

Collection of E-Journals in the University Libraries in West Bengal: A Study

Tapas Kumar Das
Sr. Assistant Librarian
Visva-Bharati University
Santiniketan - 731235, Birbhum, West Bengal, India

Abstract: The present study attempts to examine the strength of e-journal 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-journal collection yet and among those having e-journal collection, there was a wide disparity seen in the number of e-journals accessible to the university libraries in West Bengal. It is also seen that there was a significant relationship in availability of e-journals between the university libraries established before 21st century and university libraries established in 21st century in West Bengal.

Index Terms - Electronic journal, e-journal, University library, West Bengal

1. INTRODUCTION

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-journal collection for providing e-information services to their users. Consequently, in the present day, university libraries have concentrated on having access to e-journal collection more and more in different modes from different sources in addition to the print resources because of the perceived benefits of e-journals such as easy access to information and its comprehensiveness (Patra, 2014). The university libraries, therefore, have access to e-journals through consortia and/or they subscribe to and/or purchase e-journals individually.

2. OBJECTIVES

The objectives of the study are:

- ❖ to identify the present collection of e-journals in the university libraries in West Bengal;
- ❖ to study the mode of access right to e-journals accessible to the university libraries in West Bengal;
- ❖ to study the mode of availability of e-journals 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-journal 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.

Collection of electronic journals i.e. e-journals accessible to the university libraries in West Bengal was taken into consideration here. In addition to this, various modes of access right to e-journals and various modes of availability of e-journals were also covered in this study.

Open access e-journals available online were not considered in this study. Both subscribed, purchased e-journals and/or e-journals accessed through consortia by the university libraries in West Bengal were taken into consideration in this study.

In view of the above consideration of e-journals 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 e-journal collection. The remaining nine university libraries in West Bengal had neither subscribed and/or purchased e-journals nor e-journals accessed through consortia.

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

Table 3.1.1: List of all the university libraries having e-journal collection in West Bengal

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

Sl. No.	Name of the University	Establishment year	Location	Type
16	Visva-Bharati	1921 (Before 21 st century)	Non-urban	General
17	West Bengal University of Animal and Fishery Sciences	1995 (Before 21 st 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 e-journal collection.

Table 3.1.2: List of the university libraries not having e-journal 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 st century)	Non-urban	General
2	Diamond Harbour Women's University, South 24 Parganas	2013 (In 21 st century)	Non-urban	General
3	Kazi Nazrul University, Burdwan	2012 (In 21 st century)	Non-urban	General
4	Raiganj University, Uttar Dinajpur	2015 (In 21 st century)	Non-urban	General
5	The Sanskrit College and University, Kolkata	2015 (In 21 st century)	Urban	Special
6	The West Bengal University of Health Sciences, Kolkata	2002 (In 21 st century)	Urban	Special
7	The West Bengal University of Teachers' Training, Education Planning and Administration, Kolkata	2015 (In 21 st century)	Urban	Special
8	University of Gaur Banga, Malda	2007 (In 21 st century)	Non-urban	General
9	West Bengal State University, North 24 Parganas	2007 (In 21 st century)	Non-urban	General

3.2 Data collection

As the research work was designed to collect the basic inputs from the university libraries in West Bengal, 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.

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-journal 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 21st century such as university libraries established before 21st century and university libraries established in 21st 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 stated. 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 study the impact, 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-journals

Table 4.1.1 reveals that there were 41.18 per cent university libraries which individually possessed e-journal collection ranging between 1 to 2500.

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

E-journal		
Collection range	No. of libraries	%
None	00	00.00
01-2500	07	41.18
2501-5000	02	11.76
5001-7500	01	05.88
7501-10000	04	23.53
Above 10000	03	17.65
Total	17	100.00

Similarly, it is seen that 23.53 per cent of the concerned university libraries individually possessed e-journal collection ranging between 7501 to 10000. It is also noted from the study that only 17.65 per cent university libraries possessed more than 10000 e-journal collection individually.

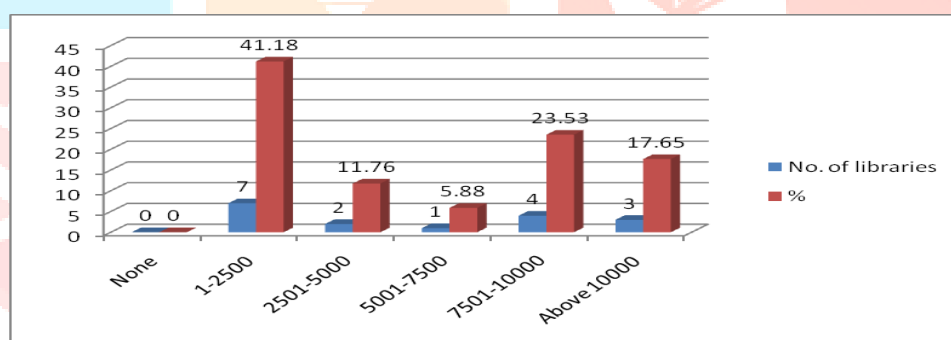


Figure 4.1.1: Distribution of university libraries with respect to collection of e-journals

It is evident from the Table 4.1.2 that all the university libraries had access to e-journals, the number of which varied from 58 to 11522. The average number of e-journals accessible to the university libraries was estimated to be 5326.12 with the Standard Deviation (SD) and Coefficient of Variance (CV) estimated for e-journal being 4122.42 and 0.77 respectively.

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

Type of EIR	No. of libraries	% (Libraries)	Mean	Minimum	Maximum	Std. Dev.	CV
E-journals	17	100.00	5326.12	58	11522	4122.42	0.77

It is found from the descriptive statistical study that more or less similar trend was observed towards less deviation in availability of e-journal collection among the university libraries in West Bengal as $CV >= 1$ indicates a relatively higher variation.

4.2 Mode of access right to e-journals

Table 4.2.1 unearths that 70.59 per cent of the university libraries under study did not have any e-journal with perpetual access right and 23.53 per cent of the university libraries had less than 100 e-journals

with perpetual access right. Only 05.88 per cent university libraries had above 500 e-journals with perpetual access right.

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

E-journal					
Perpetual			Subscription		
Collection	No. of libraries	%	Collection	No. of libraries	%
None	12	70.59	01-5000	09	52.94
Less than 100	04	23.53	5001 - 10000	05	29.41
More than 500	01	05.88	More than 10000	03	17.65
Total	17	100.00	Total	17	100.00

As far as subscription based access right to e-journal is concerned, 52.94 per cent university libraries had subscription based access to e-journal in their EIR collection ranging between 01 to 5000. Further, 29.41 per cent university libraries had individual e-journal collection ranging between 5001 to 10000 and only 17.65 per cent university libraries had more than 10000 individual e-journal collection with subscription based access right.

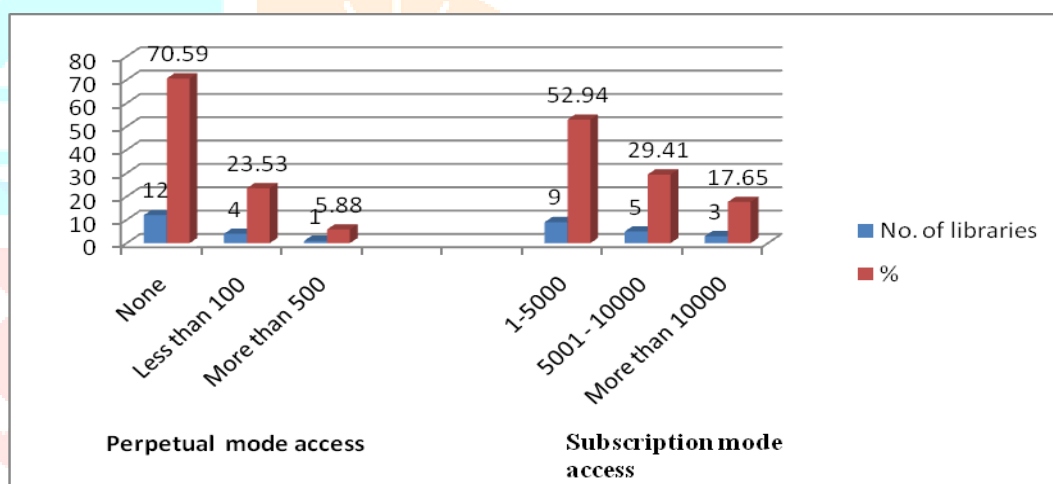


Figure 4.2.1: Distribution of university libraries with respect to mode of access right to e-journal

Table 4.2.2 provides the descriptive statistics for current status of e-journal collection with respect to mode of access-right. It has been found that all the university libraries had access to e-journals in subscription mode, the number of which varied from 58 to 11522. The mean, SD and CV values of e-journal collection accessed through subscription mode were 5262.12, 4048.90 and 0.77 respectively, whereas only 29.41 per cent university libraries had access to e-journals in perpetual mode, the number of which varied from 01 to 944 with mean, SD and CV values being 217.60, 407.69 and 1.87 respectively.

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

Type of EIR	Mode of access	No. of libraries	% (Libraries)	Mean	Minimum	Maximum	SD	CV
E-journal	Perpetual	05	29.41	217.60	01	944	407.69	1.87
	Subscription	17	100.00	5262.12	58	11522	4048.90	0.77

Table 4.2.2 also reveals the average number, SD and CV of e-journal 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-journal collection as $CV \geq 1$ indicates a relatively higher variation. However, in subscription mode access right to e-journal, more or less similar trend was observed towards less deviation among the university libraries in West Bengal.

4.3 Mode of availability of e-journals

Table 4.3.1 indicates that 23.53 per cent university libraries did not subscribe to/ purchase any e-journal individually while 41.18 per cent university libraries had subscribed to/ purchased e-journal (s) ranging between 01 to 500 and only 17.65 per cent university libraries had more than 1500 individually subscribed/ purchased e-journal collection.

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

E-journal					
Subscribed			Consortia		
Collection	No. of libraries	%	Collection	No. of libraries	%
None	04	23.53	None	04	23.53
01-500	07	41.18	01-2500	04	23.53
501-1000	01	05.88	2501-5000	01	05.88
1001-1500	02	11.76	5001-7500	01	05.88
Above 1500	03	17.65	7501-10000	07	41.18
Total	17	100.00	Total	17	100.00

Likewise, 23.53 per cent university libraries did not have access to any e-journal through consortia and 41.18 per cent university libraries had access to e-journal collection through consortia ranging between 7501 to 10000. This was followed by 23.53 per cent of the university libraries which had access to e-journals through consortia ranging between 01 to 2500.

Only 5.88 per cent of the university libraries had access to e-journals through consortia between 2501 to 5000 and 5001 to 7500 respectively.

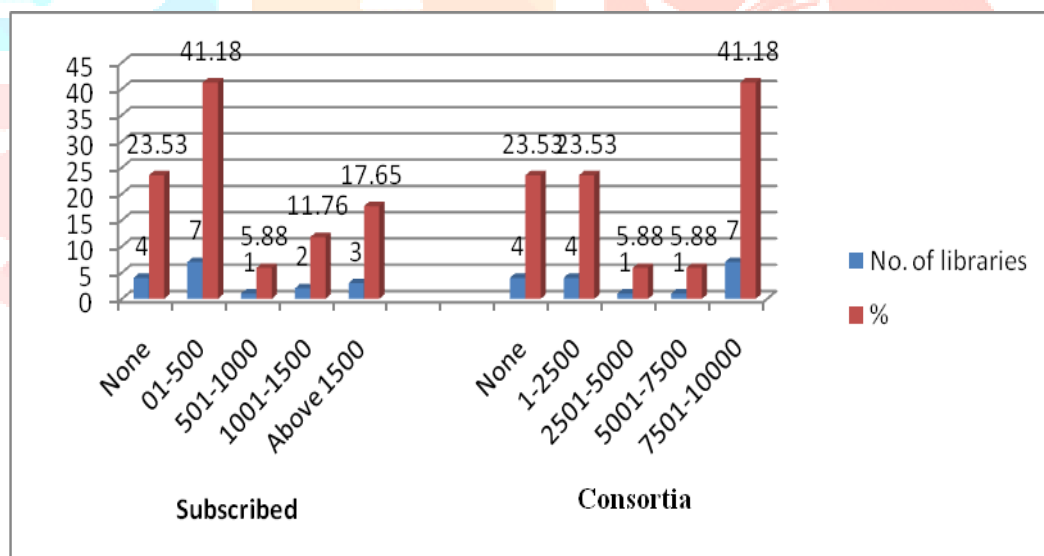


Figure 4.3.1: Distribution of university libraries with respect to mode of availability of e-journal

Table 4.3.2 provides the descriptive statistics of current status of e-journal collection with respect to mode of availability. It is found that 76.47 per cent of the university libraries individually subscribed to/ purchased e-journal collection, number of which varied from 01 to 3196. The mean and SD of individually subscribed/ purchased e-journals by the university libraries were 859.15 and 1046.44 respectively with CV being 1.22. Further, 76.47 per cent of the university libraries had access to e-journals through consortia, the number of which varied from 1439 to 9394 and their mean and SD were estimated to be 6105.77 and 3315.76 respectively.

Table 4.3.2: Current status of e-journal collection with respect to mode of availability

Type of EIR	Mode of availability	No. of libraries	% (Libraries)	Mean	Minimum	Maximum	SD	CV
E-journals	Subscribed	13	76.47	859.15	01	3196	1046.44	1.22
	Consortia	13	76.47	6105.77	1439	9394	3315.76	0.54

Therefore, average number, SD and CV of e-journal collection in different modes of availability indicate that there was wide deviation observed in subscribed/ purchased e-journal collection as $CV \geq 1$ indicates a relatively higher variation. More or less similar trend was observed towards less deviation in availability of e-journal accessed through consortia among the university libraries in West Bengal.

Table 4.3.3 depicts that out of the total e-journals accessible to the university libraries (N=90544), only 12.33 per cent were subscribed by the university libraries, whereas 87.67 per cent were accessible through consortia. Table 4.3.3 also reveals that out of the total subscribed e-journals (N=11169), only 09.74 per cent were perpetual based and 90.26 per cent were subscription based and all e-journals accessed through consortia were subscription based i.e. no university library had access to perpetual based e-journals through consortia.

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

Mode of availability	E-journals					
	Perpetual (1088)		Subscription (89456)		Total (N = 90544)	
	No. of e-journal	%	No. of e-journal	%	No. of e-journal	%
Subscribed (N=11169)	1088	(100.00) {09.74} [01.20]	10081	(11.27) {90.26} [11.13]	11169	{100.00} [12.33]
Consortia (N=79375)	00	(00.00) {00.00} [00.00]	79375	(88.73) {100.00} [87.67]	79375	{100.00} [87.67]
Total	1088	(100.00)	89456	(100.00)	90544	[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-journals given within [Square bracket]

Further, out of the total number of subscription based e-journals accessible to the university libraries (N = 89456), only 11.27 per cent were subscribed by the university libraries and 88.73 per cent were accessed through consortia.

Ratio of e-journal

Total perpetual based : Total subscription based = 1088 : 89456 i.e. 01 : 82.22

Total Subscribed : Total access through consortia = 11169 : 79375 i.e. 01 : 07.11

4.4 Impact of establishment year, type and location of the university libraries on availability of e-journal collection

Here, Chi square test was applied to find out whether there was any relationship between category-wise (establishment year, type and location) distribution of the university libraries with respect to availability and non-availability of e-journal 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-journal collection:
Chi square test

Sl. No.	Categories		Chi square	df	Table value	Remark
1	Establishment year	Established before 21st century	7.843	01	3.841	Associated
		Established in 21st century				
2	Type	General	0.163	01	3.841	Not Associated
		Special				
3	Location	Urban	0.202	01	3.841	Not Associated
		Non-urban				

As far as establishment year of the university libraries is concerned, there was a significant relationship in availability of e-journals between the university libraries established before 21st century and university libraries established in 21st century as calculative value i.e. 7.843 was higher than table value i.e. 3.841.

The result of the chi square test reveals that there was no significant association in availability of e-journals between general and special type university libraries in West Bengal as calculative value i.e. 0.163 was less than table value i.e. 3.841.

Further, with respect to location of the university libraries, there was no significant association in availability of e-journals between the urban and non-urban university libraries in West Bengal as calculative value i.e. 0.202 was less than table value i.e. 3.841.

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-journal collection yet and among those having e-journal collection, there was a wide disparity seen in the number of e-journals accessible to the university libraries in West Bengal. It is also seen that availability of e-journal 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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