Usage of E-Resources in the University Libraries of Assam:

A Comparative Study

A Thesis submitted to Assam University, Silchar for the award of the Degree of Doctor of Philosophy (Ph. D.) in Library and Information Science (Swami Vivekananda School of Library Sciences)

Submitted By

Miss. Sucheta Bhattacharjee
Ph. D. Registration No.: Ph. D. /2352/13 of 10.09.2013

Supervisor

Dr. Manoj Kumar Sinha

(M. Sc., MLISc, B. Ed. PGDHE, Ph. D. (Zoology, Library & Information Science))

Associate Professor, DLISc, AUS



Department of Library and Information Science (Swami Vivekananda School of Library Sciences) Assam University, Silchar-788011

DEDICATION

This thesis work is dedicated to my gurudev, "Swami Gahananandaji Maharaj", without whose blessing, this work was never possible

&

This work is also

dedicated to my parents, Mr Shyamal Kanti Bhattacharjee(father), Mrs.Mrinal Bhattacharjee(mother) & Sujaya Bhattacharjee (younger sister), who have always loved me unconditionally and whose good examples have taught me to work hard for

the things that I aspire to achieve.

DECLARATION

I, Sucheta Bhattacharee, Ph. D. Registration No.: Ph. D./2352/13

of 10.09.2013, University Registration No. 10400158 of 2003-2004

hereby declare that the topic of my Ph. D. Research entitled as "Usage of

E-Resources in the University Libraries of Assam: A Comparative

Study" is the record of work done by me under the supervison of Dr.

Manoj Kumar Sinha, Associate Professor, DLISc, Assam University,

Silchar and the contents of the Thesis is based on my continuous study

and review of literature of the subject.

This thesis is being submitted to Department of Library &

Information Science, Assam University, Silchar, Assam for the award of

the degree of Doctor of Philosophy (Ph. D.) in Library and Information

Science.

Place: Assam University, Silchar

Date: 23rd February 2016

(১১ ফাল্গুন ১৪২২, মঙ্গলবার)

(Sucheta Bhattacharjee)

Ph. D. Registration No.:

Ph. D./2352/13 of 10.09.2013

Department of Library & Information Science

Assam University, Silchar

i



DEPARTMENT OF LIBRARY AND INFORMATION SCIENCE

(Swami Vivekananda School of Library Sciences)
Assam University, (A Central University)
Silchar – 788 011

Dr. Manoj Kumar Sinha

[B.Sc (H), M.Sc, MLISc, B.Ed., PGDHE, Ph.D (Zoology and Library and Information Science)]

Associate Professor & Head of the Department

Ref. No. AU/DLIS/...../2016

<u>Certificate</u>

This is to Certify that the Thesis entitled "Usage of E-Resources in the University Libraries of Assam: A Comparative Study" submitted by Sucheta Bhattacharee, Ph. D. Registration No.: *Ph. D./2352/ 13 of 10.09.2013*, University Registration No. *10400158 of 2003-2004* in our Department of Library and Information Science for the award of the Doctor of Philosophy (Ph. D.) in Library and Information Science as per the provision of Ph. D. programme ordinances of Assam University, Silchar.

Place: Assam University, Silchar Date: The 23rd February 2016

(Dr Manoj Kumar Sinha)

call: +91-9435231672

Date: 23/02/2016

Associate Professor & HoD

Department of Library & Information Science Assam University, Silchar



DEPARTMENT OF LIBRARY AND INFORMATION SCIENCE

(Swami Vivekananda School of Library Sciences)
Assam University, (A Central University)
Silchar – 788 011

Dr. Manoj Kumar Sinha

Call: +91-9435231672

Date: 23/02/2016

[B.Sc (H), M.Sc, MLISc, B.Ed., PGDHE, Ph.D (Zoology and Library and Information Science)]

Associate Professor and Head of the Department

Ref. No. AU/DLIS/140/2010/

<u>Certificate</u>

This to Certify that the Thesis entitled "Usage of E-Resources in the University Libraries of Assam: A Comparative Study" submitted by Sucheta Bhattacharee, Ph. D. Registration No.: Ph. D./2352/13 of 10.09.2013 in the Department of Library and Information Science, Assam University, Silchar, Assam for the award of Doctor of Philosophy (Ph. D.) in Library and Information Science.

This work has been done by the scholar under my supervision with all the formalities as per the requirement of norms. This is further certified that no parts of this thesis forms the bans for the award of any other degree or diploma to her. I recommend that this Thesis may be placed before the examiner(s) for consideration of eligibility and fulfillment for award of the Degree of Doctor of Philosophy (Ph. D.) in the subject of Library and Information Science to her.

I wish her every success in her life.

Place: Assam University, Silchar Date: The 23rd February 2016

(Dr Manoj Kumar Sinha)

Associate Professor & Supervisor
Department of Library & Information Science
Assam University, Silchar

Email: mksinha1965@gmail.com,dr mk sinha@yahoo.com,hod lis@aus.ac.in,Manoj.kumar.sinha@aus.ac.in

ACKNOWLEDGEMENTS

In the course of working of any research, many people have helped me directly or indirectly to accomplished the task of the research project. The highest happiness that accompanies the successful completion would be incomplete without the expression of gratitude to all those people who have helped me in one or other way during the period of my research work.

I would like to express my deep sense of gratitude to my supervisor **Dr. Manoj Kumar Sinha**, Associate Professor & HoD of the Department of Library and

Information Science, Assam University, Silchar, Assam for his exemplary guidance,

valuable feedback and constant encouragement throughout the duration of this

Research work. His valuable suggestions were of immense help throughout my

Research work. His perceptive criticism kept me working to make this research work

in a much better way. Thank you sir for long hour spent in helping guiding,

encouraging and showing the path for successful competition of the work.

I would like to express my gratitude to **Prof. Sumanash Dutta**, Dean of Swami Vivekananda School of Social Sciences for extending me the opportunity to present the research project and providing all the necessary resources for this purpose and for giving me the wide scope to do the research work under his consideration and valuable suggestion.

I am also grateful to the Chairmen and committee members of Departmental Research Committee, DLISc, Assam University, Silchar, Assam and Controller of Examinations, Assam University for their kind support and great help for providing all the necessary resources in this regard.

My sincere thanks goes to **Dr Mukut Sarmah**, Assistant Professor of DLIS, Assam University for his suggestions, kind co-operations and inspiration at all the time.

I would also like to pay my heartiest thanks to all other family members of DLISc, Assam University especially Mr. Jayanto Das, Ms. Chandraboti Kannu for their constant support and co-operation.

I would like to express my warmest thanks & deep sense of gratitude to Dr.

Arun Kumar Sharma, Librarian, Assam University, Silchar; Dr. Utpal Das, Deputy

Librarian, Dibrugarh University, Dibrugarh; Dr. Wooma Sankar Dev Nath,

Librarian, Gauhati University, Guwahati and Dr. Mukesh Saikia, Librarian, Tezpur

University, Tezpur for helping me and providing suggestion and information

regarding the status of the library.

I would like to express my sincere thanks to all the respondents of the survey

who were courteous enough to complete the questionnaire and returned back. Without

their active participation, it would have not been possible to complete the study.'

I want to convey my heart full of respect towards my gurudev "Swami

Gahananandaji Maharaj" my father, Mr. Shyamal Kanti Bhattacharjee; my mother,

Mrs. Mrinal Bhattacharjee; my younger sister, Sujaya Bhattacharjee without whose

blessings, love & care, this research work was never possible.

I express my warmest thanks & deep sense of gratitude to many LIS

professionals, relatives, friends specially Sudip Bhattacharjee(Silchar), Biswabijoy

Adhikari(Kolkata,) Bhattacharjee(Silchar), Nirmalya and Anindya

Bhattachary(Kolkata) for their generous help in discussing the research work and

giving their valuable time in successful completion of this project. Time to time I got

constructive suggestions, guidance and encouragement from all my well-wishers.

Above all, it's the blessing of Almighty; for showing his blesses to take

me the right way to complete the research work in time.

Last, but not the least I express my thanks to Chaitnaya Press for printing and

making my thesis on time.

Date: 23rd February, 2016

Place: Assam University, Silchar

(SUCHETA BHATTACHARJEE)

Department of Library & Information Science

Assam University, Silchar

٧

CONTENTS

		Page No.
Declaration		i
Certificate		ii
Acknowledgen	gent	iv
Contents		vi
List of Tables		1X
List of Figures		xi
List of Plates		xii
List of Abbrevi	iations	xiii
Preface		XV
Informative Ab	ostract	xvii
J		
Chapter 1	General Introduction	01-41
Chapter 1	1.1 Introduction	2
	1.2 Background	3
	1.3 Emergence of Electronic Resources in	•
	Changing Environments	4
	1.4 Concept of E- Resources	5
	1.5 Different Forms of E-Resources	6
	1.6 Characteristic of E-Resources	9
	1.7 Advantages for Subscribing E-Resources	11
	1.8 Subscription of E-Resources / E-Journals	
	Pricing Models	12
	1.9 Concept of Library Consortia	13
	1.10 Need for E-Consortia in the University	
	Libraries of Assam	14
	1.11 Benefits of E-Consortia	17
	1.12 Consortia Models	19
	1.13 Status of membership of consortia for	
	University Libraries of Assam	20
	1.14 Locale of the Study	22
	1.15 Brief Introduction about the Four University	
	under the Study	24
	1.16 Statement of the Problem	27
	1.17 Significance of the Study	32

	1.18 Objective of the Study	33
	1.19 Hypotheses of the Study	34
	1.20 Scope of the Study	35
	1.21 Limitation of the Study	36
	1.22 Definition of the Operational Term/	
	Key Terms	37
	1.23 Plan and Organisation of Chapters	40
Chapter 2	Review of Literature	42- 78
-	2.1 Introduction	43
	2.2 Scope and Coverage of the Review	47
	2.3 Conclusion	77
Chapter 3	Research Methodology and Research	79- 97
	Design	
	3.1 Introduction	80
	3.2 Population/ Size or Area of the Study	82
	3.3 Research Methodology and Research Design	84
	3.4 Sampling Procedure for Survey	84
	3.5 Tools for the Collection of Data	85
	3.6 Personal Interview	88
	3.7 Stages/ Time Period of Data Collection	90
	3.8 Statistics Used for the Analysis of Data	91
	3.9 Coding	96
	3.10 Citation Style	96
	3.11 Conclusion	96
Chapter 4	E-Resource Consortia:	00.100
	A Conceptual Framework	98-133
	4.1 Introduction	80
	4.2 About INFLIBNET	101
	4.3 UGC-INFONET Digital Library Consortium	116
	4.4 About DeLCON: DBT-Electronic Library	
	Consortium	120
	4.5 About INDEST-AICTE Consortium	123
	4.6 Conclusion	133

Chapter 5	5 Dai	ta Analysis and Interpretation	134- 190
	5.1	Pilot Study	135
	5.2	Qualitative Interpretation	136
	5.3	Distribution of Questionnaire	137
	5.4	Personal Details of the Respondents (Backgrou	
		Information)	140
	5.5	Usage Pattern of Electronic Resources by	
		the Respondents	147
	5.6	Status and Usefulness of E-Consortia	
		under University Libraries	166
	5.7	Details of the Research Publications	
		Trends by Respondents	175
	5.8	Problems & Suggestions Provided	
		by the Respondents	180
	5.9	University Library Management Scenario	184
Chapter 6	6 Ma	ijor Findings & Discussions	191- 222
	6.1	Findings of the Responses Received	
		from Respondents	192
	6.2	Summary of the Results of the Tested	
		Hypotheses	210
	6.3	Discussions with the Previous Studies	210
	6.4	Meeting the Objectives of the Study	216
Chapter 7	7 Sug	gestions, Recommendations &	223- 230
•		nclusion	
	7.1		224
	7.2	Conclusion	228
	7.3	Suggestions for the Further Research	229
D.	11. 1		221.260
	ibliograpl		231-260
	nnexure l		261
Aı	nnexure l	II Questionnaire for Faculty Members	268
Aı	nnexure l	III Questionnaire for Librarians	275

LIST OF TABLES

Sl.	Table	Title of the Table	Page
No.	No.		No.
1	Table: 1.1	Statistical Records of Assam	12
2	Table: 1.2	Numbers of Higher Educational Institutions in Assam	26
3	Table: 3.1	Sample Design for the Present Study	85
4	Table: 5.1	Number of response received from the Respondents	137
5	Table: 5.2	Number of Response Received from Each University/ Category	138
6	Table: 5.3	Educational Qualification-Gender Wise Distribution of Respondents	141
7	Table: 5.4	Gender with University Wise Distribution of Respondents	142
8	Table: 5.5	Age & Category-Wise Distribution of Respondents	143
9	Table: 5.6	Designations and University-Wise Distribution of Faculty Members	144
10	Table: 5.7	Designations and University-Wise Distribution of Faculty Members	146
11	Table: 5.8 (A)	Preference of E-resource Usage by the Respondents	149
12	Table: 5.8 (B)	Preference of E-resource Usage by the Respondents	150
13	Table: 5.9	Summary of the Preference of E-resource Usage by the Respondents	151
14	Table: 5.10	Accessing Document and Stream -Wise Distribution of Respondents	152
15	Table: 5.11	Aware of Library Consortia with Stream-Wise Respondents	153
16	Table: 5.12	University Wise Awareness of Digital Library Consortia	154
17	Table: 5.13	Awareness towards Specific Consortia	158
18	Table: 5.14	Aware towards Specific Consortia with Stream Wise	159
19	Table: 5.15	Frequently of Access E-Resources/ Library Consortia	161
20	Table: 5.16	Time spend to access to Library Consortia in a week	164
21	Table: 5.17	Purpose of accessing E-Resources/Library Consortia	165
22	Table: 5.18 (A)	Opinion towards Usefulness of E-Resource accessed from E- Consortia (Category wise)	166

23	Table:	Opinion towards Usefulness of E-Resource accessed from	167
	5.18 (B)	E- Consortia (university wise)	
24	Table:	Satisfaction level for UGC-INFONET	169
	5.19		
25	Table:	Satisfaction level for INDEST and DeLCON	170
	5.20		
26	Table:	Preferred E-journal Publishers under Consortia Service	173
	5.21 (A)		
27	Table:	Summary of Preferred E-journal Publishers under	174
	5.21 (B)	Consortia Service	
28	Table:	Publication Details with Stream-Wise	175
	5.22 (A)		
29	Table:	Publication Details with Category–wise	175
	5.22 (B)		
30	Table:	Publication Details with University –Wise	176
	5.22 (C)		
31	Table:	Numbers of Publication (Stream Wise)	177
	5.23	(**************************************	
32	Table:	Numbers of Publication in Printed or E-media by the	178
	5.24	Respondents	
33	Table:	Publication under subscribed E-Consortia	179
	5.25		
34	Table:	Problems Faced By the Respondents	181
	5.26	J. T.	
35	Table:	Suggestions Provided by the Respondents	182
	5.27		
36	Table:	Library Automation/ Computerization Details	185
	5.28		
37	Table:	Status of Library Networking/ Resource Sharing Facility	186
57	5.29	States of Elotaly Networking Resource Sharing Patricy	100
38	Table:	Numbers of User Orientation Program Provided by Library	187
	5.30	Trained of cost of cost of costs of cos	10,
39	Table:	E-resource Usage Statistic for the Respondents	187
	5.31	2 10001100 Compo Statistic for the recopolitions	107
40	Table:	List of E-Resource Available under UGC-INFONET	188
	5.32 (A)	Elst of E Resource Francisc under Coc II ii OrtE1	100
41	Table:	List of E-Resource Available under DELCON Consortia	189
71	5.32 (B)	List of L-resource Tvanaore under Diffeory Consortia	10)
42	Table:	List of E-Resource Available under INDEST Consortia	190
42		List of L-resource Available under INDEST Consoltia	170
	5.32 (C)		

LIST OF FIGURES

Sl.	Figure	Title of Plate	Page No.
No.	No.		
1	Figure: 4.4	Total Number of Core Members in UGC-INFONET	119
2	Figure: 5.1:	Preference of the Types of E-resources Access by the Respondents	148
3	Figure: 5.2	Awareness towards Specific Consortia By the Respondents	157
4	Figure: 5.3	Frequently of Access E-Resources/ Library Consortia	162
5	Figure: 5.4	Opinion towards Usefulness E-Resource accessed from E- Consortia	168
6	Figure: 5.5	Publication under E-consortia	179

LIST OF PLATES

Sl. No.	Figure No.	Title of Plate	Page
			No.
1	Figure: 1.1	Maps of Assam	24
2	Figure: 1.2	Tezpur University, Tezpur	27
3	Figure: 1.3	Assam University, Silchar	28
4	Figure: 1.4	Gauhati University, Guwahati	30
5	Figure: 1.5	Dibrugarh University, Dibrugarh	31
6	Figure: 4.1	Information and Library Network	101
		(INFLIBNET) Centre, Gujarat	
7	Figure: 4.2	IndCat: Online Union Catalogue of Indian	107
		Universities	
8	Figure:4.3	Web Services R & D	115
9	Figure: 4.5	Home page of DeLCON: DBT-Electronic	120
		Library Consortium	
10	Figure: 4.6	Home page of INDEST-AICTE	124
		Consortium	

LIST OF ABBREVIATIONS



A.P.	Andhra Pradesh
ALA	America Library Association
APA	American Psychological Association
AU	Assam University
CAS	Current Awareness Service
CD ROM	Compact Disc Read-Only Memory
CDS/ISIS	Computerized Documentation System-Integrated Set for
	Information Systems
CoV	Coefficient of Variance
CSIR	Council for Scientific and Industrial Research
DeLCON	DBT e-Library Consortium
DELNET	Delhi Library Network
DU	Dibrugarh University
E-Book	Electronic Book
E-governance	Electronic governance
Ei	Expected Frequency
E-Journal	Electronic Journal
Eo	Observed Frequency
E-Resource	Electronic Resource
GU	Gauhati University
HRDG	Human Resource Development Group
http	Hypertext Transfer Protocol
ICSSR	Indian Council of Social Science Research
ICT	Information and Communication Technology
ILA	Indian Library Association
ILL	Inter -Library Loan
INFLIBNET	Information Library Network
INSDOC	Indian National Scientific Documentation Centre, New Delhi

IPR	Intellectual Property Right
IQR	Inter-Quartile Range
IR	Information Retrieval
ISBN	International Standard Bibliographic Description
IT	Information Technology
JCCC	J-Gate Custom Content for Consortium
JRF	Junior Research Fellow
LAN	Local Area Network
LIS	Library and Information Science
MHRD	Ministry of Human Resource Development
N-LIST	National Library and Information Services Infrastructure for
	Scholarly Content
OPAC	On-line Public Access Catalogue
PG	Post Graduate
R & D	Research & Development
RFID	Radio Frequency Identification
SDI	Selective Dissemination of Initiative
SNS	Social Networking Site
SPSS	Statistical Package for the Social Sciences
SRF	Senior Research Fellow
STM	Science Technology and Management
TU	Tezpur University
UG	Under-Graduate
UGC	University Grants Commission
UNESCO	United Nations Educational, Scientific & Cultural
	Organisation
UPS	Uninterruptible Power Supply
UT	Union territory
Web OPAC	Web On-line Public Access Catalogue
WWW	World Wide Web

PREFACE

In 21st century, libraries are moving from print to e-resources either subscribing individually or through consortia. There has been paradigm shift in the collection development policies for acquiring printed as well as e-resources (both offline and on-line resources). Library consortia is a community (a supportive) of two or more libraries which have formally agreed to cooperative, synchronize, organize, collaborate or consolidate certain functions to achieve joint objectives. The Consortium namely UGC-INFONET Digital Library Consortium, DeLCON and AICTE-INDEST subscribes to electronic resources covering all major subject discipline being taught in universities of India

The area selected for the study is Assam State of North-East India. The formation of consortia or the process of buying e-resources by the different libraries of Assam together has become very important activities in the last few years. This study "Usage of E-Resources in the University Libraries of Assam: A Comparative Study" discusses the usefulness of e-resources available under library consortia in the university libraries of Assam.

This thesis comprises of mainly seven chapters: First chapter deals with "General Introduction" are the subject matter for the first chapter. It provides information on the background, significance, objectives, hypothesis, scope, limitation, definition of operational term and Organisation of capture for the study in detail. Second chapter deals with "review of literature". Here, it provides information about national level, international level and printed and non-printed types of review of earlier study. Third chapter describes methodology adopted in the collection and analysis of the data. It also describes sampling procedure, tools of data collection and

hypothesis of this study. Forth chapter describes the information seeking concepts, needs and information seeking models in detail. Fifth chapter deals with the data analysis and interpretation of the data related to personal information, information needs of the library users. It contains interpretation of data by statistics that includes statistical data and figures. Sixth chapter comprises of major findings and discussions. Seventh chapter provides suggestions, recommendations and conclusion. It also includes areas of further research which is followed by references according to APA style.

The finding of the study shows a clear picture of e-resource usage pattern by library users belong to Universities of Assam along with the preference of e-resources or e-journals and usefulness, role and preference of e-consortia services. Thus, it would be the contribution of the study towards the national development in general and Assam/North-East India in particularly to build a new network in future.