

Availability of Library Resources and Services in Environmental Information System (ENVIS) Center Libraries in South India: A Study

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Abstract - The paper is an attempt to clearly exhibit and examine the availability of both print and electronic resources and listed out the traditional, electronic and web based services offered by the ENVIS center libraries in South India. The findings of the study show that 8 (47.05%) ENVIS libraries received financial assistance from the State Government & Central Government. It is noticed from the study all most all the ENVIS center libraries are having all type of collection to cater to the needs of scientists and at the same time all the ENVIS center libraries offered the library services like circulation service, reference service, new arrivals alert service and newspaper clipping service and new arrivals alert services through e-mail, e-Newspaper slipping and social networking (Twitter, WhatsApp, Face book, LinkedIn) and web based information services. Majority 15 (88.23%) of libraries have built their library collections in both print and electronic format.

Keywords: Library Resources, E-Resources, Library Services, Electronic Services, Web Based Services, ENVIS

I. INTRODUCTION

A library collection consists of various kinds of resources which serve as a base for providing comprehensive information support services to the users. The information requirement of users whether general or specific to support their teaching, learning, research, and for technical/project activities are being facilitated by libraries. The required information need to be made available at right time, at right place and right accessible platforms. The ENVIS Center Libraries (ECL) realizing these needs, since beginning has been developed good collections both print and electronic resources by adopting appropriate collection development policies and guidelines.

The rapid growth of information literature and reduction of financial assistance in real terms, libraries at ENVIS centers also find it difficult to acquire comprehensive resources in various filed interests of their user communities. On the other hand, the ECL's have to meet diverse resources needs of their users. Collection development is not a onetime activity in the library, it is a continuous process. Hence, an attempt is made here to examine the status of collections such as books, e-books, journals, e-journals, back volumes of periodicals, conference proceedings, photographs, newspapers and magazines, maps & atlases, newsletters, patents, standards and specifications, reference resources, reports, photographs and slides, theses and dissertations, rare collections and Government publications etc.

II. REVIEW OF LITERATURE

A review of literature reveals that there is a large amount of literature available on the use of e-resources, but no in depth study has been done on the availability of both print and electronic resources, services offered by the Environmental Information Systems (ENVIS) Center Libraries in South India has not been reported in the literature. The present study is an attempt to clearly establish and exhibit the availability of library resources in ECL's in South India. The recent studies published related topic of research during the progress report period was collected and reviewed.

The Ridwan, S.M (2014) conducted study an assessment of electronic information resources and services in Kaduna State University Library, Kaduna- Nigeria. The outcome of the study reveals that 19 (42.22%) respondents say there is adequacy of acquiring electronic information resources to the e-library and at the same time 23(51.55%) respondents said that there are issues and problems in acquisition and management of e-resources. In 2015 similar study was conducted by Singh, M & Arora, A.K (2015) on the functioning, resources and services of three selected University Libraries of Haryana. It found that the Deenbandhu Chhotu Ram University of Science and Technology (DCRUST) has the highest number of collections of special collection, i.e. 2372, whereas Bhagat Phool Singh Mahila Vishwavidyalaya (BPSMV) and O.P Jindal Global University (OPJGU) libraries have no such collection and also all selected university libraries offer a range of services including CAS, SDI, photocopy service, bibliography service, document delivery service, inter library loan (ILL) service, reference service, circulation, membership, OPAC/ Web OPAC services. Further Ekene, U & *et al.*, (2016) assessed the availability of library resources and services in two medical libraries in South-east Nigeria. Findings show that reference services, searching medical databases, Current Awareness Services are equally rated by the respondents to be the most adequate of all the services listed. Reddy, H.K & Chandraiah (2017) analyzed the collection development of university library of Dravidian university since 2011 to 2016 and it explain very elaborately about collection development subject-wise, school-wise and also department-wise of the university and it found that need to allocate more funds to university library to acquire more e-books and also e-journals for use

of professional and non-professional student community of Dravidian University, Kuppam, Andhra Pradesh. A study conducted by Madhusudhan, M (2018) examined institutional characteristics and resources dedicated to web based services. Most of the selected university libraries are yet to exploit potential of web forms and a few libraries offer innovative web based library services in different sections and also this study identified specific ways in which the web helps university libraries to improve and develop innovative and creative web based library services.

III. SCOPE AND LIMITATIONS OF THE STUDY

The limitation of the present study is selected 17 South Indian ENVIS center libraries out of 68 ENVIS Focal point centers in India, which has been engaged in state-of-the-art information acquisition, processing, storage, retrieval and dissemination of information, to support and promote research, development and innovative theoretical and practical thematically information in environmental information. The present study is focus on to examining the availability of both print and electronic resources and also electronic services offering by the following 17ECL's in South India.

Centre for Ecological Sciences (CES-IISc), Bangalore, Foundation for Revitalization of Local Health Traditions (FRLHT), Bangalore, Environmental Management and Policy Research Institute (EMPRI), Bangalore, Regional Occupational Health Centre (NIOH), Bangalore, Centre for Advanced Study in Marine Biology (CASMB), Parangipettai, Department of Zoology - University of Madras (DZ-UoM), Chennai, Institute for Ocean Management, Anna University Campus (IOM-AU), Chennai, C.P.R. Environmental Education Centre (CPR-EEC), Chennai, Salim Ali Centre for Ornithology and Natural History (SACON), Coimbatore, Tamil Nadu State Council for Science, Technology & Environment (TSCSTE), Chennai, Institute of Forest Genetics and Tree Breeding (IFGTB), Coimbatore, Kerala State Council for Science, Technology & Environment (KSCSTE), Trivandrum, Indian Institute of Chemical Technology (IICT), Hyderabad, Centre on Eastern Ghats Ecology (CEGE), EPTRI Campus, Hyderabad, Environment Protection Training and Research Institute (EPTRI), Hyderabad, Department of Environment and Forest (DEF), Port Blair and Goa State Council for Science & Technology (GSCST), Saligao, Goa.

IV. ANALYSIS AND FINDINGS OF THE DATA

A structured questionnaire was framed and same has been distributed to all the 17 ENVIS centers libraries to collect the data on the availability various library resources and services offering to their user community.

The collected data was coded before enter into the MS excel sheet, later the data was transfer to PSPP software package for analysis and interpretation of data.

A. Year of Establishment and Nature of Organization

Background information about the institutions with respect to year of establishment, nature of organization and the availability of information on their respective institute web is presented in Table I. The impact of national polices focusing research on environment and related issues many institutions were established by both State and Central government across the country. Considering this, it is observed from the table that seven (38.88%) centres i.e., FRLHT, CASMB, IOM, CEGE, EPTRI, GSCST and PPCC was established in different Government, R & D and Autonomous organizations were established to do the good research in their respective fields. The seven (38.88%) centres namely FRLHT, EMPRI, RNI OH, SACON, IFGTB, CEGE, and EPTRI are functioning under the Research and Development organization tagline, followed by 5(27.77%) centres such as the CPR-EEC, TSCSTE, DEF, GSCST and PPCC was set up by the government organization and departments, next, three (16.66%) centres such as CASMB, DZ-UoM and IOM was established as part of State and Centre Universities in South India. Remaining three (16.66%) centres i.e., of the KSCSTE, IICT and CES-IISc has been functioning as an autonomous bodies. It is good to note that all 18(100%) ENVIS centres have designed and maintained their own website to host institutions vision, mission, objectives, areas of activities including library collections, services and other facilities offered to scientists and general public.

TABLE I YEAR OF ESTABLISHMENT AND NATURE OF ORGANIZATION

Year of establishment	(No=18)	
	Resp.	%
Before 1970	02	(11.11%)
In between 1970-1980	03	(16.66%)
In between 1981-1990	04	(22.22%)
In between 1991-2000	07	(38.88%)
In between 2001-2010	02	(11.11%)
Nature of organization	Resp.	%
Government	05	(27.77%)
University	03	(16.66%)
R & D Center	07	(38.88%)
Autonomous	03	(16.66%)
Website	Resp.	%
Institute	18	(100.0%)
Library	--	(00.0%)
ENVIS	18	(100.0%)

B. Distribution of Respondents by Gender, Qualification, Experience etc.

Library professionals play a very vital role in the process of providing efficient and timely services to the user community. It will be interesting to point out their

qualification, age, designation, experience and same has been presented in Table II. Majority 13 (76.47%) of the library and information centres are headed by male librarian and only 4 (23.52%) libraries are headed by female. As per their qualifications are concern all the 17 libraries are appointed qualified librarian with MLISc., Degree and few libraries are acquired M. Phil degree and qualified UGC-NET/SET examination. Only 2 librarians are completed their Doctoral Degree. It is good to note that majority of the 15(88.23%) respondent's designation is Librarian and the same time 10(58.82%) libraries are headed by senior professionals with the agree group between 41-50 years. Further it is observed that 11(64.70%) librarians have professional experience ranges between 11-20 years.

TABLE II DISTRIBUTION OF DEMOGRAPHIC INFORMATION OF THE PROFESSIONALS

Demography of respondents (No=17)		Resp.	%
Gender	Male	13	(76.47%)
	Female	4	(23.52%)
Qualification	MLISc with M. Phil	11	(64.70%)
	MLISc with NET/SET	4	(23.52%)
	MLISc with Ph. D,	2	(11.76%)
Designation	Librarian	15	(88.23%)
	Deputy/ Assistant librarian	01	(5.88%)
	Library Assistant	--	(0.00%)
	Information Officer	--	(0.00%)
	Information Scientist	01	(5.88%)
Status of Position	Permanent	16	(94.11%)
	Temporary	1	(5.88%)
Age	20-30 years	00	(0.00%)
	31-40 years	06	(35.29%)
	41-50 years	10	(58.82%)
	Above 51 years	01	(5.88%)
Experience	Less than 5 years	00	(0.00%)
	6-10 years	4	(23.52%)
	11-20 years	11	(64.70%)
	Above 21 years	02	(11.76%)

C. Distribution of Financial Assistance for Libraries

If library and information centres need to provide need based collection and services to scientific community the proper financial assistance required. In this context the sources of finance to ENVIS libraries are presented in Table III. From the table it can be observed that 8 (47.05%) libraries receives the financial assistance from the State as well as Central Government and 5 (29.41%) libraries getting financial assistance from their Parent organization as well as from Central Government while 04 (23.52%) libraries i.e., CASMB, DZ-UoM, IOM& IICT libraries are getting financial assistance from multiple sources such as the State Government, Central Government, UGC and CSIR.

TABLE III DISTRIBUTION OF FINANCIAL ASSISTANCE FOR LIBRARIES

Financial Resources	(No=17)	
	Resp.	%
Parent organization & Central Govt.,	05	(29.41%)
State Government & Central Govt.,	08	(47.05%)
State Government, Central Govt., & UGC or CSIR	04	(23.52%)

D. Distribution of Respondents by Availability of Print Resources in Libraries

Libraries build resources to provide timely services to the information seekers. Books, Journals, Reports etc. are part of the library collection which contains the information desired by the users. The strength of library collection determines the ability of the libraries to serve its users. Table IV and V presents the availability of various print resources in the ENVIS Centre libraries and it observed that the CES-IISc, IICT & DZ-UoM libraries have highest library collection ranges between 10,001-20,000, 25,000-45,000 and 45,001-65,000 thousands followed by 10(58.82%) libraries have less than 1000 thousands of bound volumes of periodicals and 12 (70.58%) libraries have less than 1000 thousands reports (annual, statistical, research, survey & technical). Further the table data reveals that 15(88.23%) libraries have less than 1000 Maps, Atlases and reference resources.

TABLE IV DISTRIBUTION OF AVAILABILITY OF PRINT RESOURCES IN LIBRARIES

Types of Print Resources>	Print resources in Thousands								Total
	< 1000	1001- 3000	3001- 5000	5001- 8000	8001- 10,000	10,001- 15,000	45,000- 50,000	60,001- 65,000	
Books	1(5.88)	1(5.88)	3(17.64)	6(35.29)	3(17.64)	1(5.88)	1(5.88)	1(5.88)	17(100.0)
Bound volumes of periodicals	10(58.82)	6(35.29)	--	--	1(5.88)	--	--	--	17(100.0)
Reports	12(70.58)	2(11.76)	2(11.76)	1(5.88)	--	--	--	--	17(100.0)
Photographs	15(88.23)	2(11.76)	--	--	--	--	--	--	17(100.0)
Maps & Atlases	15(88.23)	2(11.76)	--	--	--	--	--	--	17(100.0)
Reference resources	15(88.23)	2(11.76)	--	--	--	--	--	--	17(100.0)
Rare collections	15(88.23)	2(11.76)	--	--	--	--	--	--	17(100.0)
Conference proceedings	15(88.23)	2(11.76)	--	--	--	--	--	--	17(100.0)

It is observed from the Table V the IFGTB library has been subscribing highest i.e., 100-200 journals, 3(17.64) libraries i.e., DZ-UoM, Chennai, IFGTB, Coimbatore & IICT,

library, Hyderabad have more than 300 thesis and dissertations. 4(23.52) libraries have more than 300 Government publications.

TABLE V DISTRIBUTION OF AVAILABILITY OF PRINT RESOURCES IN LIBRARIES

Types of Print Resources>	Print resources in Hundreds								Total
	<20	21-40	41-60	61-80	81-100	100-200	201-300	>301	
Journals	3(17.64)	5(29.41)	6(35.29)	2(11.76)	--	1(5.88)	--	--	17(100.0)
Newspapers and Magazines	15(88.23)	2(11.76)	--	--	--	--	--	--	17(100.0)
Newsletters	4(23.52)	5(29.41)	2(11.76)	3(17.64)	1(5.88)	2(11.76)	--	--	17(100.0)
Patents & Specifications	6(35.29)	2(11.76)	2(11.76)	--	1(5.88)	1(5.88)	--	--	12(70.58)
Photographs and Slides	1(5.88)	2(11.76)	4(23.52)	2(11.76)	4(23.52)	3(17.64)	--	1(5.88)	17(100.0)
Thesis and dissertations	8(47.05)	1(5.88)	1(5.88)	1(5.88)	1(5.88)	2(11.76)	--	3(17.64)	17(100.0)
Government publications*	2(11.76)	1(5.88)	1(5.88)	2(11.76)	1(5.88)	4(23.52)	2(11.76)	4(23.52)	17(100.0)

E. Distribution of Respondents by Availability of E-Resources in Libraries

Most of the libraries are now adding electronic resources to their existing print collection to enhance the resources base. E-resources collection in ENVIS centre libraries is being presented in Table VI. From table it can be observed that only the DZ-UoM library has highest (more than 1000) e-Books available in their library. The ENVIS centres namely the CES-IISc, FRLHT, EMPRI, CASMB, RNIOH, DZ-UoM, IOM, CPR-EEC, SACON, TSCSTE, IFGTB, KSCSTE, IICT, CECE, EPTRI, DEF and GSCST libraries have less than 100 e-Journals collections in their respective libraries. And also it found that 11(64.70) of libraries have

less than 100 e-Report collections. But, three (17.64) libraries namely the DZ-UoM, SACON and IFGTB have collection range between 101-200e-Maps, globes & atlases. Also table clearly shows that 13(76.47) libraries have less than 100 e-theses and dissertations collection in their ENVIS centres libraries. Further study on availability of government publications reveals that, 14(82.35) libraries such as the CES-IISc, FRLHT, EMPRI, RNIOH, CASMB, DZ-UoM, IOM, CPR-EEC, SACON, KSCSTE, CECE, EPTRI, DEF, GSCST have less than 100 government publications and remaining three i.e., TSCSTE, IFGTB and IICT libraries have collection range between 201-300 government publications.

TABLE VI DISTRIBUTION OF AVAILABILITY OF E-RESOURCES IN LIBRARIES

Types of e-Resources>>>	e-Resources in Thousands								Total
	<100	101-200	201-300	301-400	401-500	701-800	801-900	>1000	
e-Books	2(11.76)	5(29.41)	4(23.52)	1(5.88)	2(11.76)	1(5.88)	1(5.88)	1(5.88)	17(100%)
CD-ROM databases	10(58.82)	5(29.41)	1(5.88)	--	1(5.88)	--	--	--	17(100%)
e-Reports	11(64.70)	6(35.29)	--	--	--	--	--	--	17(100%)
Photographs and Slides	12(70.58)	4(23.52)	1(5.88)	--	--	--	--	--	17(100%)
e-Conference proceedings	13(76.47)	1(5.88)	1(5.88)	--	--	--	--	--	15(88.23%)
e-Thesis and Dissertations	13(76.47)	--	--	--	--	--	--	--	13(76.47%)
Audio-Visual resources	13(76.47)	4(23.52)	--	--	--	--	--	--	17(100%)
e-Maps, globes & atlases	14(82.35)	3(17.64)	--	--	--	--	--	--	17(100%)
e-Reference resources	15(88.23)	2(11.76)	--	--	--	--	--	--	17(100%)
e-Journals	17(100.0)	--	--	--	--	--	--	--	17(100%)
e-Consortia resources	8(47.05)	4(23.52)	--	--	--	--	--	1(5.88)	13(76.47%)
Rare collection archives	8(47.05)	--	--	--	--	--	--	--	8(47.05%)
e-Government publications*	14(82.35)	3(17.64)	--	--	--	--	--	--	17(100%)

F. Distribution of Respondents by Library Services Offered By the Libraries

Libraries offer various types of service to the user community as a service oriented organization. Table VII

presents the statistics related to the specific type of traditional services offered by ENVIS Centre Libraries. Table VII denotes that the circulation service, reference service, new arrivals alert services and newspaper clipping

services are commonly offered by majority of the libraries namely the CES-IISc, FRLHT, EMPRI, CASMB, RNIOH, DZ-UoM, IOM, CPR-EEC, SACON, TSCSTE, IFGTB, KSCSTE, IICT, CEGE, EPTRI, DEF and GSCST ENVIS centres.

TABLE VII DISTRIBUTION OF TRADITIONAL SERVICES OFFERED BY LIBRARIES

Types of traditional services	(No=17)	
	Resp.	%
Circulation Service	17	(100.0%)
Reference Service	17	(100.0%)
Referral Service	11	(64.70%)
Current Awareness (CAS) Service	14	(82.35%)
Selective Dissemination Information (SDI) Service	7	(41.17%)
Document Delivery Service(DDL)	12	(70.58%)
Inter Library Loan (ILL) Service	9	(52.94%)
Reprography Service	10	(58.82%)
Indexing and abstracting Service	10	(58.82%)
New arrivals alert Services	17	(100.00%)
Newspaper Clipping Service	17	(100.00%)
Bulletin board service	4	(23.53%)
Translation Service	5	(29.41%)
Bibliographical Services /Compilation of bibliography	13	(76.47%)

G. Distribution of Respondents by Electronic Services Offered By the Libraries

The Table VIII presents the electronic services offered by ENVIS Centre libraries. It is found that the Electronic New arrivals alert services through e-mail and Electronic Newspaper Slipping Service are commonly offered electronic services by all libraries under the study. Further, 16(94.11%) libraries are providing the Electronic Circulation Service and Electronic Current events and contents alerts for their respective users. Also, 15(88.23%) libraries are providing electronic current awareness (CAS) service and electronic current events and contents alerts.

H. Distribution of Respondents by Web Based Services Offered By the Libraries

Web based services are getting popularity with the accessibility of the information and communication technology. Table-09 analyzes the web based services offered by libraries, and clearly denotes that Social Networking (Twitter, WhatsApp, Face book, LinkedIn) service provided by all 17 ENVIS Centre Libraries, followed by, 15 (88.23%) libraries providing Library blog and subject gateways service for regular updates and current developments of the libraries. Interestingly, 13 (76.47%) of libraries are providing text and virtual chats service to users to interact with library professionals to update information

about availability of library resources, services and facilities through various virtual online platforms.

TABLE VIII ELECTRONIC SERVICES OFFERING BY LIBRARIES

Types of electronic services	(No=17)	
	Resp.	%
Electronic Circulation Service	16	(94.11%)
Electronic Reference Service	10	(58.82%)
Electronic Reprography Service	12	(70.58%)
Electronic Current Awareness (CAS) Service	15	(88.23%)
Electronic Selective Dissemination Information (SDI) Service	9	(52.94%)
Electronic Document Delivery (DDL) Service	11	(64.70%)
Electronic New arrivals alert services through e-mail	17	(100.0%)
Electronic Newspaper Slipping Service	17	(100.0%)
Electronic Public Access Catalogue (OPAC)	15	(88.23%)
Electronic Current events and contents alerts	16	(94.11%)

TABLE IX WEB BASED SERVICES OFFERING BY LIBRARIES

Types of web based services	Resp.	%
Ask Librarian	3	(17.64%)
Frequently Asked Questions (FAQ)	5	(29.41%)
Text and virtual chats	13	(76.47%)
Library blog and subject gateways	15	(88.23%)
Discussion forum for users	9	(52.94%)
Library wiki	6	(35.29%)
Social Networking (Twitter, WhatsApp, Face book, LinkedIn)	17	(100.0%)
Virtual tour	4	(23.52%)

V. FINDINGS OF THE STUDY

The results of the study clearly denote that, most of the libraries have good library resources and to provide common library and information services. Also it is interesting to note that many libraries have taken the initiative to build e-resource and provide specific web-based services for their respective library users and also most 88.33% of libraries are willing to build hybrid environment in their libraries.

VI. CONCLUSION AND SUGGESTIONS

In ICT era, it has become a practical necessity and reality with technological revolutions to provide improved access to information resources. Libraries are expanding existing library services and making required information accessible at any time; anywhere and any place. Information resources, services awareness and use is conceived as a backbone for information facilitation and with recent technological developments are creating new forms of services and ways

of providing information bypassing traditional libraries. The present libraries have to perform new roles and responsibilities which are different from the traditional ones. The advances in web enabled technology and its applications and web-based facilities have made lasting impact on information access, sharing and use and library professionals as well. User communities are showing positive and encouraging attitude towards use of e-Resources, services and facilities due to several advantages and benefits.

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