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Computerization and its impact in technical library system

RESEARCH PAPER

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ABSTRACT

Computerization has affected all aspects of public life and professional activities. Libraries, particularly those associated with technical Institutions have benefited from the trend of computerization. In the present study the phenomenon of computerization is sought to be described in specific terms with reference to a number of libraries surveyed, the extent of computerization has been estimated, taking into account the various functions performed by libraries. With this background, the expected improvement in efficiency and quality is examined, consequent to computerization.

Key Words: Computerization, Information technology, Particular library

INTRODUCTION

Impact of Information Technology:

To quantify the impact of information technology on library management the following information was considered relevant

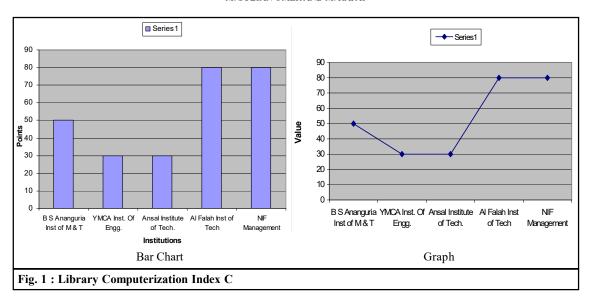
- 1) Computerization of office
- 2) Computerization of acquisition interface
- 3) Institutional networking
- 4) Interdepartmental networking
- 5) Users' membership record
- 6) Computerization of circulation services
- 7) Computerization of cataloguing
- 8) Classification software scheme
- 9) Availability of e-journals
- 10) Availability of CD ROM

Each of the above points were allotted 10 marks. The computerization status of a given library was therefore calculated on a 100 point scale. The score is donated by the symbol C. The symbol C is Library Computerization Index. It gives an estimate of the impact of computerization on a particular library.

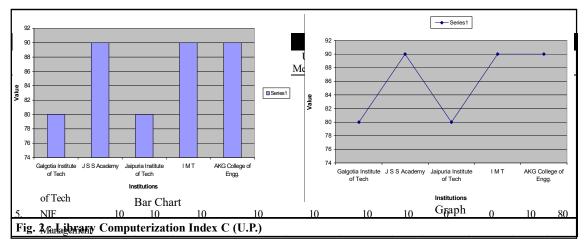
The Table 1, 2,3, bar chart Fig 1.2,3 and graph Fig 1.2, 3 are shown representing the values of C in State of Haryana, U P and Delhi.

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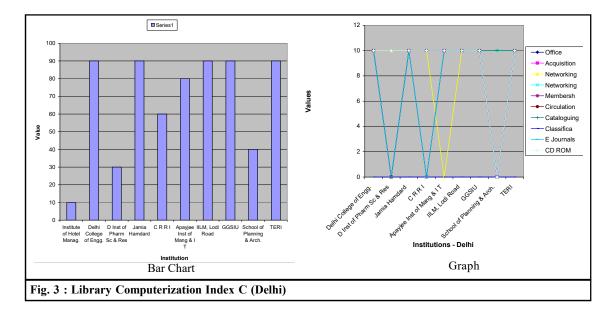
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Sr. No.		Office	Acquisi	Institutional Networking	Interdepart Networking	Users' Membersh	Circulation	Catal	Classifica	E Journals	CD ROM	Total Pts
1.	Galgotia	10	10	0	10	10	10	10	0	10	10	80
	Institute of											
	Tech											
2.	JSS	10	10	10	10	10	10	10	0	10	10	90
	Academy											
3.	Jaipuria	10	10	10	10	10	10	10	0	10	0	80
	Institute of											
	Tech											
4.	I M T	10	10	10	10	10	10	10	0	10	10	90
5.	AKG	10	10	10	10	10	10	10	0	10	10	90
	College of											
	Engg.											

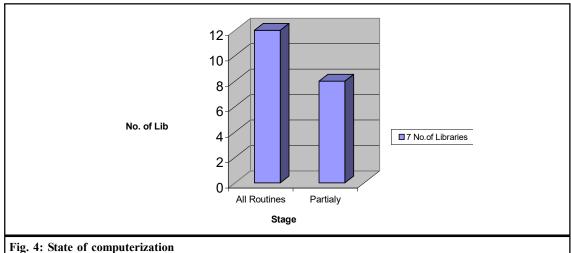


Sr.	le 3 : Delhi Comp Institute of Hotel			Institutional	Interdepart	Users'	Circulation	Catal	Classifica	Е	CD	Total
No.	Manag.			Networking	Networking	Membersh				Journals	ROM	Pts
1.	Institute of Hotel	10	0	0	0	0	00	0	0	0	0	10
	Manag.											
2.	Delhi College of	10	10	10	10	10	10	10	0	10	10	90
	Engg.											
3.	D Inst of Pharm	10	0	10	0	0	0	0	0	0	10	30
	Sc & Res											
4.	Jamia Hamdard	10	10	10	10	10	10	10	0	10	10	
5.	CRRI	10	10	10	10	0	10	0	0	0	10	60
6.	Apayjee Inst of	10	10	0	10	10	10	10	0	10	10	80
	Mang & I T											
7.	IILM, Lodi	10	10	10	10	10	10	10	0	10	10	90
	Road											
8.	GGSIU	10	10	10	10	10	10	10	0	10	10	90
9.	School of	10	0	10	10	0	0	10	0	0	0	40
	Planning and											
	Arch.											
10.	TERI	10	10	10	10	10	10	10	0	10	10	90



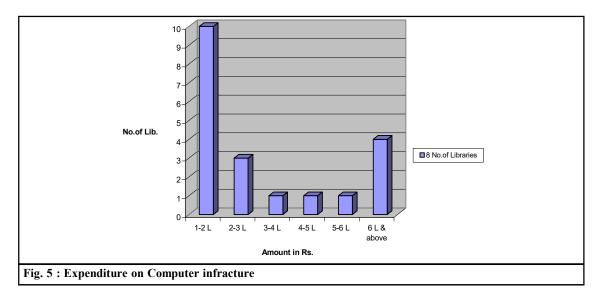
State of computerization:

Of 20 libraries surveyed in the study 10 libraries have fully automated all their functioning and 8 libraries have partially computerized their library routines. All 8 partially computerized libraries have their circulation system on the computer.



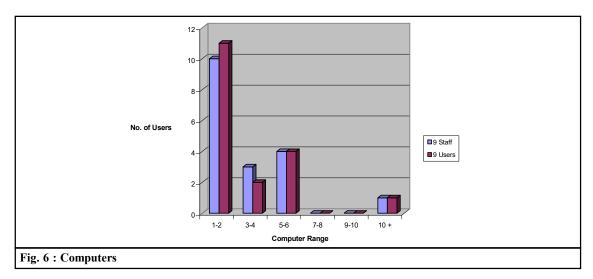
Expenditure on computer infrastructure :

Several institutions surveyed in the study take care of hardware requirement for the library at institutional level as such the libraries do not have the separate budget for purchase of computer infrastructure for their library. However budget is being allocated to the library specially for purchase and maintenance of integrated library software package. Moreover the budget allocation for computer infrastructure is of nonrecurring kind. The figure No. 5 is pictorial representation of budget allocated to 20 libraries surveyed in the study which ranges from 1 lac to 2 lacs incase of 10 libraries and 6 lacs and above in case of 4 libraries.



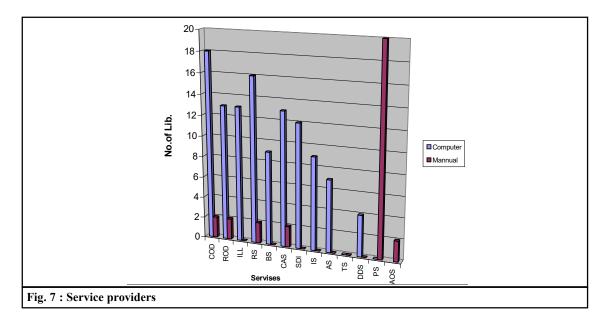
Number of computers:

While most libraries have 1 to 2 PCs only, that are equally distributed for staff and users. Only one library has more than 10 computers available for their staff and users, respectively. The Fig. 6 is pictorial representation of number of computers provided to staff and User in 20 libraries surveyed.



Services:

Of 20 libraries surveyed, all libraries invariably provide Circulation and Photo copying services. Of 20 libraries surveyed 18 libraries provides reference services, 15 libraries each provide Reservation of documents and Current Awareness Service, 13 libraries offer ILL and 12 libraries claim to provide Indexing and Abstracting services. None of the libraries amongst those surveyed provide Translation Services. Only 4 libraries provide Document Delivery Service. The Fig. 7 is pictorial representation to Services of 20 libraries surveyed.



Extent of computerization:

The extent to which specific libraries were computerized, was judged on a 100 point scale. The status of computerization was indicated by an index C.

In the state of UP; the average value of computerization index was quite high. The average

was 84 with a maximum variation of 6 from the average.

In the state of Haryana the average value was 54 and the variations was quite high. The variation in this region had a maximum value of 26 points. There are regions of Haryana, which show higher computerization tendency as compared to other region in the same state.

In Delhi, the average value of the computerization index was found to be 67. Variations were again large and in a particular institution, the computerization index had a very low value of 10 points.

On the whole, in the three regions studied the computerization index had very high values (they always exceeded 50%). Thus computerization is proceeding at a rapid rate.

Conclusion:

Finally it emerges from the study that computerization tends to have a beneficial impact on the quality status and efficiency of the functioning and management of a library as well as on the services that it provides. The impressions of library users tends to agree with these assessments. Hence computerization attempts need to be given encouragement and incentives.

Appendix above Questionnaire for Librarians:

1) Name of the Institution					_
2) Specific name of the Library, If	any				_
3) Name of the Person					
4) Designation and Grade					
5) Year of establishment					
6) Total Budget	a) Books	2002 (Rs.)	2004(Rs.)
b) Journals		2002(Rs.)	2004(Rs.)
7) Finance Received from:	a). UGC	2002 (Rs.)	2004(Rs.)
b). MHRD		2002 (Rs.)	2004(Rs.)
c) AICTE		2002 (Rs.)	2004(Rs.)
d). Institutional Budget		2002 (Rs.)	2004(Rs.)
e). Special Grant		2002 (Rs.)	2004(Rs.)
f) Marketing of Library Product	ts and Services	2002 (Rs.)	2004(Rs.)
g) Any other Source		2002 (Rs.)	2004(Rs.)
8) Total Number of Professional S	staff	2002 ()	2004 ()
9). Total Floor Area		2002 ()	2004 ()
10). Total Stacking Area		2002 ()	2004 ()
11). Scope for future extension of L	ibrary				
Vertically		Y()	N ()
Horizontally		Y()	N ()
12). Number of Reading seats in ea	ch reading room				
General Books Sections		2002 ()	2004 ()
Text-Books Section		2002 ()	2004 ()
Reference Book Section		2002 ()	2004 ()
Periodicals Section		2002 ()	2004 ()
13). In which year your libraries wa	s computerized		()	
14). What expenditure the Library h	nas made on:				
a) Software		(Rs.)	

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	b) Hardware		(Rs.)			
	c) Infrastructure		(Rs.)			
	d) Retro Conversion		(Rs.)			
	e) Training of Staff		(Rs.)			
15)	. How much expenditure Library has made	e on Up	gradatio	n of infr	astructi	ıre ()
	. From where the Library has received the	_	_			,		ĺ
	Agency	Ü	Year		Amou	ınt		
a)	UGC		()	()
b)	MHRD		Ì)	Ì)
c)	AICTE		Ì)	Ì)
_	Allocation from Institutional Budget		Ì)	Ì)
e)			Ì)	Ì)
f)	Marketing of Library Products and Service	es	Ì)	Ì)
,	Any other source		(Ó	()
-	Grant Library received for Up gradation		()	(ĺ
	. How Many Terminals are there for users	.	(Ć	•			,
	. What is the Hardware Configuration of s			,				
	. Is OPAC available in:							-
,	Cubicles		2002 ()	2004	()
Re	ading Rooms		2002 (í	2004	`		<u> </u>
	. Does the Library has separate reading ro	om	/Cubicle	es	200.	(,
21)	For faculty or Research Scholars	.0111	2002 ()	2004	()
22)	. If yes, Then each cubicles or reading roo	m for	2002 (,	2001	(,
	culty/Research scholar is equipped with Ter		2002 ()	2004	()
	. Do your Library do online acquisition also		2002 ()	2004	`)
	Does the software support the	,	2002 (,	2001	(,
21)	a). Barcode		()				
	b). MARC 21		()				
	c). CCF		()				
25)	. Do you acquire Periodicals Journals Thro	ough	(,				
23)	a). Indian Agents	ougn	()				
	b). Foreign agents		()				
	c). Sponsors		()				
	d). Publisher		()				
	e). Any other		()				
26)	. Number of Periodicals Subscribed		()				
20)		India	(Faraian		Total		
	3 1	muia (`	Foreign	`	Total	`	
	Primary 1992	()	(<i>)</i>	()	
	2002	()	(<i>)</i>	()	
C	2004	()	(<i>)</i>	()	
sec	condary 1992	(<i>J</i>	(<i>)</i>	()	
	2002	()	(<i>)</i>	()	
27	2004	(1 T :1.)	()	()	`
21)	a). No. of Full text Journals available in t		-			()
	b). Name of E journals databases Librar	y nas a	ccess					

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1.					
2.					
3.					
4.					
5.					
6.					
7.					
28). Do your library subscribe Periodical/Journal	1992	20	002	20	04
In print form	()	()	()
On CD ROM	(()	()
On Line	(()	()
Printed with CD ROM	(()	()
29). Has The Bar Coding of Books been done	`	(ĺ)	ŕ
30). What are the services and facilities provided	l by libra	ry to its:	reader	,	
Services	2002	-		Comp.is	used from
a). Circulation of Documents	()	()	()
b). Reservation of Documents	(()	()
c). Inter Library Loan		Ì)	Ì)
d). Reference Services		()	Ì)
e). Bibliographical Services	(()	()
f). Current awareness Services		()	()
g). SDI Services	(()	()
h). Indexing Services	(()	()
i). Abstracting Services	(()	()
j). Translation Services	()	()	()
k). Document Delivery services	()	()	()
1). Photocopying Services	()	()	()
m). any other Services	()	()	()
31). Does the Library has or connected to LAN	, ,	(,)	ŕ
32). Does the Library has CD Roam Facility	2002 ()	2	004 ()
33). Does the Library use:					
a). One Server	()			
b) More than one Server	()			
c). if yes to b, How many	()			
34). What is the configuration of the Server					
a) Processor Speed					
b). RAM					
c). Hard Disc					
35). Does the Library have converted some in ho	use colle	ction in	digital	form? ()
36). Does the Library has built up some digital Co	ollection			()
37). What is the name of software used for buildi	ing Digita	al Collec	ction		
38). From where the software has been acquired				Cost	
39). How Much Library has spent on digitization	in:				
1997, 1998, 1	999		_, 2000	0	,

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2001	, 2002	, 2003	, 2004	
40). Other a	ccessories required for	conversion from pr	int to digital?	
I	, ii	,	iii	
	, v		_, vi	
41). Any oth	er Information			
Name				
Signature				
Contact Nu	ımber			
Email				

REFERENCES

- Abdul, Hayee Sameni and Muhammad Mezbah-ul-Islam (2003). 'Automation of University Libraries in Bangladesh: Advancement of Shahjalal University of Science and Technology Library, Sylhet', PLANNER, Shillong, pp. 124-131.
- Afonso (2004). Application of Modern Technology to Public Libraries. Herald Library Sci., 43 (1-2): 81-90.
- Agila, V. (2001). Application of Information Technology in Modern Academic Library. *Library Progress* (*International*), **21** (1-2): 53-57.
- Ambia, G. (1992). Application of Computers in Different Areas of University Libraries', XXXVII All India Library Conference on Library and Information Technology in Pursuit of Excellence, Bhubaneshwar, pp. 73-75.
- Amudha, G. and Lawrence A., Mary (2009). Access to ICT in India and World', International Conference on 'Knowledge Networking in ICT Era', Chennai, pp. 175-183.
- Antony, Gracious F.L. and Jasmine Anne Shyla, F.L. (2009). 'ICT Technologies for Future Education, International Conference on 'Knowledge Management in ICT Era', Chennai, pp. 155-158.
- Babu, B. and Parammeswaran, R. (1999). Automation of public Library and Information Services in the Context of Electronic Information Era: Public Library Staff Opinion Survey'. *ILA Bulletin*, **35** (1-2): 1-4.
- Bansode and Periera (2008). A Survey of Library Automation in College Libraries in Goa State. Library Philosophy and Practice, http://www.Webpages,videho.edu/~mbolim/bansode-perierapdf.
- Barman, Hemant Kumar (2003). Library Automation and Retrospective Data Conversion of Dibrugarh University: A Case Study. PLANNER, Shillong, pp. 1-22.
- Birjit Singh, A., Ibohal Singh, Ch. and Madhuri Devi, Th. (2009). 'ICT Application in Libraries: Scenario in Manipur', National Seminar on Digitization and Networking of Library and Information Centres in North East India, Guwahati, pp. 122-129.
- Boralyan, R. and Ramadevi, K.A. (1995). Library Automation and Information Network System. *Library Progress (International)*, **15** (1-2): 17-21.
- Chauhan, S.K. and Murthy, T.A.V. (2004). Application of information and Communication Technology (ICT) in Information Management', PLANNER, Imphal, pp. 132-140.
- Chopra, Y.L. and Mukherji (2000). 'Application of Information Technology in University Library Services of Jabalpur (Madhya Pradesh)', *Annals of Library Science and Documentation*, **47** (2): 49-51.
- Das, Thakuria and Borthakur (2011). How effectively ICT is being Used in College Libraries: A Case Study', National Seminar on Digitization and Networking of Library and Information Centres in North East

- India, Guwahati, pp. 131-140.
- Henry, N. Mendehsohn (1997). Services in Automated Libraries: Challenges and Opportunities. *IASLIC Bulletin*, **42** (1): 27-34.
- Ibohal Singh, Ch. and Khomdon Singh, Th. (2003). IT Application in University Libraries in North East India: A Study. PLANNER, Shillong, pp. 34-44.
- Imchen, T. (2009): Computer application in Academic Libraries in Nagaland', National Seminar on Digitization and Networking of Library and Information Centres in North East India, Guwahati, pp. 87-95.
- Jayprakash, M. and Balasubramani, R. (2011). Status of Automation University Libraries of Tamilnadu: A Survey. *European J. Scientific Res.*, **53** (1): 17-24.
- Joteen Singh, R.K. (2003). Status of Library Automation of Manipur University Library Under INFLIBNET Programme', PLANNER, Shillong, pp. 45-51.
- Kannappanavar and Chidanand Swamy, H.M. (2005). Application of information technology in Engineering Libraries in Karnataka, with Special Reference to KUVEMPU University Jurisdiction. *Indian J. Infn. Lib & Soc.*, **18** (2): 45-53.
- Kumar, Kishan (1980). Application of Computers: A Challenge for Change', ILA Bulletin, XVI (3-4): 122-129.
- Kumar, Santosh (2004). Automation of North Eastern Hill University: A Case Study of Tura Campus Library. *ILA Bulletin*, **40** (3): 32-36.
- Kundu, A.K. and Gupta, M. Das (2002). Inevitability of Information Technology in Library: A New Perspective. *Indian J. Inf. Lib. & Soc.*, **15** (3-4): 129-134.
- Lihitkar, Shalini and Rajayalakshimi, D. (2005). Computerisation of Nagpur University Library and Users Perception: A Case Study. *ILA Bulletin*, **41** (4): 5-14.
- Mange, Ram (2002). Information Technology in User Education. IASLIC Bulletin, 47 (3): 167-169.
- Mayuri, Medhi and Rupam, Deka (2011). 'Problems and Prospect of Automation in Public Libraries with Special Reference to District Library, Kamrup', National Seminar on Modernization of Public Libraries in India with special reference to North Eastern Region, Gauhati, pp. 271-278.
- Moorthy, A. Lakshamana (2004). 'Library Automation in India, In Horizon of Information Technology: New Age, New Wage Trend and Impact of Library Science', ed. Suryanath Singh, Inamdar Bandhu Prakashan, Pune, vol. 1, pp. 288-300.
- Murugan, K. and A. Lawrence, Mary (2009). 'Information and Communication Technology', 'International Conference on Knowledge Networking ICT Era', Chennai, pp. 164-167.
- Ochongwu, M.G. (1994). Modern Technologies in Information Management: Problems and Prospects for Nigerian Libraries. *Ann. Library Sci. & Documentation*, **41** (4): 152-154.
- Pandey, P.N. (2003). Automation of Kamala Nehru College Library: Experiences and Problems. *ILA Bulletin*, **39** (3): 37-39.
- Ramana, Y. V. 2004, 'Automation and Networking of Central Library of CSJM University, Kanpur: A Case Study', ILA Bulletin, vol. 40, no. 2, pp. 33-37.
- Rao, Ravichandra I.K. and Sainul Abideen, P. (1999). Features of Library Automation Software: A Comparative Study. *Library Science with a Slant to Documentation & Information Studies*, **36** (4): 211-228.
- Rimai, Atoring (2011). 'ICT: Modern Techniques in Public Library and Information Centers, National Seminar on Public Libraries in ICT Driven Knowledge Society', Imphal, pp. 61-67.

- Sampath, Kumar B.T. and Biradar, B.S. (2010). Use of ICT in college libraries in Karnataka. India: A Survey', Program. *Electronic Library & Information systems*, **44** (3): 271-282.
- Satyanarayana, M. (2005). 'INFLIBNET: Its Activities in Library Automation. IASLIC Bulletin, 50 (2):110-115.
- Saxena, S.C. and Mehta, S.N. (1990). Impact of new developments in information technologies on library/information professionals in the library/information centre management. Status and authority of library profession in library management', IASLIC Bulletin, pp. 39-42.
- Shahnaz, K. (2012). Use of Information and communication Technology (ICT) in Collection Development in Scientific and Research Institute Libraries in Iran: A Study. *Internat. J. Advancements Res. & Technol.*, **1** (3):1-15.
- Shakuntala, Lomte, Veena, Kumble and Shaista, Parveen (2009). Impact of Information and Communication Technology on Libraries and Library Professionals in Aurangabad City. International Conference on Knowledge Networking in ICT Era' Chennai, pp. 146-150.
- Singh, Sonal and Saroja, K.G. (2006). Information Technology and Rural Library. *Indian J. Inf. Lib. & Soc.*, **13** (3-4): 86-89.
- Sinha, Manoj Kumar and Satpathy, Kishor Chandra (2004). 'Library Automation and Networking for Managing Library and Information Services. *Indian J. Infn. Lib & Soc.*, **17** (3-4): 118-130.
- Sivasankari, R., Thilagavathy, N. and Nithyanandam, K. (2009). Implementing Information and Communication Technology in Public Libraries of North West and Central Chennai. International Conference on 'Knowledge Management in ICT Era' Chennai, pp. 205-211.
- Stephen, T. and A. Lawrence, Mary (2009). 'Role of ICT in the Development of Libraries', International Conference on 'International Conference on Knowledge Networking in ICT Era' Chennai, pp. 180-183.
- Sundarajan, S.G. (2009). 'Implementation in Academic Library: An Empirical Study on an Engineering College Library', 'International Conference on 'Knowledge Networking in ICT Era', Chennai, pp. 175-183.
- Vaishta, Seema (2007). Automation and Networked Services: A Case Study at the Technical Deemed University Libraries in North India. *IASLIC Bulletin*, **52** (2): 120-126.
- Veerajaneyulu, K. and Devi, Uma (2004). Computerization of acquisition system with SOUL software. *Indian J. Inf. Lib & Soc.*, **17** (3-4): 31-35.
- Veeranjaneyulu, K. and Narasimhulu, A. (2004). Application of Information technology in Acharya N.G. Ranga Agricultural University Library System. *Indian J. Inf. Lib. & Soc.*, **15** (3 4): 152 -156.
- Vijaya Kumar, A. (2007). Information Technology Past- Present and Future. *Indian J., Inf. Lib. & Soc.* **20** (3-4) : 107-112.
- Yadagiri, A. (1999). Application of Information Technology in the 4 Central Libraries, REC Warangal: A Case Study. *IASLIC Bulletin*, **44** (3): 111-115.
