

## E-book collection accessible to the university libraries in West Bengal: A study

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**Abstract:** *The present study attempts to examine the strength of e-book collection in the university libraries in West Bengal. It is observed from this study that not all the university libraries in West Bengal possessed e-book collection yet and among those having e-book collection, there was a wide disparity seen in the number of e-books accessible to the university libraries in West Bengal. It is also seen that there was a significant relationship in availability of e-books between the university libraries established before 21st century and university libraries established in 21st century in West Bengal and the significant relationship also depended on location of the university libraries in West Bengal.*

**Key Words:** *Electronic book, e-book, University library, West Bengal.*

### 1. INTRODUCTION:

University libraries are important centres of various academic and research-based activities and they perform an indispensable role in successfully attaining the academic objectives of the concerned mother institutions and this successful pursuit of objectives can be realized only through developing and maintaining rich library collection of resources along with proffering seamless service along with wider and easy access to information and resources (Sasikala, Nagaratnamani, & Dhanraju, 2013).

In order to meet the requirement of the library users, library introduces various ICT based services. Hence, today's information handling technologies have significantly influenced the basic nature of traditional print-based libraries and have created electronic, digital and virtual libraries containing Electronic Information Resources (EIRs) like e-books, e-journals, databases, etc. (Pall, 2014).

The university libraries are not the out of this recent trend of developing e-book collection for providing e-information services to their users. Consequently, in the present day, university libraries have concentrated on having access to e-book collection more and more in different modes from different sources in addition to the print books because of the perceived benefits of e-books such as easy access to information and its comprehensiveness (Patra, 2014). The university libraries, therefore, have access to e-books through consortia and/or they subscribe to and/or purchase e-books individually.

### 2. OBJECTIVES: The objectives of the study are:

- to identify the present collection of e-books in the university libraries in West Bengal;
- to study the mode of access right to e-books accessible to the university libraries in West Bengal;
- to study the mode of availability of e-books accessible to the university libraries in West Bengal; and
- to identify the impact of establishment year, type and location of the university libraries on availability of e-book collection in West Bengal.

### 3. METHODOLOGY:

#### 3.1 scope and coverage of the study

There are total 36 universities in West Bengal, of which 27 universities are government aided and remaining 09 universities are private (University Grants Commission, n.d.). This study covered all the libraries of government aided universities which were offering educational programmes in the regular mode in the state of West Bengal. Netaji Subhas Open University, Kolkata is an open university imparting education in the distance learning mode. So, this state aided open university was not considered in this study. Therefore, the scope and coverage of this study included total 26 university libraries in West Bengal.

Based on the availability and accessibility of EIRs in the university libraries in West Bengal, EIRs were broadly classified into three categories namely e-journal, e-book, database and digitization of in-house print resources of the university libraries. Only collection of electronic books i.e. e-books accessible to the university libraries in West Bengal was taken into consideration here. In addition to these, various modes of access right to e-books and various modes of availability of -books were also covered in this study. Open access e-books available online were not

considered in this study. Both subscribed, purchased e-books and/or e-books accessed through consortia by the university libraries in West Bengal were taken into consideration in this study.

In view of the above consideration of EIRs for this study, it is found from the collected data that out of the total 26 government aided university libraries in West Bengal under this study, 17 university libraries had EIR collection. The remaining nine university libraries in West Bengal had neither online EIR, whether subscribed, purchased and/ or accessed through consortia, nor digitized resources. So, the data were analysed on the basis of data collected from the 17 university libraries in West Bengal covering EIR collection.

Out of the total 26 government aided university libraries in West Bengal under this study, seventeen university libraries had EIR collection and the list of the university libraries was presented in the Table 3.1.1.

Table 3.1.1: List of all the university libraries having EIR collection in West Bengal

Sl. No.	Name of the University	Establishment year	Location	Type
1	Aliah University	2007 (In 21 <sup>st</sup> century)	Urban	General
2	Bankura University	2014 (In 21 <sup>st</sup> century)	Non-urban	General
3	Bidhan Chandra Krishi Viswavidyalaya	1974 (Before 21 <sup>st</sup> century)	Non-urban	Special
4	Jadavpur University	1955 (Before 21 <sup>st</sup> century)	Urban	General
5	Maulana Abul Kalam Azad University of Technology	2001 (In 21 <sup>st</sup> century)	Urban	Special
6	Presidency University	2010 (In 21 <sup>st</sup> century)	Urban	General
7	Rabindra Bharati University	1962 (Before 21 <sup>st</sup> century)	Urban	General
8	Sidho-Kanho-Birsha University	2010 (In 21 <sup>st</sup> century)	Non-urban	General
9	The West Bengal National University of Juridical Science	2004 (In 21 <sup>st</sup> century)	Urban	Special
10	University of Burdwan	1960 (Before 21 <sup>st</sup> century)	Non-urban	General
11	University of Calcutta	1857 (Before 21 <sup>st</sup> century)	Urban	General
12	University of Kalyani	1960 (Before 21 <sup>st</sup> century)	Non-urban	General
13	University of North Bengal	1962 (Before 21 <sup>st</sup> century)	Non-urban	General
14	Uttar Banga Krishi Viswavidyalaya	2001 (In 21 <sup>st</sup> century)	Non-urban	Special
15	Vidyasagar University	1981 (Before 21 <sup>st</sup> century)	Non-urban	General
16	Visva-Bharati	1921 (Before 21 <sup>st</sup> century)	Non-urban	General
17	West Bengal University of Animal and Fishery Sciences	1995 (Before 21 <sup>st</sup> century)	Urban	Special

Table 3.1.2 shows that out of the total 26 government aided university libraries in West Bengal under this study, nine university libraries did not have any EIR collection.

Table 3.1.2: List of the university libraries not having EIR collection in West Bengal

Sl. No.	Name of the University	Establishment year	Location	Type
1	Cooch Behar Panchanan Barma University, Cooch Behar	2012 (In 21 <sup>st</sup> century)	Non-urban	General
2	Diamond Harbour Women's	2013	Non-	General

Sl. No.	Name of the University	Establishment year	Location	Type
	University, South 24 Parganas	(In 21 <sup>st</sup> century)	urban	
3	Kazi Nazrul University, Burdwan	2012 (In 21 <sup>st</sup> century)	Non-urban	General
4	Raiganj University, Uttar Dinajpur	2015 (In 21 <sup>st</sup> century)	Non-urban	General
5	The Sanskrit College and University, Kolkata	2015 (In 21 <sup>st</sup> century)	Urban	Special
6	The West Bengal University of Health Sciences, Kolkata	2002 (In 21 <sup>st</sup> century)	Urban	Special
7	The West Bengal University of Teachers' Training, Education Planning and Administration, Kolkata	2015 (In 21 <sup>st</sup> century)	Urban	Special
8	University of Gaur Banga, Malda	2007 (In 21 <sup>st</sup> century)	Non-urban	General
9	West Bengal State University, North 24 Parganas	2007 (In 21 <sup>st</sup> century)	Non-urban	General

### 3.2 Data collection

A descriptive survey method was adopted for collecting data and other information required for this study. For that purpose, one well-structured questionnaire for the University Librarian / Library In-Charge was designed for collecting data from the university libraries in West Bengal. The filled up questionnaires were collected from the university libraries for data analysis and interpretation.

Data for this study were collected over the years and finally those were checked, rectified and presented here based on the latest data on collection received during the first quarter of the last year.

On the other hand, in order to study the impact of different factors like establishment year, type and location of the university libraries in West Bengal on e-book collection development, the researcher analyzed the collected data of the university libraries from different points of view such as establishment year of the university libraries, type of the university libraries and location of the university libraries in West Bengal. The details have been mentioned below:

- Here, year of establishment was considered before and in 21<sup>st</sup> century such as university libraries established before 21<sup>st</sup> century and university libraries established in 21<sup>st</sup> century.
- In the case of types of university libraries, there were general type and special type.
- For location of the university libraries urban and non-urban area were considered.

### 3.3 Statistical methods used

The collected data were classified, tabulated, thoroughly analyzed and graphically represented according to the objectives. Statistical analysis of the data collected from the university libraries was done accordingly applying various statistical tools and techniques such as Percentile, Ratio, Mean, Standard Deviation (SD) and Coefficient of Variance (CV). In order to test the hypothesis, Chi-Square test had been applied at 5% level. The values of the statistical analyses were worked out with the help of Microsoft Excel.

## 4. ANALYSIS AND FINDINGS:

### 4.1 Collection status of e-books

Table 4.1.1 depicts that 29.41 per cent university libraries did not have any e-book collection. Out of the university libraries having e-book collection, 47.06 per cent of the university libraries had individual e-book collection below 3000.

Table 4.1.1: Distribution of university libraries with respect to collection of e-books

E-book		
Collection	No. of libraries	%
None	05	29.41
Below 3000	08	47.06
3001-6000	01	05.88
6001-9000	00	00.00
9001-12000	00	00.00
12001-15000	02	11.76
Above 50000	01	05.88
Total	17	100.00

It is also revealed that 11.76 per cent university libraries had e-book collection ranging between 12001 to 15000 and only 05.88 per cent libraries had more than 50,000 e-book collection.

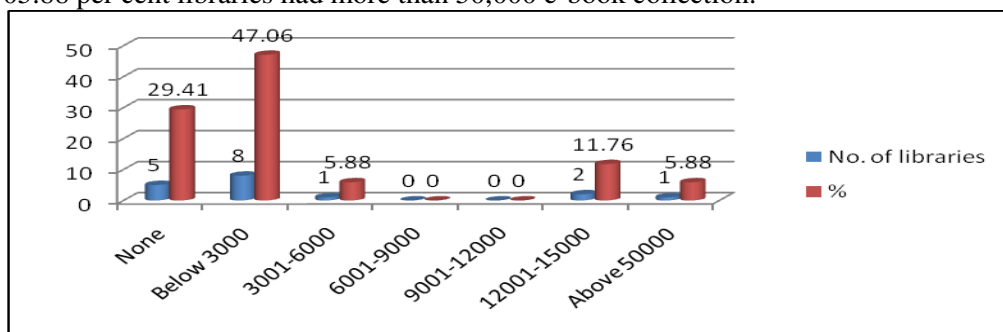


Figure 4.1.1: Distribution of university libraries with respect to collection of e-books

Table 4.1.2 depicts that 70.59 per cent of the university libraries had e-book collection and it is interesting to note the minimum and maximum number of e-book collection in the university libraries, which varied from 08 to 58036 with average number, SD and CV being 7783.50, 16571.39 and 2.13 respectively.

Table 4.1.2 Current status of e-book collection accessible to the university libraries

Type of EIR	No. of libraries	% (Libraries)	Mean	Minimum	Maximum	Std. Dev.	CV
E-books	12	70.59	7783.50	08	58036	16571.39	2.13

It is also found from the descriptive statistical study that there was a wide deviation observed in availability of e-book collection among the university libraries in West Bengal as  $CV \geq 1$  indicates a relatively higher variation.

#### 4.2 Mode of access right to e-books

Table 4.2.1 reveals that 35.29 per cent university libraries did not have access to any e-book collection with perpetual access right and 41.18 per cent university libraries had e-book collection in perpetual mode ranging between 01 to 2000. Only 11.76 per cent of the university libraries had access to e-book collection with perpetual access mode ranging between 2001 to 5000. It is interesting that only 05.88 per cent university libraries had more than 50000 perpetual access e-books.

Table 4.2.1: Distribution of university libraries with respect to mode of access right to e-book

E-book					
Perpetual			Subscription		
Collection	No. of libraries	%	Collection	No. of libraries	%
None	06	35.29	None	14	82.35
01- 2000	07	41.18	Less than 500	02	11.76
2001 – 5000	02	11.76	More than 5000	01	05.88
5001-10000	00	00.00		-----	-----
10001-15000	01	05.88		-----	-----
More than 50000	01	05.88		-----	-----
Total	17	100.00	Total	17	100.00

As far as subscription based access to e-book is concerned, 82.35 per cent of the university libraries did not have any e-book collection in subscription based access and 11.75 per cent university libraries had less than 500 e-book collection in subscription mode access. Only 05.88 per cent of the university libraries had access to more than 5000 subscription based e-books.

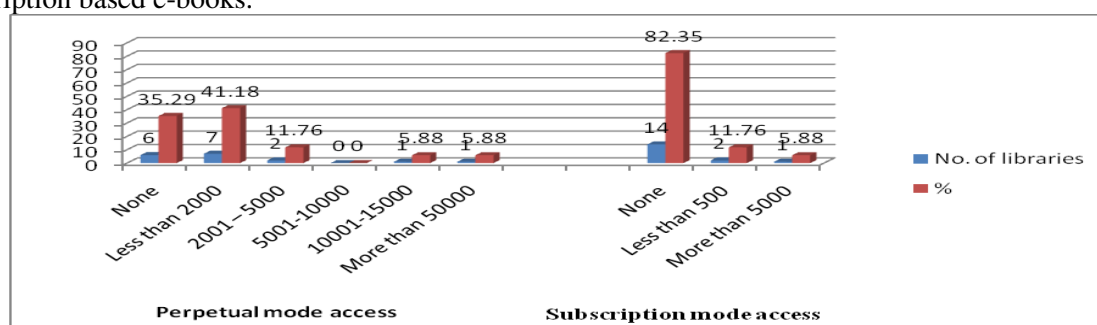


Figure 4.2.1: Distribution of university libraries with respect to mode of access right to e-book

Table 4.2.2 provides the descriptive statistics for current status of e-book collection with respect to mode of access-right.

Table 4.2.2: Current status of e-book collection with respect to mode of access-right

Type of EIR	Mode of access	No. of libraries	% (Libraries)	Mean	Minimum	Maximum	SD	CV
E-book	Perpetual	11	64.70	7641.00	08	58036	17179.45	2.25
	Subscription	03	17.65	3117.00	81	9138	5214.40	1.67

It is seen that 64.70 per cent of the university libraries had e-book collection with perpetual access right and only 17.65 per cent of the university libraries had access to e-books through subscription mode with average value of perpetual and subscription mode being 7641 and 3117 respectively. The SD and CV estimated for perpetual based access to e-books were 17179.45 and 2.25 respectively. For subscription based access to e-books, SD and CV were 5214.40 and 1.67 respectively. It is interesting to note the minimum and maximum number of perpetual access e-books in the university libraries, the number of which varied from 08 to 58036 while number of e-books accessed through subscription mode varied from 81 to 9138 among the university libraries in West Bengal.

Table 4.2.2 also reveals the average number, SD and CV of EIR collection with respect to their mode of access right and it indicates that there was wide deviation observed in perpetual based access right to e-book collection in both modes of access right (perpetual and subscription) as CV >= 1 indicates a relatively higher variation.

### 4.3 Mode of availability of e-books

Table 4.3.1 reveals that 29.41 per cent university libraries did not subscribe to/ purchase any e-book individually and further, 52.94 per cent university libraries had individually subscribed to/ purchased e-book collection up to 5000. Only 05.88 per cent university libraries had more than 50000 individually subscribed/ purchased e-book collection.

Table 4.3.1: Distribution of university libraries with respect to mode of availability of e-book

E-book					
Subscribed			Consortia		
Collection	No. of libraries	%	Collection	No. of libraries	%
None	05	29.41	None	17	100.00
01- 5000	09	52.94		----	----
5001 - 10000	00	00.00		----	----
10001 - 15000	02	11.76		----	----
More than 50000	01	05.88		----	----
Total	17	100.00	Total	17	100.00

It is also observed from the Table 4.3.1 that no university library had access to e-book through consortia.

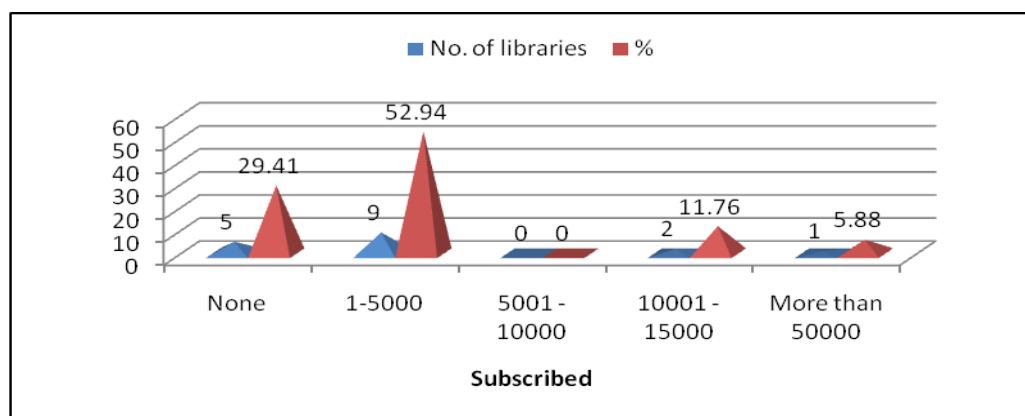


Figure 4.3.1: Distribution of university libraries with respect to mode of availability of e-book

Table 4.3.2 reveals that 70.59 per cent of the university libraries had their individually subscribed e-book collection, which varied from 08 to 58028 in number and their estimated mean, SD and CV were 7783.50, 16571.39 and 2.13 respectively. No university library had access to e-book through consortia.

Table 4.3.2: Current status of EIR collection with respect to mode of availability

Type of EIR	Mode of availability	No. of libraries	% (Libraries)	Mean	Minimum	Maximum	SD	CV
E-books	Subscribed	12	70.59	7783.50	08	58028	16571.39	2.13
	Consortia	00	00.00	00.00	00	00	00	0.00

Therefore, average number, SD and CV of e-book collection in different modes of availability indicate that there was wide deviation observed in subscribed/ purchased e-book collection as CV  $\geq 1$  indicates a relatively higher variation.

Table 4.3.3 depicts that out of the total e-books accessible to the university libraries (N = 93402), all i.e. 100 per cent were subscribed by the university libraries, of which 89.99 per cent were in perpetual based access right and only 10.01 per cent were in subscription based access right.

Table 4.3.3: Distribution of total number of e-books accessible to the university libraries with respect to mode of availability and mode of access right

Mode of availability	E-books					
	Perpetual (N = 84051)		Subscription (N = 9351)		Total (N = 93402)	
	No. of e-book	%	No. of e-book	%	No. of e-book	%
Subscribed	84051	(100.00) {89.99} [89.99]	9351	(100.00) {10.01} [10.01]	93402	{100.00} [100.00]
Consortia	00	(00.00) {00.00} [00.00]	00	(00.00) {00.00} [00.00]	00	{00.00} [00.00]
Total	84051	(100.00)	9351	(100.00)	93402	[100.00]

Percentage with respect to 'Mode of access right' given within (Round bracket), percentage with respect to 'Mode of availability' given within {Second bracket} & percentage with respect to total no. of e-books given within [Square bracket]

Ratio of e-book

Total subscription based access : Total perpetual based access = 9351 : 84051 i.e. 01 : 8.99

#### 4.4 Impact of establishment year, type and location of the university libraries on availability of EIR collection

The category-wise (establishment year, type and location) distribution of the university libraries in West Bengal with respect to availability and non-availability of e-books were considered here and chi square test was applied to find out the relationship between them and the result is presented in the table 4.4.1.

Table 4.4.1: Impact of establishment year, type and location of the university libraries on availability of e-book collection: Chi square test

Sl. No.	Categories	Chi square	df	Table value	Remark
1	Establishment year	6.838	01	3.841	Associated
	Established before 21st century				
2	Type	0.019	01	3.841	Not Associated
	General				
3	Location	4.812	01	3.841	Associated
	Urban				
	Non-urban				

As far as establishment year of the university libraries is concerned, there was a significant association with availability of e-book collection between the university libraries established before 21<sup>st</sup> century and in 21<sup>st</sup> century as calculative value i.e. 6.838 was higher than table value i.e. 3.841.

With respect to availability of e-book collection between general and special type university libraries in West Bengal, the test reveals that there was no significant association between the two as calculative value i.e. 0.019 was less than table value i.e. 3.841.

So far as location of the university libraries is concerned, there was a significant relationship with respect to availability of e-book collection between university libraries located in urban and non-urban areas as calculative value i.e. 4.812 was higher than table value i.e. 3.841.

## **5. CONCLUSION:**

In 21st century, the university libraries are trying to build their library collection with the combination of print and electronic information resources. Electronic Information Resources (EIRs) are supposed to have more potential for academic support in the university. Many university libraries are presently developing their library resources with substantial EIR collection like e-journals, e-books and databases through individually subscribing and/or purchasing and by accessing through different consortia along with their digitized resources created in-house. It is observed from this study that not all the university libraries in West Bengal possessed e-book collection yet and among those having e-book collection, there was a wide disparity seen in the number of e-books accessible to the university libraries in West Bengal. It is also seen that availability of e-book collection depended on the establishment year (established before 21st century and in 21st century) of the university libraries in West Bengal but it did not depend on the type (general and special) and location (urban and non-urban) of the university libraries in West Bengal.

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