"ICT infrastructure in the college libraries of Dooars under North Bengal University"

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Abstract

Eniac Computer the first substantial computer was the giant ENIAC machine developed by John W. Mauchly and J. Presper Eckert at the University of Pennsylvania. Development of computers gone through the five generations, and came to the present position. Computer is such a machine which can calculate, process, store and retrieve information very first which human mind cannot do. The real revolution took place when IT came into existence. It is a combination use of computer, communication technology, multimedia technology, optical storage, networking, and barcode technology. Development of IT made easy to get information of any form sitting at home in just one click. Development of IT proves to be the boon for the library. Benefits of ICT use in the library are seen in library management and services. UGC has made provision of special grants for university and colleges to develop ICT infrastructure in the libraries.

Present study is conducted on ICT infrastructure in the college libraries of Dooars region under North Bengal University to discover how ICT has affected the overall performance; the results of the study have not found encouraging.

Keywords: College libraries, ICT, automation, computer, e-resources.

Introduction:

The history of electronic computers is not very much old; it came into existence in the early 1950s. Initially computers were regarded as machines for scientific and technical calculations, subsequently; business data processing on computers overtook scientific computing. In the recent years there is tremendous growth in personal computers. Computers connected to LAN and WAN are being perceived as very important commination medium for accessing wealth of information and utilize services available across the world. [1]

With the advent of Information and communication technology libraries of the world is automated their library to avoid repetitive clerical work. The function aspect of library and information

technology is the representation, storage and distribution of bibliographic objects in the digital forms. [2]

The main role of the library is to organize mediate access to information, are in a position to both contribute to and benefit from the development of and information network. Automation is a technique to make a system automated, i.e. self-active. Thus library automation means the application of machine to perform the different routine, repetitive and clerical jobs involved in functions and service of the libraries.[3]

"Nothing can be more damaging than to ignore it in library and to give a low priority. No new college, university or department should be opened unless adequate number of books in the library is provided". [4]

Study finds its cause to the hypothesis that the resources, facilities and services for application of IT in the selected libraries are developing stage and some are standing at far away from the IT revolution. Uneven development is seen in the sampled libraries. Libraries which are having basic ICT infrastructure are not being used up to the full extent.

Objective of the present study is to find the available condition of the libraries related to general information, ICT infrastructure, IT based services, staff quality, benefit of ICT application in the library, and different problems encountered adopting the ICT infrastructure in the libraries of the Dooars region under the North Bengal University.

Ten libraries were chosen on the basis of minimum library equipment which is needed to provide library services. Questionnaire was designed to interview the library professional. Personal observation, discussion and visits to the sites helped to correlate the necessary data to carry out the present study. Divulgence emerge form methodology was studied in the context of historical development of libraries to present condition. Questions helped the present study was implementation of ICT infrastructure facility, average subscriber, organizational sections, library services, ICT equipment's availability and fund allocation.

The images emerge from the selected library is that still forty percent libraries are in very poor condition, far away from the modern technology. Backwardness of place and the student's poverty and location of their house in very remote area causing less attended in the library causing barrier of development of the library. Libraries are still struggling in developing basic building and furniture infrastructure. Sixty percent of the libraries are automated and have acceptable infrastructure need to take proper use of it.

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Objective of the study:

The main aim of the present study was to know the existing conditions of the library its services, ICT infrastructure etc in the college libraries of Dooars region under North Bengal University. The objectives of the study are:

- ➢ Find out the present condition of the college libraries.
- ➢ Find out the ICT infrastructure facilities available in the colleges under the study.
- ➢ To know the application of ICT in the colleges under the study.
- ➢ To revel the benefit of ICT application in the college under the study.
- ➢ Identify what are the technologies are being used by the libraries under the study.
- ➢ To find out problems faced by the library professionals in the application of ICT.

Statement of the problem

Key factor for any research and development is information. Information is the main ingredient and essential to sustain in present world. Now day's owing to technological advancement like computer, internet and networking technologies, libraries have shunned the mantle of being repositories of books. Advanced technology has seen the introduction of electronic services in the libraries. Libraries become complete information Centre. [5]

It became an urgent need to conduct a study on availability of ICT infrastructure in the colleges to find out the benefit and shortcomings.

However, it is necessary to say that many studies have conducted but these are isolated or restricted to institution only. It has been noticed that ICT infrastructure facilities are developing very fast in other nations, where as in the colleges of Dooars region is satisfactory. The present study is made on the selected ten college libraries of Dooars region to identify present condition of ICT infrastructure facilities its proper usage and problems in developing ICT infrastructure in the library. Present topic has been considered for greater interest of Dooars region with expectation to render useful recommendation for the development of said field.

Methodology

For the present study questionnaire and observation survey method has been adopted for the preset research. Application of ICT in the selected college libraries of Dooares region were considered as dependent variable which are drawn on the basis of libraries characteristics, librarians and professional characteristics. Selected ten college libraries of Dooars region under the North Bengal University have considered on the basis of having minimum library facilities to render library

services. To carry out the research suitably structure questionnaire were designed and distribute and interview the library head or the in-charge of the library personally, normal discussion were made. Observation method are also adopted and verified with the reality by visiting the library sections which also help the researcher to relate with the data provided by library which were needed for the present study. Name of the selected colleges data are collected are Alipurduar College, Alipurduar Mahila Vidyalaya, Vivekananda College, Sahid kshudiram College, Birpara College, Falakata College. Lilabati College, Nani Bhatraycharya College. Parimal Mitra Smriti College.

Research tool (Questionnaire)

Following research questions have guided to accomplish the stated objectives.

RQl **- D**escription of selected college libraries under the study?

RQ2 **-** What were different levels of availability and utilization of ICT infrastructure in the college libraries?

RQ3 –Percentage of average users are using the college libraries?

RQ4 – How many organizational units were available in the college libraries?

RQ5 – What were the different kinds of collection were available in the college libraries?

RQ6 - Which library management software and type of computer systems were used in the college libraries?

RQ7 - What are the status in providing different library services to users in their college libraries?

RQ8 - Which are the methods used in delivery of documents in the college libraries?

RQ9 - How much IT equipment are being used in the college libraries?

RQIO - What is budget in the selected college libraries?

Study area

Present study includes sample selected college libraries of Dooars region Under North Bengal University.

Assumptions

It is assumed all the librarians of the selected colleges libraries of Dooars region under the North Bengal University are very much aware on importance of application ICT infrastructure in the libraries which are implemented in the library. It is also assumed that library professional will respond questions correctly, and they will answers questions honestly.

Findings of the study

For centuries the society in their various stages of development have prospects on the basis of scientific information and knowledge .Though the growth of new scientific information and

implication has been slow, but later years information has been recognized as deriving force for all human development owing to the adoption computers, internet and networking technology. [6]

The Dooars are covers mainly with forest and tea garden. Special dooars tea makes this place famous. During the British period Britisher brought different tribal labours from Nepal, Chota Nagpur and Santhal Parganas. This tribal people are Oraons, Mundas, Kharia, Mahali, Lohara, Chik Baraik and Santal. Before the settlement of other community this people converted the forest into villages and started living and forms majority of the population in the Western Dooars region.

The area is having several national parks and wildlife sanctuaries which attract a lot of tourists which contribute to the economy. [7]

It revolution in the colleges situated in this region is being sporadic then being consistent in uniformity. Information obtained from ten colleges libraries revealed that 30% libraries are set up after year 2001 which are in poor condition even proper libraries are not found. In 50% colleges are fully automated. In digital age many libraries are just acting as store house of books. Libraries are far away from the electronic information age. A finding from the following tables shows that technology so profoundly affecting the libraries which appear to be a distant cry for the libraries in Dooars region.

Each of the libraries drawn under study (Table-I) is in service for a long time to expose themselves to reach to the position of modern standard practice elsewhere in the globe.50% of the library was established in between 1950s to 1990s which is more than enough time to flourish.

Table-1	Status/ Year of establishment/ Size/ Staff pattern of library				
Sl.No.	Name of the colleges(Degree College)	NAC Status	Year of establishment	Size, Approx Sq.Ft	Staff pattern
1	Apd College	B+	1957	6000	P-2,NP-5
2	Falakata College	B+	1981	4000	P-1,NP-3
3	Vivekananda college	NA	1985	2000	P-1,NP-1
4	PMS Mahavidyalaya	C	1985	3000	P-1,NP2
5	Birpara College	B	1986	3000	P-1,NP-2
6	SKhudiram College	B	1996	4000	P-2,NP-2
7	NBS Mahavidyalaya	NA	2000	1000	P-1,NP-1
8	Alipurdur Mahila Vidyalaya	C	2007	3500	P-1,NP-1

| 9 | Shidhukhanu College | NA | 2010 | 800 | NP-1 |
| 10 | Lilabati Mahvidyalay | NA | 2013 | 900 | NP-1 |

Staff- P (Professional), NP (Non Professional)

ICT become common and necessary factor for the society. Every organizations and institutions in the world and in bigger cities are updated their organization with the modern equipment's related to ICT. Application of computer in the library not only save time and money for repetitive work but also it brings revolution in information science. Lackadaisical approach of heads of the colleges depriving libraries and users from the benefit of IT revolution.

Table-2	Library collection					
Sl. No.	Name of the colleges (Degree College)	Books	Journals /Periodicals	N-List	Microfilm/ Microfiche CD/DVD/ Cassette	Reposts/ monographs
1	Apd College	34600	780	Yes	-	-
2	Falakata College	19730	1356	Yes	-	-
3	Vivekananda college	13507	112	Yes	-	-
4	PMS Mahavidyalaya	16500	204	Yes	-	-
5	Birpara College	15000	302	Yes	-	-
6	Sahid SKhudiram College	13477	-	Yes	-	-
7	NBS Mahavidyalaya	8011	-	Yes	-	-
8	Alipurdur Mahila Vidyalaya	12400	78	Yes	-	-
9	Samuktala Shidhukhanu College	1383	-	Yes	-	-
10	Lilabati Mahvidyalay	1500	-	Yes	-	-

The Collection of books found in the sampled collages is ranges from over 1000 to a maximum up to 35'000. In 40% of libraries do not have collection of journals. 60% of college libraries have very less collection of journal up to 1500 which is very less to consider. Good things found in all the 100% library is that they have subscribed to INFLIBNET N-List Program. In 100% libraries do not have CD/DVD/Cassettes, Reports and monograph.

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Sl. No.	Name of the colleges(Degree College)	Remote area	Villages	Small towns	District town
1	Apd College				✓
2	Falakata College			✓	
3	Vivekananda college				✓
4	PMS Mahavidyalaya			✓	
5	Birpara College			✓	
6	Sahid SKhudiram College			✓	
7	NBS Mahavidyalaya			✓	
8	Alipurdur Mahila Vidyalaya				✓
9	Samuktala Shidhukhanu College	✓			
10	Lilabati Mahvidyalay		✓		

Selected libraries under the study location wise found that 80% libraries are located in the district towns and other small towns. 10% libraries are found in the remote area and 10% libraries situated in villages. Though it is seen that 80% colleges are situated in the towns but practically located in the remote area. These areas are far away from the cities which act as barrier in getting every facility quickly and easily. Table 2 indicated that only 20% colleges are located in the remote area and villages so the students of remote area and villages had to travel far to reach colleges.

Table-3	Status of daily visit to library by users						
Sl.No.	Name of the colleges(Degree College)	Student	%	Faculty	%	Non-Teaching	Total
1	Apd College	45	75	15	15	-	60
2	Falakata College	37	71	15	29	-	52
3	Vivekananda college	55	82	12	18	-	67
4	PMS Mahavidyalaya	35	79.5	09	20.5	-	44
5	Birpara College	38	76	12	24	-	50
6	SKhudiram College	47	83	10	17	-	57
7	NBS Mahavidyalaya	27	84	05	16	-	32

8	Alipurdur Mahila Vidyalaya	25	78	07	22	-	32
9	Samuktala Shidhukhanu College	20	87	03	13	-	23
10	Lilabati Mahvidyalay	25	83	05	17	-	30
Total average %		79.85%		20.15%			44.7

Above table 3 represents that total number of visitors in the entire college library per day in average are 447 and number of average users visit to library per day per college are 45.It is seen that 79.85% visitors of the libraries are students and 20.15% visitors are from faculty group.

In an average 45 users visiting a library represents unhealthy position of the library. Libraries are not able to attract users. It is also true that most of the students users are belongs to tribal and schedule cast and they live in very remote area and villages, they had to travel a lot to reach in colleges which causes shortage of user's time and act as barrier in proper utilization of the library.

Table-4	Organizational units					
Name of the colleges	Acquisition& Processing	Periodical	Administrative	Reference	Circulation	Computer search section
Apd College	Y	Y	Y	Y	Y	Y
Falakata College	Y	Y	Y	Y	Y	Y
Vivekananda college	Y	Y	Y	Y	Y	N
PMS Mahavidyalaya	Y	Y	Y	Y	Y	Y
Birpara College	Y	Y	Y	Y	Y	Y
SKhudiram College	Y	Y	Y	Y	Y	Y
NBS Mahavidyalaya	Y	Y	Y	Y	Y	N
Alipurdur Mahila	Y	Y	Y	Y	Y	Y

Vidyalaya						
Shidhukhanu College	Y	Y	Y	Y	Y	N
Lilabati Mahvidyalay	Y	Y	Y	Y	Y	N

Y for existing and N for not existing

In 100% sampled college libraries have the entire organizational unit required for running the library manually i.e. acquisition, processing, reference section, circulation section and management. But in information explosion age all the ICT facilities are become essential to provide speedy and modern services to users. In 60% of sampled college libraries have computer search section and have limited ICT facilities which are not enabling the libraries to provide full benefit to its users.

Table-5	ICT equipment's availability and usage					
Sl.No.	Name of the colleges	Software	Computers	Printers	Barcode Printer	Photocopy machine
1	Apd College	E-grnthalaya	09	03	01	-
2	Falakata College	Local	07	03	01	-
3	Vivekananda college	Soul	06	02	01	01
4	PMS Mahavidyalaya	Koha	05	02	01	
5	Birpara College	SOUL	16	01	02	01
6	SKhudiram College	Koha	05	01	-	-
7	NBS Mahavidyalaya	-	01	-	-	-
8	Alipurdur Mahila Vidyalaya	Local	03	02	01	01
9	Shamuktala Shidhukhanu College	-	01	-	-	-
10	Lilabati Mahvidyalay	-	01		-	-

Data in table number 2 depict that 100% library have computers. 80% libraries have printers and scanners, 20% library do not have printers lin the library.70% libraries have barcode scanner and 30% library do not have barcode scanner. 30% library have photo copy machine and 70% libraries do not

have photo copy machine in the library. IoT equipment's, camera, fax machine, LCD projector are not available in 100% library.40% libraries are not automated and deprived from the benefit of modern technologies in giving library services.

20% libraries are using Koha Library management software, 20% libraries are using Soul software, 20% libraries are using local software, 10% libraries are using E-Grantahalalya software and 30 libraries are not using any software.

Table-6	Application of IT in different area.					
Sl. No.	Name of the colleges	Classification	Cataloguing	Circulation	Information searching	Library management
1	Apd College	No	Yes	Yes	No	No
2	Falakata College	No	Yes	Yes	No	No
3	Vivekananda college	No	No	No	No	No
4	PMS Mahavidyalaya	No	Yes	Yes	No	No
5	Birpara College	No	Yes	Yes	No	No
6	SKhudiram College	No	Yes	Yes	No	No
7	NBS Mahavidyalaya	No	Yes	No	No	No
8	Alipurdur Mahila Vidyalaya	No	Yes	Yes	No	No
9	Shidhukhanu College	No	No	No	No	No
10	Lilabati Mahvidyalay	No	NO	No	No	No

From table number 2 we can see that all 100% libraries are manually doing classification and library management. 60% libraries have database searching facility but 40% library do not have such facility. 60% libraries are using ICT in circulation unit. We can notice that 60% libraries are automated but only selected area ICT application is done not all the section.

Table-7	Status of library services					
Sl. No.	Name of the colleges(Degree College)	Tex book, Journal, Ref. book	CAS/SDI/Indexing/Abstracting/	Internet facility	Database Searching	Reference service

		searching	Bibliography			
1	Apd College	✓	X	✓	✓	✓
2	Falakata College	✓	X	✓	✓	✓
3	Vivekananda college	✓	X	✓	X	✓
4	PMS Mahavidyalaya	✓	X	✓	✓	✓
5	Birpara College	✓	X	✓	✓	✓
6	Sahid SKhudiram College	✓	X	✓	✓	✓
7	NBS Mahavidyalaya	✓	X	X		✓
8	Alipurdur Mahila Vidyalaya	✓	X	✓	✓	✓
9	Samuktala Shidhukhanu College	✓	X	X	X	✓
10	Lilabati Mahvidyalay	✓	X	X	X	✓

✓ **(Tick)If available , X(cross)otherwise**

In 100% sampled college reading of text books, journals, reference books are available. Internet searching facility is available only to 70% of the college libraries. Indexing, abstracting service, bibliography service and SDI services are not available to 100% of the college libraries. In 100% of the sampled college libraries provide reference services to its users. From the above table it is clear that many of the important services are not provided by the sampled libraries only basic services are provided to its users.

Table-8	Library budget(2015-2020)	
Sl.No.	Name of the colleges	Average allocation of fund
1	Apd College	3.0 Lakh
2	Falakata College	2.0 lakh
3	Vivekananda college	75 thousand
4	PMS Mahavidyalaya	80 thousand
5	Birpara College	2.5 lakh
6	Sahid SKhudiram College	2.6 lakh
7	NBS Mahavidyalaya	35 thousand
8	Alipurdur Mahila Vidyalaya	1.3 lakh

9	Samuktala Shidhukhanu College	60 thousand
10	Lilabati Mahvidyalay	80 thousand

In five year(2015-2020) the budgetary outlay in 50% of the sampled colleges libraries range from approx. 1.5 lakh to 3.0 lakh and rest of the 50% sampled college libraries up to 1.0 lakh.

There is a disparity in the allocation of fund found in the libraries. Annual budgetary allocation in 50% colleges is very low which restrict the library to provide proper and basic services to the user.

Shortcomings

The present study revels the causes on the hypthesis that library resources, ficilities and services in the sampled college libraries are in benning stage of ICT application. It is seen that 60% of the libraries are fully autmated but libraries are using only cirlulation part. Other resouirces ICT resources are limited which causing the barrier to render full benefift of IT based library services.Thourh the internet facility and Wi-Fi connetivity is present in 60% of the library but the speed is so slow that it is very hard to get down load information from the internet. Most of the colleges are situated in towns and it is found that the students of these areas are belongs to the tible and schedule. Dooars region is sounded by rives forest and tea garde , users of these area mostly lives in the velleges and remote area and they need to travel a lot to reach the colleges whichtaking time to reach colleges and thus users don't have time to come to the libarary besides the normal classes. Library professionals are found trained but non –professionals staffs are untrined.

The objective of the present study were to find the present condition of ICT infrasturcture facilities in the college libraries fo Dooars region under the North Bengla univeristy, to find out the general information of the libraries , Usage of ICT in the library , Benefit found using IT by library professional and users its benefit, and what are the problems faced by the library professional at the time of adopting the ICT facilities in the library.

In a present world there seen a shift of humand and mareial development form manual to technological. Lackadaisical attitude on adoption of latest technology detectable in the libraries under study and it can be disatrous. As the libraries are regnaized as information centre and back bone of serserch and development, with out the recent speedly served information R&D is not possible. Application fo ICT is the media to transform the manual libraries in to IT based integrated library systm. 60% sampled libraries of Dooars regions are going through in first stage integated information systme and 40% of the libraries are found in such a position that even we can say it as library.These libraries collectiosn are even less then two thousnd, there is even found hving proper sitting place to read books. In all the libraries number of user per day found very less. Budgetoty

allocation is uneven distribution. There is no provision fo fund allocation found in these libraries. Libraries budged is based on UGC fund only. There is no provisoion of found for development of ICT infrastucture.

More then 50% sampled college libraries of Dooars region founf is in the initial stage of modern library. Information and communication technology made it possible to publish and share information resources rmotely in internet using the computer.In the present day more then 70% of new informations are published in the internet. All the modern libraies are in position to share theire resource with each other throuth the internet. But unfortunetly 40% of the sampled libraries are not reach to such potion due to financiela curnh, lakadisal attitte of head of the institurte towards the library, abesence fo librarey professionals, remotely location of the libraray, lack of technical suport for ICT infrastucture maitanance. Some of the the are in good postion and have the capacity to brigh it up to the mark, but many libraries are runnig thruogh very poor conditon, these libraries do even have proper room for library, very less books no sitting arrengment. Users are very less in these libraries.

Central government has tremendous planning with huge grants from the university grants commission for the up gradation of the libraries with modern technology and integration with other library. But the sampled libraries do reflect any such symptoms. It seems more practical planning is needed to make by the central and state government so that the libraries are develop equally.

Sampled libraries under the study need to take more initiative to seek out solution all the problems are missing. It is very much essential to modernize the individual libraries on priority basis to walk hand in hand with the standard of rest of the world. Library staff needs to more acquaint with fundamental of modern library they need to equip with modern technologies. All the college head need to give importance to library and library profession in respect ICT infrastructure development decision on of library professional and required fund need to crate to develop the library as per the present day need.

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