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Attitudes towards Information Technology Adoption: A Study of Library Professionals in North East India

By

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ABSTRACT

The study identifies the importance of studying the attitudes towards information technology of library professionals working in North East. Empirical study cOllducted on the library professional working in North Eastern Part of India. The study is based on already developed and tested scales of attitudes towards computer and information technology. The five variables identified through factor analysis are anxiety, efficiency, work performance, use confidence and acceptance. A. Anxiety ranks the highest variable of attitudes towards information technology. Most of the socio economic variables do not show any significance with attitudes towards infonnation technology except sex and working experience. The paper suggests adequate information technology infrastructuralfacilities, and training and education for information technology to library professional working in North East to become at par with the main stream.

KEYWORDS: Library Automation, Library Professional Attitudes, North East Libraries, Information Technology changes. Anxiety

0. INTRODUCTION

Application of information technology has brought about a tremendous development as well as challenge in the libraries. Many manual, strenuous and repetitive activities have been taken over by the information technology creating entirely new environment.. In this new environment, whereas handling, storing and dissemination of information has become efficient and effective but at the same time, it has generated fears and apprehensions among library professionals. Some of the recognised fears of technology among library professionals are fear of technology itself, cost of error, ability to learn, job security, reduced socialisation, big brother phenomenon and health effects (B~rgen, 1988). One of the worst fears during initial stages was about losing the job. This fear may have been overcome now but still library professionals fear that adoption of information

technology will change the nature of job as it will become more complex and demanding. Despite the widespread availability of information technology, many libraries particularly in North East do not gain the full benefit of it because some individuals resist using them. In fact, understanding why people accept or reject computers or technology innovations at work places has proven to be one of the most challenging issues in research. In response to this challenge, present study has been conducted to identify the attitudes of library professionals towards information technology. This study has been limited to library professionals working in North East India.

Most of the research on human attitudes towards technology emerged in the late 1970s and is still continuing. These relate to various fields like lawyers, doctors, accountants, physicians, pharmacists etc. During 1980s many studies were conducted to identify the attitudes of library professionals towards computers and information technology (Fine, 1979; Yaghmai, 1981; Prince and Burton, 1988; Waters, 1988; Jones, 1989, 1999; Yaacobs', 1991; Hauptman and Anderson,]994; Edwards et aI, 1995; AI-Zahrani, 2000; Bii and Wanyama, 2001). This brief review of literature presents conflicting views about the attitudes towards information technology adoptions in libraries. This may be because the studies have been conducted in different environments and different socio economic background of the respondents. In spite of this odd, still a few basic concl usions can be drawn from the above mentioned studies. These are as follows:

- Library professionals who are already working with automated systems or have some knowledge of technology are less resistant to technology. This means that professional qualifications and knowledge does show positive attitudes towards information technology
- The type of the library, sex and different managerial positions of the librarians' and experience on the job does not make any significant difference in attitudes towards information technology. Even though some studies show otherwise.
- There is a general feeling that challenges to library profession remain more or less the same with or without technology .
- The higher the age, the more chances of resisting technology innovations. More experienced professionals are *less* enthusiastic about new developments in information technology.

Other problems reported by the library professionals are lack of adequate information skills, ever-changing scenario of information technology developments and its applications in libraries and over inquisitive user with information technology related issues and problems.

It is also observed that attitudes towards information technology are gradually changing since 1970s.InitiaJIy it was the fear of computers, *anxiety* and losingjobs to computers. Now it is fear of keeping pace with latest developments in information technology and avoiding boredom and monotony due to daily exposure to same screen, instructions and procedures. Libraries in North East are still picking up on the adoption of information technology in the libraries. In this present scenario, objectives of this study are:

- To measure the attitudes of library professionals towards information technology

.:. To study the nature of relationship between attitudes towards information technology with socio-economic variables of library professionals working in North East..

1. METHODOLOGY

An initial survey of the libraries in seven states of North East, was conducted. These states are Arunachal Pradesh, Assam. Manipur, Maghalaya, Mizoram, Nagaland and Tripura, Out of 43 libraries, 22 libraries were identified having two or more professionally qualified persons and having some application of information technology. This was defined as having atleast one computer in the library. A total of 163 library professionals working in these libraries were administered a questionnaire having 81 items. Out of these 13 items were related to socio economic conditions of the respondents and rest 68 items were based on the scales developed and tested by Pereek et al (1979) "attitudes towards computer" and Nair (1998) "attitudes towards information technology". The scale items were based on five point Likret type rating ranging from strongly agrees to strongly disagree. Out of 163 respondents, 122 respondents returned back the questionnaire. After scrutiny, 19 were found incomplete and excluded from the final analysis. A matrix of 103 observations, thus selected was prepared against 81 variables. The various statistical analyses performed on the data using SPSS 7.5 version are factor analysis and analysis of variance (ANOYA). A total response rate was 63.19%.

2. RESULTS

A total of 68 variables were subjected to factor analysis with varimax rotation. A total of 21 factors were loaded mounting to 74.53% of variance. Out ofthese 21 factors only 10 were retained for the final analysis on the following criteria:

.:. Factor loading of each item was not less than 0.35;

.:. More than 3 items with above mentioned loadings were on one factor and

.:. Items having significant loadings on more than two factors were credited to the factors on which the loading was highest..

.:. The details of the factor loadings obtained are presented in table No: 1 Attitudes towards Information Technology: Factor Analysis Results" below:

Table 1. Attitudes towards information technology, factor Analysis Result

No	Items	Factors									
		1	2	3	4	5	6	7	8	9	10
01	I would like to use a computer	0.051	0.279	0.216	0.142	0.114	0.132	-0.029	0.270	0.442	0,078
02	Computers would be helpful in my line of work	0.052	0.577	0.166	0.077	0.024	0.063	-D.116	0.236	0.131	0.328
03	Machine response time of computers are very slow	0,182	0.084	0.176	0.250	0.004	-0.063	-0.008	-0,Q98	0.091	0,433
04	I would enjoy learning about the basics of computers and their abilities	0.004	0.030	0.195	0.056	0.027	-0.007	0.087	-0.111	0.799	-0.034
05	Computers are a great boon to humanity	0.202	0.386	0.054	0.077	-0.128	-0.214	0.348	-0.245	-0.080	0.243
06	The use of computers is a threat to the employee's position	-0.011	0.009	0.036	-0.024	0.035	0.786	0.149	0.007	0.155	0.OS3
07	In formation produced by computer is very accurate	0.184	-0.100	0.031	0.729	0.138	0.072	0.077	-0.mn	0.270	0.087
08	Information produced by computers is recent and timely	0.145	0.398	0.040	0.616	-0.203	-0.034	-0.026	-0.113	-0.104	-0.040
09	Computers in library are very difficult to use	0.258	-0.045	0.279	0.195	0.542.	0.142	0.130	0.106	-0.101	-0.029
10	The utility of computers is highly limited	0.252	0.090	0.279	0,Q75	0.185	0.116	0.391	0.240	0.063	-0.01 I
11	Computers might be useful but the results are not always encouraging	0.069	0.072	0.017	0.\83	0.351	0.222	0.131	0.066	-0.043	0,400
12	The use of computers goes against the interest of the employees and should not be encouraged	0.005	-0.010	0.320	0.207	0.023	0.606	0.026	-0.080	-0.140	0.030
13	Libraries in India are not ready for computers and will not be readY for Quite sometime	0.039	-0.052	0.049	0.200	0.452	-0.009	0.0125	-0.185	0.074	0.161
14	All li'braries should make use of computers as far as possible	0.146	0.210	0,407	Q.ll32	0.222	-0.097	-0.301	0.097	0.140	0.193
15	Computers have great uses in libraries because of its vast storaae capacity	0.129	0.110	0.734	0.144	0,Q78	0.034	-0.006	0.039	0.169	-0.089
16	If judiciously used computers can be useful in several areas of the library	0.068	0.058	0.782	-0.066	0.002	0.103	0.091	-0.152	0.050	0.043
17	Computers are 1oo expensive for a library because of its limited bud!(et	-0.090	0.021	0.158	-0.046	0,406	-0.024	0.062	-0.127	0.050	0.042
18	Computers are good for the library professionals but bad for the non-professionals	-0.069	0,035	0.051	0.032	0.760	0.081	-0.050	0,Q71	0.093	0.045

No	Items	Factors									
		1	2	3	4	5	6	7	8	9	10
19	The poor shape of academic and research libraries can be improved with judicious use of computers	O.J47	0.137	0.519	0.259	0.308	0.202	0.296	-0.129	0.106	-0.093
211	It is difficult to have access 10 computer services in my library	0.220	0.073	-0.178	0.095	0.393	0.259	0.161	-0.078	0.385	0.113
21	The use of computers in my library have made my routine tasks more stimulating	0.247	0.369	0.300	-0.002	0.040	0.06J	0.273	0.052	0.291	0.249
22	Computers have great potential for use in library clerical operations	0.209	0.161	0.429	-0.024	-0.042	0.057	0.155	-0.301	0.084	-0.041
23	I have been able to adapt to the changes brought upoo by the addition of computers to my present workplace	0.009	0.299	0.280	-0.029	0.434	0.014	0.087	0.110	0.509	0.296
24	The use of computers in the library and the effect on my position in the library is threatening	0.247	0.175	-0.059	0.095	0.047	0.590	0.092	0.129	-0.107	0.084
25	The pace with which computers are introduced and accepted in the library if frightening	0.107	0.036	0.104	-0.024	0.140	0.430	0.214	-0.105	0.076	0.037
26	Having computers in my workplace. I am more dedicated to the tasks that 1 have to perform	0.061	0.776	0.109	-0.066	0.081	-0.09J	0.009	-0.047	0.045	0.037
27	I am motivated to work more efficiently	0.051	0.822	0.J42	O.07J	-0.024	0.087	0.036	-0.104	0.089	0.091
28	Library professional wili need adequate training/knowledge in Information Technology in order to implement Information Technology successfully to library	0.494	0.128	0.257	-0.150	0.005	0.339	-0.160	0.184	0.107	0.005
49	Information Technology has greatly improved the existing condition of library services	0.503	0.345	0.170	0.034	0.463	-0.051	0.020	0.036	-0.039	0.078
30	Information Technology has enabled users to have greater access to more accurate information in the libraries	0.756	0.016	0.151	0.070	-0.022	0.009	0.030	0.093	-0.J60	0.OJ9
31	Resource sharing among different libraries has been greatly enhanced by application of Information Technology	0.759	-0.118	0.056	0.070-	0.009	0.010	0.056	-0.J85	0.085	0.279

No	Items	Factors									
		1	2	3	4	5	6	7	8	9	10
32	Information Technology has helped in saving the time of the users and library professional	0.645	0.316	0.222	0.039	-0.018	-0.036	0.125	0.146	0.094	-0.045
33	Information Technology has eliminated the dull, repetitive and routine work of the library professional	0.407	0.147	0.129	0.130	-0.041	0.146	0.074	0.086	0.151	-0.080
34	Information Technology has enabled users to have information at a shorter span of timc	0.574	0.3R6	0.116	0.192	-0.183	-0.032	0.093	-0.122	-0.096	-0.079
35	Information search and retrieval (eg. catalogue search) has become easy & fast because of Information technology in the libraries	0.669	0.261	0.082	0.198	-0.129	0.061	0.146	-0.104	0.026	-0.027
36	Lib. professional have become more efficient in their work and their performances have greatly improved because of the application of Information Technology	0.483	0.424	-0.027	0.375	0.083	0.040	-0.064	-0.042	0.146	-0.149
37	Library professionals are now more satisfied with their job on account of Information Technology	0.504	0.511	-0.229	0.197	0.041	0.070	-0.023	-0.012	0.022	-0.075
38	The introduction of Information Technology to libraries have paved the way for library professionals to provide efficient information services	0.213	0.374	0.023	0.396	-0.044	-0.035	-0.158	0.083	-0.037	0.139
39	Library professionals not skilled in Information Technology have lost their job, position, or displaced because of the influx of the new professionals (skilled in Information Technology) to libraries	0.045	-0.040	-0.017	0.021	-0.099	0.118	0.153	0.592	-0.102	0.036
40	Library professionals feel the their professional status has been enhanced because of Information Technology in their workplace	0.255	0.596	0.227	-0.059	0.076	0.196	0.168	-0.159	-0.096	0.045
41	A library having Information Technology facilities generates more interest and encourages more users	0.342	0.512	0.236	-0.028	0.192	0.102	-0.122	0.069	0.177	0.029

No	Items	Factors									
		1	2	3	4	5	6	7	8	9	10
42	Information Technology has improves the decision making process of the management and hence more efficient library management	**0.383**	0.221	0.264	0.056	0.107	0.118	0.162	-0.349	0.279	-0.079
43	Information Technology leaves no incentive for the progress of library professionals	-0.033	0.079	-0.100	0.240	0.191	-0.142	**0.438**	0.031	0.018	-0.174
44	Scientists and researchers are adequately served with the existing Information Technology facilities in the library	**0,438**	0.560	-0.147	0.115	0.068	-0.091	0.051	0.045	0.210	-0.040
45	Information Technology may cause a feel ing of personal inadequacy among the library profcssionals	0.343	0.038	-0.203	-0.012	0.217	0.184	0.298	**0.368**	0.066	0.103
46	Introduction of Information Technology in libraries may result in the reduction of the number of library professionals	-0.072	0.017'	-0.228	-0.094	0.[24	0.132	0.006	-0.017	-0.012	**0.708**
47	Information Technology will enable library professionals to have more free time to do more interesting and imaginative work. i.e.• more time for making decisions, planning and supervision	**0.573**	0.184	-0.106	0.069	0.311	0.088	-0.042	0.045	0.064	-0.210
48	Information Technology can force the complete retraining of the library professionals to do other duties more difficult than the routine ones	-0.023	-0.180	-0.JI9	-0.105	0.084	-0.094	-0.015	**0.772**	0.007	0.039
49	Information Technology can reduce the level and the quality of interpersonal communication	-0.123	0.114	0.233	0.161	0.130	0.038	**0.502**	0.157	0.079	0.199
50	Information Technology can change professional 'ten;torial' workplace to something uncomfortable, even alien	0,128	0.004	0.068	-0.021	-0.076	0.218	**0.820**	0.018	0.117	-0.042
	Eigenvalue	12.432	3.927	3.160	2.830	2.550	2.330	2.219	2.013	1,778	1.395
	Percentage of variance	18.282	5.775	4.647	4.162	3.749	3,427	3.263	2.960	2.614	2.052

Note: n = 103, Factor 1= Efficiency 1, Factor 2= Work Performance, Factor 3= Use Confidence, Factor 4= Efficiency 2, Factor 5= Anxiety 1, Factor 6= Anxiety2, Factor 7= AllXiety 3, Factor 8= Anxiety 4, Factor 9= Acceptance and Factor 10= Anxiety 5

It is clearly observed that out of 68 items, only 50 items have significant loadings on 10 factors with a total of 50.93% variance. It is also observed while naming the factors that there is overlapping among the factors. for example there are five factors related to anxiety and two factors related to efficiency. However there are one each factor for work performance, use confidence and acceptance . . In order to have clear results and better understanding, similar factors were merged together. The five final variables or factors for attitudes towards information technology are discussed below and presented in table no: 2 "Final factor analysis"

Table:2 Final factors obtained

Sl. No.	Name of Factor	Factors Emerged	No. of items loaded
1	Efficiency	Efficiency 1 +Efficiency 2	15
2	Work Performance	Work Performance	8
3	Use Confidence	Use Confidence	5
4	Anxiety	Anxiety 1 + Anxiety 2 + Anxiety 3 + Anxiety 4 + Anxiety 5	19
5	Acceptance	Acceptance	3

Factor 1: *Efficiency*

The term Efficiency is defined as "the ability of Information Technology in enabling library professionals to provide efficient information services, by providing accurate information to users at the shortest span of time". Fifteen items loaded on this factor. This factor emphasises role of information technology in efficiency of libraries.

Factor 2: *Work Performance*

Work Performance is defined as "the influence ofInformation Technology on the work performance of the library professionals by motivating them to be more dedicated towards work and thereby performing more efficiently. The terms lIsed here are motivation, dedication and stimulation, all emphasizing on performance.

Factor 3: *Use Confidence*

Use Confidence is defined as "the ability of library professionals to use Information Technology components in their workplace by being assured in the utility ofInformation Technology to perform various functions, hitherto done conventionally or manually".

Factor 4: *Anxiety*

Anxiety is defined as "fear, worry, threat or apprehension towards the use of Information Technology in the work place. It can be health anxiety, fear of Information Technology due to inexperience or lack of knowledge on Information Technology, being threatened by job insecurity/displacement,

being worried of additional workload and responsibility". The factor having highest number of loadings and mean value emphasis here is threat, fear and apprehension of information technology.

Factor 5: ***Acceptance***

Acceptance is defined as "adaptation to the Information Technology environment, by accepting Information Technology applications in the workplace, and thereby liking and enjoying the new environment". It is the least important factor and rates lowest among the five factors.
It was important to identify the relationship among the five variables of attitudes towards information technology. Pearson's coefficient of correlation was computed between the factors. Interco relations and mean scores of five variables of Attitudes towards Information Technology were computed and are presented in Table: 3 "Inter-correlation among factors".

Table No:3 "Inter-correlation among factors"

Sl.no	Attitudes	Efficiency	Work Performance	Use Confidence	Anxiety	Acceptanct:
I	Efficiency	X				
2	Work performance	0.662**	X			
3	Use Confidence	0.461 **	0.467**	X		
4	Anxiety	-0.352**	-0.342**	-0.377**	X	
5	Acceptance	0.318**	0.436**	0.469**	-0.414**	X
	No. of items	15	8	5	19	3
	Mean	28.48	16.65	8.42	47.45	5.26
	Rank	2	3	4	1	5

Note: n = 103, *P = < .01 and **P = < .005

Anxiety emerges as the factor having higbest mean value and ranks the first among five factors of attitudes towards information technology. Further, it can show significant negative relations with all other four factors. Thus it can be infeITed that if anxiety levels are higher, then Work Performance, Use Confidence, Acceptance and Efficiency are lower. The highest positive cOITelation between Work Performance and Efficiency shows that higher the work performance, higher is the efficiency on the job. This indicates that work performance, efficiency and use confidence go together. Even Anxiety level does not allow Acceptance of Information Technology as they are negatively correlated. Anxiety is rated as the top factor followed by efficiency, work performance and use confidence respectively. Acceptance is least ranked factor of information technology. This is also proved by many studies. Torkzadeh and Koufteros (1993) examined the change in attitudes namely 'Computer anxiety' that occur due to training intervention.

It was of interest to know weather any kind of relationship exists between attitudes towards adoption of information technology and socio econDmic variables of the respondents. Analysis of variance was computed between seven variables of socioeconomic variables namely age, sex, designation,

professional qualifications, academic qualifications, working experience in the library and the overall working experience. It is observed that most of the socio-economic variables do not shows any significance with attitude towards information technology. Age, designation, professional qualification, academic qualification and working experience in the present library shows no significance with any components of attitudes towards information technology. In the case of sex, significance can be observed with use confidence (f= 4.037). This shows that there are variations between male and female library professionals in relation to use confidence. Overall working experience in libraries show significance with anxiety (f= 1.998). This implies that there are variations among library professionals with different levels of overall working experience in relation to anxiety towards information technology. The remaining socio-economic variables do not show any significance with attitudes towards information technology, with the exception of sex and overall working experience in libraries where some variations are observed. Many studies have been conducted to see whether socio-economic variables namely, age, sex, designation, professional qualifications, academic qualifications, present working experience in library and overall working experience in libraries have any relationship with attitudes towards information technology. Loyd and Gressard (1984) have studied the effects of sex, age and computer experience on attitudes towards information technology. Speier et al. (2002) has also identified that relationship between ease of use and performance almost doubles across training intervention. Results are shown in table 4: "Socio-economic variables and attitude towards information technology: (ANOVA)" below

Table4: Socio-economic variables and attitude towards information technology: (ANOVA)

No.	Socio Economic Variable		Attitude towards information technoloty					df
			Anxiety	Efficiency	Work Perfo.	Use Conti.	Accept	
1	Age	f	0.927	0.781	1,046	0.913	0.827	6/96
		Sig	0,479	0.587	0,400	0,489	0.552	(2.1750) #
2	Sex	f	0.616	0.377	2.084	4.037	0,480	1/101
		Sig	0,434	0.541	0.152	0.047	0,490	(3.9201) #
3	Designation	f	1.148	1,488	2.240	1,136	1,894	4/98
		Sig	0.339	0.212	0.070	0.344	0.118	(2,4472) #
4	Professional qualifications	f	1.197	0.894	0.743	0.816	0.316	*21100*
		Sig	0.307	0,412	0,478	0,445	0.730	(3.0718)#
5	Academic qualifications	f	0.888	0.519	0,401	0.509	0,491	*21100*
		Sig	0,415	0.597	0.671	0.603	0.614	(3.0718) #
6	Working Experience in the present library	f	1,483	1,188	0.977	1,482	0.995	8/94
		Sig	0.174	0.315	0,459	0.174	0,445	(2.0164) #
7	Overall working Experience	f	1.998	0.625	0.911	0.627	0.568	8/94
		Sig	0.055	0.755	0.511	0.753	0.801	(2.0164) #

***P<.05, Bold marking = Calculated value, # = Tabulated value**

3. DISCUSSION & CONCLUSIONS

Among the five factors which emerge as the attitude towards information technology anxiety ranks among the first variable. Computer anxiety was also one of the most important variables reported in the literature. The term 'Computer Anxiety', has been associated with library professionals in recent literature to describe their attitude and behaviour towards integration of information and technology in a modern library. Numerous definitions have been proposed for the term 'Computer anxiety', for example, disabling levels of anxiety and internal dialog that belittles their ability and undermines their confidence "fears concerning the computer itself, that is, jargon, technological trends, the 'paperless society'; worries about damaging the computer; the showing an inability to type" is a second example offered by Ovens (1991). Jerabek et al. (2001) studied the relationships between 'computer anxiety' and 'library anxiety' and have stated that they have been sometimes hypothesized as emotional responses to new technology. They used two scales namely, Computer Anxiety Index and Library Anxiety Scale, which were multidimensional instruments that measured both anxiety and attitudes. Weil et al. (1987) have stated that "whether we call it 'computer anxiety,,' 'techno stress,,' or 'computer phobia,,' all estimates indicate that as many as one out of three adults suffers from aversive reactions to computers and computer-related technologies". Sievert et al. (1988) identified several factors that influence computer anxiety in library staff. The principal determinant was experience with a computer i.e., the degree to which the staff of the libraries were already familiar with and using computers and number of years worked in the library.

Various studies reporting the relationship between socio-economic relations and attitudes show conflicting results. Fine (1979) reported that age, working experience and designation were important variables in determining attitude towards computers, but Luquire (1983) stated that age does not show any significance with attitude computers while designation was an important variable in determining attitude towards computers. Sievert et al. (1988) showed that age, educational qualification and working experience influences attitude towards computers but designation does not have any significance in determining attitude towards computers and computer anxiety. In the same line, DuMont and DuMont (1989) concluded that designation shows no significance in determining attitude towards computers. Lee (1989) reported that attitude towards computers is influenced by educational qualification and working experience in the library whereas Su (1993) showed that working experience does not influence attitude towards computers but designation was an important variable in determining attitude towards computers and technology. AI-Zahrani (2000) reported that attitude towards Information technology is influenced by educational qualification. As mentioned earlier also that these differences may be due different environmental conditions. However, it is clear that some socio-economic variables do influence attitudes towards information technology. The present analysis shows that only sex and working experience makes a little difference as far as attitudes towards information technology is concerned.

4. SUGGESTIONS

The present study has shown that there are high levels of performance anxiety among library professional working in North East.. Studies of the effects of performance anxiety on computer tasks indicate that anxious individuals tend to engage in "debilitative" thoughts and statements, such as negative self-evaluation, expectations of failure, and distracting thoughts (Kupersmith, 1992). He further defines it as "a syndrome of physical and emotional exhaustion, involving the development of negative self-concept, negative job attitudes, and loss of concern and feeling for clients." Factors that can be responsible for this phenomenon are long-term stress, lack of autonomy and control, conflict between idealistic expectations and reality, impossibly heavy woi'kloads, and poor management and ignorance. In order to overcome this situation, following suggestions are made:

- Top priority should be given for cultivating positive attitudes towards information technology. This can be done by equipping library professionals with the latest knowledge on information technology. This can be further, achieved by given opportunities for library professional to attend in-service training and continuing education programmes in information technology .
- This can be achieved by identifying some departments in the region having infrastructure facilities to run regular summer courses in information technology. This will help as most of the library professionals find it difficult to attend such courses at far away places .
- The libraries should set realistic goals by knowing the weakness and strength of their organisations. Further, there is need for developing infrastructure in information technology in the libraries .
- The various libraries can develop some kind of cooperation to share the resources available. Some kind of organisational strategies can be developed in this regard especially for the North East..

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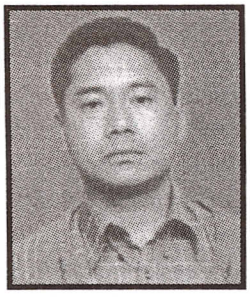

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