

SUBJECT ACCESS IN OPAC INTERFACES IN TAMILNADU:

A SURVEY

By

B. Ramesh Babu

Reader

Department of Library and Information Science

University of Madras

Chennai - 600 005

Email: beeraka_r@yahoo.co.uk

M. Tamizhchelvan

Librarian

The New Indian Express

Anna Salai

Chennai 600 002

Email: tamizhchelvan@hotmail.com

Abstract

The design and development of OPACs are the recent development of libraries in India in general and Tamilnadu in particular. The major objective of the paper is to gain an overview of the subject access features of the OPAC interfaces being used in Tamilnadu. A sample of 50 libraries in Tamilnadu was selected. The analysis of the data represents the state-of-the-art of the libraries in the winter of 2002. The data includes, the types and nature of the libraries, Information Technology application, interface used, range of access points provided, subject access facility and types of searches in OPACs. The major findings of the survey are: an emerging trend in the development of OPACs; use of a variety of commercial software, in-house developed software also used in a few libraries; coverage of OPACs limited to book collection only; and absence of standardized vocabulary control tools for subject access.

KEYWORDS: Subject access, OPAC, Tamil Nadu, Survey, Interfaces

0. INTRODUCTION

Subject access is another mechanism for demonstrating relationship between records in a database. Efforts to improve subject access to information are as old as recorded information itself. Catalogues have historically aimed to satisfy fairly general approach to subject searches. But at the same time, it is most problematic area in searching OPACs or any other similar databases. The design and development of OAPCs are the most recent development of libraries in India in general and Tamilnadu in particular.

1. SUBJECT ACCESS IN OPACs

Subject Access has been defined as the “whole spectrum of activities from the identification of indexable concept, through the representation of those concepts in some kind of indexing language, to the ultimate retrieval of recorded information in response to a query” (*Advances in Librarianship* Vol. 13 (1984) p.51). According to Mandel (1985), Subject Access in an online catalogue can be viewed “As a system with four independent component

1. The design of the online catalogue
2. The bibliographic records acted upon by the catalogue
3. The users who bring subject searches to the catalogue and finally
4. The tools we can load into the catalogue to facilitate subject searches such as an online authority file or an online classification schedules.”

According to Markey (1986), Subject Access to OPAC is significant due to the following reasons:

- The preponderance of subject searches input by library patrons
- Unfavorable experience with subject searching at the online catalogue
- The heavy volumes of subject searches input by library patrons that result in no retrieval or too much retrieval.
- Library patrons’ and staff needs for improvements to online catalogue for subject searches

2. SCOPE AND OBJECTIVES OF THE PAPER

In view of the significance attached to Subject Access in OPACs, in this paper an attempt has been made to study the provision of Subject Access facilities in the OPACs of 50 libraries in Tamilnadu with the following objectives:

- To examine the nature of software being used in the design and development of OPACs;
- To identify the number of access points provided for searching the OPACs;
- To examine the subject access provision; and
- To study the search strategy and search techniques offered.

3. LIBRARY AND INFORMATION CENTRES IN TAMILNADU

The number of libraries in Tamilnadu under various types are as follows: Universities (22), Arts and Science Colleges (300), Engineering Colleges (228), Medical and Paramedical

colleges (187), Public libraries (2846). In addition, there are a large number of special libraries attached to various industries, research institutes and other corporate sector. These libraries are slowly marching towards automation of their services. Public libraries are functioning in a traditional way. The financial support by the University Grants Commission (UGC) through Information and Library Network (INFLIBNET), Development Library Network (DELNET) and other regional and local networks such as Madras Library Network (MALIBNET) and Science City in Chennai has influenced the academic libraries in India in general and Tamilnadu in particular towards automation. Special libraries in Tamilnadu are dynamically involved in the modernization of their operations. All these libraries have built up their collection of mostly printed resources with a small portion for digital collection.

4. METHODOLOGY

For the purpose of the study, a sample of 50 libraries has been identified in Tamilnadu, who have developed OPACs. A structured questionnaire (Appendix A) has been administrated and the data has been collected, analysed and interpreted.

5. ANALYSIS AND DISCUSSION

5.1 Classification of Libraries According to Type

In this study, a sample of 50 libraries (Appendix-A) responded having designed and developed OPACs and the details of which are furnished in Table I.

Type of library	No.	%
Academic	34	68%
Special	13	26%
Public	3	6%
Total	50	100%

About two-thirds of the sample (68%) belongs to academic libraries, followed by 13(26%) special libraries. A meager percent (6%) represents public libraries, which includes the British Council library, the Connemera Public Library, and Roja Muthaih Research Library in Chennai.

5.2 Classification of Libraries according to Year of Establishment

Table II provides the classification of the libraries according to the year of establishment.

Year of establishment	Type of library						Total n = 50	
	Academic		Special		Public		No.	%
	No.	%	No.	%	No.	%		
Up to 1950	7	14%	1	2%	2	4%	10	20%
1951-1975	7	14%	6	12%			13	26%
1976-2001	20	40%	6	12%	1	2%	27	54%
Total	34	68%	13	26%	3	6%	50	100%

About half of the sample was established in the last quarter of the century. It implies that most of them belong to 'academic' libraries under self-financing category.

5.3 Classification of Libraries based on Year of it Application

Table III furnishes the classification of libraries according to year of IT application. It is observed that, late nineties witnessed a large number of libraries moving towards IT application.

Year	Type of library						Total n = 50	
	Academic		Special		Public		No.	%
	No.	%	No.	%	No.	%		
1985			1	2%			1	2%
1987	1	2%					1	2%
1990	1	2%					1	2%
1992			1	2%			1	2%
1994	3	6%	1	2%	1	2%	5	10%
1995	7	14%	1	2%	1	2%	9	18%
1996	3	6%					3	6%
1997	3	6%	3	6%			6	12%
1998	1	2%	2	4%			3	6%
1999	7	14%	1	2%	1	2%	9	18%
2000	8	16%	2	4%			10	20%
2001			1	2%			1	2%
Total	34	68%	13	26%	3	6%	50	100%

5.4 Classification of Libraries by Location

It is seen from the table IV that, a large number of libraries (30) are from Chennai, followed by Tiruchirapalli (13). It is observed that Chennai, being the metropolitan city, a number of academic, special and public libraries were established. Hence a major portion of libraries was covered.

	Number of Libraries	Percent	Cumulative Percent
Chennai	30	60.0	60.0
Tiruchirapalli	13	26.0	86.0
Coimbatore	5	10.0	96.0
Erode	1	2.0	98.0
Kalpakkam	1	2.0	100.0
Total	50	100.0	

5.5 OPAC Interfaces

Table V furnished the brands of OPAC interfaces used by the libraries under survey in Tamilnadu. [For the purpose of convenience and to maintain the confidentiality, the names of the interfaces have not been mentioned. Instead code names have been used as S1, S2, S3 and so on. However the names of Interfaces are given in Appendix – C. But the codes names and serial number in Appendix do not match.

Software	Type of library						Total n = 50	
	Academic		Special		Public		No.	%
	No.	%	No.	%	No.	%		
S1	8	16%	3	6%	2	4%	13	26%
S2	8	16%					8	16%
S3	2	4%	5	10%	1	2%	8	16%
S4	5	10%	2	4%			7	14%
S5	6	12%	1	2%			7	14%
S6	2	4%					2	4%
S7	1	2%					1	2%
S8	1	2%					1	2%
S9			1	2%			1	2%
S10			1	2%			1	2%
S11	1	2%					1	2%
Total	34	68%	13	26%	3	6%	50	100%

5.6 Coverage in OPACs

While all the libraries under survey have covered books in their OPACs, about three-fourths (76%) have also included periodicals, as shown in Table VI. It is to be mentioned that these OPACs are still in the development stage.

Types of collection	Type of library						Total n=50	
	Academic		Special		Public		No.	%
	No.	%	No.	%	No.	%		
Books	34	68%	13	26%	3	6%	50	100%
Periodicals	25	50%	11	22%	2	4%	38	76%
Theses	16	32%	7	14%			23	46%
Standards	7	14%	6	12%			13	26%
Patents	5	10%	1	2%			6	12%
Non-book Materials	14	28%	7	14%	3	6%	24	48%

5.7 Access Points

Table VII reveals that, OPAC interfaces provide 11 access points. While search by author and title is offered by all the interfaces, search by accession number and class number is provided by 94% and 90% of libraries respectively. However, it is to be pointed out that the OPAC interfaces are amenable to customization. It is not known whether users search by ISBN, ISSN and other access points, although provisions are made in the interfaces.

	Name of the software											Total n=50
	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11	
	n=13	n=8	n=8	N=7	n=7	n=2	n=1	n=1	n=1	n=1	n=1	
Accession	12	8	6	7	7	2	1	1	1	1	1	47
Number	24%	16%	12%	14%	14%	4%	2%	2%	2%	2%	2%	94%
Author	13	8	8	7	7	2	1	1	1	1	1	50
	26%	16%	16%	14%	14%	4%	2%	2%	2%	2%	2%	100%
Title	13	8	8	7	7	2	1	1	1	1	1	50
	26%	16%	16%	14%	14%	4%	2%	2%	2%	2%	2%	100%
Keywords	9	6	7	7	7	1	1	1	1	1	1	42
	18%	12%	14%	14%	14%	2%	2%	2%	2%	2%	2%	84%
Class No.	10	8	8	7	7	1	1	1		1	1	45
	20%	16%	16%	14%	14%	2%	2%	2%		2%	2%	90%
ISBN	2	8	4	4	7	1	1	1		1	1	30
	4%	16%	8%	8%	14%	2%	2%	2%		2%	2%	60%

ISSN	2		3	1	7		1	1			1	16
	4%		6%	2%	14%		2%	2%			2%	32%
Series	2		3	2	7	2	1	1	1	1	1	21
	4%		6%	4%	14%	4%	2%	2%	2%	2%	2%	42%
Place	3	6	4	6	7	2		1	1		1	31
	6%	12%	8%	12%	14%	4%		2%	2%		2%	62%
Publishers	7	8	5	7	7	2	1	1	1	1	1	41
	14%	16%	10%	14%	14%	4%	2%	2%	2%	2%	2%	82%

5.8 Subject Access

Subject search is made possible through various means as shown in Table VIII. Subject headings are supported in five interfaces. While keyword search is provided in all the interfaces, class number search is provided in ten (40%) interfaces. However it could not be ascertained whether these libraries are using any Standard List of Subject headings. However, it is observed that most of the libraries (58%) developed in-house headings.

	Name of the software											Total n=50
	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11	No.
	n=13	n=8	n=8	n=7	n=7	n=2	n=1	n=1	n=1	n=1	n=1	%
Subject Heading List	2		1	1	1	1						6
	4%		2%	2%	2%	2%						12%
Keywords	9	6	7	7	7	1	1	1	1	1	1	42
	18%	12%	14%	14%	14%	2%	2%	2%	2%	2%	2%	84%
Class No.	10	8	8	7	7	1	1	1		1	1	45
	20%	16%	16%	14%	14%	2%	2%	2%		2%	2%	90%
In-house heading	8	5	6	4	3				1	1	1	29
	16%	10%	12%	8%	6%				2%	2%	2%	58%
Keyword in Title	12	5	8	7	7	1	1	1	1	1	1	45
	24%	10%	16%	14%	14%	2%	2%	2%	2%	2%	2%	90%

5.9 Types of Searches

Two types of searches namely 'simple' and 'advanced or complex searches' have been observed in the study of interfaces as shown in Table IX. While "simple search" has been

provided in all the interfaces, “Advanced or Complex search” is provided only in 10 interfaces. By and large, it may be stated that the OPAC interface of any brand does provide both the searches with a little variation.

	Name of the software											Total n=50
	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11	No.
	n=13	n=8	N=8	n=7	n=7	n=2	N=1	N=1	n=1	n=1	n=1	%
Simple Search	12	8	8	7	6	1	1	1	1	1	1	47
	24%	16%	16%	14%	12%	2%	2%	2%	2%	2%	2%	96%
Advanced or Complex Search	9	8	7	7	7	2	1		1	1	1	44
	18%	16%	14%	14%	14%	4%	2%		2%	2%	2%	88%

On further examining the various provisions under “advanced or complex searches”, there are four combinations of searches, as shown in Table X.

	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11	Total
	n=13	n=8	n=8	n=7	n=7	n=2	n=1	n=1	n=1	n=1	n=1	n=50
Author and Title	11	8	7	7	7	2	1		1	1	1	46
	22%	16%	14%	14%	14%	4%	2%		2%	2%	2%	92%
Author and Subject	8	1	7	7	7	2	1		1		1	35
	16%	2%	14%	14%	14%	4%	2%		2%		2%	70%
Author and Keywords	7	1	5	7	6	2	1			1	1	31
	14%	2%	10%	14%	12%	4%	2%			2%	2%	62%
Global Search	8	8	7	7	7	2	1	1		1	1	43
	16%	16%	14%	14%	14%	4%	2%	2%		2%	2%	86%

5.10 Search Methods

Five search methods were noticed as seen from Table XI. While ‘Boolean logic’ and ‘exact searching’ are offered in 10 interfaces, on the other hand ‘truncation’ is provided in 7 interfaces. The ‘word proximity’ and ‘phrase searching’ is offered in 6 and 5 interfaces respectively.

Table XI. Search Methods													
	1	2	3	4	S5	S6	S7	S8	9	10	11	Total n=50	
	n=13	n=8	n=8	n=7	n=7	n=2	N=1	n=1	n=1	n=1	n=1	No.	%
Boolean Logic	8 16%	2 4%	8 16%	7 14%	6 12%	2 4%	1 2%		1 2%	1 2%	1 2%	37	74%
Truncation	7 14%	1 2%	4 8%	1 2%	7 14%	2 4%				1 2%		23	46%
Word proximity	3 6%		4 8%	6 12%	3 6%	2 4%			1 2%			19	38%
Phrase Searching	8 16%		6 12%	5 10%	3 6%					1 2%		23	46%
Exact Searching	11 22%	8 16%	7 14%	7 14%	5 10%	2 4%		1 2%	1 2%	1 2%	1 2%	44	88%

6. MAJOR FINDINGS

The following are the major findings of the survey:

- 1) About 2/3rd of the sample are in from academic libraries.
- 2) Among the academic libraries, majority belongs to self-financing Engineering Institutions.
- 3) About half of the sample libraries were established during the last quarter of the previous century.
- 4) Application of IT is the late nineties phenomenon.
- 5) Most of the sample libraries (30) are located in and around Chennai.
- 6) As many as 11 brands of OPAC interfaces are being used.
- 7) Books and periodicals were covered in the OPACs under study.
- 8) Eleven access points to the OAPCs are provided by the interfaces examined.
- 9) Subject access is possible through a variety of ways.
- 10) Both 'simple' and 'advanced or complex searches' are observed in the interfaces studied.
- 11) Five types of search methods are noticed, but not provided by all the interfaces.

7. CONCLUSION

On the study of the OPACs in Tamilnadu, it is inferred that, these interfaces have recognised the importance of subject access and subject retrieval. Providing effective subject access is one of the most important challenges facing library and information professionals today. Subject access provisions in OPACs of three generations have shown an increasing stress and importance, and it has enhanced from generation to generation. However, on the examination of the OPACs in Tamilnadu, it is found that 'Subject Access' functionality has yet to reach its full potential in the OPAC environment.

To sum up the presentation on Subject Access in OPACs, it is pertinent to quote Cochrane (1985) who stated in the following words:

"The question is not pretext vs. controlled searching, not is it Boolean vs. non Boolean searches. The question is how can we create a catalogue that brings books together does not separate related subjects or conceal information and allows the user to search with ease and little difficulty, no matter whether the query is specific or general".

REFERENCES

- [1] Broadbent, E "Classification access in the online catalog. *Cataloguing and classification quarterly* 21,2 (1995), pp119-42.
- [2] Bryant, P. "Subject wise? On providing access to information through interactive catalogues." *Cataloguing Australia*, 19,3/4, (1993), pp.73-84.
- [3] Byrne, Alex and Micco, Mary "Improving OPAC subject access: the ADFA Experiment", *College and Research Libraries*, 49,5 (1988), pp432-441.
- [4] Cherry, Joan M. "Improving subject access in OPACs: an exploratory study of conversion of users' queries", *Journal of Academic Librarianship*, 18,2 (1992), pp 95-99
- [5] Clack, D. H. "Subject access to African American studies resources in online catalogs: issues and answers", *Cataloging and Classification Quarterly*, 19,2 (1994) pp49-66.
- [6] Cochrane, P. A. "Subject Access – free or controlled? The case of Papua New Guinea." In: *Redesign of catalogs and indexes for improved online subject access*. Edited by P A Cochrane. Phoenix, AZ 1985, pp251-266.
- [7] Cochrane, P. A. "Improving LCSH for use in online catalogs revisited: what progress has been made? What issues still remain?" *Cataloging and Classification Quarterly*, 29,1/2, (2000), pp73-89.
- [8] Mandel, Carol A. "Enriching the library catalog record for subject access", *Library Resources and Technical Services*, 29,1, (Jan/Mar 1985), pp.5-15.
- [9] Markey, Karen. "Users and the online catalog: Subject access problems". In: *The impact of online catalogs*. edited by Joseph R Mathews ew York: Neal-Schuman Publishers Inc., 1986, pp. 35-70.

[10] Ramesh Babu, B and O'Brien, Ann . “ Web OPAC interfaces: an overview" The Electronic Library 18,5 , (2000) pp316-327.

[11] Ramesh Babu, B. and Tamizhchlevna, M. “An investigation into the features of Web OPACs in India”, In: *CALIBER - 2002: Internet Engineering for libraries and information centers* (papers presented at the Ninth National Convention for Automation of Libraries in Education and Research Institutions) (Jaipur, February 14-16, 2002) pp. 130-138

[12] Ramesh Babu, B. and Tamizhchelvan, M “An investigation in to the features of OPACs in Tamil Nadu” Paper has accepted for the publication in *Library Review* (UK), (2002)

[13] Tamizhchelvan, M. and Ramesh Babu, B., “Web OPACs in India : A study”, In *Modernisation of Academic Libraries* edited by Manoharan, A. and Allysornam, S. and Manalan, Jesudas: seminar papers, Bishop Heber College, Tiruchirapalli, Manoharan, A. and Allysornam, S. and Manalan, Jesudas (2001), pp. 284-90.

[14] Williamson, Nancy J.”Subject access in the Online environment” In *Advances in Librarianship*. V. 13.edited Simonton. New York: Academic press, (1984), pp50-97.

Appendix A: Questionnaire

(Please tick (v) where required)

I. Name of the Library :

II. Address of the library :

III. Year of establishment :

Academic|Public|Special

IV. Type of the library :

V. Year of IT application :

VI. Housekeeping Operations

Acquisition : Available/Not available

OPAC : Available/Not available

Circulation : Available/Not available

Serials Control : Available/Not available

VII. Name of the Software used :

VIII. Coverage in OAPC

YES

NO

1. Books :

YES

NO

2. Periodicals :

YES

NO

3. Theses :

YES

NO

4. Standards :

YES

NO

5. Patents :

YES

NO

6. Non-book materials :

IX. Access Points

NO

YES

1. Accession Number :

NO

YES

NO

YES

2. Author :

3. Title :

YES

NO

4. Keywords :

NO

YES

5. Subject Headings :

YES

NO

6. Keyword in Title :

YES

NO

7. Class Number :

SUBJECT ACCESS IN OPAC INTERFACES IN TAMILNADU:

YES

NO

8. ISBN :

YES

NO

9. ISSN :

YES

NO

10. Series :

YES

NO

11. Place :

YES

NO

12. Publisher :

X. Subject Access

i. Standard subject headings	YES	NO
ii. In-house developed subject headings	YES	NO

XI. Types of searches

YES

NO

1. Simple search :

YES

NO

2. Advanced or Complex search :

XII. Advanced or complex search provisions

SUBJECT ACCESS IN OPAC INTERFACES IN TAMILNADU:

i. Author/Title	YES	NO
ii. Author/Subject	YES	NO
iii. Author/Keywords	YES	NO
iv. Global search	YES	NO

XIII. Search Techniques

1. Boolean logic : YES NO

2. Truncation : YES NO

3. Word proximity : YES NO

4. Phrase searching : YES NO

5. Exact searching : YES NO

Appendix B: List of libraries covered in the survey

Name of the Institution	Location

Anjalai Ammal Mahalingam Engg. College	Tiruchirapalli
Anna University	Chennai
Asian College of Journalism	Chennai
Avinasilingam University	Coimbatore

SUBJECT ACCESS IN OPAC INTERFACES IN TAMILNADU:

Bharathidasan Institute of Management	Tiruchirapalli
Bharathidasan University	Tiruchirapalli
Bishop Heber College	Tiruchirapalli
British Council Division	Chennai
Cauvery College for women	Tiruchirapalli
Central Poly Technique	Chennai
Chennai Port Trust	Chennai
Connemara Public Library	Chennai
CSI Bishop Appasamy College of Arts & Sc	Coimbatore
CSIR Madras Complex	Chennai
Chanalaskhmi Srinivasan Eng. College	Tiruchirapalli
Indira Gandhi Centre for Atomic Research	Kalpakkam
Indian Institute of Technology	Chennai
Institute for Financial Management	Chennai
Institute of Mathematical Sciences Centre	Chennai
Jamal Mohamed College	Tiruchirapalli
Jayaram College of Engineering & Tech.	Tiruchirapalli
JJ College of Engineering and Technology	Tiruchirapalli
Karunya Institute of Technology	Coimbatore
Kongu Engineering College	Erode
Larsen & Toubro Limited	Chennai
Loyola College	Chennai
M. N. Dastur & Co. Ltd	Chennai
Madras Institute of Technology	Chennai
Madras School of Economics	Chennai
Madras School of Social Work	Chennai
Madras Veternary College	Chennai
MOP Vaishnav College for Women	Chennai
National Institute of Fashion Technology	Chennai
Oxford Engg. College	Tiruchirapalli

RBI Staff College	Chennai
Regional Engineering College	Tiruchirapalli
Roja Muthiah Research Library	Chennai
SPIC TECHNICAL LIBRARY	Chennai
Sri Angala Amman College of Engg. & Tech	Tiruchirapalli
Sri Krishna Arts and Science College	Coimbatore
SRM Engineering College	Chennai
St. Joseph's College	Tiruchirapalli
Structural Engineering Research Centre	Chennai
Sri Venkatesa College of Engineering	Chennai
TN MGR Medical University	Chennai
Tamil Nadu Pollution Control Board	Chennai
University of Madras	Chennai
VLB Janakiammal College of Eng.& Tech	Coimbatore
Wipro Technology	Chennai
Women Poly Technique	Chennai

Appendix – C: List of softwares used in OPACs in Tamilnadu

- 1. Alice for Windows**
- 2. AUTOLIB**
- 3. GRANTHALAYA**
- 4. In-house developed interfaces**
- 5. LIBASOFT**
- 6. LIBRIS**
- 7. LIBSYS**
- 8. NIRMALS**
- 9. NOOLAGAM**
- 10. SLIM++**

11. SOUL



Dr. B. Ramesh Babu is a Reader in the Department of Library and Information Science, University of Madras. His teaching and research interests are cataloguing, indexing, online catalogues, information seeking behaviour, bibliometrics and preservation. He was Commonwealth Fellow during 1999-2000 and worked at the Department of Information Science, Loughborough University, United Kingdom. He has a good number of publications to his credit in journals and conference proceedings.



M. Tamizhchelvan, Librarian, The New Indian Express, Chennai. With experience of over decade in the field of Newspaper librarianship. His research interests are Online cataloguing, Database Management Systems, Database creation, Internet surfing. He is currently working of the feature of OPACs in South India and published a number of paper in journals, edited volumes, presented papers both National and International level. He is also got knowledge about CDS/ISIS. He has designed and developed a number of database and served as consultants to the projects