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LIS RESEARCH TRENDS IN INDIA: A CONTENT ANALYSIS OF THE PROMOTION OF LIBRARY AUTOMATION AND NETWORKING IN NORTH EASTERN REGION (PLANNER 2004-2014) ARTICLES

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ABSTRACT

PLANNER is an annual convention initiated by INFLIBNET for North East region of India. The themes of the convention are nascent and attract library and information professional from all over India and abroad. Planner conventions are organized in following States: These are Assam (4), Meghalaya (2), Manipur (1), Mizoram (1), Nagaland (1) and Sikkim (1). But Tripura and Arunachal Pradesh states are not hosting Planner Convention till date.

Present paper maps the contents of the last eight PLANNER proceedings on different parameters. The study explores themes, sub themes, venues, and number of papers, authors, authorship pattern, collaborations, and institutions. Researchers find that total 404 articles published in the proceedings. 757 authors are contributed in these publications. 162(40.10%) articles are single authored and 242(59.90%) articles are written by multi-authored. Average degree of collaboration is 0.60. Total 524 unique contributors are found in this study. Maximum contributors are male authors' i.e.358 (68%) and Females authors are 166(32%). out of these contributors 431(82.25%) authors from Indian and 93(17.75%) authors from foreign.

KEYWORDS: *INFLIBNET, PLANNER, content analysis, conference proceedings.*

INTRODUCTION :

Libraries play vibrant role in higher education. The impact of ICT changed the scenario of Library and Information centers. INFLIBNET contributed significantly in the development of Indian libraries and strengthen the higher education through its numerous services. PLANNER is an important and special activity of INFLIBNET for North Eastern states of India. The word PLANNER itself stands for "Promotion of Planning for Library Automation and Networking in North Eastern Region".

In general Map is a picture which represents large geographical area on a piece of paper. Here mapping stands for representing distribution of knowledge base. Proceedings are the collection of academic papers that are published in the context of academic conference. (Wikipedia, 2016).

Content analysis is a research tool used to determine the presence of certain words or concepts within texts or sets of texts. According to W.J. Paisley, "Content Analysis is a

phase of information processing in which communication content is transformed through objective and systematic application of categorization rules, into data that can be summarized and compared".

Bernard Berelson defined the term Content Analysis as, "It is a research technique for the objective, systematic and quantitative description of the manifest content of communication".

Krippendoff, Klaus stated, "Content Analysis is a research technique for making replicable and valid inferences from texts (or other meaningful matter) to the contexts of their use".

2. OBJECTIVES OF THE STUDY:

The main objective of the study is to analyze contents of the PLANNER proceedings. The specific objectives are as follows,
a) To observe distribution of proceedings according to year, place, host, organizing secretary, director and theme;
b) To analyze number of papers in proceedings;
c) To examine authorship pattern of publications;
d) To find out degree of collaboration;
e) To know gender wise contribution;
f) To investigate geographical distribution of contributors;
g) To evaluate the contribution from North Eastern States;
h) To study most used subjects/subject headings.

3. LITERATURE REVIEW:

Thesis by Kulkarni (2011) titled "Mapping CALIBER, NACLIN & IASLIC Proceedings: A Scientometric study unpublished thesis submitted to Dr. Babasaheb Ambedkar Marathwada University, Aurangabad was beneficial for planning and writing this paper. An article Content analysis: A useful methodology by M. B. Kedar and M.N. Shewale (2015) also found useful for conceptual information. Research Paper Content analysis of the Journal of counseling psychology by Buboltz and others (2010) provided depth theoretical and analytical subject background. Smeaton, Keogh, Gurrin, McDonald, & Sødring (Smeaton, Keogh, Gurrin, McDonald, & Sødring, 2003) explained the authorship pattern in their research article.

4. SCOPE AND LIMITATION OF THE STUDY:

Libraries play a very important role in the providing services to the users. Therefore library science is an important area of the study. There are large numbers of various types of literature published in this field. Up till now from 2003 to 2016 total 10 PLANNER conventions are organized by INFLIBNET and various North-Eastern Institutes during this period. For this study researchers have taken "Promotion of Planning for Library Automation and Networking in North Eastern Region" (PLANNER's) Eight proceedings from 2004-2014. All proceedings data collected from the INFLIBNET's Institutional repository. Out of 10 PLANNER's proceedings only 8 proceedings (Except 2003 and 2016) are taken for this study.

5. DATA COLLECTION AND METHODOLOGY:

In the present study, the PLANNER proceeding's papers have been analyzed with the help of content analysis methodology. Content analysis is a research technique used to make replicable and valid inferences by interpreting and coding textual material. By systematically evaluating texts (e.g., documents, oral communication, and graphics), qualitative data can be converted into quantitative data. Although the method has been used frequently in the social sciences, only recently has it become more prevalent among organizational scholars. (TCB, 2016)

All 8 PLANNER's proceeding's contents are taken from INFLIBNET's Institutional Repository (INFLIBNET, 2016). Searched all concern articles published in PLANNER's proceedings and all articles entries are doing in Microsoft Excel. All entered data are analyzed and kept in tabulated form.

It is convention organizing in the collaboration of North-East regional educational institute. Convention

helps to user, service providers, LIS professional to involving in Library automation and networking in North-East India.

6. RESULTS OF ANALYSIS:

Following details of all planners organized in North-East area in collaboration of INFLIBNET. Table 1 shows that INFLIBNET Centre is organized PLANNER conventions from 2003 with the collaboration of North Eastern State's educational Institute. Up to 10 Planner conventions are organized in following States: These are Assam (4), Meghalaya (2), Manipur (1), Mizoram (1), Nagaland (1) and Sikkim (1). But Tripura and Arunachal Pradesh states are not hosting Planner Convention till date.

Table 1 Detail of PLANNER

Year	Name of Host Institute	State	Organizing Secretary	Coordinator/ Convener, INFLIBNET	Theme
2003	North Eastern HiII University	Meghalaya	Mrs. I. Majaw	Mr. K Prakash	Automation of Libraries in North Eastern Region: Trends Issues and Challenges
2004	Manipur University, Canchipur	Manipur	Mr. Ch. Radheshyam Singh	Mr Prem Chand	Creation, Management and Access in Network Environment
2005	Assam University, Silchar	Assam	Sh. V. D. Srivastava	Mr . H.G. Hosamani	Digital Collection Management and E-journal Management in Libraries
2006	Mizoram University, Aizawal	Mizoram	Prof. Pravakar Rath	Mr. Prem Chand	Digital Preservation, Management and Access to Information in the Twenty First Century
2007	Gauhati University, Guwahati	Assam	Dr. Narendra Lahkar	Mr H.G. Hosamani	Library as a Global Information Hub :Perspective and Challenges
2008	Nagaland University, Dimapur	Nagaland	Dr. T. Temjen	Mr Manoj Kumar K	Open Access, Open Source and Open Libraries(O3)
2010	Tezpur University, Tezpur	Assam	Dr. Mukesh Saikia,	Mr H.G. Hosamani,	Re-engineering of Library and Information Services in Digital Era
2012	Sikkim University Gangtok	Sikkim	Dr. Tamal Kumar Guha	Mr Ashok Kumar Rai	Building Participatory Library Services in Digital Era
2014	Dibrugarh University, Dibrugarh	Assam	Dr. Utpal Das	Mr. Abhishek Kumar	Capacity Building in Library and Information Services
2016	North Eastern HiII University	Meghalaya	Dr. F. R. Sumer	Sh. H. G. Hosamani	Disruptive Innovations for Libraries: Adopt, Adapt and Evolve

[Source: Annual Report of INFLIBNET Centre (From 2003-04 to 2014-15) (INFLIBNET, Annual Reports, 2003-04 to 2013-14)]

6.1. No. of articles/papers published in Planner

Figure 1 No. of articles/papers published in Planner
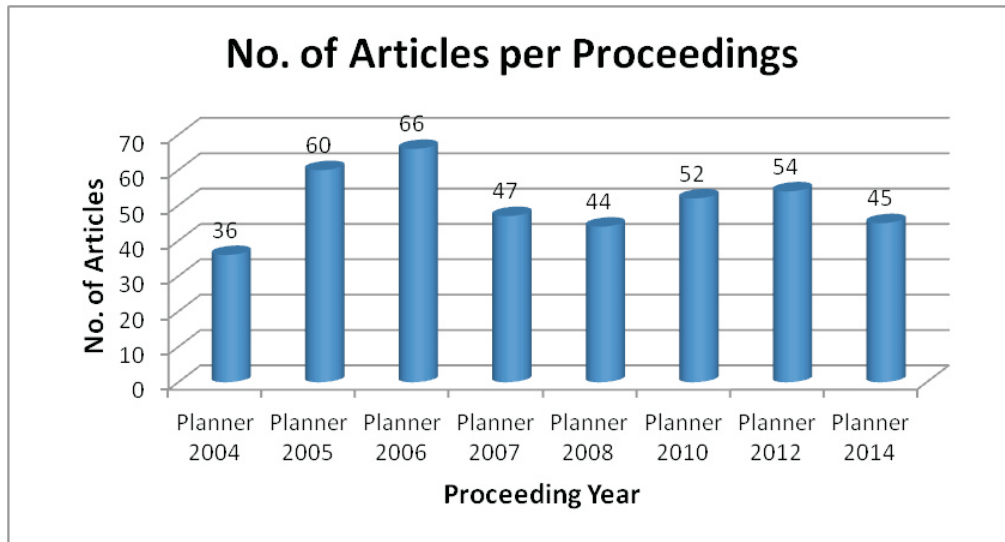

No. of Articles per Proceedings

Figure No. 1 shows that total 404 papers are published or included in the 9 PLANNER's proceedings during the 2004-2014. Out of 404 papers minimum papers are included in Planner 2004 i.e. 36 and maximum papers in Planner 2006 i.e. 66. Total 404 papers are selected for publication in 8 conventions. So, Average 50 articles/papers are published in proceedings per convention

6.2. Year Wise and Proceedings wise Articles/Papers

Table 2 Year Wise and Proceedings wise Articles

Proceedings	No. of Articles	% of published Articles	No. of Contributors	Average Contributors per Article
Planner 2004	36	8.91%	71	1.97
Planner 2005	60	14.85%	113	1.88
Planner 2006	66	16.34%	113	1.71
Planner 2007	47	11.63%	76	1.58
Planner 2008	44	10.89%	95	2.16
Planner 2010	52	12.87%	99	1.90
Planner 2012	54	13.37%	107	1.98
Planner 2014	45	11.14%	83	1.80
Grand Total	**404**	**100.00%**	**757**	**1.87**

Figure No. 1 shows that 9 PLANNER Proceedings are took for the study. Total 404 papers are published or included for the proceedings during the 2004-2014. Out of 404 papers minimum papers are included in Planner 2004 i.e. 36 (8.91%) and maximum papers in Planner 2006 i.e. 66(16.34%).

Table No. 2 shows No. of Authors contribution and average no. of authors per paper per year. Maximum authors contributed in Planner 2005 i.e. 113 Authors and Planner 2006 i.e. 113 Authors and minimum contribution of authors in Planner 2004 i. e. 71 Authors.

Also Table No. 2 explored the maximum average of contributors in Planner 2008 i.e. 2.16 authors per paper and minimum average contribution in Planner 2007 i. e. 1.58 authors per paper.

6.3. Authorship Pattern

Table 3 Authorship Pattern

Planner	Authorship Pattern					Grand Total	Degree of Collaboration
	Single	Two	Three	Four	Five		
Planner 2004	12	15	8	1		36	0.67
Planner 2005	25	21	10	4		60	0.58
Planner 2006	31	24	10	1		66	0.53
Planner 2007	28	12	6		1	47	0.40
Planner 2008	13	19	6	4	2	44	0.70
Planner 2010	17	24	10	1		52	0.67
Planner 2012	22	15	13	4		54	0.59
Planner 2014	14	26	5			45	0.69
Total Articles	**162**	**156**	**68**	**15**	**3**	**404**	0.60
%	**40.10**	**38.61**	**16.83**	**3.71**	**0.74**	**100**	

Table No. 3 shows the authorship patterns of research publications. It could be noted that Single authored papers rank first in order sharing 40.10% the next place is recorded by two authored papers sharing 38.61% of the total research contributions. Three authored contributions take that third position in order occupying 16.83% of the total research output during the study period followed by Five authored 0.74%. A significant note of the study is that the majority of the publications are contributed by multiple authors. It indicates that the single authored work is less than that of the multiple authored contributions. 242 (59.90%) papers are Multi authored and 162 (40.10%) papers are single authored. It means collaborative research is done

6.4. Degree of Collaboration

The degree of collaboration is defined as the ratio of the number of collaborative research papers to the total number of research papers in the discipline during a certain period of time. The formula suggested by Subramanyam (Subramanyam, 1983)is used in this study. It is expressed as where;

$$C = \frac{N_m}{N_m + N_s}$$

C is the degree of collaboration in a discipline. Nm is the number of multi-authored research papers in the discipline published during a year. Ns is the number of single authored research papers in the discipline published during a year.
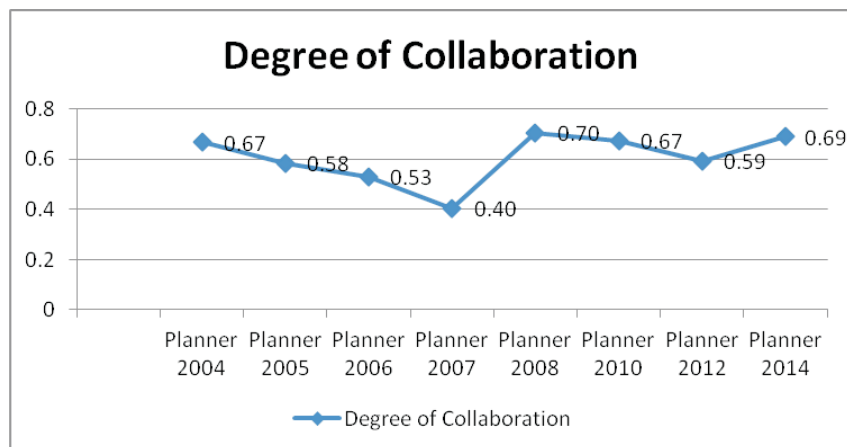
Figure 2 Degree of Collaboration

Figure 2 shows that degree of collaboration in Planner conventions proceedings. Degree of collaboration is in 2004(0.67) and 2014(0.69). Average degree of collaboration is 0.60. It observed that degree of collaboration is collaborative efforts among the researchers.

6.5. Gender wise contributors
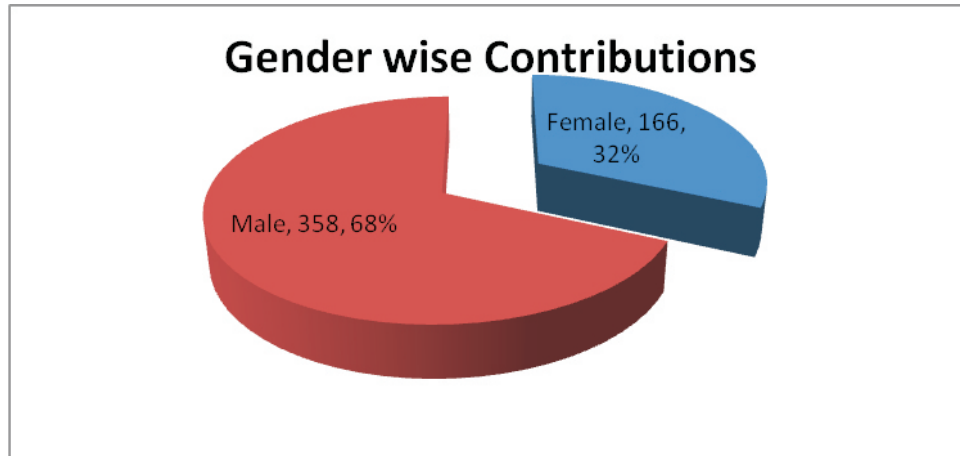
Figure 3 Gender wise contributors

Figure 3 is shows that total 524 authors are contributed in 404 papers during the 2004-2014 Planner conventions. Out of these maximum contributors are males i.e.358 (68%) and Females are 166(32%).

6.6. Top Ten Authors

Table 4 Top Ten Authors

Name of Author	No. of Contributions
Devi, Th Madhuri	11
Murthy, T. A. V.	10
Singh, Ch. Ibohal	10
Devi, Th. Purnima	9
Chand, Prem	8
Saha, Nimai Chand	6
Singh, Sanjay Kumar	6
Lahkar, Narendra	5
Deka, Dipen	5
Mudhol, Mahesh V	5

In this study total 524 contributors are contributed 404 papers in Planners. Out of those Th Madhuri Devi is contributed 11papers. So, she is on first position. On second position are T. A. V. Murthy and Ch. Ibohal Singh. Both are contributed 10 papers each. Total 753 contributors are count in whole study but out of these contributors unique authors are 524.

6.7. Top Ten Institution's Contribution:

Table 5 Top Ten Institution's Contribution

Name of Institute	No. of Contributors
Manipur University, Imphal.	21
Guwahati University, Guwahati	20
INFLIBNET	19
Assam University, Silchar	18
Jadavpur University, Kolkata	8
University of Dhaka, Dhaka	7
North Eastern Hill University, Shilong	7
Visva-Bharati, Kolkata	6
Anna University	6
IIT, Guwahati	6

Table 5 shows that top ten institution's in contribution. In this study total 232 institutions are count. 21 contributors are from Manipur University. It is on first position. Guwahati University (20 Contributors) is on Second position and on Third position is INFLIBNET Centre (19 Contributors).

6.8. Top Ten Designation and Affiliation wise Contributors:

Table 6 Designation wise and Affiliation wise Contributors

Designation	Types of Institutes						Grand Total	%
	College	IITs	Research Institute	School	University	NM		
Librarian	53	3	22	14	26		118	**22.52**
Asst Librarian	10	6	18		43		77	**14.69**
Research Scholar	1		1		43		45	**8.59**
Lecturer	1				28		29	**5.53**
Scientist			23				23	**4.39**
Lib Assistant	1	4	3		9		17	**3.24**
Dy Librarian		1	1		14		16	**3.05**
Asst Professor	1		1		13		15	**2.86**
HOD			2		11		13	**2.48**
Other Desig.	4	3	27		57		91	**17.37**
Not Mentioned						80	80	**15.27**
Grand Total	**71**	**17**	**98**	**14**	**244**	**80**	**524**	**100.00**
%	**13.55**	**3.24**	**18.70**	**2.67**	**46.56**	**15.27**	**100.00**	

Table 6 revels distributions of designations and affiliation wise contributors recorded in Planner. In this study total 41 types of designation wise contributors are found. Only top ten designation's records (353 contributors) are given in the table. 31 designations (91 contributors) are given in other designations. And 80 contributors are not mentioned his designations and affiliations in the papers.

In this study top ranked designation's of contribution is Librarian i.e. 118(22.52) followed by Assistant Librarians i.e. 77(14.69%) and Research Scholar 45 (8.59%).

In this study following types of institution's contributors are contributed in the Planner: 244(45.56%) contributors from University Libraries , 98 (18.70%) contributors from Research Institute's Libraries, 71(1.55%) contributors from College Libraries, 17 (3.24%) contributors from IIT's Libraries, 14 (2.67%) from School Libraries and 80(15.27) contributors are not mentioned their affiliations.

6.9. Country wise distribution of contributors

Figure 4 Geographical distribution of Contributors
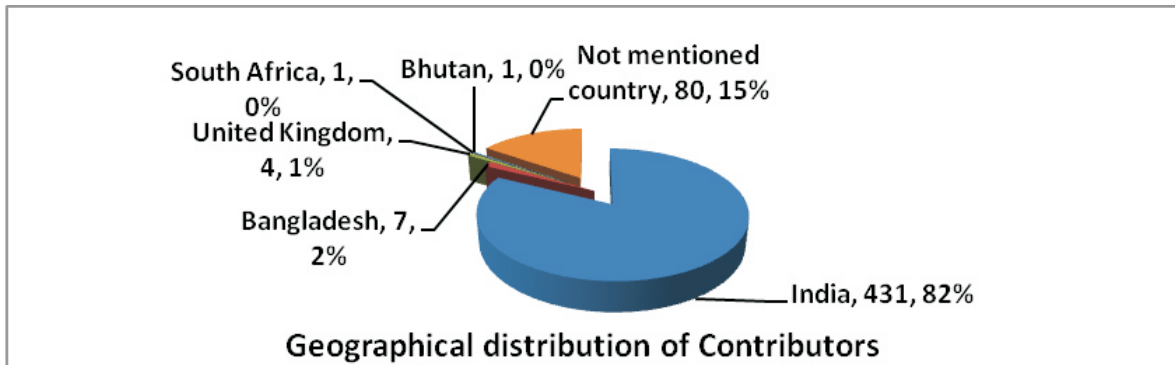

Geographical distribution of Contributors

Figure 4 shows that geographical distribution of contributors. Out of 524 contractors Indian contributors are contribute maximum papers 431(82.25%) Contributors from India, 7(1.34%) contributors from Bangladesh, 4 (0.76%) contributors from United Kingdom, 1(0.19%) contributors from South Africa and Bhutan each and 80(15.27%) contributors are not mentioned their country in the paper.

6.10.   State wise distribution Contributors

Table 7 State wise distribution of contributors

State	Total Contributors	State	Total Contributors
Assam	**108**	Madhya Pradesh	6
West Bengal	46	Jammu and Kashmir	5
Gujrat	45	Rajasthan	5
Karnataka	36	**Sikkim**	**4**
Maharashtra	28	Punjab	4
Manipur	**26**	Chandigarh	3
Tamil Nadu	20	Uttarakhand	3
Delhi	20	Himachal Pradesh	2
Uttar Pradesh	17	Pondicherry	2
Andhra Pradesh	13	**Nagaland**	**2**
Odisha	10	Bihar	1
Meghalaya	**9**	Jharkhand	1
Kerala	7	**Arunachal Pradesh**	**1**
Mizoram	**7**	Haryana	1
		Total Contributors	**431**

Table 7 shows that state wise contributor's record. 29 States and 7 Union Territories are in India. Out of these state and union territories 25 states and 3 Union Territories contributors are contribute in Planner. Maximum 108 contributors are from North Eastern State Assam, followed by West Bengal 46 and 45 contributors from Gujrat.

From North Eastern States contributors are Assam (108), followed by Manipur (26), Meghalaya (9), Mizoram (7), Nagaland (2) and 1 contributor from Arunachal Pradesh. A contributor from Tripura State is not found in the Planner. Sikkim (4) is North East and Himalayan State. Out of 431 Indian Contributors 157(36.43%) Contributors are from North East States.

6.11.Top Ten Subject headings

Table 8 Top Ten Subject Headings

Top Subject Headings	Planner 2004	Planner 2005	Planner 2006	Planner 2007	Planner 2008	Planner 2010	Planner 2012	Planner 2014	Grand Total
Digital library	10	1	9	7	4	7	1	3	42
E-Resources		3	1	1	5	5	2	5	22
Open Access	1		7	1	8	1	2		20
Institutional Repository	2	1	4	1	7	2		2	19
Internet		2	1	5	1	5	2	2	18
Digital Preservation	3	1	7			2	2	3	18
Digitization	5	2	7	1	1	1		1	18
Web 2.0					2	6	8	1	17
INFLIBNET	6	2	4	2		1	1	1	17
Knowledge Management	3	5		4		1	2	1	16

In this study total 1575 key words/subject headings are found in all Planner proceedings. Only top ten most used subjects are given in Table 8. Maximum 42 times Digital Library word is used in key words, followed by E-resources (22), and Open Access (20).

7. CONCLUSION

Proceedings are the best platforms in scholarly communication. Content analysis of PLANNER proceedings revealed that the proceedings cover wide range of authors from India and abroad and discussed latest concepts. Content and citation analysis studies needs to be undertaken for various conference proceedings in Library and Information Science. Findings of this study are that total 404 articles published in the proceedings. 757 authors are contributed in these publications. 162(40.10%) articles are single authored and 242(59.90%) articles are written by multi-authored. Average degree of collaboration is 0.60. Total 524 unique contributors are found in this study. Maximum contributors are male authors' i.e.358 (68%) and Females authors are 166(32%). out of these contributors 431(82.25%) authors from Indian and 93(17.75%) authors from foreign. From North Eastern States contributors are Assam (108), followed by Manipur (26), Meghalaya (9), Mizoram (7), Nagaland (2) and 1 contributor from Arunachal Pradesh.

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