TRENDS IN USING CD-ROM IN ACADEMIC AND SPECIAL LIBRARIES OF DEVELOPING COUNTRIES: A STUDY OF NIGERIA

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Abstract

High hopes were attached to CD-ROM technology at its inception in bridging the gap between the information 'rich' and information 'poor' countries. However, this technology is entering the libraries of developing countries including Nigeria at a very slow pace. This study explored the use of CD-ROM in academic and special Libraries in three geo-political zones of Nigeria, namely the South-West South-South and South-East. A questionnaire was used to collect data from 39 participating institutions in these three zones. It was found that only 50% of the libraries were using the technology and 65% of these were facing financial difficulties in sustaining it. Sixty-six percent of libraries had only up to two CD-ROM workstations. Most of the library staff were self-trained and only a few libraries were undertaking promotional and user education activities. It was suggested that donors of CD-ROM should assist Nigerian libraries to develop full text CD-ROM products to help sustain the flow of digital information in Nigeria in particular and developing countries in general.

Introduction

The widening gap between so called information 'rich' and information' poor' countries has been the focus of many studies in the last few decades. Most researchers agree that multitudes of factors are responsible for it and proposed different solutions for bridging the gap. However, with the introduction of the Compact-Disk Read-Only-Memory (CD-ROM), many of them were convinced that this technology would play a vital role in bridging the divide.

Many authors, during the early days of CD-ROM had high praise for the technology as an alternative to on-line searching and as a useful technology for libraries and information centres located in isolated areas (Brito, 1989; Nissley and Nelson, 1990; Wright, 1990; Keylard, 1993). Nicholls and Majid (1989) felt that CD-ROM was suitable for the prevailing information infrastructure and requirements of developing countries where telecommunication facilities were either not available or expensive to use for on-line service in libraries. Other advantages of CD-ROM put forward were: « convenient, easy and unlimited access;

- micro-computer-based technology;
- powerful and user-friendly interfaces;
- access to a substantial portion of world literature;
- easy budgetary control due to fixed CD-ROM database costs;
- inexpensive training tool. (Abid, 1992; Ashford and Hariyardi, 1993; and Kanamugire,1993).

Library and information professionals in developing countries were excited to have access t<r information on a scale, speed and convenience previously unknown to them. Several libraries in developing countries took the initiative and successfully established CD-ROM based information retrieval facilities (Ali, 1988; Addo, 1992), Several donor countries, individuals and corporate organizations came forward to support the technology in developing countries (While, 1992). They provided both bibliographic products as well as full text materials on CD-ROM specially prepared for developing countries,

having seen the poor and out-dated libraries in these countries (Abid and Pellisier, 1994). Karamugire (1995) proposed that leading CD-ROM publishers should co-operate with donor agencies to make CD-ROM products more affordable for developing countries.

An important issue related to establishment and maintenance of IT-based services in developing countries is their ability to sustain these facilities. Sustainability as applied to information system is the maintenance and continuity of the system over the long term enabling it to perform its functions to the community for which it was installed. Experience has shown that only few libraries in developing countries are able to sustain these activities beyond the period of donor financing (Mambo, 1993). Many libraries fail to obtain funding from their parent organization. Another problem in sustaining CD-ROM service can be lack of a culture to pay for library services (Lahiri, 1996).

Literature shows that many libraries in developing countries are not effectively using CD-ROM due to inadequate financial resource, equipment and trained manpower, while among those using it, they encounter difficulties in sustaining it. However not much is known about the use of CD-ROM technology in Nigerian academic and special libraries. The available literature is basically descriptive (Akinyosoye, 2000). The objective of this study was to explore the trends in using CD-ROM in the academic and special libraries, reasons for its possible wider-utilization and ways to rectify the situation.

Method

Three geo-political zones in Southern Nigeria namely; (i) the South-West comprising Lagos, Ogun, Oyo, Ondo, Osun, Ekili Stales; (ii) the South-East zone comprising Ebonyi, Enugu, Anambra, Abia and lino states; and (iii) the South-South zone made up of Edo, Delta, Bayelsa, Rivers, Akwa-Ibom and Cross River States, were selected for the study.

These geo-political zones were selected because of near similarities in their educational infrastructure and economic conditions and status of academic libraries. Brochures of Joint Admission and Matriculation Board were used for the selection of universities, polytechnics and colleges of education. Other lists of special libraries were consulted to identify names and addresses of other tertiary institutions in the three zones.

A questionnaire was developed, validated and used for collecting data from the libraries. The questionnaire consisted of three sections. Section one sought information on those not using CD-ROM technology and possible reasons for not doing so, and whether they have plans to use it in the future. Section two solicited data on CD-ROM products acquired, their use for performing various library operations, and methods used for training library staff in the use of CD-ROM technology. The last section of the questionnaire obtained data on CD-ROM access policies implemented by the participating libraries, their changing policy, promotional and user-education activities. It also explored the perception of respondents of problems faced by those libraries in implementing CD-ROM technology. The survey method was used for the study. A total of 70 copies of the questionnaire were distributed to the selected institutional libraries, while 39 filled and returned their questionnaire and these were analyzed using frequencies and percentages. The data were presented.

Results

The participating libraries were asked if they were using CD-ROM

technology for meeting the information needs of their patrons and/or for performing various library operations. Table 1 showed the status of use of CD-ROM. It was found that only 20 (51.3%) of the libraries surveyed were using CD-ROM technology, while 19 (48.7%) were not using. Moreover, nearly 50% of the libraries in each of the three geo-political zones were using the technology, while 50% were not using the technology.

Table I **Status of CD-ROM Use** N-39

Zone	Using	Not Using	Total
	10(52.6%)	9(47.4%)	19(100%)
South-West	6(50%)	6(50%)	12(100%)
South-South	4(50%)	4(50%)	8(100%)
South-East			

When those not using the technology were asked to indicate possible reasons for it, two major reasons given by 15(78.9%) of the libraries were lack of CD-ROM equipment and unavailability of fund for subscription to CD-ROM products (Table 2). Seven libraries claimed that they did not use CD-ROM because of limited computer knowledge among the library professionals. Two other reasons given were lack of knowledge of information retrieval among the library professionals (four), and lack of interest in the use of CD-ROM by users (two).

Table 2: Reasons For Not Using CD-ROM

[multiple response N= 19]

Reason	Zone SW(N=9)	SS(N=6)	SE(N=4)	Total (N-19)
l.Lack of CD-ROM equipment in the library	6(66.7%)	6(100%)	3(75%) 15(78.9%)	
2.No budget for purchase of CD-ROM products	6(66.7%)	5(83.3%)	4(100%) 15(78.9%)	
3.Limited computer literacy among library professionals	2(22.2%)	5(83.3%)		7(36.8%)
4.Lack of information retrieval knowledge among library staff	1(11.1%)	3(60.0%)	- 4(21.1%)	
5.Library users do not ask for CD-ROM products.	1(11.1%)	1(25%)		2(10.5%)
6.CD-ROM not a useful				

technology of our library

7.Printed sources are better than electronic sources 1(16.7)

The libraries were asked to indicate possible sources of fund if they intend to install CD-ROM facility. Of the fourteen libraries in this category, eight (57.1%) reported that they would ask the parent organization for a special grant for the purpose. Six libraries were considering using their budget to finance CD-ROM acquisition. Four libraries each were depending on gifts and /or assistance from international and private donors (Table 3).

Table 3: Possible Sources For Acquiring CD-ROM Products (Multiple Response N=14)

Fund sources	SW N=5	SS N=5	SE N=4	Total N=14
Through requisition for Special grant	1(20%J	2(50%)	5(100%) 8(57.1%)	
Through regular library budget	2(50%)	4(80%)		6(42.9%)
Through international donors	1(20%)	3(60%)		4(28.6%)
Through gifts	1(20%)	3(60%)		4(28.6%)

Trends in Using CD-ROM Technology

Of the 20 libraries currently using CD-ROM, 14(70%) were using it to provide an information searching service for their users. Such also include user searcher, cataloguing, reference and other library operations.

Staff Training

Libraries were asked how their staff acquired training in CD-ROM products. Variety of training methods were used (Table 4). Sixteen (80%) of libraries reported that their staff trained themselves by using manuals. Staff in 10(50%) of the libraries used trial and error. In eight libraries (40%) staff attended short courses. In four (20%) libraries, skill was acquired as part of professional studies trained during attachment with institutions already using CD-ROM.

Table 4: Training Methods for Developing CD-ROM Retrieval Skills (N = 20)

Training Method	Number of libraries	Percentage

Staff training through reading Manuals	16	80
Through trial and error	10	50
Through attending short courses	8	40
Short training as part of course Work during professional studies	4	20
Attachment in instructions using CD-ROM	3	15

CD-ROM Access **Policy**

All the libraries having CD-ROM facility provided an information searching facility for their staff members. Of the 20 libraries, 17(85%) libraries each allowed their students to use the service (Table5). Nine (45%) libraries permitted external users to use their CD-ROM facility.

Table 5: **Types Of** Users **Entitled To Used CD-ROM (Multiple Response N = 20)**

User type	No. of Libraries	Percentage
Staff members	20	100
Students	17	85
Institution staff	13	65
External users	9	45

Asked about access policy for using CD-ROM, data showed that in 12(60%) libraries, users book for appointment with library staff first. In 8(40%) libraries approval must be obtained from the library chief or his/her representative; while in 7(35%) libraries, users obtained recommendation from the head of department. It is only in 4(20%) libraries that the users walk in and use the facility, as shown in Table 6,

Table 6: Access **Procedure For Using CD-ROM (Multiple Response N =20)**

Access procedure	**No. Libraries**	**percentage**

Prior appointment with library Staff	12	60
Approval from library chief/representative	8	40
Recommendation by head of department	7	35
Filling a search request form	5	25
Walk in and use facility	4	20

Furthermore, at nine libraries, staff were responsible for searching information for their users, whereas three libraries required end -users to conduct their search. Eight libraries allow both intermediary and end-user hard copies of retrieved information or to down-load it. Only 4 (20%) of the participating

libraries charged their users for printing out information in spite of the financial difficulties in sustaining the CD-ROM technology, earlier expressed by majority of libraries. Unwillingness to charge for services by libraries in developing countries is one of the major contributors to financial difficulties.

Promotional Activities And User Education

Of the twenty CD-ROM using libraries only 6(30%) undertook promotion of the use of CD-ROM facility by their users. Eleven libraries encouraged end-users to conduct their own searches. Considering the low level of computer literacy among the library users, it might be difficult for them to conduct effective data base searches with their low-level of training.

Participating libraries in the study were asked about their opinion on the use of CD-ROM technology in their institutions. All felt that it was under-utilized, (Table 7).

Table 7: Reasons For Under-Utilization Of ^D-ROM (Multiple Response N

User **Type**	No. **of Libraries**	**Percentage**
Limited computer literacy among Library professionals	15	83.3
Inadequate CD-ROM databases	15	83.3
Stringent copyright law of owners of CD-ROM	12	66.7
High cost of licencing and renewals	12	66.7
Lack of knowledge of potential of CD-ROM based Information retrieval	10	55.5
Inadequately trained professionals in CD-ROM searching	10	55.5
Rigid CD-ROM use policy operating in some libraries	7	38.9

Two major reasons for under-utilization were limited computer literacy among the library professionals and inadequate CD-ROM databases and/or equipment. Two other reasons reported by twelve (66.7%) of the libraries were lack of awareness of the potential of CD-ROM and limited computer literacy among users. Other reasons include lack of .user training (10 libraries),

inadequate trained library professionals (10 libraries).

Discussion

During the early days of CD-ROM, high expectations were attached to this technology in solving 'the information related problems of the developing countries including Nigeria. Several years after its introduction it appears that the technology has failed to have impact on the libraries in Nigeria, although there are some "information oasis" in some institutions. However, the future is still bleak for many academic libraries in Nigeria still struggling for its introduction and substance. Many institutional libraries in Nigeria are not using CD-ROM technology. This is disappointing. It probably shows lack of initiative and acceptance of the technology. In addition, these libraries face problems such as small number of CD-ROMS, inadequately trained library staff, financial difficulties in procuring and sustaining usage. Above all the licensing and lease agreements of procedure of CD-ROMS discourage subscription (Dobb,1990).

These agreements relate to all aspects of CD-ROM usage including the necessity of returning discs multi-user access, lost or replacement disc policies, down-loading of data. Consequently, in most cases it is the licensing policy which is an important consideration in the selection of CD-ROM products for subscription and purchase (Pooley, 1990)

Conclusion

In an era, when large chunk of useful information products are only available in electronic format, the gap between the so called information "poor" countries like Nigeria is widening into a "divide". To ameliorate the unfortunate situation, Nigerian academic library managers must review their policy of heavily depending on traditional printed information sources. They must set aside adequate resources for collecting electronic information. Moreover they should avoid accepting computers from donors if the means of sustaining their effective usage cannot be guaranteed by the donors, Donors should on their part sustain the use of the technology by ensuring continuous flow of information to the developing countries in order to Bassist in reducing the widening information gap between the developing and the developed countries.

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