Collection of Vidyasagar University Central Library: A Bibliometric Study

Pijush Kanti Jana*
Debabrata Maity**

Abstract

Implementation of sampling procedure and selection of random sampling technique are the key concepts in this study. Systematic sampling method has been followed for the collection of data with a sample size of 1000 books in Vidyasagar University Central Library. This paper shows different aspects of books eg., distribution of library collection by their subjects, price, year of publication, edition, language, country of publication, authorship pattern etc. Analysis of average cost of books in different subject fields and average cost per page of a book in different page limits are also another feature of this study.

1   Introduction

The Vidyasagar University started its academic activities in the year 1985 with just 6 post graduate departments but now it has 27 postgraduate departments with other diploma courses. In the month of July, 1996 the Central Library, Vidyasagar University started its functioning from the Administrative Building officially. From the beginning of the establishment of the library it has been suffering from both staff and funds. Still during the last three decades its performance is quite satisfactory in all respect. Therefore, about after 30 years of its journey it needs to know the nature of its collection development. But it is not easy to find out the nature of its collection when its total stock exceeds one lac. Therefore, a moderate sample size has been chosen irrespective of analysis the whole collection. Again, a systematic sampling technique has been followed for selection of books in the sample.

2   Objectives

The objectives of this study are to find out nature and characteristics of books collected in Vidyasagar University Central Library and particularly with a view to examine the following aspects:

* Professor , Dept of Library and Information Science, Vidyasagar University
** Librarian, Mohisda R N High School, Keshpur, Paschim Medinipur

1)   To find out subject-wise distribution of books.

2)   To see language-wise distribution of books.

3)   To know country-wise publication of books.

4)   To observe authorship pattern of the collection.

5)   To find out subject-wise average price and average pages per book.

6)   To help the authority to take decision for selection of books.

7)   To help the authority to take decision for allocation of funds.

3   Methodology

At present there are 1,02,048 books in the Central Library, Vidyasagar University. To fulfill the objectives of the study, it is not possible to study all books in the collection. Therefore, a random sampling method has been adopted for collection of books. Here, at the first stage, a sample size of 1000 books has been chosen for collection of data. In this case, as a complete list of the books from which sample is to be drawn is available, so the systematic sampling for collection of data is selected. A systematic sampling is formed by selecting one unit at random and then select-ing additional units at evenly- spaced intervals until the sample has been formed. The first item is selected at random generally by following the lottery method. Subsequent items are selected by taking every k-th item from the list where 'k' refers to the sampling interval or sampling ratio i.e., the ratio of population size to the size of the sample. Symbolically,

$$K = (N/n) \qquad \text{Where, } K = \text{Sampling interval,}$$

$$N = \text{size of the universe,}$$

$$n = \text{sample size.}$$

The universe size of this study is first 100000 books in the library and the sample size is 1000 books. So, value of K is (100000/1000) = 100. The first book (i.e., first sample unit) has been selected from the first hundred books by lottery method and the accession number of that book is 82. Then the sampling interval 100 has been added to each sample unit to get the accession number of the book of the next sample until to form the sample. Hence, the accession number of the books of the sample units are 82, 182, 282, 382 . . . 99982.

Again, to collect necessary information from the sample units, following steps have been fol-lowed:

●   Required information has been collected directly from Online Public Access Catalogue (OPAC) of the Central Library, Vidyasagar University. Sometimes to collect data Acces-sion Register of the organization has also been consulted and in few cases relevant informa-tion has also been collected directly from books.

● As initial page numbers of many books are not available in OPAC, so this study is based only on the textual pages of the books.

● The data so collected are systematically arranged in various tables and which are subsequently analyzed.

● First emphasis is to classify the books according to the department existed in Vidyasagar University. Then some other important subjects are also selected separately.

● Diagrammatic representation has also been made in many cases for better presentation of data.

● Recommendation and conclusions have been made on the basis of analysis of the data.

4   Analysis of Data

The data collected through systematic sampling are systematically arranged in different tables and those tables are then analyzed to fulfill the objectives of this study.

4.1 Subject-wise Distribution of Books

The books collected through systematic sampling are basically grouped into subjects associated with different departments. However, books are also grouped into subjects like Research Methodology, Operations Research or Computer which are generalia in nature. Some books are also grouped into other category which includes books on Bibliography, General Dictionary, General Encyclopedia, Theory of Natural Sciences, Medical Science, Agriculture, Arts, Philosophy & Theory of Literature, Germanic Literature, Greek Literature, Assamese Literature, Marathi Literature, Biography etc. Due to very nature of the subjects associated with each department it is hard enough to isolate books on each Department rather it is better to group the collection on different subjects. In many cases book on a subject does not represent the book on that department.

Sl. No.	Subject	No. of books	Percentage of books
1	Research Methodology	4	0.4
2	Operation Research	6	0.6
3	Computer	79	7.9
4	Library and Information Science	29	2.9
5	Philosophy	35	3.5
6	Religion	22	2.2
7	Sociology	96	9.6
8	Political Science	49	4.9
9	Economics	86	8.6
10	Law	10	1.0
11	Education	8	0.8
12	Mathematics	48	4.8
13	Physics	60	6.0
14	Chemistry	23	2.3
15	Anthropology	7	0.7
16	Microbiology	12	1.2
17	Botany	8	0.8
18	Zoology	11	1.1
19	Human Physiology	16	1.6
20	Accounting & Management	60	6.0
21	English language & literature	57	5.7
22	Sanskrit language & literature	24	2.4
23	Hindi language & literature	7	0.7
24	Bengali language & literature	134	13.4
25	Santali language & literature	7	0.7
26	Geography	19	1.9
27	History	41	4.1
28	Others	42	4.2
	Total	1000	100.00

Table 1: Distribution of books by Subjects

It is evident from Table- 1 that the library has a giant collection of books on Bengali Language and Literature (13.4%). Collection of books on Sociology (9.6%), Economics (8.6%) and Computer (7.9%) are also remarkable. Good collection of books are also found on Physics (6.0%), Accounting & Management (6.0%), English Language and Literature (5.7%), Political Science (4.9%), Mathematics (4.8%) and History (4.1%). General collection (4.2%) in the library is also satisfied.

4.2 Distribution of Books According to their Price and on Broad Classes

Subject wise distribution of books related with different departments has been shown in Table - 1. But the bivariate frequency distribution table showing the distribution of books according to their broad classes of division along with their price has been given in Table – 2.

Broad class/ Price (Rs.)	000	100	200	300	400& 800	500	600	700	900	Total	Percentage
Up to 500	106	29	17	178	226	127	75	4	49	811	81.1
501-1000	9	3	4	52	11	21	11	1	14	126	12.6
1001-2000	3	2	0	17	1	14	2	0	1	40	4.0
2001-3000	0	1	0	1	2	5	0	0	0	12	1.2
3001-4000	0	0	1	1	0	3	1	0	0	6	0.6
4001-5000	1	0	0	0	0	3	0	0	0	4	0.4
5001-6000	0	0	0	0	0	0	0	0	0	0	0
6001-7000	1	0	0	0	0	0	0	0	0	1	0.1
Total	120	35	22	249	240	173	92	5	64	1000	100
Percentage	12	3.5	2.2	24.9	24	17.3	9.2	0.5	6.4	100	100.00

Table 2: Distribution of books according to their price and broad classes of division

It reveals from Table – 2 that about half of the collection of the books are on Social Sciences (24.9%) and on Languages and Literature Class (24%). However a good number of collections of books are also found in Pure Sciences (17.3%) and Generalia Class (12%). Books on Arts (0.5%) and Religion (2.2%) are negligible. Again, in question of price of books, it is found from Table – 2 that price of 81.1% of total collection are ranges up to Rs 500.00 and value of 97.7 % of books in the library are up to Rs 2000.00. No books have been found between the ranges of

Rs 5001 – 6000 and there is only 1 (0.1%) book is found between the ranges of Rs 6001 – 7000.

4.3 Publication Year and Distribution of Books

The first book was accessioned in the Accession Register of the Central Library, Vidyasagar University on 10.09.1986. Therefore, books are grouped into those which are published before the year 1986 ie, up to the year 1985 and then in different years. The last publication year i.e., 2012 has been chosen as the last book of the population has been published in that year. Again, from the study it is found that there is only one book which has been published in the year 1903 and there is another book which has been published in the year 1949. So, there are 176 (17.6%) books which have been published during the years 1950 to 1985.

Sl. No.	Year	No. of books	Percentage of books
1	Up to 1985	178	17.8
2	1986	47	4.7
3	1987	45	4.5
4	1988	44	4.4
5	1989	34	3.4
6	1990	28	2.8
7	1991	17	1.7
8	1992	11	1.1
9	1993	20	2.0
10	1994	36	3.6
11	1995	37	3.7
12	1996	38	3.8
13	1997	45	4.5
14	1998	29	2.9
15	1999	17	1.7
16	2000	32	3.2
17	2001	32	3.2
18	2002	25	2.5

19	2003	24	2.4
20	2004	28	2.8
21	2005	29	2.9
22	2006	27	2.7
23	2007	37	3.7
24	2008	39	3.9
25	2009	47	4.7
26	2010	23	2.3
27	2011	12	1.2
28	2012	17	1.7
29	Not available	2	0.2
	Total	1000	100.00

Table 3: Publication of books according to their year of publication

Table – 3 shows that pattern of publication year of books are decrease gradually considering the introduce of different new departments year after year and which is due to purchase of less books or of purchasing books which are published earlier. However, the study shows that the collection of books published in the years 1991, 1992, 1999, 2011 and 2012 are decrease remarkably.

4.4 Language-wise Distribution of Books

It is evident from Table – 4 that the books available in the library are written mainly in six languages. It also revels from the Table that more than three- fourth (76.2%) of the collection are written in English language and 20.8% of the collections are in Bengali language. Collections of books in other languages are miserable. It is interesting to say that 0.8% books are written in more than one language and which is due to explanation of the text in some other languages.

Sl. No.	Language	No. of books	Percentage
1	Assamese	1	0.1
2	Bengali	208	20.8
3	English	762	76.2
4	Hindi	6	0.6
5	Sanskrit	10	1.0
6	Santali	5	0.5
7	More than one language	8	0.8
	Total	1000	100.00

Table 4: Language-wise distribution of books

4.5 Country-wise Publication of Books

It shows from Table – 5 that out of 1000 books under study 754 (75.4%) books are published with in India. Out of another 246 books 139 (13.9%) books have been published from UK and 79 (7.9%) books have been published from USA. Publications of books from other countries are negligible.

Sl. No.	Country Name	No. of books	Percentage
1	Australia	4	0.4
2	Bangladesh	5	0.5
3	France	1	0.1
4	Germany	2	0.2
5	India	754	75.4
6	Ireland	1	0.1
7	Netherland	2	0.2
8	New Zealand	4	0.4
9	Russia	9	0.9
10	UK	139	13.9
11	USA	79	7.9
	Total	1000	100.00

Table 5: Country-wise publication of books

4.6   State -wise Publication of Books

It reveals from the study that out of 1000 books selected for the study 754 (75.4%) books were published in India and 246 (24.6%) were published outside India. State wise publication of those 754 books has been given in Table – 6.

Sl. No.	State Name	No. of books	Percentage
1	Andhra Pradesh	14	1.86
2	Delhi	418	55.44
3	Gujarat	2	0.26
4	Karnataka	4	0.53
5	Madhya Pradesh	1	0.13
6	Maharashtra	16	2.12
7	Pondicherry	1	0.13
8	Rajasthan	10	1.33
9	Tamilnadu	4	0.53
10	Uttar Pradesh	18	2.39
11	West Bengal	266	35.28
	Total	754	100.00

Table 6: State -wise publication of books

The Table shows that out of 754 books 418 (55.44%) books were published from Delhi, 266 (35.28%) books were published from West Bengal. Except the states of Andhra Pradesh, Maharashtra, Rajasthan and Uttar Pradesh publication from other states were miserable.

4.7   Authorship Pattern of Books

It reveals from the Table – 7 that out of 1000 books under study 673 (67.3%) books have been published by single author, 179 (17.9%) books have been published by two authors, 41 (4.1%) books have been published by three authors. Books published by more than three authors are negligible.

Sl. No.	Authorship	No. of book(s)	Percentage
1	1 author	673	67.3
2	2 authors	179	17.9
3	3 authors	41	4.1
4	4 authors	5	0.5
5	5 authors	2	0.2
6	6 authors	3	0.3
7	7 authors	1	0.1
8	10 authors	1	0.1
9	1 editor	52	5.2
10	2 editors	24	2.4
11	3 editors	3	0.3
12	Corporate Body	13	1.3
13	Government Publication	3	0.3
	Total	1000	100.00

Table 7: Authorship pattern of books

Again, in question of editorial publication 52 (5.2%) books have been published by single editor, 24 (2.4%) books have been published by two editors and only 3 (0.3%) books have been published by three editors. Books published by corporate body and government publication are 13(1.3%) and 3 (0.3%) respectively.

4.8   Distribution of Books by their Edition

Time to time new edition of books should be added to the collection to cope up with development of any subject field. From this study it shows that edition of books are distributed from edition 1 to edition 16. Table – 8 depicts that there are 788 (78.8%) books in the library with its first edition, books in the library with its 2nd edition are 88 (8.8%), 3rd edition are 51 (5.1%), 4th edition are 21 (2.1%) and so on. Books having its edition from 7 and onwards are miserable.

Sl. No.	Edition	No. of books	Percentage
1	1	788	78.8
2	2	88	8.8
3	3	51	5.1
4	4	21	2.1
5	5	15	1.5
6	6	14	1.4
7	7	7	0.7
8	8	5	0.5
9	9	2	0.2
10	10	1	0.1
11	11	3	0.3
12	12	1	0.1
13	14	1	0.1
14	15	1	0.1
15	16	1	0.1
16	23	1	0.1
	Total	1000	100.00

Table 8: Distribution of books by their edition

4.91   Subject-wise Average Price of Books

Average price of books based on different subjects are depicted in Table – 91. It reveals from the Table that average cost of books is highest for the books on the subject Microbiology and which is Rs. 1537.34 per book. The next positions are goes in favour of the subjects Anthropology, Chemistry, Zoology and Human Physiology with average price of books of Rs 876.43, Rs 869.34, Rs 705.71 and Rs 550.43 respectively.

Sl. No.	Subject	No. of books	Average price/book
1	Research Methodology	4	210
2	Operation Research	6	195.04
3	Computer	79	347.20
4	Library and Information Science	29	494.14
5	Philosophy	35	394.70
6	Religion	22	423.63
7	Sociology	96	392.99
8	Political Science	49	364.88
9	Economics	86	409.26
10	Law	10	465.70
11	Education	8	371.24
12	Mathematics	48	364.21
13	Physics	60	425.395
14	Chemistry	23	869.34
15	Anthropology	7	876.43
16	Microbiology	12	1537.34
17	Botany	8	393.25
18	Zoology	11	705.71
19	Human Physiology	16	550.43
20	Accounting & Management	60	343.82
21	English language & literature	57	286.33
22	Sanskrit language & literature	24	157.38
23	Hindi language & literature	7	236.43
24	Bengali language & literature	134	71.76
25	Santali language & literature	7	71.43
26	Geography	19	411.92
27	History	41	309.70
28	Others	42	347.25
	Total	1000	

Table 91: Subject-wise average price of books

Average price of books on the subjects Physics, Law, Library and Information Science, Economics, Geography, Religion are ranges from Rs 400 – 500. Again, average price of the books on Computer, Philosophy, Sociology, Political Science, Education, Mathematics, Botany and Accounting & Management and History are ranges from Rs 300 – 400. The Table also reveals that average price of books on Bengali and Santali Language and Literature is less than Rs 100.00 and which are only about Rs 71.

4.92 Distribution of Books in their Price and Pages

Average price of a book in relation to its page number has been presented in Table – 92. It shows that out of 1000 books a maximum of 230 books belong to pages 200 – 300, 181 books within pages 100 – 200, 150 books within 300 – 400 pages. Again, the Table shows that 683 (68.3%) books belong to pages within 100 to 500.

Sl. No.	No. of pages	No. of books	Average price per book (Rs.)	Average price/ pages of a book
1	Up-to 100	73	41.72	00.83
2	100-200	181	162.10	01.08
3	200-300	230	320.58	01.28
4	300-400	150	458.55	01.31
5	400-500	122	467.95	01.04
6	500-600	82	436.10	00.79
7	600-700	60	502.00	00.77
8	700-800	34	471.83	00.63
9	800-900	28	556.86	00.66
10	900-1000	16	757.19	00.80
11	1000-1100	9	418.93	00.40
12	1100-1200	5	1266.504	01.10
13	1200-1300	3	2566.67	02.05
14	1300-1400	5	607.00	00.50
15	1400 & above	2	1884.70	--

Table 92: Page-wise distribution of books

It is found from the Table that there is a positive tendency of price of a book as the pages per book increases. Though in case of range of pages of books within 1300- 1400, the price per book is significantly low perhaps due to sampling error. Average price per pages of a book has also been calculated based on the mid-value of the number of pages of books. The Table also shows that except in some cases there is a decreasing tendency of price per page of a book up to a certain range of 700 – 800 pages, while it again increases.

5   Findings and Conclusions

Data collected through systematic sampling are systematically arranged in tables and are also analysed in suitable form. However the major findings of the study are as follows:

i) Collection of books on Bengali Language and Literature in the library is more than any other subjects. Books on the subjects Computer, Sociology, Economics and Physics are also re-markable but those books are not associated with any individual department. Though books on the subject Anthropology should not be so separated from those of the subjects on bio-logical sciences still its collection is remarkably poor considering the initiation of the Department in the university.

ii) Cost of books on social sciences, language and literature class are less as compared to other classes and their collection is about half of the collection in the library.

iii) Cost of more than 80% of the books in the library is less than or equal to Rs 500.00 and cost of about 98% books in the library are within Rs 2000.00.

iv) Except in certain cases books in the collection are evenly distributed in their year of publication.

v) Considering the type of the library language wise distribution of books is justified because about three- fourth books in the collection are in English language and about 21% books are in mother language.

vi) Ratio of collected books published within India and abroad is about 3: 1 and which is quite satisfactory.

vii) More than 50% of Indian books are published from Delhi where its share in the state of West Bengal is about 36%.

viii) In question of authorship only 10% of the total collection are goes in favour of editorial and other corporate body publication where 67.3% of the total collection is published by single author.

ix) About 79% books in the library are in first edition and 8.8% books are in second edition. Number of books in other editions are gradually decrease.

x) Except in certain cases the price per book in the collection has increased due to increase in

the number of pages per book. However, average price per page of a book is decreased due to increase in the number of pages per book to a certain limit when it is increased again.

References

1   http://vidyasagar.edu.in/opac. Visited on 1st July, 2013.

2   Das, N .G. 2009. Statistical Methods. New Delhi: Tata McGraw Hill. 449p.

3   Jana, Pijush Kanti and Basak, Arup Kumar. Collection Development of Vidyasagar University Central Library: 1986 – 2006. *Vidyasagar University Journal of Library and Information Science.* 10-14; 2009; 58 – 68.