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EDITORIAL

Faculty of Physical and Life Sciences,
University of Benin, Benin City.

This is the fifth issue of our journal, *The Information Technologists: An International Journal of Information and Communication Technology (ICT)*. On behalf of the editorial board members, I heartily congratulate our contributors and assure them that the sustainability and timely publication of our journal is guaranteed.

Once again it is our intention to ensure that the peer review procedures are greatly accelerated. This is to make it possible for manuscript to be disposed off within a time frame of not more than one month. The editorial board is fully equipped with material and human resources, and we are persuaded by the fact that when a journal comes out regularly, its sustenance is guaranteed. This invariably gives confidence to the subscribers and contributors to continue to associate with the journal.

In this issue of **THE INFORMATION TECHNOLOGIST**, articles on a variety of topics on Librarianship and Information Communication Technology (ICT) are presented.

Our lead article by Dr. E. Camble and Michael Alfred Obaje focused on the Use of CD-ROM Databases by Staff and Students in the University of Jos Library.

Dr. (Mrs.) Rosemar, Agbonlahor and Oluwatoyin N. Oyekan, in their article, assessed the State of Preparedness of Students at different stages of the ICAN qualifying examination in major tuition centre in Ibadan, Nigeria using ICT in professional practice.

The article by Dr. (Mrs.) Margaret Uyoyou Ugboma and Nelson Edewor focused on the Use of E-mail in providing Library and Information Services in Higher Institution Libraries in Delta State, Nigeria.

Dr. Michael Wole Olatokun and Monsurat Funmilola Folaranmi article investigated the Adoption and Use of ICT in Private and Public Secondary Schools in Kwara State, Nigeria.

Fidelis O. Chete, Oruoghor Ovuakpor and Frances C. Chete in their article investigated the Use of the Internet among Students of the

The article by Oseghale Osagie examined the Perception and Use of ICT resources in Kenneth Dike Library by Postgraduate Students of the University of Ibadan.

Godwin B. Afebende and Denis Ayana did a Survey of the Use of Electronic Resources (ERS) in Libraries. Specifically, their article focused on Students in two selected academic libraries in Cross River State, Nigeria.

Josiah I. Adeyomoye and Pauline Adeniran in their article, evaluated the Use of the Internet Facilities as an Information Source both for teaching and learning in the University.

Dr. Chizoba Nwora "Zee" Maducke in his article synthesized different theories on the Social, Cultural and Economic Impact of Globalizing Information Technology in developing countries from the African Perspective.

The Article by E. J. Garba and J. A. Garba examined the Challenges facing ICT-Driven distance Education and Proffered Solutions on how to curb these challenges to ensure effective and sustainable ICT-driven distance education in Nigeria.

Michael Alfred Obaje, Augustine Sani and Victoria Lawal in their article investigated Internet Access and Usage of the main Library by Staff and Students of the University of Jos.

From the Editor's Column, is a work which examined the radical redefinition of the nature and operation of the information profession accessioned by the advances made in Information Technology.

Finally, we sincerely congratulate our contributors once more and wish our numerous readers well.

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USE OF CD-ROM DATABASES BY STAFF AND STUDENTS IN THE UNIVERSITY OF JOS LIBRARY

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ABSTRACT

The focus of this study is the use of CD-ROM databases by staff and students in the university of Jos library. This is of interest as CD-ROM database services is in consonant with the vision of providing excellent and effective information services to all staff and students of university of Jos. The study was guided by six objectives. In order to achieve objectives, questionnaire was designed and administered on a sample of 2570 out of which 2332 were properly filled, returned and used for the study. Interview was conducted with some staff, students and system unit librarian mainly to supplement information provided by the

questionnaire.. Tables and bar charts were used for data analysis and presentation. Analyses revealed that many staff and students were not properly informed of the existence of CD-Rom databases in the library and they use inappropriate search terms thereby retrieving irrelevant information. CD-ROMs are mostly used for literature search and teaching. Staff and students preferred the use of CD-ROMs to the use of printed materials, and the major problem with the use of CD-ROMs is inappropriate use of search terms. Researcher recommended among others, that University of Jos library should organize regular training workshops for staff and students on the use of CD-ROMs, demonstrate and teach them how to form proper search terms for better information retrieval to meet their information needs as well as saving their time.

Keywords: CD-Rom Databases, Library University Staff & Studies, University of Jos.

INTRODUCTION

University of Jos library introduced the use of CD-ROM databases for staff and students in 1998. The **CD-ROM** (stands for "Compact Disc Read-Only Memory". A CD-ROM is a flat, plastic disc with digital information encoded on it in a spiral form.



It presents a way of digitally storing large amount of information in a way that is easy to search and retrieve the information. Information stored on

CD-ROM cannot be changed. The most conspicuous advantage of CD-ROM is its large storage capacity.

CD-ROM database products first emerged in academic libraries in 1986 at the University of Rhode Island library in state of Rhode Island and the United States of America (USA), (McCarthy, 1997), and since then it has spread to many libraries in the world. In Nigeria, Kenneth Dike library, University of Ibadan, first started the use of CD-ROM databases with only three databases available for searching in 1991 (Oduwole 2000).

The study is as a result of the researcher being motivated by the large number of CD-ROM databases in use by the University of Jos library. The researcher is interested in investigating whether staff and students are aware of these databases, have the necessary skills to use them, the purpose of use, how effective is the use of this CD-ROMs, what problems are encountered by staff and students in the use of these databases.

Observation of the use of CD-ROM databases by staff and students shows low level of usage, and not very encouraging as majority leaves the computer lab disappointed, while others who claimed to be satisfied retrieved junks of information not relevant to their information needs. It is not just the provision of CD-ROMs and computers, but how far have staff and students been able to put this CD-ROMs into proper use. Are staff and students aware of the specific CD-ROMs available for their use and how to use them? Are the staff and students using the available CD-ROMs effectively? That is, are they retrieving the much-needed information to meet their needs? Do they know how to form proper or suitable search terms? It is believed that the study will address these questions and find answers to them.

Objectives of the Study.

The objectives of the study are to:

- examine whether staff and students are aware of the availability of CD-ROM

databases in University of Jos library;

- determine the effectiveness of search skills and terms in the use of CD-ROM databases by staff and students in the university of Jos library and how these affect the search outcomes;
- identify the purposes of which the CD-ROMs are being used by staff and students;
- identify whether staff and students' prefer the use of CD-ROM

databases to printed materials they have been used to;

- identify what staff and students need to become more effective in their CD-ROM search skills;

* identify the problems staff and students of University of Jos have

with the use of CD-ROM services;

METHODOLOGY

The survey research method was used for the study. The target population comprises all the staff, postgraduate and undergraduate students of the University of Jos.

The population in question stands at 15,600 staff and students. This is made up of 2,900 staff, 1,700 postgraduate students and 11,000 undergraduate's students. (computed from MIS statistics of University of Jos, 2003). Based on Adetoro's (1986:19) percentage theory that a sample of 20 percent of a population of up-to 1000, 10 percent of a population of up-to 5,000 and 5 percent of a population of up-to 10,000 are sufficient to ensure "representativeness", hence, the sample size per stratum is given in table1.

Table 1: Number of Sample size per stratum.

User Group (strata)	Population	Percentage formula	Sample size
Undergraduate Students	11,000	15% of 11,000	1650

Postgraduate students	1,700	20% of 1,700	340
Staff	2,900	20% of 2,900	580
Total	15,600		2570

Using different population and percentages, the sample per stratum was obtained as follows: Undergraduate students (1650), postgraduate students (340) and staff (580). The totality of the samples for all the strata formed the sample size of the study (2,570). Random sampling technique was used to obtain the above samples in the administration of questionnaire. The research instruments used are questionnaire and interview. The data generated were tabulated and analyzed with the aid of frequency

tables for clearer presentation of results.

Results and Discussion

A total of two thousand five hundred and seventy (2570) copies of the questionnaire, were printed and administered on the three user groups. Out of this figure, two thousand three hundred and thirty two (2332) representing 90.7% were properly filled, returned and used for the purpose of analysis, while two hundred and thirty eight (238) representing (9.3%) were not returned.

Table 2. Response rate

Respondent groups	No of questionnaire administered.	No of questionnaire returned and usable	% of usable returns
Staff	580	562	96.9
Postgraduates	350	328	93.7
Undergraduate s	1650	1442	87.4
Total	2570	2332	90.7

The response rates of the questionnaire returned are in table 2 and the overall response rate is 90.7%. Data analyses and

presentation are based on each of the objectives.

Respondents were asked to indicate whether they are aware of the CD-ROM database in the University of Jos library. Their responses are presented in table 3.

1. AWARENESS OF CD-ROM DATABASES BY RESPONDENTS

Table 3 Respondents Awareness of CD-ROM databases

Respondent groups	Yes	No
Staff	562	-
Postgraduates	328	-
Undergraduates	1442	-
Total	2332	-

From table 3 above all the respondents indicated that they are aware of CD-ROM databases in the University of Jos library. The respondents were further asked to indicate the sources through they became aware. Their responses are presented in table 4.

Table4 . Sources of awareness of CD-ROM databases services in the University of Jos library

Options	Frequency	Percentage (%)
Through friends	1696	72.7
Library awareness posters	45	1.9
Training workshop	591	25.3
Total	2332	100

From table 4 above it is clear that majority of staff and students got to know about the CD-ROM services in the library

through friends (72.7%) and not through the effort of library awareness activities. Few staff and students knew about it

through Training workshop (25.3%). The need for awareness of new services in the library is very important.

2. EFFECTIVENESS OF SEARCH SKILLS AND TERMS USED BY RESPONDENTS

Information retrieved from CD-ROM is a function of search terms. For staff and students to retrieve relevant

information, appropriate search terms must be used. In this regard, respondents were asked to indicate the effectiveness of the search terms they use in retrieving information on CD-ROM databases in University of Jos library. Their responses are shown in table 5

Table 5: Effectiveness of search terms by staff and students in the University of Jos library.

Options	Frequency	Percentage (%)
Very effective	212	9.1
Fairly effective	1420	60.9
Not effective at all	700	30.0
Total	2332	100

From the responses on how effective staff and students are with the use of CD-ROM databases, 212 (9.1%) were very effective in their choice of search terms, 1420(60.9%) were fairly effective in their choice of search terms and 700 (30.0%) were not effective at all. This shows that majority of staff and students of CD-ROM do not have enough confidence and not very effective in their choice

of search terms. The implication of this is that majority of staff and students retrieve information that may not be relevant to their information needs.

3 PURPOSES FOR USING CD-ROM DATABASES BY RESPONDENTS

Analysis to determine the main purpose(s) for which CD-ROMs are being used in the University of Jos library is provided in table 6.

Table 6 Purpose(s) for which CD-ROMs are being used.

Options	Frequency	Percentage (%)
Assignments	90	3.9
Teaching/ Lectures	41	1.8
Writing project/dissertation/thesis	1463	62.7
Materials for personal research	735	31.5
Leisure or hobby	3	0.1
Total	2332	100

From the table above, 1463 (62.7%) Used CD-ROMs for project writing/dissertation/thesis; followed by 735(31.5%) who used CD-ROMs for personal research; others uses are not very prominent . CD-ROMs therefore are mostly used for literature search during project/dissertation and thesis writing as well as personal research by staff.

4 PREFERENCES IN THE USE OF CD-ROMS VERSUS PRINT INDICES

It was sought to identify whether staff and students prefer to use the printed materials they have been used to before the introduction of CD-ROM services. The analysis of responses of staff and students' preferences in searching CD-ROM databases versus printed materials is shown in table7

Table 7. Staff and students' preferences in physical choice of materials

Options	Frequency	Percentage (%)
(a) Use of CD-ROM databases	1762	75.6
(b) Use of Printed materials	40	1.7
Use of both (a) & (b)	530	22.7
Total	2332	100

It is clear from the responses that staff and students prefer the use of CD-ROM to printed materials, that is 1762 (75.6%), this is followed by the choice of using both the CD-ROM and Printed materials at the same time 530 (22.7%). It is evident that staff and students are no longer satisfied with the use of printed materials alone for academic purposes. Only 40 (1.7%) prefer to continue with the use of printed material, the reasons might not be far

from their level of computer competence.

5 WHAT STAFF AND STUDENTS NEED TO IMPROVE ON THEIR ABILITY TO USE THE CD-ROM DATABASES (SKILLS)

Considering the exposure or level of Staff and students in the use of CD-ROM databases, respondents were asked on what they need to make them more effective in their searching skills. The responses are shown in table 8.

Table 8. what staff and students need to improve on their ability to use the CD-ROM (skills)

Options	Frequency	Percentage (%)
Training	821	35.2
Regular Search Practice	321	13.8
Use of intermediary (Librarian)	1190	51.0
Total	2332	100

It is clear from the table above that the need for subject librarians to assist staff and students in the use of CD-ROM is evident, 1190(51.0%) this is followed closely by the need for training 821 (35.2%) and need for regular search practice comes last with 321 (13.8%).

6. PROBLEMS STAFF AND STUDENTS HAVE IN THE USE OF CD-ROM DATABASES

This was sought to determine problems staff and students normally have with the use of CD-ROM databases in the university of Jos library. Determining the problems will enable the researcher to proffer

suggestions towards minimizing or solving them. Responses to problems staff and students have with the use of CD-ROM databases services is analyzed in table 9.

Table 9. Problems normally encountered by users in the use of CD-ROM databases

Options	Frequency	Percentage (%)
Inappropriate Search terms	1060	45.4
Few workstations	80	3.4
Limited Titles of CD-ROM in your area	25	1.1
CD-ROMs not updated regularly	321	13.8
Full Printed materials for CD-ROM abstracts not available in the library.	791	33.9
Full Text CD-ROM not available (only abstracts)	55	2.4
Total	2332	100

The major problem as can be seen from the responses is inappropriate use of search terms with 1060 (45.4%), this is followed by the problem of library not having the full printed version of abstract CD-ROMs 791 (33.9%). Staff and students may want to get the details of the abstracts CD-ROMs from full text printed version but these are not in the library's collection. The next problem is that most CD-ROMs are not regularly updated 321 (13.8%). Few workstations 80 (3.4%), limited titles of CD-ROMs in subject areas 55(2.4%) and full text CD-ROM not available 25 (1.1%) have few responses indicating that they are not major problems to staff and students.

7. OVERCOMING PROBLEMS ASSOCIATED WITH THE USE OF CD-ROM DATABASES.

Staff and students were asked to suggest ways the use of CD-ROM

databases could be improved in academic library in Nigeria. The responses are analyzed in table 10.

Table 10. Ways of overcoming the problems associated with the use of CD-ROM databases in academic libraries in Nigeria.

Options	Frequency	Percentage (%)
Organize training workshops/ seminars on the use of CD-ROMs for staff/students	1269	54.4
Increase funding for academic libraries	730	31.3
Training on the Use of CD-ROM be focused in ETF training programme	3	0.1
Computer course on the use of CD-ROM be made mandatory for all students in higher education	330	14.2
Total	2332	100

The responses as shown in the table above indicates that 1269 (54.4%) suggested that training workshops/seminars on the use of CD-ROM for staff will improve the use of CD-ROM databases in academic libraries in Nigeria. This is followed by funding 730(31.3%), while only 3 (o.1%) suggested that

use of CD-ROM be focused in ETF capacity training programme, 330(14.2%) suggested that computer course on the use of CD-ROM be made mandatory for all students in higher education. The need for training and funding are very prominent suggestions in the responses.

Interviews were carried out with some staff, students and the System unit librarian. The aim of this interview and direct observation was to determine the effectiveness or appropriateness of staff and students' choices of search terms. Materials/documents retrieved from the CD-ROM databases revealed this. Purposes for which CD-ROMS are being used; problems staff and student encounter during searching; and what exactly staff and students need for effective use of CD- ROM services; how often the CD-ROMS are updated are other things investigated.

For the system librarian, the aim was to get more facts about the use of CD-ROM titles subscribed to, update of workstations, problems of use and suggestions towards improving the use.(see Appendix III Section C). The summary is given below:

(a). There are 262 databases titles being subscribed to by the university of Jos library.

(b). CD-ROMs are not updated regularly (very irregular)

(c). About 20-30 workstations are available for CD-ROM databases staff and students.

(d). Inappropriate search terms is the major inhibiting factor affecting the use of CD-ROMs in the library (60%), followed by hard copy of cited abstract not available in the library (45%), Insufficient funds (40%), Outdated CD-ROMs (30%), Low level of computer literacy (25%) and Insufficient computers (20%)

(e). The use of CD-ROM databases in academic libraries in Nigeria can be improved by:

(i). Organizing training seminars on the use of CD-ROMs, especially on formation of appropriate search terms.

(ii). Subscribing to full text databases for academic communities.

(iii). Government should increase funding for academic libraries.

(iv). Computer literacy training for members of academic communities.

Results and Discussion

Notable for this results are:

*Staff and students are aware of CD-ROM databases' services in the university of Jos library mostly through friends not through library awareness activities.

*They are not very effective in their choice of their search terms.

*CD-ROM databases are mostly used for literature search and teaching.

*Majority of staff and students preferred the use of CD-ROM databases to printed materials

*It was clear from the study that staff and students need the assistance of an intermediary (Librarian) in the use of CD-ROM databases.

*The major problems staff and students have with the use of CD-ROMs databases are inappropriate search terms and non-availability of full text printed version of abstracts for some CD-ROM databases.

Discussion

To a large extent the use of CD-ROM databases is fully

integrated into the university system in developed countries but yet to be fully utilized in developing countries. The reasons for this poor utilization range from structural inadequacies to lack of proper awareness. The staff and students in the university of Jos library were not given proper awareness on the introduction of CD-ROM databases leading to poor patronage and under utilization or waste of resources. This is similar to the study by Ogunyade & Oyibo (2003) in their study of use of CD-ROM Medline by Medical students of the college of Medicine, University of Lagos reported that the use of CD-ROM is still very poor among the medical students of the University of Lagos due to lack of awareness, financial constraints among others.

This study revealed that staff and students are not actually deriving fully the benefit of using CD-ROM databases, as they should for obvious reasons. To be able to fully retrieve relevant information using computer, one must have a basic knowledge of word processing in computer. Majority of

staff and students have low level competence in using computer hence it becomes clear that unless adequate training is given to staff and students, the problems of inappropriate use of search terms will persist. In order to improve the quality of end-user searching, libraries should provide search training for users as well as search aids. It is rather disturbing that so many library users seem completely uncritical in their evaluation of CD-ROM use as many express satisfaction even when they achieve very poor results.

The study also reveals that many CD-ROM databases are only available in abstracts and locating the full text in printed version is very difficult. This finding agrees with the study by Newa (1996), that describe the introduction of CD-ROM in Africa university libraries. The study revealed that CD-ROM databases help staff and students to find reference to relevant materials, but locating them in libraries and obtaining them is very difficult; and suggested that full text databases, at

least in some selected areas, may be a better choice for African Universities.

The study also reveals that many CD-ROMs databases are not regularly updated thereby making the use to get current information unachievable. For staff and students to get the currents issues of Journals via CD-ROMs there is need for updating yearly, then comes the problem of financial involvement in doing this. Just like Majid (2001) found out in his study "investigation of the use of CD-ROM in academic libraries in three South Asian countries" found out that CD-ROMs were not regularly updated. Outdated review of literatures will not make a research be of interest to other researchers who want to know the current trend of things hence there is need for regular updating of CD-ROM databases by University of Jos.

Despite the inadequacies in the use of CD-ROMs, staff and students still prefer this to print medium. It is more convenient to use computer for a search than going through the shelves for hour and later be disappointed as the book or material you need might have been stolen, lost, borrowed or even shelved

wrongly. But with computer search, once your search term is appropriate the information will be retrieved and many staff and students can do this at the same time getting the same information without any hitch or delay. One of the library staff commented that if he directs patrons to a print resource, they will often ask if it is available on computer (CD-ROM), in fact, one patron said that he felt more comfortable using a computer than a book.

Conclusion

From the major findings of the study, the following conclusions are drawn:

It was discovered from this study that majority of staff and students were not effective in their choices of search terms. The implication of this is that staff and students waste a lot of time retrieving junk, or irrelevant information and thereby leaving the lab unsatisfied. Very few staff and students could effectively form useful search terms using Boolean operators.

Majority of Staff and students in the University of Jos library use CD-ROM databases for literature search. Few others use full text databases for assignments, lecture notes and teaching.

It is clear from the study that staff and students prefer to use CD-ROM databases to print indices. It is also important to note that many staff and students prefer to use CD-ROMs along side with the print indices.

Staff and students need training and the assistance of the subject librarians to become effective in their search skills.

The major problems staff and students have with the use of CD-ROMs are: forming search terms, getting full articles (print version) of abstracts retrieve from CD-ROMs pose a very serious obstacle to staff and students. Libraries don't have recent Journals in print form and most full text CD-ROMs are textbooks and current affairs. CD-ROMs are not updated regularly.

"CD-ROM is not a panacea". However, in spite of the limitations mentioned, this technology has brought University of Jos library the opportunity

to improve their internal library operations and to improve information access through services, which were limited or never offered with other types of technology.

Recommendations

Based on the findings of this study, the following recommendations are provided:

- University of Jos library should organize regular training workshops on the use of CD-ROMs, demonstrate and teach them on how to form proper search teams for better retrieval to meet their information needs as well as saving the time of staff and students.
- Subject librarians should assist especially new staff and students as they use CD-ROM databases for literature search and teaching, and they should be trained properly on the use and to use different CD-ROMs. (Bibliographic and full text).
- University should subscribe to full text CD-ROM databases (journals).
- Funds should be made available by the University administration for regular updating of CD-ROMs and adding new titles to existing ones.
- The list of journals that are held within particular subject areas should be made available in the lab where searching is done, so that, as staff and students are searching, they can check which journals are held locally.
- CD-ROM publishers should try to make their products more user-friendly. It is important to develop easy-to-use search retrieval systems as majority of staff and students are not very computer literate.
- There is need for academic libraries in Nigeria to co-operate in organizing training workshops on the use of ICT facilities generally and in particular the use of CD-ROMs databases.

REFERENCES

- Adeniran, O.R. & Adigun, T.A. (1994). Availability and use of CD-ROM products in Nigerian libraries and information centres. Electronic library 12(3), 155-168.
- Adetoro, A. (1986). Research Techniques for Projects. Zaria: Gaskiya Corporations.
- Akinade H, Ogunyade T.O (2002). Use of MEDLINE database for information searching by students, residents & Faculty: College of Medicine University of Lagos. Nigerian Libraries 36 (1):30-41.
- Awogbami, P. A. (1991). The diffusion of CD-ROM into Nigerian libraries. CD-ROM librarian 7(5), 30-33.
- Igbeka, Josephine. U. & Okpala, Angela. W. (2004). Analyses and Patterns of CD-ROM Database Use in Kenneth Dike Library, University of Ibadan. The Information Technologist 1(1)
- Kuhlthau, Carol. Collier. (2004). Seeking Meaning: A Process Approach to Library and Information Services, 2nd ed. Norwood, NJ: Ablex Libraries Unlimited.
- Mabawonku, I., & Idowu, A.O. (1999). Information technology facilities and applications in some Nigerian research, African Journal of library, Archives and information science 9(1), 27-35.
- Majid, S. (2001). Trends in using CD-ROM in academic libraries of three South Asia countries- Pakistan, Bangladesh and Srilanka. Aslib proceedings 53(2), 68-70.
- Manzari, L. (1998). Student preferences for CD-ROM instruction Journal of academic Librarian ship 24 (6), 48
- Mackellar, M., & Elliott, F. (1999). The importance of training CD-ROM end user. Computers in libraries 19 (2). 63-66 U.K.

- Mosuro, T. (1996). CD-ROM technology and its application of Kenneth Dike Library, university of Ibadan. Nigerian library, Archives and Information Science Review 14 (1 &2). 46-50.
- Newa , J. M. (1996). Cd-ROM service for the University of Dares Salaam Office of International Affairs. National Research Council USA. Bridge Builders African Experiences with information and Communication technology. Washington DC. National Academy Press 247-257
- Oduwole, A. A. (2000). A study of the use of CD-ROM databases in Nigerian academic libraries. Journal of Information Science 26 (5). 364-369.
- Ogunyande, Taiwo .O., & Oyibo, W.A. (2003). Use of CD-ROM MEDLINE BY Medical Students of the College of Medicine, University of Lagos. Journal of Med. Internet Resources 5(1) : e⁷
- Rao, S.S. (1995). CD-ROM database services: A survey. Online and CD-ROM Review19(4), 203-206.
- Schultz, K., & Salomon, K. (1990). End users respond to CD-ROM. Library Journal, (Febraury 1), 56-57.
- Salanje, (1995). CD-ROM technology in library and information units in developing countries. African Journal of Library Archives and Information Science 5(1),1-7.
- Siddiqui, M. (1992). CD-ROM Searching in an academic library in a developing country. CD-ROM librarian 7 (5), 23-28.