pradesh | 4 |
| Karnataka | 2 | West Bengal | 2 |

⁵ Data extracted from *Annual Report 1997-98*. Department of Agricultural Research and Education, Ministry of Agriculture, New Delhi, 1998.

⁶ Mandates of the ICAR and its Research Institutes. New Delhi: ICAR, 1994, P166.

The National Agricultural Research System of India⁷⁻¹⁷ has necessary infrastructure and is well equipped with laboratories, libraries, and manpower. It also has the largest scientific manpower. It is estimated that the country today has over 60,000 scientists under various government and non-governmental organizations engaged in active research, excluding technical, administrative and supporting personnel. The scientific manpower –management personnel, scientists and teachers engaged in research, education & extension work in agricultural sector –has been estimated to about 31,000.

8. Future of Indian Agricultural Libraries

In spite of some dark spots in the history of past 50 years of Indian agricultural libraries for different reasons, now they have sunny days and a bright future. The present trends of economic globalization have made agricultural globalization imminent and the second Green Revolution will be an event of near future. The agricultural libraries and information centres cannot be ignored and they will have to play a vital role in the service of the nation. It is emphasized again that ICAR, New Delhi planned to develop a nation-wide agricultural information network connecting all libraries of State Agricultural Universities and ICAR research institutes and it is being developed to all states of India. The ARIS cells will have connectivity with libraries also for bibliographic information. Thus Indian agricultural libraries with electronic platform will join information super highway –

⁷ Radhawa, M.S. A History of Agriculture

⁸ Swaminathan, M.S. Report of the Working Group on Agricultural Research and Education for the Formulation of the Eighth Plan. New Delhi: Planning Commission; ICAR, 1989.

⁹ Sidhu, D.K., Tyagi, K.C., and Mishra, S.P. Content and coverage of Agriculture and Dairy News in regional and National Dailies, *Interaction*, 1983, 1, p77-90

¹⁰ Bhatt, V. S. Information Resources in Agricultural Research, In 40 years of Agricultural Research in India. ICAR, New Delhi, 1989. p.272-82.

¹¹ Swaminathan, M. S. Report of the working Group on Agricultural Research and Education for the Formulation of the Eighth Plan. Planning Commission, ICAR, New Delhi, 1989.

¹² Sharma, R.D. The Agricultural Information Network for India, Society for Information Science, PID Building, New Delhi, 1989.

¹³ Ostman, Ronald E (Ed). Communication in Indian Agriculture. New Delhi: Saga Publications India Pvt Ltd, 1989.

¹⁴ Final Report of the ICAR Institutes and Agricultural Universities (Indo-American Agricultural Library Survey & Study Team for the ICAR), ICAR, New Delhi, 1968, 182p.

¹⁵ Swaminathan, M.S. The Great revolution and small farm agriculture: Annual Report, CIMMYT, Mexico, 1990.

¹⁶ Prasher, R.G. Managing University Libraries. New Delhi: Today & Tomorrow's Printers & Publishers, 1991, p350.

¹⁷ Final Report of the ICAR Institutes and Agricultural Universities (Indo-American Agricultural Library Survey & Study Team for the ICAR), ICAR, New Delhi, 1968, 182p.

The Electronic Libraries, The Digital Libraries at local, regional, and national levels and enter with pride and smile into the Knowledge Age of 21st Century.

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GREY LITERATURE FROM THE YORK SEMINAR (UK) OF 1978 TO THE YEAR 2000*

By Vilma Alberani and Paola De Castro

Abstract: The evolution of the concept of grey literature (GL) over a twenty year period is pointed out. The recommendations drawn up during the York Seminar in 1978 are analysed to argue whether they are still valid in the Internet age. The typical documents of grey literature (pre-prints, technical reports, theses, conference proceedings, translations, glossaries, advertising and technical advertising documents) are included in the web, where also new types of GL documents can be retrieved (e-journals, collections of FAQs, e-prints, etc.). Some examples are given of documents available in the Internet which are to be considered grey since they are not spread through the “normal commercial publication channels” and it is not always easy to get them, unless you are not directly involved in the authors’ “invisible colleges”. The examples given provide suggestions to reflect on the effective document availability, data security and reliability, illegal use of the material available in the Internet, etc.

The York Seminar

The Seminar held in York (UK) in 1978, promoted by the Commission of the European Communities - EC (now: European Union) and by the British Library Lending Division – BLLD (now: British Library Bibliographic Services & Document Supply Centre), represents a fundamental stage in the discussion about non conventional or grey literature in Europe. As a matter of fact, this particular Seminar marked the “debut” of grey literature (GL) in Europe.

Twenty years have gone past and many things, particularly in the technological sector and in data transmission, have changed. Therefore it is logical to pause for a moment and reflect on this type of literature and on how much has been done so far to improve its presentation, circulation and use. Firstly, let us try to outline the development of the topics pointed out in that Seminar¹. It brought together 30 participants from Member States of the European Communities (EC) who

* The authors delivered a communication on this subject during the Third Italian Conference on Grey Literature held in Rome (Italy) in November 1999. This is a revised and extended English version of that paper.

¹ Gibb J. M., Phillips E. (1978/1979). A better fate for grey or non conventional literature. *Journal of research communication studies*. 1: 225-234

represented the point of view of publishers, users and intermediaries (librarians and documentalists). It was organised by two very different organisations: one at political level (EC) and the other at national level (BLLD). The EC was interested in improving the access and circulation of information contained in GL material within Member States while programmes such as the “Universal Bibliographical Control (UBC)” and the “Universal Availability of Publications (UAP)” were being debated at international level.

The Seminar was aimed at formulating informal recommendations that would allow the Commission of the European Communities to start specific initiatives to reach a consensus within the EC. The BLLD, in its capacity as a national lending library, was the only one in Europe to have a considerable depository of GL as well as an interest in setting up the most complete collection possible of this material.

The recommendations of the York Seminar and their applications

The recommendations that arose following the discussions at the Seminar represent the stepping stone for grey literature which even today gives rise to comments on the argument. The main issues are briefly described.

The definition of GL. - Many of the participants of the 1978 Seminar had never heard of GL, a term which appeared for this first time in the list of the keywords of LISA (Library and Information Science Abstracts) in 1976, not as an original keyword, but as a translation of “graue Literatur”, term that is somewhat older².

Despite many attempts to formulate a more precise description, the definition and the examples given in York to this type of literature are still valid: it is “non conventional literature, not issued through the normal commercial publication channels”. The Luxembourg Convention’s definition, formulated in 1997 during the Third International Conference on GL, does not change substantially the meaning of the York definition.

After many years, it is still difficult to precisely delimit the significance and the boundaries of this type of material. Therefore grey literature is defined as material (it must be remembered that it is “literature”, not to be confused with ephemeral material) that is *not* circulated through the usual commercial channels, *not* easily found, *not* always available, etc. Thus it is a definition in negative terms that

² Hogeweg-de Haart H.P. (1985). Grey literature in social science: a concise review of literature. In: *IFLA. Grey literature in social science, information and documentation*. Budapest: The Economic Information Unit, Hungarian Academy of Sciences. p. 9-45

allows the identification of all documents which are not part of the traditional categories of monographs and serials.

The special features of this type of material make its established definition still up to date: it is still represented by documents having a limited number of readers. Its circulation (even if the channel can be different from the conventional one) is always meant for experts, the number of copies (if printed) is definitely limited.

Presentation of documents. - This type of literature, particularly in rapidly developing sectors, becomes significant only if it is circulated quickly and informally within interested groups, generally to the detriment of the most basic editorial and bibliographic standards. Despite the assumption that it was impossible to impose a strict regulation for the presentation of texts, the participants of the Seminar requested the Commission to carry out or to order a study verifying the existing practices, standards and guidelines. The aim was to formulate and issue the minimal requirements for a good presentation, legibility and reproducibility of these documents as well as correct bibliographic details (author, title, producer/publisher and date).

The Primary Communications Research Centre of Leicester University (UK), in charge of this study, presented a document in 1981³ that stated the current situation of several producers and intermediaries, proposing two lists: the first one regarding bibliographic information that has to be present in GL documents; the second list regarding additional essential information for specific documents. However, with regard to this topic, it is necessary to keep in mind that numerous ISO standards exist, some of which have been elaborated or modified after the York Seminar.

Unique numbers and codes. - One of the points discussed in York was the need to facilitate the identification of documents. The recommendations explicitly state there was a clear need for the unique identification of 'grey' or 'non conventional' documents. The use of codes, on a numeric, alphabetic or symbol basis, allows for identification of concepts, objects, etc., focusing the informative content in few numbers, letters or symbols that form a language of identification. Librarians and information scientists know these systems of notation very well since they were introduced in libraries centuries ago. The use of computers has inevitably brought about a development in the codification system, reaching an unambiguous and coherent understanding of information through the application of internationally accepted codes.

³ Knowles, C.M. (1981). *The bibliographic presentation of grey literature*. Luxembourg: Commission of the European Communities. Directorate general of information market and innovation. 43 p. (EUR 7139 EN)

In order to avoid the proliferation of numbers and codes that were present in many documents, a numeration similar to the ISBN for books and to the ISSN for periodical material was introduced.

With the implementation of the SIGLE (System for Information on Grey Literature in Europe) system (the bibliographic database for GL described below), a set of regulations for the standardisation of data to be entered in the system, was issued. This has inevitably influenced the presentation of this documentation. Among these regulations, the description of the type of registration and the related bibliographic level introduced the ISBN and ISSN codes which, if they appear on documents, are accepted by the system. The elaboration of the standard ISO 10444 "International standard technical report number (ISRNT)", published in 1994 can be partly considered a realisation of the decisions made in York, even if it is based on the ANSI standard Z 39.23-1983 (first edition: 1974). The application of this standard foresees the establishment of an international agency supported by national centres for the assignment of report numbers and their control. Nevertheless, we must, with regret, note that except the French national agency, no national agency has actually started to build such a register.

The creation of a GL database. - A further move to limit the difficulty in retrieving this kind of literature would have been to elaborate GL bibliographies. This would facilitate the knowledge of the existing GL documents but certainly not of their immediate availability.

The idea of making this material part of the national bibliographies was rejected but, at the same time, getting the producers themselves to decide on the documents to be included or rejected was considered as an essential premise for bibliographic control. During the discussions, the participants of the Seminar touched several times on the theme of setting-up of "national GL authorities" which might have the appearance of a network of centres. They would have various duties, for example, to set specific codes for producers and, in particular, to collect GL documents published on their own territory.

The recommendation that each Member State should appoint a body in charge of collecting, listing and creating a bibliographic database, as a starting point before the implementation of a European database, found its application in the '80s.

Each Member State has its own national authority (in Italy it is the Central library of CNR, the National Research Council), that collects GL documents and increases the European database (SIGLE). Since the end of 1985, SIGLE has been managed by the European Association for Grey Literature Exploitation (EAGLE), a non

profit association that represents a co-operative network for identification, location and supply of grey literature⁴.

Making the GL producers aware. - The need to involve the producers materialised with a suggestion that a programme of seminars should be launched in order to promote the application of guidelines for GL.

Italy participated right away with commitment towards this awareness campaign. The questionnaires sent out by the National Research Council, by both its Institute of research and scientific documentation and the Central library, had two aims: finding out about the bodies and their material and, at the same time, informing about the innovations under way and making them aware of what was being proposed at the national and European levels. The Study Group of the Italian Library Association (*Associazione Italiana Biblioteche*, AIB) has, in the past years, carried out a remarkable awareness campaign towards librarians and information specialists interested in this literature by getting them directly involved in finding solutions to existing problems, some of which were dealt with in a collaborative way.

The Italian National Institute of Health (Istituto Superiore di Sanità, ISS) also contributed to such an activity by gathering information and data on GL producers in specialized sectors, particularly the health sector⁵, and information science⁶. In addition, together with AIB, it participated in the awareness campaign by organizing three conferences entirely devoted to GL which were held at the Institute itself. We prefer not to report on all the activities that the Study Group has carried out. Those who are not familiar with these activities and wish to have all the necessary information, only need to look up the proceedings of the Italian national conferences of 1992, 1996 and 1999^{7,8,9} and a special issue of the AIB Bulletin published in 1997¹⁰.

⁴ Detailed information on EAGLE and SIGLE is available at: <http://www.kb.nl/infolev/eagle/frames.htm>

⁵ Alberani, V., De Castro Pietrangeli, P. Rossi Mazza, A.M. (1990). The use of grey literature in health sciences: a preliminary survey. *Bull. Med. Lib. Assoc.* **78** (4): 358-363

⁶ Alberani, V., De Castro Pietrangeli, P. (1995). Grey literature in information science: production, circulation and use. *Inspel* **29** (4): 240-249

⁷ La letteratura grigia. 1. Convegno nazionale. Istituto superiore di sanità, Roma, 4-5 giugno 1992. Atti. (1992). V. Alberani, P. De Castro Pietrangeli (Eds). Roma: Istituto superiore di sanità (ISTISAN Congressi; 29)

⁸ La letteratura grigia. 2. Convegno nazionale. Istituto superiore di sanità, Roma, 20-21 maggio 1996. Atti. (1996). V. Alberani, P. De Castro Pietrangeli, D. Minutoli (Eds). Roma: Istituto superiore di sanità (ISTISAN Congressi; 48)

⁹ La letteratura grigia. 3. Convegno nazionale. Istituto superiore di sanità, Roma, 25-26 novembre 1999. Atti. (2000). V. Alberani, P. De Castro (Eds). Roma: Istituto superiore di sanità (ISTISAN Congressi; 67)

¹⁰ *La letteratura grigia* (1987). Vilma Alberani, A. Pagamonci (Eds). Bollettino d'informazioni AIB, **27** (3/4): 305-475

Apart from the Italian initiatives and those of other countries, mention must be given to the four international conferences on grey literature^{11,12,13,14} which give evidence of the continuing interest of this kind of material, the evolving approaches to this literature through the years and the emerging initiatives at national and international levels.

Twenty years after York...

Would the themes discussed have brought about different recommendations if the Seminar in York had been held in 1998 instead of 1978?

Many changes have taken place in the last twenty years mainly due to the technological innovations that have dramatically changed our way of living and working.

It is only logical, twenty years from the York Seminar, to ask ourselves if the birth of the Internet and the huge amount of information that is placed daily in the web by every single institution has determined a change in the access to GL and its availability. Or should we perceive that it is the illusion of finding everything on the Internet that causes difficulties other than the ones that have already been mentioned? It is this ambiguity of the Internet that allows us to write, look for, navigate, visit, respond, create casual or intentional relationships and individual contacts. But it is like "... going through a city without a destination in mind. It is beautiful and vast, but where do we want to be?"¹⁵. The level of circulation of the Internet in Italy, though not comparable to that reached in the USA and Japan or in some European countries more oriented towards the so-called "society of information", has definitely changed the method of access to information in all sectors. The number of the Internet users rapidly increased both in the USA and in

¹¹ *Weinberg Report 2000* (1994). Proceedings of the 1. International conference on grey literature, Amsterdam, 13-15 December 1993. Amsterdam: TransAtlantic

¹² *Grey exploitation in the 21st century* (1996). Proceedings of the 2. International conference on grey literature, Washington, D.C., 2-3 November 1995. Amsterdam: TransAtlantic

¹³ *Perspectives on design and transfer of scientific and technical information* (1998). Proceedings of the 3. International conference on grey literature, Luxembourg, 13-14 November 1997. Amsterdam: TransAtlantic

¹⁴ *New frontiers in grey literature* (2000). Proceedings of the 4. International conference on grey literature, Washington, C.D. 4-5 October 1999. Amsterdam: TransAtlantic

¹⁵ Colombo F. (1999). Informati per capire. *La Repubblica* 27 ottobre 1999, p. 39

Europe over the last five years and it is quite surprising that while in 1995 there was a great difference between the two continents (European Internet users were about one third of USA users), in the year 2000, they are almost the same.

In an attempt to respond to the numerous questions raised by the advent of new computer technology, let us reflect on the characteristics and “classic” types of GL that are now revised on the Internet.

Characteristics and types of GL documents: some reflections between tradition and innovation

Obviously, we do not wish to describe the characteristics and the types of GL documents that, by consolidated procedure, have been illustrated many times both in literature and in specific conferences⁽⁷⁻¹⁴⁾. Rather we would like to analyse if the categorisation and the characteristics given to the GL documents after the York Seminar are still valid also for the category of documents currently present on the Internet, or if the Internet has introduced new diversification that could have given rise to new characteristics and/or new categories of documents, perhaps cancelling earlier ones.

We carried out a preliminary analysis checking on web sites of different international and national organisations, central and local government units, associations, universities, political parties, etc., which are different in terms of their duties as well as their informative targets, but all operative at institutional level.

Issuing organisations. - It is worth noting that, by tradition, one of the identifiable characteristics of the GL documents is specifically the role of the issuing organisation which is responsible or guarantees its contents (incidentally, even in database exclusively meant for GL, as the SIGLE or the NTIS, the role of the issuing body takes on a dominant position in their cataloguing rules).

Let us take into consideration the presentation of the homepage of some of these organisations. Since they take on the role of promoters of their own “image”, supplying the users with complete, valid and thoroughly updated information on their activities, they make these pages the main source of information of their assignments and their structure. The GL, as well known, is directly spread by the organisation that produces the document or by the one that commissions it or by both of them. As aforementioned, the organisation is also editorially and/or contractually responsible for the document. For this reason, the search on GL documents, be it on paper or on the Internet, is immediately oriented towards the issuing bodies (and usually not towards the author of the study or research). Being aware of the institutional duties of the institutions and of the documents which

they issue, in a more or less formal way, is of great help when there is a need for the information required.

Hard copies versus electronic documents. - The findings of the organisations reported on paper are slowly giving way to the aforementioned web pages which are easily updated.

The following examples of published documentation will allow us to make useful observations on current GL on the web. Let us take, for instance, a library association: the Italian Library Association (AIB). Its web site (www.aib.it), besides supplying information on the structure of the organisation, on activities in progress and on services offered, has under its heading “Publications” the full-text of the association’s newsletter, also produced as print format; the indexes and the summaries (but not the full-text) of the articles published in the quarterly periodical of the association (*Bollettino AIB*); an articulate online collection, the “Public documents on the web”, loaded with information and useful addresses for the search of official sources (gazettes and official bulletins, parliamentary acts, jurisprudence, etc.) and other publications also circulating in print format and spread through commercial channels. However, many other technical items that can be classified under the GL category are available from the AIB site under other headings (and not under “Publications”): working papers (for example comments on the new copyright law), papers presented at conferences but not published as printed proceedings, etc. In addition, many documents are only present online.

This is what allows us to reflect on the apparent casualty with which we often find on the web very recent and important documents for the ongoing debate on specific topics. Most of the time it is still possible to find a document both on the web and on paper, nevertheless the access to the related paper is generally rather difficult unless one has direct contact with the source of the published document (author/organisation), as in the past; in any case, with the Internet, time and geographical barriers have been completely broken down.

As for the stability of the documents in the web over time, is there anyone who can guarantee this? Nowadays, there is still the tendency, often motivated, to print everything that one finds interesting on the web for a double and simple reason: paper guarantees the conservation of the document and it allows for in-depth reading for research and analysis.

Users who are not habitual or expert of the Internet often retrieve useful and relevant information/documents only by chance; this casual retrieval is one of the features of this new tool. On one hand, the presence on the web of documents which are not easily available on paper does not guarantee *a priori* the access,

especially when the address is not known or when the existence of the document is ignored. On the other hand, there is still the presence of the “invisible colleges” that utilise and make documents available on the Internet without worrying excessively about their circulation outside the limited circle from which they originate.

Moreover there is the need to take into account the illicit appropriation of intellectual contents available on the web with problematic consequences for copyright.

Unlike documents and reports meant for a limited number of people generally already known *a priori*, it is possible to find documents which can be easily assimilated to GL material on the Internet since their circulation is not part of the usual book-selling channels, but they are addressed to a larger public. This is the case of the documents produced, for example, by EPAC, a non-profit organisation which has among its targets that of giving information and support to all those who, for various reasons (patients, family members, health officers, etc.) are interested in hepatitis C. Some time ago, the Italian newspaper *La Repubblica* wrote about EPAC, and gave its URL (www.videopagine.org/epac/comitato.html). Out of curiosity and to understand the sense of the information found in the site, we recall, for example, an interview with the pathologist, of eight pages, which seems unavailable in print, and among the Frequently Asked Questions (FAQ), a “document published on the Internet for non commercial reasons” that represents the translation into Italian of an analogous document in English. It reproduces in a structured form (11 very detailed sections) the FAQ on hepatitis C.

Since the authors of this paper work for the Italian National Institute of Health (ISS), it only seems natural to quote its web site (www.iss.it), where there is access to various GL documents published in institutional series (*Rapporti ISTISAN, Serie Relazioni, ISTISAN Congressi, Notiziario dell'Istituto Superiore di Sanità, Strumenti di riferimento*) under the heading “Scientific information”. The *Notiziario*, the monthly bulletin which provides information on the activities in progress, is fully accessible online; among the reports and the other documents (guidelines) only some are accessible in full-text. They are specifically selected according to the current needs. The others have abstracts both in Italian and English. Furthermore, lists of the reports published in the institutional series are also available. However, the policy of the Institute is to make all the documents that have an immediate impact on the national health service (health emergencies, guidelines, etc.) available online.

Types of GL

The analysis specially carried out on the Internet allows us to state that the major part of the types of GL identified in York are still those found on the web, but there are in addition new ones which give the document a different greyness.

On one hand there exists a great abundance of technical reports, preprints, glossaries, bibliographies, translations, technical advertising documentation, theses, etc.; on the other hand we have new forms of GL represented by discussion groups, FAQ collections, e-journals and e-zines, etc., new forms of grey documentation in its most traditional and well established meaning of “material not spread through the normal commercial publication channels”.

The following are some examples that will allow us to make some useful comments.

Preprints. - The use of preprints to enable quick circulation of the results of experiments, studies and research at different stages of the project among interested researchers, has been long established in the scientific fields, especially among physicists. The circulation of documents, which was first done through paper, has now been fully replaced by the use of the e-mail between individuals or groups and by electronic archives established in the most important research institutes.

The electronic archives set up in 1991 in the Los Alamos National Laboratory (<http://xxx.lanl.gov/>) allow the acquisition of this type of documents for the field of physics and other related disciplines, mathematics, nonlinear sciences, computer science. At the same time, researchers can submit their contributions to the archives using the web interface, through ftp or e-mail.

To give another example, the HEPIC (High Energy Physics Information Center, <http://www.hep.net/>) allows the link with the following archives of preprints: CERN's Integrated Library System; CERN Preprint Server; DESY Preprints; Durham-Ral HEPDATA System; Fermilab Preprints; HEPDOC from CERN - Interactive Search for Help Documents; KISS-KEK Information Service System; Los Alamos Preprint Archives; Particle Data Group Documents from Berkeley; SISSA e-Print Server; SLAC's HEP Preprint Database Search. References quoted in the document (*refers to*) and quotations received by the preprint (*cited by*) are also present in the preprint archives.

Reports. - The technical report, that has always represented the standard typology of GL, is present in all fields on the Internet: To give an example, on the SLAC (Stanford Linear Accelerator Center) web site (<http://www.slac.stanford.edu/pubs/>)

there are electronic versions of all the most recent publications and reports, with the possibility of rapid search, by number of the document or by author and title. Sometimes this documentation is available in full-text, other times a password or payment is required.

It is worth noting the explicit recommendation of “netiquette” against the indiscriminate use of file downloading from the archives available on the web: “indiscriminate automated downloads from this site are not permitted” (<http://babbage.sissa.it/>).

Theses. - To come to a completion of this outline of types, we present archives of theses online: Network Digital Library of Theses and Dissertations (<http://www.ndltd.org/>), the archives of technical reports and conference proceedings of ERCIM (European Research Consortium for Informatics and Mathematics) almost all available in electronic format.

There can be many other examples which, due to limited space, are not mentioned here.

Conclusions

In conclusion, we can state that the difficulty of having access to documents, which was one of the initial features that defined grey literature, still remains so for those who are not experts. A short report published in *IFLA Journal*¹⁶ about a workshop held within the 2000 IFLA Conference states that “Grey literature remains a perennial problem for information professionals in term of product knowledge, acquisition, processing, bibliographic control and use”. Therefore, it is logical to ask ourselves if the librarian or information specialist can still consider himself/herself a non expert in a world in which the web has broken down barriers of space and time. In the past, the role of the librarian as the intermediary between the information and the final users could not be brought into question; today this certainty does not hold because information and documents, though grey, seems to be easily accessible on the web. However, this accessibility is not as easy as it appears to be. Therefore the librarian has to acquire a theoretical knowledge needed for the job as well as the practical skills and the necessary versatility for better navigation by taking advantage of the often hidden potential of this new tool.

¹⁶ From IFLA Corporate partners (2001). Publishers and libraries - Partners in the electronic age: Reflections on a workshop at IFLA 2000. *IFLA Journal* (27): 51-53

The diffusion of the Internet is generating a massive demand for professionals coming from traditional sectors, including that of librarians¹⁷. As “information architects”, they are able to define the correct structure of information of a site, thus having new career prospects with the Internet.

Finally, it can be said that the analysis carried out allows us to state that even today the most traditional types of grey literature are all present on the Internet. What has changed is the way of acquisition, but not the “grey” that predominantly characterizes this literature which can be further developed. Rather, the grey is even more emphasised in the Internet age. This greyness, that initially seemed to define a literature different and opposite from an open literature, with wide circulation and “well packaged”, cannot be considered a negative feature of such literature anymore. Instead, it represents the sign of evolution and its short-lived nature could become the emblem of an increasing intellectual growth.

At this point, we would like to recall what the contemporary painter Gerard Richter said about the colour grey that he considered as a happy possibility and the only one in order to realise the indifference, to avoid definitive statements. In this context, it is only natural that any similarity can be a paradox. We would like to end this short *excursus* from York to Internet in the knowledge that only time will confirm our ideas and give the grey new tonalities.

All the Internet sites cited in this paper were last visited on July 12, 2001

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¹⁷ Mazzoni R. La rivincita dei bibliotecari. Internet crea nuove architetture. *PC Professionale* (104): 9

MUSEUM LIBRARIANS AS INFORMATION STRATEGISTS¹

By Geert-Jan Koot

What's wrong with museum libraries?

Libraries and museums both have similar missions: they acquire, describe and make accessible records of human experience. But what is the perceived importance of a library within a museum? The role of museum libraries could be described in special library terms – to provide information to support the activities of the museum, especially its research – and one could assume that such libraries do play an important role in their information-intensive organisations. However, the status of museum libraries, as well as their influence, is less clear than this. In 1996 Esther Bierbaum published an article on this subject, based on a survey of 152 randomly selected museum libraries². Her conclusion was that museum libraries do not fare well within their parent organisations.

There are several measures of departmental status within an organization. One is funding; another, staffing and services, and a third is utilization. By the first of these measures (funding), the museum library's status is not exactly stellar. By the second (staffing), status is at the least ambiguous, but the services offered by library personnel, especially to museum staff, somewhat redeem the situation³. The third indicator measures the degree and extent to which management shows awareness of the library, for example by using its services. Unfortunately, utilization by those who matter when it comes to defining institutional status results in a low grade for the library. These results are not unique to museum libraries. In 1993 Davenport and Prusak examined why many corporate libraries play such a marginal role in their organizations. Their conclusions apply perfectly to museum libraries. 'Corporate libraries have largely been left behind by the information revolution. Their goal is to obtain as many books as possible on the assumption that someday someone would want to use each one. Library policies are not focused on how to ensure that information resources are used, but rather on

¹ Revised version of paper given in Cambridge, Fitzwilliam College at the ARLIS/UK & Ireland Annual Conference *The changing agenda for art librarians*, 6-9 July 2000.

² Bierbaum, E. Green. 'Museum libraries: the more things change...' *Special Libraries* vol.87 1996 p.74-87.

³ *ibid.* p.83

ensuring that they do not leave the premises illicitly. Librarian skill development focuses on acquisition, storage, and classification of printed materials, and distribution of them on request. This is essentially a warehouse model of information provision.⁴

There must be more to a museum library than an open door and neatly filled shelves. Living in the information age, even museum librarians perceive themselves as information professionals. It seems, however, that they operate according to the wrong conceptual model. Librarians have a high degree of potential value. They know what information is needed, and how to facilitate the effective delivery of that information. Unlike their counterparts in information systems they have chosen to focus on information, rather than technology. However, technology is one of the tools to expand their mission, their function and scope, perhaps even combined with other information functions in the museum. To find out what a museum librarian should do to upgrade the status of the library, the potential and the opportunities in this specific setting have to be articulated. To do this, I would like to place the museum library within the information structure of its parent organization, and analyse current electronic developments as part of the museum information service model.

The library as part of the museum information structure

In 1998, Elizabeth Orna and Charles Pettitt published a study about information management in museums and galleries⁵. Although this book sets out guiding principles and practices for integrated management of the whole range of information, it is remarkable that the museum library remains absent. Museums are considered to be storehouses of objects, but they are also powerhouses of information. According to Orna and Pettitt there are two main players in this field: the guardians and the stakeholders of collection information. The guardians are responsible for managing particular types of information. They have authority about acquiring, recording, and amending the information at issue, and they have an overall picture of the ways in which it is used. These guardians are the curators and the researchers, converting raw to refined information. The stakeholders have a vital stake in information because they need it in order to maintain the essential knowledge for their jobs. The stakeholders include curators providing cataloguing information, the registrar's department, conservators, collection managers, and also documentation specialists⁶.

⁴ Davenport, T.H. and Prusak, L. 'Blow up the corporate library.' *International Journal of Information Management* vol.13 1993, p.405-413.

⁵ Orna, E. and Pettitt, C. *Information management in museums*. 2nd ed. Aldershot: Gower, 1998.

⁶ *ibid.* p.29-30

To which of these categories does the librarian belong? Orna and Pettitt see documentation specialists as stakeholders, using refined information. 'Their interest in the refined information made available by the curator is likely to be incorporating the information into the integrated information management package.'⁷ In my opinion, this role is too limited.

Museum librarians as natural guardians of knowledge

Orna wrote in 1990: 'The real essential is that museum professionals should try to put themselves in the place of the widest range of potential users when they look at their collections. Then they should think of how they can manage the information to allow users to find their own way in, even if their ways of looking at the material are very different from the museum's own conception of what it is there for.'⁸ Librarians have traditionally been the interface between knowledge and dissemination. As knowledge brokers they confront those who seek with those who know. Because museum librarians meet staff members from all the different departments of the museum, they are well informed about the needs and sources of knowledge within their institutions. Furthermore, they consider user service of paramount importance, and are equipped with highly developed methods of information retrieval for anything they do not already know. The librarians not only provide information, they also provide a physical space of communication, their libraries. These facts make them natural guardians of knowledge.

All decisions about collection information management and access should contribute towards the aim of using the full store of information. This store includes the invisible knowledge in the minds of the people responsible for the care and presentation of the collections. Museums do need people capable of gathering knowledge from those who have knowledge. Subsequently this knowledge has to be structured and refined. Librarians and documentation specialists are among this group of knowledge administrators, involved with recording the information produced by others. In this position museum librarians are again the natural guardians of knowledge, which also gives them a leading role in defining criteria for the information structure. Librarians are the ideal people to act as information managers, analysing needs and designing a strategy for the integrated management of, and access to, information.

⁷ *ibid.* p.37

⁸ Orna, E. 'Helping users to come to terms with the documentation.' *Terminology for museums. Proceedings of an international conference held in Cambridge, England 21-24 September 1988.* Cambridge: Museum Documentation Association, 1990 p.538

Management of collection information

In museums different kinds of information are needed for survival and success. At the centre of the museum's requirements for information are the collections: all the other kinds of information that any museum requires depend on them. That core should be properly maintained, and if it is not, there will be a black hole in the middle. Current developments in technology will bring new ways of using collections and of creating services based on them.

The role of the librarian should be explored in connection with current developments in object registration. In the early days of computing, the registrar's department was set up to provide inventory control and support basic core data to administer the objects. The databases created could have been the results of a stocktaking exercise, since they recorded only simple physical descriptions, with no information about history or significance. Later on this activity was expanded to record basic object data in such a consistent way that the data are usable in the long term as information. In the year 2000, there is an international standard system format and vocabulary for describing museum objects – CIDOC, Object-Oriented Reference Model (CRM) – but it is not widely used⁹. Museum collection management systems too are heterogeneous with respect to record type, platform and comprehensiveness. Although cataloguing objects is a highly individualized affair, more or less the counterpart of the standardization familiar to libraries, the librarian can still furnish language-based information, methods and means for authority and vocabulary control, indexing tools and record structures. Cataloguing practices developed for use in library or archival settings might be usefully applied in object description. Moreover, based on the experience of three decades of wrestling with computerization, librarians have a significant base of knowledge to share with museum professionals. Librarians have something to offer museums in this respect¹⁰.

An example of the supportive role of librarians in the development of collection information is the REACH project in the United States. REACH stands for Record Export for Art and Cultural Heritage. Librarians are concerned with providing information to the museum visitor, as well as to the educators and curators. It's not surprising at all that a professional organisation of librarians, the Art and Architecture Group of the Research Libraries Group (RLG), started this project to investigate whether information about objects could be extracted from collection

⁹ CIDOC Object Oriented-Reference Model (CRM), <http://www.ville-ge.ch/musinfo/cidoc/oomodel/oodocs.htm>

¹⁰ Bierbaum, E. Green. 'Records and access: museum registration and library cataloguing.' *Cataloging and Classification Quarterly* vol.9 1988 p.97-111

management systems and made useful for research purposes. RLG has developed a testbed database of museum object records from a number of different museums that use different collection management systems. The goal was to combine these records into a single interface for the use of researchers. Essentially, the project was concerned with standards. The REACH element set created in this project has many points in common with other cultural heritage data standards¹¹.

Here we have the old preoccupation of librarians, in love with standard formats, standard vocabularies, standard procedures, and standard rules for cataloguing.

Integrated access to information in museums

Why do we use standards and why do librarians think museums should use standards for information management? Standards are of critical importance for structuring and networking databases in order to share information. The isolation of the departments will erode as soon as museums make commitments to internal information exchange and link computer programmes. Standards are necessary in order to integrate object information, images and bibliographical descriptions. Access to integrated information allows completion of the picture when an artefact or a work of art is being researched. Although technology can greatly increase the power of museums to retrieve, analyse and disseminate information, this is not enough. Integrated management of the whole range of information is essential for the museum. Those who provide value-added services successfully will benefit, more than the owners of the objects. Librarians are able to contribute their knowledge of information management and to support the dissemination and use of standards. They can help to enrich the storehouse of cultural information available in electronic form by leading object documentation projects in their institutions.

Today museum librarians are increasingly involved in the digitization of information. Years ago, in 1995, the role of the chief librarian of the Museum of Fine Arts in Boston was expanded into Director of Information Resources, responsible for the library, the archives and for the development of an automated collection management system.

My own library, the Rijksmuseum Library in Amsterdam, is an example of how this involvement can evolve into leadership. My library was assigned to select and build a museum collection management system. To demonstrate the close relationship between collection management and collection information, the library started to design a museum-wide, automated collection information system,

¹¹ REACH Project Summary Report, December 1998 <http://www.rlg.org/reach.html>

bringing together the most diverse forms of art information in the institution. As recognition for expertise in this field, the responsibility for the development of the information system and the digitizing of the collections was taken away from the department of collection management and assigned to the library.

These are only two examples focused on bringing a collective power to museum libraries, which has been absent from their previous state as independent, isolated entities.

Museum information centres

Nowadays many museums put increasing emphasis on access to information. They stimulate visitors to discover more about the objects on display and the subjects or cultures to which these objects belong. We have seen that within the museum many different groups need access, desperate to find information. They choose their own route through the information embodied in the objects, and through the museum's knowledge resources. There is a growing group of informal learners who set their own targets about what they want to know. Meeting objectives that relate to the needs of informal, self-directing learners is one of the most interesting challenges in information management. According to Orna and Pettitt¹², little research has been done on the questions actually asked in museums, either by visitors or by museum staff. The most common enquiries are about specific types of objects, or individual objects. In second place are requests for associated information on places or individuals. Surprisingly, enquiries for objects illustrating a particular subject matter represent a small proportion of the total. This kind of research provides useful pointers to the essentials of information management.

The problem is that many collection management databases are rather poor in content, being the result of stocktaking exercises or created as working tools for the curators. The more raw materials are available, the more they have to be mediated by indexing and interpretation in depth. Besides, in many of the larger museums only a portion of the collections has been recorded in a database. Therefore there are considerable limits to the ability of present-day systems to provide users with full and accurate information about the museum's collections. Staffed information services meet this need¹³. In my own experience, many visitors need associated information of a very different kind, which is not supposed to be recorded in the systems we use. Despite the attraction of electronic information, printed materials will form the major resource for many years to come. Books have been produced for hundreds of years, and much of the information they contain

¹² *ibid.* 5 p.52

¹³ Will, L. 'Museums as information centres.' *Museum International* vol.46 1994 p.21

will never be transferred onto computers¹⁴. John Burnett wrote in 1995: 'Bibliographical aids are vital, and if I had to choose between better online bibliography and improved collections databases I would choose the bibliography: I need access to dozens of objects, but hundreds, if not thousands, of pieces of literature. Only a small number of objects are needed to pose questions whose answers are widely scattered through print and manuscript.'¹⁵

There is only one conclusion to draw: the need for staffed information services, combined with the importance of books, highlights the library as the best location for the museum information centre. Moreover, librarians are trained and experienced mediators between individual users and the knowledge stored in their museums. Librarians must be focused on innovation, since museums are places where innovation begins. Innovation originates with listening to the users: What questions do users ask? How do they use information? What are they expecting from technology?

Three different examples of museum information centres and how they are organized.

- Already well-known are the self-service multi-media centres like the Micro Gallery of the National Gallery in London, the ARIA system of the Rijksmuseum, and many more. Despite their attractiveness, these information products are limited in their scope and interactive approach. It is often education and communication departments that set up these centres. In fact, education people are users of the museum's information sources, and as such do not differ from other users like curators and researchers, seeking information about the objects and their context. The educators create a range of products aimed at informing and educating the public, such as textual displays, guided tours, leaflets and guides, packs for teachers, gallery lectures, and also interactive systems, multi-media presentations and websites.
- The second example is the human-mediated, internet-based virtual reference desk of the Electronic Reference Service of the National Museum of American Art in Washington. This service was started by the librarian in 1993 as an extension of the traditional library reference function, to attract more users. At that time the users of the Museum's library were very few in number, and the Museum had extraordinary but little-known resources for the study of

¹⁴ *ibid.* p.21

¹⁵ Burnett, J. 'Museum scholarship in the information age.' Information: the hidden resource, museums and the Internet. Proceedings of the seventh international conference of the MDA held in Edinburgh, Scotland 6-7 November 1995. Cambridge: Museum Documentation Association, 1995 p.250

American art. One of the goals was to use the resources of the institution to the fullest extent. Information from Museum-developed sources was incorporated, including the curatorial files. Today, many museums offer virtual reference desks, receiving in some cases hundreds of questions daily, in others one every two weeks like the Royal Tyrrell Museum in Alberta¹⁶. For the Museum of American Art the outcome of this service is an increased membership, attracting many who were unfamiliar with the Museum before visiting it electronically. Being part of an outreach programme, this service makes the museum more visible and proves to be a powerful instrument for the public relations of the library¹⁷.

- A very different but most interesting example of the organization and influence of a museum information centre is located at the National Maritime Museum in London. In the early 1990's the Collections Division established a functional separation between the provision of information by the Information Division and the management of information. The Collections Division is concerned with activities that lead to the input and processing of data. The Information Division's responsibilities are for output in the form of information products and services. That being so, the information people have a decisive role in determining the form and content of documentation and setting priorities. Analyses of visitor's requests are used to decide what part of the collections the the collections people should tackle next. However, the need to balance the interest of public access with the interests of collection management, curatorial research and conservation is recognized. In the Maritime Museum, the process of managing information is shared between the two divisions, and its success depends on interaction, negotiation and co-operation between them¹⁸.

Collaborative efforts towards improving access to museum information

Museums and libraries are increasingly called upon to deliver, and provide access to, collection information and educational programming, often in electronic form. To achieve this technologists, collection managers, librarians, archivists, curators, researchers and educators must work together as never before. The teamwork approach, problem-solving groups that cut across departmental and institutional divisions, or even organisational restructurings, are the rule rather than the exception.

¹⁶ Virtual Reference Desk <http://www.vrd.org>

¹⁷ Stahl, J. 'Have a question? Click here. Electronic reference at the National Museum of American Art.' *Art Documentation* vol.17 1998 p.10-12

¹⁸ *ibid.* 5 p.195-201

The example of the National Maritime Museum shows the importance of close collaboration in terms of interaction, negotiation, and co-operation between those who are responsible for the input of information and those who are responsible for its output. Monitoring users' needs by analysing their requests has become the directional force for processing information.

Another user-related factor is the technology of the information system and the method of the way in which this is used. Information technology is supposed to support the storage and retrieval of information. Close collaboration with software engineers and systems managers is essential for the design and operation of user-friendly interfaces and the interconnection of databases. The technology needs to be developed by people capable of reaching understanding with those who retrieve information and those who manage the collections¹⁹.

Several initiatives in integrating and distributing museum information have been launched recently. They were initiated by librarians and based on collaboration between institutions.

- Already mentioned is the REACH project of the Research Libraries Group, aimed at sharing data about museum objects. Their VISION project has been set up to test applications to share image information, and is aimed at developing a core cataloguing record for visual images. Both projects merged in 1997 to further the goal of improved access to object and image information²⁰.
- In 1993, the NINCH project (National Initiative for a Networked Cultural Heritage) was launched in the United States to bring national cultural heritage online. Museums, libraries, research and educational institutions and contemporary art organizations joined together to create an environment in which cultural resources could be networked²¹.
- In the United Kingdom, the National Museum Director's conference of 1999 offered its vision on how digitization could help to integrate the resources of museums and libraries. Meanwhile, the UK government has taken steps to hasten the integration of museum and library services. A new body has been

¹⁹ *ibid.* 5 p.104

²⁰ Lanzi, E. 'Improving access to art information: The REACH and VISION projects.' *Art Documentation* vol.17 1998 p.15-19

²¹ Green, D.L. 'Networking Cultural Heritage: introducing NINCH (National Heritage for a Networked Cultural Heritage).' *Art Documentation* vol.16 1997 p.15-17

created, the Museum, Libraries and Archives Council²², with the aim of welding together the areas they cover in order to exploit the synergy that exists between them.

- Without these powerful bodies in the Netherlands, the Rijksmuseum Library has taken the initiative of bringing together the curators of this museum's Department of Prints and Drawings, the Department of Dutch History and the curators of the special collections at the National Library in The Hague. Together they have formulated a project based on the content of both collections called the Digital Atlas of Dutch History. The Atlas will result in a website covering national history presented by means of characteristic print materials and objects, including pamphlets, prints and medals depicting historical highlights; this will be thematically arranged and enriched with research findings. During this project the photographic departments of both institutions joined the party. The Rijksmuseum Library designed the record structure and the vocabulary for cataloguing printed texts and museum objects. A uniform method of cataloguing will make it possible to link the pamphlets, prints and medals. The Royal Library provided the standards, the procedures and the infrastructure for the digitizing of text (pamphlets), images (prints) and three-dimensional objects (medals). This partnership has revealed great potential for both institutions.

Museum librarians as information strategists

Museum libraries should be more than storehouses accumulating books, and their librarians should be more than custodians of collections of books. These will become simply historic collections if the librarians do not participate in the world of online resources. But there is much more to take care of. I defined librarians earlier as the natural guardians of knowledge. As such, there are many potential roles to be performed, most of them in co-operation with other information-oriented functions. Within the museum setting, librarians have their work cut out for them: they have the opportunity to take on a leading role as information strategists and create a dynamic environment. The Director of Information Resources at the Museum of Fine Arts in Boston, Nancy Allen²³, put it most clearly in saying that museum librarians are shaping themselves as information navigators, organizers and creators. They will continually expand their

²² Owen, T. and Johnson, R. 'Libraries, museums and archives collaborating in the United Kingdom and Europe.' *Art Libraries Journal* vol.24 no.4 1999, p.10-13. The Commission has now been renamed Resource: the Museums, Libraries and Archives Commission.

²³ Allen, N.S. 'The role and function of libraries in art museums.' *The Bulletin of Japan Art Documentation Society* vol.5 1996 p.19

understanding of information access and, in turn, teach others how to be self-guided on the information highways. They will bring their knowledge of information management to ongoing developments in capturing, describing, and sharing museum information and, in turn, will support the dissemination and use of standards. Many museum librarians will also help to enrich the storehouse of cultural information available in electronic form, by leading object documentation projects in their own institutions. Museum libraries of today have to be led by information strategists, bringing all the resources in their institutions together, and making them available to a global community.

I would like to conclude with a statement by my director, Ronald de Leeuw, comparing the information policy of museums and libraries. He stated that museums believe that they push themselves forward with spectacular exhibitions, lavishly full-colour books about the collections and multi-media installations. But all these achievements together open only a tiny window onto their large resources of stored information and knowledge. Libraries are traditionally geared to maximize the size of this window. In managing information and making it accessible, museums can learn a lot from the library community.

It is now up to museum librarians to make these contributions, by offering their expertise, and addressing museum needs outside and inside the library.

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ASpB Best Paper Award

The Best Paper Award of the *German Special Library Association* (ASpB e.V.) and *EBSCO Information Systems, Lange & Springer*, was presented for the first time at the 28th Workshop and Training Conference "Special Libraries Today - Competition and Cooperation". The Best Paper Award is endowed with prize money of DM 1000. The Special Libraries Association offers this prize as encouragement for professionally presented lectures and informative papers in the German library scene.

Attendees at the conference were asked to choose the best paper according to predefined criteria such as successful design, attractive style of presentation and innovative orientation. The winners of this year's award are Barbara Burghardt and Silvia Grunwald, owners of the Liber@ction company (Hanover and Munich), whose paper entitled "From librarian to information manager - Two years of experience as independent businesswomen" was enthusiastically received by most of the attendees. These committed and motivated information professionals presented an informative paper on a field of work rather unfamiliar to special librarians.

FROM LIBRARIAN TO INFORMATION MANAGER - TWO YEARS OF EXPERIENCE AS INDEPENDENT BUSINESSWOMEN¹

By Barbara Burghardt and Silvia Grunwald

Abstract: The presentation "From librarian to information manager - Two years of experience as independent businesswomen" gives an insight into the working environment of freelance librarians.

Attention is focused on the field of activities and cooperation with customers. The most important aspects are attracting customers, the aims of the projects and negotiations. Previous experience and future challenges will also be presented.

The question is then finally discussed from the standpoint of a freelance librarian of how studies of librarianship at a university for applied science prepare students for the different facets and new fields of employment in the information age.

1. Company Portrait

The Liber@ction company was founded in 1998 by Barbara Burghardt and Silvia Grunwald, graduates in librarianship from Hanover University of Applied Sciences.

In addition to the fields of library organization and web design, the company's range of services has been expanded during its first two years of existence to

¹ Paper presented at the German Special Libraries Association, AspB, bi-annual conference March 6 -9, 2001 in Hannover, Germany: winner of Best Paper Award

include office organization and also the implementation of extensive literature searches.

In *web design*, the major priority has been shifted from the creation of internet sites to the updating and maintenance of existing presentations.

In *office organization*, procedures and services are worked out together with the customer for designing his workplaces. This includes both practical procedures such as establishing systems for maintaining order and filing systems, as well as advice on how existing systems can be more effectively used or improved in order to achieve the greatest possible efficiency of existing operations.

Literature searches are performed in the field of library catalogues (CD-ROM, card catalogues, online searches), the internet and, if required, also in commercial databases. If desired, the relevant literature can additionally be procured.

The main emphasis in these freelance activities is placed on *library organization*, which is subdivided into the two fields of retroconversion and library support. In those projects which have already been completed, the conversion of card catalogues was first performed and the associated revision of the holdings, after completion of which ongoing library support was undertaken on an hourly basis to deal with the daily business arising in a library. The libraries involved have holdings ranging from about 5000 to 15000 units.

2. Customer Acquisition

2.1 Target group

It is difficult to determine a precise target group since potential customers include all those who wish to access information professionally or privately.

As far as customer acquisition is concerned, this means that both those involved in scientific work as well as university institutes and also small and medium-sized enterprises and large concerns will be addressed. Enquiries have already been received from private individuals with a view to updating their libraries or cataloguing a literary estate.

2.2 Publicity

The term "information management" has many meanings and is therefore frequently not clearly defined for the customer. Consideration must be given to this fact in publicity for the product or service. The job profile of a librarian as an independent entrepreneur can be communicated most effectively to the customer in a personal conversation on the spot. This can arouse interest in the field of activity

and show the prospective customer what could be changed for the better by implementing a project.

It is important to make the planning and structure of any project transparent to the customers since this will involve costs for them and they will initially react in a rather reserved manner. If the foreseeable improvement in their daily work is made clear to the interested parties then this may dispel any reservations they may have about a possibly time-consuming and cost-intensive order.

Nevertheless, the most important and effective publicity is a personal recommendation from satisfied customers.

3. Project Framework

3.1 Objectives

In project implementation, clearly formulated goals are indispensable both for individual phases and also for the project as a whole. They serve to orient and monitor the work currently in progress or already performed.

Before the objectives can be laid down, the actual situation must be analysed: where are the difficulties at the present point in time, why has the project been initiated and where should the innovations lead?

The goal of the two librarians, irrespective of the projects in hand, is that the customer can work permanently and independently with the product supplied, whether this be a database, the restructuring of a library or a new office filing system.

3.2 Negotiations

If cooperation has been decided upon, an intensive discussion is held with the customer, in which the customer's wishes are clearly articulated and compared with the realization of these wishes by the specialist.

In this connection, a possible solution is developed for the customer including the desired elements for future use; at the same time, attention must be paid that the project has a fixed time and financial framework.

In addition to specialized questions, within the framework of these discussions future working conditions are also clarified. Smooth handling of the project requires well equipped workplaces with computers and working facilities and access to the premises outside the institution's opening hours is also meaningful.

4. Cooperation

4.1 Project leader

An important prerequisite for the smooth handling of all organizational and specialist questions is the appointment of a project leader by the customer. The project leader serves as a link or translator between the staff of the institution/company and the librarians. Although cooperation with all members of staff is indispensable (see "Staff motivation") nevertheless it has proved useful to have a contact who is responsible for the project and interested in its success. Positive and also negative feedback can thus be exchanged more effectively and any possible difficulties rapidly removed.

4.2 Staff motivation

Since the project is implemented with the aim of making work within the institution easier it is important that for the realization of the project that the staff's interest should be aroused since they will be the future users. On the one hand, including the staff reflects a broad spectrum of opinion concerning the expectations associated with the project and, on the other hand, different ideas will be gathered which may be useful for the project.

Innovations are presented to the staff at regular workshops in order to arouse their interest in the project and to keep them informed about the stages of the commission.

5. University Course and Professional Experience

The following points refer to a course of university studies from winter 1994 to summer 1998 and are intended to reflect the extent to which this course provides a suitable preparation for the requirements of work as a freelance librarian/information specialist.

5.1 Economic and legal aspects

The lectures on business administration provided insights into processes such as workplace description or handling budgetary control lists, i.e. the work undertaken by librarians as employees in large libraries.

Less attention was paid to economic aspects to be considered in business enterprises such as quality assurance, project management or budgeting.

Law lectures considered, for example, the structure of the public budget and the basic principles of the legal system as well as of EU law. Alternative classes on

legal issues of relevance to business administration would be a meaningful addition.

Freelance work is undoubtedly only one example of the later requirements of a library profession, nevertheless in future the librarian in the private sector will increasingly take on the function of an information manager so that an extension of the above-mentioned aspects within the course of studies should be discussed.

5.2 Social skills

The extent to which a course of studies should undertake to impart social skills is undoubtedly a question of principle, nevertheless experience has shown that the aspects discussed in the following - not only in dealing with customers but also among colleagues - are of great significance.

a) Conflict management

Whether in large libraries or in a one-person library; there are always colleagues and superiors. Conflicts are unavoidable - the important thing is to identify these conflicts and solve them. Awareness of the possibility of holding discussions or the existence of a project group may already simplify relations between the different attachment groups.

b) Empathy

It is often very difficult for outsiders to reconstruct your own thoughts. It is therefore important that you should not regard your own way of thinking as obvious but you should rather learn to understand and translate other people's thought structures and needs.

A special aspect in this connection is the information discussion. The means of conducting such discussions were dealt with during the university studies, especially in the "Communications" course: the lessons learnt there are of assistance in linking one's own way of thinking as a librarian with the customers' expert knowledge in conversations with them.

c) Job profile

Whether we like it or not, the term "librarian" continues to evoke an antiquated job profile.

It would be helpful to already tackle this problem during one's university studies and to look for means of counteracting this image. A starting point could be the consideration of how the curriculum and professional activities could be described possibly leading to a change in the name of the course and qualification.

5.3 Expertise

The university studies provided the specialist equipment for taking the plunge into freelance work or an information specialist's field of work: ranging from solid training in fields such as cataloguing and performing searches through the provision of basic library knowledge such as signature systems, basic principles of acquisition or interlibrary loans up to insights into special areas such as music libraries, user research or the structure of the library system in Germany.

Placements and jobs as student assistants also proved to have a very positive effect so that insights could be obtained into different library operations meaning that from the very start it was possible to approach freelance activities and the world of work in a realistic manner.

Know-how obtained in the various database systems, classification systems or working procedures meant that from the start comprehensive and detailed advice could be offered to the customers.

The library landscape is at present experiencing a period of change as is the curriculum of the university course. It is to be hoped that the job profile of the librarian, information specialist or information manager will develop in such a direction that due to its major contribution in coping with the flood of information the profession will maintain its considerable reputation in the information world!

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THE NEED FOR MARKETING AND TOTAL QUALITY MANAGEMENT STRATEGIES IN LIBRARIES IN GHANA

Anaba A. Alemna

Abstract: The importance of Marketing and Total Quality Management in libraries is stressed in this paper. The writer is of the view that the conditions which challenged libraries in developed countries to adopt Marketing and Total Quality Management strategies are very much prevalent in Ghana at present. It is not, however, clear if library managers are effecting the necessary changes to satisfy their clients.

There is therefore the need for libraries in Ghana to adopt these initiatives in order to ensure their continued use and importance. Failing this, the writer concludes that the continued survival and sustenance of libraries in Ghana is in jeopardy.

Introduction

According to Seddon¹ information has become a very profitable commodity and as such, many profit-making organizations are now involved in the provision of information services and products on a scale equivalent to that being done by libraries. This phenomenon has slightly increased the number of competitors in the information market place. The emerging technological challenges and societal changes also pose an unprecedented threat to the continued survival of libraries as worthy information providers.

In the face of these challenges it is now time for libraries to exhibit that they are invaluable to the continued survival and sustenance of their organisations. This can best be done by actively marketing their services, and by means of total quality management.

The concept of marketing library and information services and products is catching on in many libraries worldwide. It has now been realised that marketing information services and products is essential for all information providers if they are to continue to exist. This is largely because information has become a very valuable resource in recent times comparable to traditional resources such as land,

¹ Seddon, S.:Marketing Library and Information Services, Library Management, Vol. 11, No. 6, 1990. Pp. 35-39.

capital and labour. Fortunately, information is a highly marketable commodity and libraries, according to Cornish² are still major sources of information provision.

Total quality management (TQM) has been defined as “a management philosophy embracing all activities through which the needs of the customer and the community, and the objectives of the organization are satisfied in the most efficient and cost effective way by maximizing the potential of all employees in a continuing drive for improvement.”³

Total quality management has been the fundamental business strategy of the world’s leading organizations throughout the 1980s. In some developed countries such as Japan, the United Kingdom and the United States of America, a number of organizations have adopted TQM as a way of life for the continuous improvement of the quality of their products and services to their customers. Quality, to these organizations is the ‘totality of features and characteristics of a product or service that bear on its ability to satisfy stated or implied needs.’⁴

In the context of service, quality is about putting the right service in the hands of the customer, at the right time and price. It is therefore, not surprising that these organizations have focussed their products on niche markets, rather than selling standard mass-produced goods. This reaction has been the response to the fierce competition on the domestic and international business environment, technological changes, pressures to demonstrate value for money (especially in service-oriented organizations), and consumer sophistication, among others. Today, we are witnesses to quality products and services from Japanese, British and American organizations.

Marketing and TQM in Libraries

Surprisingly however, marketing and its theories have not been widely accepted by practitioners in the information profession and its application in libraries has been extremely slow and cautious. This approach is attributed by Tanui and Kitoi⁵ to the fear of dealing with the little – known sphere of marketing which is mistakenly associated only with profit – making enterprises. It is thus often assumed that marketing is inapplicable to the services and products of a library since a library with good books, up-to-date journals and staff is an end in itself. It must however

² Cornish, G.P: Universal Availability of Publications and its importance to Human Development, Regeneration and Growth. Library Management Vol. 19, No. 8, 1998. Pp 480-485

³ British Standards Institution. BS 4778: Quality Vocabulary. Part 1 1987

⁴ British standards Institution: BS4778 Quality Vocabulary. Part 2. 1991

⁵ Tanui, A.T and S. Kitoi, Why marketing? Library Management. Vol. 14, No. 4, 1993, Pp. 43 – 47

be stated that marketing is for both profit-oriented and non-profit organizations. It does not only involve a good but a service as well.

Many librarians still hold a rather myopic view that their services and products are so essential that people will use them as they have always done without any additional effort on their part. They erroneously assume that users' needs are also satisfied because they come to use the library. Unfortunately however, although librarians may regard libraries as indispensable, it is by no means certain that those outside the profession share this view. This aversion however seems strange, since marketing like librarianship places the user at the centre of all activities. It is thus very essential that the marketing concept is wholly and quickly adopted if libraries are to continue to exist as information providers in the future. Weingard⁶ sums this up when she states that "if libraries are to survive or thrive, the complete spectrum of marketing approaches is essential to the managerial toolbox."

A controversy over the expansion of TQM into service-oriented organizations (such as libraries) has to do with the question of profit making. Business as we all know, are designed to make profit. Libraries, unfortunately, are not profit making ventures and are considered to offer "free" service. It should be noted, however, that libraries, be they public, academic or research are not 'free'. Customers may not be paying directly for the use of the library but are entitled to the service because their taxes, school fees, the contributions and membership subscriptions of the organizations they serve, coupled with grants of various types donated to the libraries, are good enough reasons for them to be managed efficiently. More than ever before, stakeholders are demanding accountability, value for money. And precise justification of all resources to improve the competitiveness, effectiveness and flexibility of the whole organization. Accountability is thus crucial both in the business sector in general and in the library in particular. This is yet another justification for the applicability of TQM to businesses and libraries.

Another reason why libraries should adopt TQM is that it (TQM) embodies certain values and approaches, which are common and already established concepts in libraries. These include the elements of participative management, staff training and development and responsive service to customers. However, several of the defining and extraordinary elements of TQM such as continuous improvement, quality tools and measurement and customer-focused planning are not commonly applied in libraries. It is for these reasons that libraries are in a position to expand and improve upon principles they already value and employ, while introducing

⁶ Weingard, D.E. Preparing for the New Millenium: the case for Market Strategies. Library Trends Vol. 43, No. 3, 1995, pp 296-317

new approaches to planning, problem solving and envisioning future customer services and needs.

Strategies for Ghana

The library must remain relevant to the community. It is only when libraries in Ghana are seen as performing the arduous task of directing the flow of information services and products as a bid of responding to the demands of their information users can they be seen as marketing information. Effective marketing is the obvious means by which users can be made aware of the services of the library and their value. It can however be argued that perhaps, it is in recognition of this that academic libraries in Ghana are involved in all kinds of networks and resource sharing ventures as a means of offering users access to as wide a selection of documents as possible.

However, studies by Martey⁷, Kissiedu⁸ and Adwin⁹ all paint a dismal picture of no attempts being made to effectively market the products of libraries in Ghana. The problem then is, in the midst of dwindling funds, technological advancements and increased competition, libraries are still not only expected to meet the information needs of their users, but also to maintain their central positions in their organisations. Apparently, the library's monopoly of information provision has been broken and it therefore has to compete vigorously to survive. Strangely, librarians themselves are taking the importance of the library in the academic setting for granted. This is obviously suicidal for libraries in these times when there is increased competition for funds, increased expectations for service, societal changes as a result of technological advances and growing competition from especially, the private sector in the provision of information services and products.

The pressure of demand on libraries has increased not just because of increasing number of students, but because of the high cost of books which make these beyond the reach of most students. The library, thus become the primary and sometimes the only source of information for students. The increasing student – lecturer ratios have also made it difficult for meaningful tutorials to be undertaken thus necessitating independent learning. There have also been the increasing

⁷ Martey, A.K. Marketing Products and Services in Academic Libraries in Ghana. Libri Vol. 50 No.4, 2000. Pp 261-268.

⁸ Kissiedu, C.O.:Marketing as a Management Tool in University Libraries: the Ghanaian Experience (Unpublished)

⁹ Adwin, K.: Marketing Academic Libraries: Promotional Activities at University Libraries. Journal of Inst. of Education Vol. 4, No.1 1998, pp 51-57

technological developments in information management, which the libraries have to take into account. In an increasingly competitive world, quality is no longer an optional extra. It is an essential strategy.

TQM has been increasingly applied in libraries in the developed countries since the 1990's and it is helping libraries to establish a culture of never-ending improvement of quality of products and services. By so doing, patron and employee satisfaction are guaranteed and stakeholders are assured of optimum utilization of limited resources to satisfy customer needs. While TQM in libraries is well established in developed countries, it has only recently become popular in some developing countries such as India, Malaysia, Fiji and Pakistan. In Africa, however, very little literature on studies conducted on TQM implementation in libraries is available. In Ghana, there is no literature on TQM studies, nor is there any library, which has implemented this concept.

Conclusion

Over the years, libraries in Ghana have been performing the traditional role of identifying, accessing, storing and disseminating information to a relatively small number of users. In recent years, things are gradually changing. In all types of libraries, the numbers of users are increasing. The universities in Ghana are now charging user fees for all facilities on campus including the use of the library as against absolutely free University education a few years earlier. Students are now demanding quality service for their monies worth. There is therefore the need for library managers to re-examine their traditional role and adopt an entirely new culture which would satisfy the ever-increasing demand for improved and quality service to the clientele.

Librarians in Ghana must also note that not embracing the marketing concept will ensure that the demise of their libraries will come sooner than expected. Libraries in Ghana are indeed in a time of great challenges and if they are to be prevented from becoming the dinosaurs of the future, then Total Quality Managements and Marketing Strategies must be adopted to prevent them from imminent collapse.

British standards Institution: BS4778 Quality Vocabulary. Part 2. 1991

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