Asian Journal of Multidisciplinary Studies
Volume 2, Issue 7, July 2014

ISSN: 2321-8819 (Online)
2348-7186 (Print)
Impact Factor: 0.923

Performance Audit of Some Selected University Libraries in West Bengal: A Framework for Evaluation

Bairam Khan[#1] & Dr. Tridib Tripathi[*2]

[#1] Assistant Librarian Gr. II, Central Library & Part-time Research Scholar, Depart. of Library & Information Science, The University of Burdwan, Burdwan, W.B., India-713104,

[*2]Associate Professor, Depart. of Library & Information Science, The University of Burdwan, Burdwan, W.B., India-713104

Abstract

Introduction-This paper discussed the need of performance audit of some selected University Libraries in West Bengal, India and how the libraries have achieved their day to day operations & activities economically, efficiently and effectively. For the purpose of this study, four selected university libraries in West Bengal established during the same time have been considered and 41 performance indicators have been applied that is based on ISO 11620 (2008) and IFLA-Measuring Quality: Performance Measurement in Libraries (2007).

Methods-To conduct of this study a large variety of data-gathering and analysis techniques have been adopted such as surveys, interviews, observations, documentary analysis as well as the analysis of financial, service, output statistics i.e. performance data of four university libraries in West Bengal.

Findings- After applying the performance indicators for different activities & operations performed by the studied university libraries, it shows that NBUL has overall performed well achieved 1st position followed by BUL (2nd), RBUL (3rd) & KUL (4th).

Suggestions- It will be possible to measure the strengths and weakness of performance of the university libraries in different angels compared to the other universities of the state. It will help to prepare a framework for evaluation as well as to monitor the proper guidelines and utilization of financial, human, technical and other resources with minimum economy will be achieved efficiently and effectively within the university library systems.

Keywords-Performance Audit, Performance Indicator, Economy, Efficiency, Effectiveness University Libraries.

1. Introduction

It was around 1970 that some countries began to pay attention to government shrinking policy and actually this policy was influenced by limitation of the resources and gains the most from the least. This time audit process need to be changed in methods, purposes and process, because this kind of audit cannot fulfill all the needs of government in the case of auditing.

There are different kinds of audit from different aspects. At the beginning of this excursus it is better to discuss the different kinds of audit. Normally there is discussion about nameable kinds of audit; different aspects of audit are considerable.

The most citable aspects of audit definitions are:

Aspects/objectives	**Kinds of audit**
1.necessity **aspect**	Arbitrary / obligatory /internal **audit**
2.time of doing **aspect**	Continual/periodic/final **audit**
3.cause /primary purpose **aspect**	Financial/regularity/performance **audit**

Generally auditing involves collection and evaluation of evidence to determine and report whether information under audit complies with established criteria.

In briefly the discussion is about performance audit and abbreviated definitions of financial, regularity & performance audit is mentioned in this summarized form (Zibaei, 2009):

Kinds of audit	**abbreviated definitions/primary purpose of audit**
Regularity audit	(compliance) Compliance of activities with criteria(laws and regulations) and finding the contrariness cases

Kinds of audit	**abbreviated definitions/primary purpose of audit**
Financial audit	Whether the financial statements are prepared, in all material respects, in according with an identified financial reporting standards & frameworks
Performance audit	audit of economy, efficiency and effectiveness of related affairs

Performance audit is a relatively recent innovation introduced in many countries to assess matters of efficiency and effectiveness in the public sector. It is prevalent predominantly in democratic countries like the United States (US), the United Kingdom (UK), Canada, Australia, New Zealand and India in response to increasing public demand (Manaf, 2010). SAI India has been carrying out performance audit over the past 40 years on a variety of subjects across all sectors of public sector programmes in the Central and the State Government (Supreme Audit Institutions, India, 2004).

INTOSAI (The International Organisation of Supreme Audit Institutions) defines "Performance Audit is concerned with the audit of economy, efficiency and effectiveness and embraces:

(a) audit of the economy of administrative activities in accordance with sound administrative principles and practices, and management policies;

(b) audit of the efficiency of utilisation of human, financial and other resources, including examination of information systems, performance measures and monitoring arrangements, and procedures followed by audited entities for remedying identified deficiencies; and

(c) audit of the effectiveness of performance in relation to achievement of the objectiveness of the audited entity, and audit of the actual impact of activities compared with the intended impact''.

According to ICPA (The International Centre for Performance Auditing) "A performance audit is a systematic examination of evidence to independently assess the performance and management of a program against objective criteria."

The Comptroller and Audit General of India defines "Performance audit to see that Government programmes have achieved the desired objectives at lowest cost and given the intended benefits."

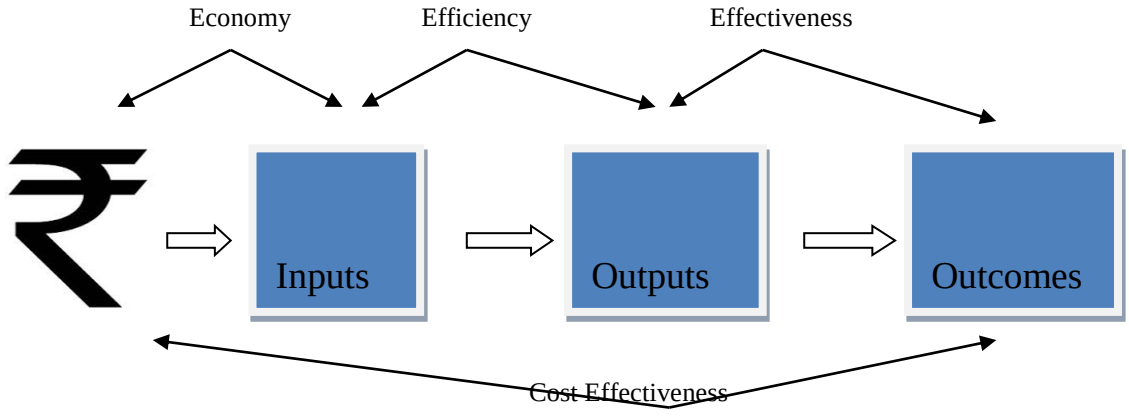
Performance audit is totally based on 3Es i.e. Economy, Efficiency and Effectiveness. It can be summarized as follows:

Economy is minimizing the cost of resources, having regard to the appropriate quality (spending less).

Efficiency is the relationship between the output, in terms of goods, services and other results and the resources used to produce them (spending well).

Effectiveness is the extent to which objectives are achieved and the relationship between the intended impact and the actual impact of an activity (spending wisely).

Economy, efficiency and effectiveness links inputs to outcomes can be represented by the following diagram:-



The basic measures when constructing the three Es are:

• *Cost*-the money spent to acquire the resources;

• *Input*- the resources (staff, materials and premises) employed to provide the service;

• *Outputs*- the service provided to the public, for example, in terms of tasks completed;

• *Outcome*- the actual impact and value of the service delivery (Audit Commission, U.K., 2000)

2. Need Performance Audit in University Libraries

According to A. N. Whitehead, 'Universities are schools of education and schools of research'. They preserve the connection between knowledge and the zest of life uniting the young and old in the imaginative consideration of learning.

The missions of the University Libraries are to make its resources available and useful to academic community and sustain and preserve a universal collection of knowledge and creativity of future generations. It has to be done with economically, efficiently and effectively.

The university library has a valuable role in higher education as well as research activities. Like other public service institutions or those financed from public funds, university libraries have come under increasing pressure to demonstrate results and outcomes of their activities and to justify the use of resources allocated to them. Nowadays, it is difficult for university libraries to manage and proper utilization of library resources due to financial crisis. It is also difficult that library finance is properly utilized according to budget allocation. Some libraries have adequate budget allocation whether it is utilizing properly. So it is challenge to library manager proper utilization of finance as well as resources of the library. Main purpose of the library is to give right user to provide right information at the right time.

Administrative and budget reforms in the public sector have affected the university libraries, particularly as they come under the purview of the fund of the government, and thus are subject to closer scrutiny and monitoring through various budgetary and audit procedures.

In this situation, library and information centre in different categories have been started to apply performance audit standard and methodologies for functioning the administration, reader service, technical service and circulation service as well as web-enabled services to the patrons.

The application of performance audit in university libraries will help to review and evaluate current library operations, compare current library operations, staffing and budget with similar university libraries, assist in developing performance and outcome measurement for the library and provide an assessment of how efficiently the library is running with available resources.

In this situation performance audit is needed to an institution such as library and information centre due to the following reason:

1. To assess utilisation of fund in proper way to achieve economically predetermined objectives and goals of the university libraries.
2. To measure work flow, materials flow, work process and staffing allocations for in order to identify potential efficiencies & effectiveness of university library systems;
3. To audit how efficiently ICT related operations in university libraries have achieved.

3. Literature Review

Oklahoma Department of Libraries (1977) made a performance audit during the period March 24, 1977to May 10, 1977. The purpose of this audit is to study the management, operations, programs, and fiscal needs of an agency.

The EQLIPSE (Evaluation and Quality in Library Performance: System for Europe) project commenced in February 1995 and was completed at the end of March 1997 by the Commission of the European Communities. The Project was funded as part of the European Commission's Libraries Programme. In order to establish the validity as to whether the ISO draft standard would be a satisfactory core set the above exercise was carried out. A comprehensive list of performance indicators was compiled which contained indicators drawn for the different aspects of different types of libraries for evaluation.

Follow-Up Review of the Performance Audit of the Library Services for the Blind and Physically Handicapped released by the Department of Audits and Accounts, Georgia in June 2002. This Review was conducted to determine the extent to which the Board of Regents has addressed the recommendations presented in the 2002 Performance Audit. This Audit Report recommended the status of library management (3 recommendations), library operation (4 recommendations) and library funding (3 recommendations), (Georgia Department of Audits and Accounts, Performance Audit Operations Division, 2004).

Sacramento Public Library Authority (2008) conducted performance audit that was to primarily focus on the internal business practices of the library, such as human resources, finance, facilities, information technology, and collection management, and would result in the development of improved business practices for the Library Authority and enhanced customer satisfaction with library services.

Sarkhel (2010) has identified that now it is the part of our culture, performance audit of a library is very much dependent on the performane measurement based on the performance indicators. He further discusses the different phase of of developing reference framework for performance indicators, tool required to support the different framework of the library.

The Comptroller and Auditor General of India (2010-2011) made a performance audit of activities of National Library of India, Kolkata. This report contains of result of performance audit of activities of the National Library. This performance audit reveals that due to weak internal controls, absence of wok norms and lack of automation, the library has not been able to keep pace with the times in providing efficient redership services to the people.

4. Objectives

The main aim of this study is to examine closely the present situation of performance audit of some selected universities in West Bengal.

The specific objectives are:

I. The economy of activities in accordance with sound administrative principles and practices and management policies adopted by the university libraries.

II. The efficiency of utilization of human, financial, technical and other resources, including examination of information systems, performance measures and monitoring arrangements and procedures followed by audited entities for remedying identified deficiencies; and

III. The effectiveness of performance of university libraries in relation to the achievement of the objectives and the actual impact of activities compared with the intended impact.

IV. To audit overall performance of university libraries in terms of their activities performed as well as different services provided to the users of the library.

V. To know the strength and weakness of performance of the university libraries in different angles compared to the other universities in the state through performance audit.

5. Methodology

To conduct of this study a large variety of data-gathering and analysis techniques have been adopted such as surveys, interviews, observations, documentary analysis as well as the analysis of financial, service, output statistics i.e. performance data of university libraries in West Bengal. Data has been collected through questionnaire plus interview. For in-depth study as well as to gather actual information, direct visit, interview & discussion was conducted to the Librarian & in-Charge of the studied university libraries.

5.1 Choice of Indicators

Performance Indicator is an expression (which may be numeric, symbolic or verbal) used to characterize activities (events, objects, persons) both in quantitative and qualitative terms in order to assess the value of the activities characterized, and the associated method, (International Organization for Standardization, 2008). Performance indicators are the guidelines for evaluating performance of different types of library.

There is no unique and supreme method, which is undisputed & uncontroversial for evaluating the university libraries. But, each type of method is having certain qualities and limitations.

There are some well known methods and guidelines available at present across the world to determine the performance of the different types of libraries. These are EQLIPSE (Evaluation and Quality of Library Performance: System for Europe, 1996), EQUINOX Project by European Commission (1998-2000), BIX – THE BIBLIOTHEKSINDEX: STATISTICAL BENCHMARKING IN GERMAN PUBLIC LIBRARIES (Klug, 2000), Quality Handbook: Performance indicators for library activities (Edgren, 2004), Measuring quality: Performance Measurement in Libraries by IFLA (Poll & Boekhorst, 2007) and ISO 11620- Information and documentation- Library Performance Indicators (2008), ISO/TC 46/SC 8 N (Information and documentation — Statistics and Quality Indicators for Web Archiving, 2012).

To determine the performance audit of the university libraries major of the performance indicators has been taken from the Measuring quality: Performance Measurement in Libraries by IFLA publication 127 (2007) and ISO 11620- Information and documentation- Library Performance Indicators (2008) because it covers how to determine performance of all aspect library activities and functioning.

5.2 Framing the Questionnaire

The questionnaire was designed (see appendices) keeping in view of all the aspects of the present study. The structured questionnaire was prepared and distributed to librarian / in-charge of each university library.

Librarian / in- charge questionnaire has been developed according to the ISO 11620- Information and documentation Library Performance Indicators (2nd Ed., 2008) & IFLA Publications 127 – Measuring Quality: Performance Measurement in Libraries (2nd Ed., 2007). Questionnaire has been also added according to requirement local situation of the library. The questionnaire consisted of 9 sections covering data related information of the library.

6. Scope & Limitations

The scope of the study is limited to only to four (4) university libraries in West Bengal. These university libraries are Burdwan University Library (BUL, 1960), Kalyani University Library (KUL, 1960), North Bengal University Library (NBUL,

1962) & Rabindra Bharati University Library (RBUL, 1962). The study has covered all the libraries of general universities in nature which are offering education following formal mode of delivery in the state of West Bengal and these are established during the year 1960 to 1962. To maintain the homogeneity of the study, it did not cover the libraries of universities those are catering education in the specific subject and also the libraries of research institutes. For this study, data has been taken for the period 2009-2010 to 2011-2012.

7. Data Analysis &Interpretations

Sl. No	Performance Indicators	Methods	BUL	KUL	NBUL	RBUL
1	Shelving Accuracy	[(A / B) × 100] A = No of documents correctly shelved B = Total No. of documents in the Library	146992 / 183739 80 %	114346 / 152462 95 %	214956 / 238840 90 %	104268 / 109756 95 %
2	Time taken for document retrieval from closed stacks	Requisition Slip given to Document Received by the user	5-10 minutes	5-10 minutes	10-15 minutes	Up to 1 p.m. requisition was time taken & book Issued up to 5 p. m. If requisition received 2nd half but book issued next day first half
3	Speed of Interlibray Lending	A = Total no. of hours to complete a specified no. of ILL B = No of interlibrary loan	No ILL facilities at present	No ILL facilities at present	No ILL facilities at present	No ILL facilities at present
4	Percentage of successful interlibray Loans	A / B × 100 A = No of successful interlibrary Loan B = Total of all interlibrary Loan	NIL	No ILL facilities	No ILL facilities	No ILL facilities
5	Public Access Workstation per Capita	A / B × 1.000 A = No of public access workstation B = No of Users of the Library	33 /3436 = .0096	3 / 2823 = 0.001	72/2543= 0.0283	22 / 7386 = 0.002
6	Workstation Hours Available per Capita	[(A - B) × C] ÷ D A = Total No. of Workstation B = No. of Workstation not in service C = No. of Hours the Workstations are available to users during a Year D = Population to be served (That is Total no. of library member in a year)	3125 / 3436 = 30.01	7473 / 2823 = 2.64	2467 / 2543 = 61.14	55616 / 7386 = 7.53
7	User Area per Capita	A / B A = Library Area available for users service in square feet B = Total no. of library members	37351 / 3436 = 10.87	23136 / 2823 = 8.19	28660 / 2543 = 11.27	30000 / 7386 = 4.06
8	Seats per Capita	(A / B) × 1.000 A = No. of available seats to users B = No. of Library members	137 / 3436 = 0.039	100 / 2823 = 0.035	150 / 2543 = 0.059	300 / 7386 = 0.040
9	Staff Per Capita	A / B × 1.000 A = No. of staff in a library B = No. of library users	39 / 3436 = 0.011	18 / 2823 = 0.006	23 / 2543 = 0.009	20 / 7386 = 0.002

Sl. No	Performance Indicators	Methods	BUL	KUL	NBUL	RBUL
10.	Collection Turnover	A / B A = No. of loan in a year B = Total No. of document in the loan collection	17480 / 146992 = 0.11	20424 / 121969 = 0.167	32087/191072 = 0.16	25830 / 87804 = 0.294
11	Loans per Capita	A / B A = Total No. of loan in a year B = No. of users of the library	17480 / 3436 = 5.08	20424 / 2823 = 7.23	23087 / 2543 =12.61	25830 / 7386 = 3.50
12	Percentage of Stock Not Used	[(B - A) ÷ B] × 100 A = Total no. of loan in a year B = Total no. of document in the loan collection	129512 / 146992 = 88.10	101545 /121969 = 83.2	158985 / 191072 = 83.02	61974 / 87804 = 70.58
13	Number of Content Units Downloaded per Capita	A / B A = No. of content units downloaded in a year B = library members in a year	49418 / 3436 = 13.50	File Downloaded not available	85391 / 2543 = 33.57	File Downloaded not available
14	Library Visits Per Capita	A / B A = Total no. of library visits by the users in a year B = Total no. of library users in a year	49830 / 3436 = 14.50	24000 / 2823 = 8.50	41400 / 2543 = 16.27	59400 / 7386 = 8.04
15	Percentage of Information Requests Submitted Electronically	A / B × 100 A = No. of information requests submitted electronically during a year B = Total No. of information requests received during a year	4 / 6 = 66.66	This facilities not provided by the library	This facilities not provided by the library	This facilities not provided by the library
16	Percentage of External Users	A / B × 100 A = No. of external active users B = Total No. of active users	597 / 3116 = 19.15	135 / 2258 =5.97	425 / 2299 = 18.48	32 / 6647 = 0.48
17	Percentage of the total library lending to external users	A / B × 100 A = No. of loans to external users B = Total no. of loans	120 / 17480 = 0.68	No lending facilities are available to external users	No lending facilities are available to external users	No lending facilities are available to external users (Only Photo Copies facilities are given to external users
18	User attendances at library events per capita	A / B × 1.000 A = No. of attendances at the library events B = Total no. of library user	510 / 3436 = 0.15	750 / 2823 = 0.27	During last three year no library events was held	500 / 7386 = 0.067
19	Number of user attendance at training lesson per capita	(A + B) ÷ C × 1.000 A = No. of attendance at Library instructional sessions B = No. of Sessions on the library C = Total library user	328 / 3436 = 0.095	During last three year no training lesson was held for users	43 / 2543 = 0.016	62 / 7386 = 0.008

Sl. No	Performance Indicators	Methods	BUL	KUL	NBUL	RBUL
20	Average Public seating Occupancy rate	(A / B) × 100 A = No. of public seats in use B = Total no. of public seats provided	80 / 140 = 57.14	60 / 100 = 0.60	100 / 150 = 66.67	180 / 300 = 0.60
21	Workstation Use Rate	A / B A = is the no. workstation in use B = is the no. of operable workstation hours provided	33 / 3008 = 1.09	3 / 2491 = 0.12	72 / 2468 = 2.91	22 / 2538 = 0.86
22	Cost Per Loan	(A / B) A = Total recurrent expenditure (i. e. acquisition, equipment & capital expenditure) in a year B = Total No. of Loan in a year	8536394 / 17480 = Rs. 488	1145286 3 / 20424 = Rs. 560.75	3640117/32087 = Rs. 113.44	3950000 / 25830 = Rs.152.92
23	Cost Per Database Session	A / B A = Is the cost of databases in a year B = Is the No. of sessions of the database	4341542 / 12550 = Rs.345.93	5000000 / 12250 = Rs.408.16	3284120 / 16500 = Rs.199.03	2600000 / 9900 = Rs.262.62
24	Cost Per Content Unit Downloaded	A / B A = is the cost of Electronic resources in a year (Electronic resources includes e-Journals, e-books & databases) B = No. of content unit downloaded from electronic resources during a year	4341542 / 49418 = Rs.87.85	Data not available	8655730 / 85391 = Rs. 101.36	Data not available
25	Cost for Library Visit	A / (B - C) A = the total recurrent expenditure in a year B = is the total number of physical library visit in a year C = is the total number of virtual visits in a year	8536394 / 49830 = Rs.171.31	1145288 3 / 24000 =Rs. 477.20	3640117 / 41400 = Rs. 87.92	3950000 / 59400 = Rs.66.50
26	Document Acquisition Speed	Day of Ordering to Day of Receipt of Documents	I: 30-50 days	9-20 days	45-60 days	28-40 days
			F: 45-60 days	20-30 days	90 days	28-40 days
27	Document Processing Speed	Day of Document Received by Technical Staff to Shelving the Document on the Stack	2-3 Months (if emergency then documents process within 2 to 3 days)	7 months	6-9 months	3-4 months

Sl. No	Performance Indicators	Methods	BUL	KUL	NBUL	RBUL
28	User Services Staff as a Percentage of Total Staff	(A / B) × 100 A = is the no. of permanent staff assigned to user services B = is the total no. of staff of the library	28 / 36 = 77.77	13 / 19 = 68.42	15 / 19 = 78.94	15 / 20 = 75.00
29	Correct Answer Fill Rate	(A / B) × 100 A = is the no. of enquiries answered correctly B = is the total no. of enquiries handled	12210 / 16500 = 74.00	9240 / 13200 = 70.00	13860 / 20130 = 68.85	11550 / 16500 = 70.00
30	Ratio of Acquisition Expenditure to Staff Cost	(A / B) A = is the total expenditure on literature & information B = is the total staff cost	8401542 /17803720 = 0.47	Staff Cost not available	11884120 / 10016518 = 1.186	Staff Cost not available
31	Employees Productivity in Document Processing	(A / B) A = is the no. of document acquired in a certain period. B = is the staff involved in document processing	32.3349 /9 = 372.11	1930 / 8 = 241.00	5422 / 7 = 774.57	2330 / 5 = 466.00
32	Cost per User	(A / B) A = is the total expenditure of the library B = Is the registered library users in a year	8536394 / 3436 = 2484.39	1145288 3/2823= 4056 .99	3640117 / 2543 = 1431.42	3950000/ 7386 = 534.79
33	Percentage of Expenditure on Information Provision Spent On The Electronics Collection	(A / B) × 100 A = is the expenditure of Electronic Collection. B = is the total expenditure	4341542 / 8536394 = 50.00	5000000 / 1145288 3 = 43.65	3284120 / 3640117 = 90.00	2600000 / 3950000 = 65.80
34	Percentage of Library Staff Providing & Developing Electronic Services	(A / B) × 100 A = is the no. of library staff providing, maintaining and developing IT & / or Web-based services B = is the total library staff	3 / 36 = 8.33	No Staff involved	2 / 19 = 10.52	1 / 20 = 5.00
35	No. of Attendance Hours at Formal Training Lesson Per Staff	(A / B) A = is the no. of attendance Hours At Formal Training Lesson during a specific time period. B = is the total no. of staff member of the library	420 / 36 = 11.66	During this period no training held	96 / 16 = 6	During this period no training held
36	Percentage of the Library Budget Received By	(A / B) × 100 A = is the Library Budget Received By Special Grand or Income Generated	3760000 00 / 8536394 = 18.60	5352883 / 1145288 3 =46.73	2585330 / 3640117 = 71.02	3000000 / 3950000 = 75.94

Sl. No	Performance Indicators	Methods	BUL	KUL	NBUL	RBUL
	Special Grand or Income Generated	B = is the overall budget of the library				
37	Percentage of Institutional Budget Allocated to Library	(A / B) × 100 A = is the library budget B = is the Institutional Budget	38.8536394 /1913877875 = 1.68	Institutional Budget not available	3640117 / 705378000 = 5.14	Institutional Budget not available
38	Percentage of Collection Automated	(A / B) × 100 A = is the no. of Collection automated B = is the total collection of the library.	80 % book database automated, serial partially automated	Book Database fully automated except serial	Book Database fully automated except serial	Partially automated
39	Percentage of Automation of ILMS Module	(A / B) × 100 A = is the no. of module of ILMS functioning B = Is the total no. of ILMS modules	4 / 6 = 66.66 %	4 / 6 = 66.66 %	4 / 6 = 66.66 %	Only cataloguing module (CDS/ISIS)
40	Situation of the digital / Institutional repository of the University	(A/B) × 100 A= No. of Documents Digitised B= Total no. of Documents in the Collection	Started 2007 (prototype)	Not started	Not started	Not started
41	Percentage of the Collection Received Appropriate Preservation treatment	(A/B) × 100 A = is the document received appropriate Preservation treatment B = is the total collection of the library	100 %	100 %	90 %	100 %

From above table it may be analysed as follows:

1. **Shelving Accuracy:** This indicator is used to assess to what extent documents that are recorded in the library's catalogue are in their correct place on the shelves. A high score means high shelving accuracy. Here KUL & RBUL have achieved 95 % shelving accuracy followed by NBUL (90 %) & BUL (80 %). KUL & RBUL have performed well than NBUL & BUL.

2. **Time taken for document retrieval from closed stacks:** This performance indicator assesses whether the retrieval system is effective. A short retrieval time is considered good. The retrieval time may be affected by the number of orders at peak times. BUL & KUL have taken time to retrieved document from 5 to 10 minutes where as NBUL takes 10-15 minutes and RBUL takes maximum times. So the retrieval systems from closed stack of BUL & KUL is better, then NBUL & RBUL.

3. **Speed of Interlibrary Lending**: It is used to assess the time interval for successfully completing an inter library loan or document delivery transaction, from initial request to shipment of requested item(s). A lower score is usually considered as good. It will inform the library whether its processes are organized efficiently. At present all the studied library have no inter library lending facilities

4. **Percentage of successful interlibrary Loans**: The objective of this performance indicator is to assess the fulfillment of interlibrary loans and document delivery requests relative to the total number of interlibrary loans and document delivery requests. Percentages of successful interlibrary Loans of the studied university libraries at present are nil.

5. **Public Access Workstation per Capita**: This performance indicator assesses the availability of workstations the library users to be served. A high number is regarded as better than a low one. The performance indicator measures the provision of resources related to the users. Here NBUL scored 0.0283 having first position, followed by BUL (0.0096), RBUL (0.002) & KUL (0.001).

6. **Workstation Hours Available per Capita:** The indicator is used to audit the availability of workstations by calculating the average number of hours a workstation could be available for a member during a year. The higher the number the better the library's ability to cope with demand from users for workstations**.** Maximum hours available for the users during a year for the users by NBUL (61.14), then BUL (30.01), RBUL (7.53), KUL (2.64).

7. **User Area per Capita**: The performance indicator is used to assess the importance of the library as a place for study, meeting, and as a learning centre, and indicates the institution's support for these tasks. A higher score will usually be considered good. Here NBUL scored 11.27 having first position, then BUL scored 10.87 having 2nd position followed by KUL (8.19) & RBUL (4.06). The performance indicator is affected by the extent to which the institution provides studying, reading, and meeting facilities outside the library premises.

8. **Seats per Capita:** This performance indicator is used to audit the number of seats provided to library users for reading, studying, or working in the library. A higher score is usually considered as good. NBUL scored 0.059 efficiently and effectively followed by RBUL 0.040, BUL 0.039 and KUL 0.035 respectively.

9. **Staff per Capita:** This performance indicator is used to audit the number of library employees involved to serve library users. A high score is usually considered as good. This performance indicator should only be considered in combination with performance indicators measuring the quality of services and the efficiency of processes. Here BUL scored 0.011 followed by NBUL 0.009, KUL 0.006, and RBUL 0.002. BUL efficiently achieved the staff capita.

10. **Collection Turnover:** This performance indicator helps to assess the overall rate of use of a loan collection. The performance indicator can also be used to assess the fit of the collection to the requirements of the users to be served. The higher the number, the more intensive is the rate of use. Loan collection is effectively and efficiently used by RBUL scored 0.294 followed by KUL 0.167, NBUL 0.16 & BUL 0.11.

11. **Loans per Capita:** The objective of this performance indicator is to audit the rate of use of library collections by the library users. It may also be used to assess the quality of the collections and the library's ability to promote the use of the collections. The higher no. considers the good. There is a strong relation between the performance indicator and the ability of the library staff to promote the collection. NBUL scored 12.61 having 1st position followed by KUL 7.23, BUL 5.08 & RBUL 3.50.

12. **Percentage of Stock Not Use**d: This performance indicator is used to assess the amount of stock not used during a specified period. The performance indicator may also be used to assess the fit of the collection to the requirements of the population to be served. A high score means a low rate of use that means low score is better. RBUL scored 70.58 having first position, then KUL and NBUL scored more or less equally 83.2 & 83.02 and lastly BUL scored 88.10 in case of percentage of stock not used**.** The performance indicator is affected by several factors, including: the mission of the library, for example whether the library has an archival mission or not; the promotional activities of the library; the acquisition and weeding policies and practices in the library.

13. **Number of Content Units Downloaded per Capita:** The performance indicator is used to audit whether users find items of interest in an electronic Resource. A high number is regarded as better than a low one. NBUL scored 33.57 where as BUL scored 13.50; there is big difference between two university libraries for number of content units file downloaded. Data of contents units downloaded are not available for KUL & RBUL. The performance indicator may be affected by several factors, some outside the control of the library. Examples are: the level of users' skills, the level of network access, whether or not fees are charged for access or downloading, and the promotion of services. The number of content units downloaded could be affected by the quality and efficiency of users' search strategies.

14. **Library Visits Per Capita:** This indicator assesses the library's success in attracting

users of all its services. A high score is normally considered good**.** The capturing of virtual visits can depend on the method of calculation, software used, and the ability of the library to extract only *external* virtual visits. NBUL scored 16.27 followed by BUL 14.50, KUL 8.50, and RBUL 8.04.

15. **Percentage of Information Requests Submitted Electronically:** This indicator is used to establish the use of electronic means of communication made by the library users & request were electronically responded to users by the library staff (e.g. e-mail, digital reference) for submitting enquiries. High number may indicate well. Here only BUL provide this service successfully (66.66) but other three libraries do not provide this type of services to users.
16. **Percentage of External Users:** The performance indicator assesses the percentage of library users who are external to the Library's population to be served and thus the library's importance for learning and culture in the region. Also, it provides an estimate of the impact or attraction of a library outside of its service area. A higher score indicates the library's importance and attractiveness beyond its population to be served, and can reflect the relevance of the library's services to a broader population. Whether this is considered as good depends on the library's mission and goals. BUL has successfully completed the 19.15 % services to its external users where as NBUL has given services to external users 18.48 % followed by KUL 5.97 % & RBUL 0.48 % services to external users.
17. **Percentage of the total library lending to external users:** This performance indicator is used to assess the extent to which library loan services are used by external users. It indicates the attractiveness of the library's collection to users outside library. A high rate indicates that the library offers a high amount of services to users outside it. BUL provided 0.68 % loan to external users where as other three university libraries do not provide loan to external users.
18. **User attendances at library events per capita:** This performance indicator helps to attract different library events to its users. A high score indicates that the events that the library arranged were suited to its users. User attendances of library events scored by KUL (0.27), BUL (0.15), RBUL (0.067) and NBUL did not hold any library events to promote the library services.
19. **Number of user attendance at training lesson per capita:** The indicator is used to audit the success of the library in reaching its users through the provision of training on library services. A higher number shows efficiency in reaching users by training lessons. User attendances at training well performed by BUL scored at 0.095, followed by NBUL 0.016 and RBUL 0.008. But during the study period KUL did not organize ant training lesson for its users.
20. **Average Public seating Occupancy rate:** This performance indicator is used to assess the overall use rate of public seats provided for reading and working in the library, by estimating the proportion of the public seating in use at any given time. During the study period NBUL has scored 66.67, followed by KUL & RBUL 0.60 where as BUL scored 57.14. It estimates the probability that a randomly selected public seat in use at any time, or at the times specified.
21. **Workstation Use Rate:** This indicator is used to audit the overall rate of use of workstations provided in the library, by estimating the proportion of the workstations in use at any given time. A higher number indicates that the workstations provided are being heavily used and may indicate a need for increased resources. NBUL has scored 2.91 followed by BUL 1.09, RBUL 0.86, and then KUL 0.12. Here NBUL, BUL & RBUL is better position than KUL.
22. **Cost per Loan:** This indicator helps to assess the cost of the services of the library related to the number of loans**.** A lower value indicates cost efficiency for the loan**.** For each loan minimum expenses incurred by NBUL i.e Rs 113.44/- followed by RBUL Rs. 152.92/-, BUL Rs.488/-, KUL Rs. 560.75/-. NBUL & RBUL expenses less for each loan where as BUL & KUL has expenses more.
23. **Cost per Database Session:** This indicator is used to assess the costs of a database related to the number of sessions. A lower value indicates cost efficiency for the database. Rs 199.03/- is incurred by the NBUL, Rs. 262.62/- by RBUL, Rs. 345.93/- by BUL, Rs. 408.16 by KUL.
24. **Cost per Content Unit Downloaded:** This indicator is used to audit the cost of an electronic resource related to the number of content units downloaded. A lower value indicates cost efficiency for

electronic resources of the library. Rs. 87.85/- is incurred by BUL whereas NBUL is incurred Rs 101.36 for content unit downloaded. But data is not available for KUL and RBUL. So, the performance of BUL is better than NBUL. Other two libraries should keep statistics properly.

25. **Cost for Library Visit:** The indicator is used to assess the cost of the library's service related to the number of library visits. Lower cost is better for this indicator. Rs. 66.50/- is incurred by RBUL, then Rs. 87.92/-by NBUL, Rs. 171.31/- by BUL & Rs. 477.20/- by KUL. Here RBUL, NBUL & BUL has spent less for cost for library visit.

26. **Document Acquisition Speed:** This indicator assesses the degree to which suppliers of library materials are effective, in terms of speed. In case of Indian documents, suppliers of KUL takes less time followed by RBUL, BUL and NBUL & in case of Foreign documents less time is taken by KUL, followed by RBUL, BUL & NBUL.

27. **Document Processing Speed:** This indicator is used to audit whether the different forms of processing procedures are effective as to speed. Less time is effective for the library. BUL takes less time followed by RBUL, KUL & NBUL.

28. **User Services Staff as a Percentage of Total Staff:** It assesses to determine the library's effort devoted to public services in relation to the background services. Higher value indicates that library gives better concentration to the users. 78.94 % of staff of NBUL is involved to provide services to users followed by BUL 77.77 %, RBUL 75 %, KUL 68.42 %. So, NBUL has concentrated more & BUL and RBUL have concentrated more or less equally where as KUL to be has concentrated more for its users.

29. **Correct Answer Fill Rate:** This performance indicator is used to assess to what extent the staff are able to fulfill the primary requirement for a good reference service, namely to provide correct answers to enquiries. It should always be borne in mind that this performance indicator focuses on one aspect of the effectiveness of the reference service only. Higher value is expected for library. Staff of BUL has respond 74 % with correct answer whereas staff of KUL and RBUL has responded 70 % correct answer to its users & NBUL has responded 68.85 %.

30. **Ratio of Acquisition Expenditure to Staff Cost:** This indicator is to relate acquisition costs to staff costs in order to assess whether the library invests a relevant part of its income in the collection. A higher score is usually considered as good. It will inform the library whether its processes are organized efficiently in order to invest a relevant part of its income in the collection. NBUL (1.186) has invested more staff cost than BUL (0.47). The data are not available of other two libraries.

31. **Employees Productivity in Document Processing:** It is used to measure the average number of acquired media (print and electronic documents) processed per employee in a certain period (usually one year). The performance indicator exemplarily demonstrates employee productivity. A higher score will usually be considered as good & how efficiently employees have processed documents. Employee of NBUL has processed maximum no. of documents (774.57) in year whereas BUL is second position (558.16) followed by RBUL (466.00), KUL (241).

32. **Cost per User:** This performance indicator assesses the cost of the service of the library related to the number of users. The performance indicator could be used for evaluating: the cost effectiveness of a library in different periods; the cost effectiveness of a library in a local community in comparison with other services; the cost effectiveness of a library compared with other libraries of the same type. Less cost indicates better performance of the library and effectively provide the services to the users. Less cost is incurred by RBUL (534.79), NBUL (1431.42), BUL (2484.39), and KUL (4056.99).

33. **Percentage of Expenditure on Information Provision Spent on the Electronics Collection:** The objective of this performance indicator is to assess the extent to which the library is committed to building an electronic collection. High value indicates library concentrate on electronic collection for its users. For development of electronic collection NBUL (90 %) has invested more followed by RBUL (65.8 %), BUL (50 %), and KUL (43.65 %).

34. **Percentage of Library Staff Providing And Developing Electronics Services:** The performance indicator is used to assess the extent to which the library invests human resources in providing technical support for electronic services. The score indicates the priority the library

gives to provide and develop its IT and web-based services. High value indicates library staff involved for providing and developing electronic services. 10.52 % of library staff of NBUL providing and developing electronic services for its users whereas 8.33 % of BUL & 5 % of RBUL staff are involved for developing & providing electronic services. No staff is involved for KUL.

35. **No. of Attendance Hours at Formal Training Lesson per Staff Member:** This performance indicator is used to audit the improvement of library staff skills by attending training lessons. A higher number indicates better qualification in terms of training attended. A lower number may indicate the need to promote staff training. A high number of attendances at formal training lessons may, however, involve the same staff member(s). BUL arranged training lessons for staff member (Score-11.66) whereas NBUL has scored 6 for the training lessons of staff. During the study period KUL & RBUL have arranged no training lessons for staff of the library.

36. **Percentage of the Library Budget Received By Special Grand or Income Generated**: The objective of this performance indicator is to assess the library's success in obtaining additional financial resources. A higher score may indicate that the library successfully acts on its own initiative to obtain additional means. In this case, the library is considered ambitious and motivated. RBUL has received 75.94 % special grant whereas NBUL has received 71.02 % followed by KUL 46.73, BUL 18.60 %.

37. **Percentage of Institutional Budget Allocated to Library:** This indicator is used to measure the importance of the library (expressed in monetary units) to and the support by the funding institution. A higher score is usually considered as good. It indicates that the funding institution acknowledges the Library's value for the institution and its financial needs and may allow the library to offer better services to its users. NBUL (5.14 %) has more importance to its parent institution than BUL (1.68 %). But total institutional budget of KUL & RBUL are not available during the study period.

38. **Percentage of Collection Automated:** It is used to assess how much collection of the library has been automated. High value indicates, library has automated major of its collection. BUL, KUL & NBUL has fully automated all its collection whereas RBUL has automated partially of its collection. Serial database is partially automated in BUL but KUL; NBUL & RBUL are yet to start its serial collection for automated.

39. **Percentage of Automation of ILMS Module:** To assess how efficiently library has implemented all the ILMS modules for provide better services to the users. High score indicates, library is better position in implementing the ILMS module in the library. BUL, KUL, NBUL have functioning only four modules (i.e.- Administration, Cataloguing, Serial Control & OPAC) of SOUL, remaining two module is yet to be start (acquisition & circulation). RBUL has just purchased the SOUL software but it is yet to install.

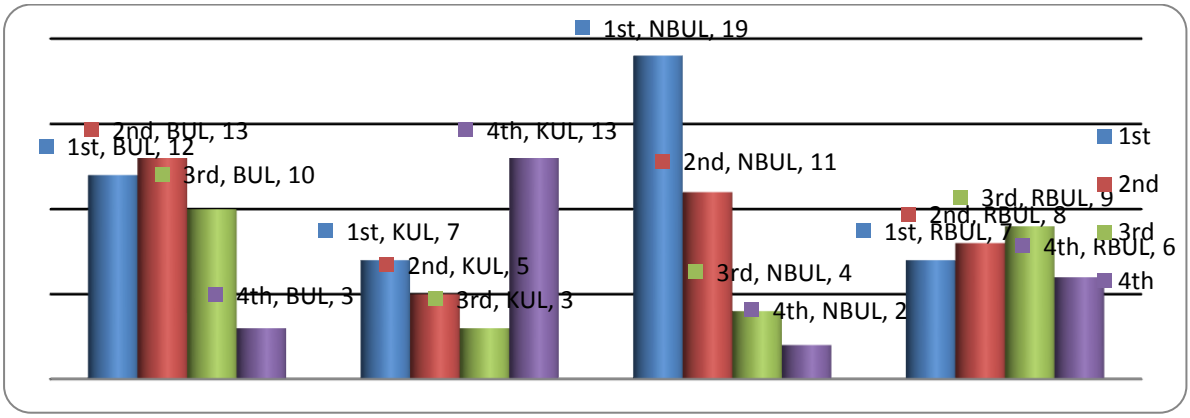
40. **Situation of the digital/Institutional repository of the University:** This indicator is used to assess the digital / Institutional repository of the library, whether library has installed any digital library software to provide digital or electronic services to its users. Here IR started means library has given importance to provide digital services to its users. BUL has started IR in the year 2007 (prototype) but it is jeopardized due to financial crisis. Other 3 university libraries are yet to install any IR software.

41. **Percentage of the Collection Received Appropriate Preservation treatment:** This indicators is used to assess whether library collection get appropriate preservation treatment. High value indicates collection of the library gets appropriate preservation treatment. Collection of BUL, KUL & NBUL gets 100 % appropriate preservation treatment whereas collection of NBUL gets 90 % appropriate preservation treatment.

After applying the performance indicators for different activities & operations performed by the studied university libraries, it shows that NBUL has achieved 1st position followed by BUL (2nd), RBUL (3rd) & KUL (4th) as follows:

Positions	Name of University Libraries			
	BUL	KUL	NBUL	RBUL
1st	12	7	19	7
2nd	13	5	11	8
3rd	10	3	4	9
4th	3	13	2	6

It can be better represented by the following graph:



8. Findings

After conducting the audit of studied university libraries, it is found that:

1. Circulation systems of RBUL is not effective, the library should consider their existing systems.
2. All the studied university libraries have no inter library lending facilities at present.
3. Workstation hours available per capita are not efficient and effective of KUL & RBUL.
4. Presently, the provision of information requests submitted electronically is not provided by the KUL, NBUL & RBUL but BUL has started to provide this services to outstation users.
5. Only BUL provides library lending facilities to external users, other 3 libraries do not provide lending facilities to external users.
6. During the study period NBUL did not organize any user attendances programmes & no training lesson was held by KUL
7. No library staff is involved for providing & developing electronic services by KUL
8. No training lesson was held for library staff during the study period by the KUL & RBUL
9. Percentage of collection automated is not satisfactorily level of RBUL and BUL has started serial databases but KUL & NBUL cannot start serial databases during the study period.
10. RBUL is yet to be started fully fledged ILMS for day to day library operations.
11. Institutional repository of the studied university libraries cannot start yet now.

9. Suggestions

1. Library should keep their up to date data of all sections.
2. They should tally with the previous year data so that they can assess their performance with the previous year.
3. Library should assess all their activities in terms cost invested & output
4. There should be a state level agency, they will monitor the library activities data and if necessary data can be exchanged among the universities to make comparative study among them. (Just like BIBLIOSTAT CONNECT by New York State Library, The State Education Department, http://www.nysl.nysed.gov/libdev/libs/#BibliostatConnect)
5. Parent Institution should give importance to its Library.
6. Fund should be given to the library on the basis of their performance.

10. Conclusions

After applying the above performance indicators it is possible to audit the matters of economy, efficiency and effectiveness of operations and activities executed by studied university libraries in West Bengal. The study shows that the strength and weakness of performance of university libraries in different angles compared to others. This study will help to prepare a framework for evaluation as well as to monitor the proper guidelines and utilization of financial, human, technical and other resources with minimum economy will be achieved efficiently and effectively within the university library systems.

References

Audit Commission, U K . (2000, June). On Target the Practice of Performance Indicators. Retrieved August 4, 2013, from archive.audit commission.gov.uk/auditcommission/subwebs/.../1398.pdf

Commission of the European Communities. (1997, March). Evaluation and Quality in Library Performance: System for Europe. Retrieved April 7, 2011, from http://www.cerlim.ac.uk/projects/eqlipse/

Edgren, J., Friberg, T., Adrial, C. J., Mansby, S., Nilsson, J., & Aslund, H. (2004). Quality Handbook: Performance Indicators for Library Activities. Retrieved April 5, 2013, from The Swedish Library Association's Special Interest Group for Quality Management and Statistics: http://www.biblioteksforeningen.org.test.levonline.com/organisation/dokument/pdf/quality_handbook.pdf

Georgia Department of Audits and Accounts, Performance Audit Operations Division. (2004, May). Follow-Up Review: Library Services for the Blind and Physically Handicapped. Retrieved April 17, 2011, from http://www.georgialibraries.org/glass/pao-04-0417fur.pdf

International Organisation for Standardization. (2012, September 28). Information and Documentation — Statistics and Quality Indicators for Web Archiving. Retrieved April 4, 2013 , from http://netpreserve.org/sites/default/files/resources/SO_TR_14873__E__2012-10-02_DRAFT.pdf

International Organisation for Standardization. (2008). ISO 11620 : Information and documentation- Library Information Indicators. Retrieved August 5, 2011, from http://gjbz.ugcn.cn/%E5%9B%BD%E5%A4%96%E6%A0%87%E5%87%86/%E5%9B%BD%E9%99%85%E6%A0%87%E5%87%86/20110228/2/ISO%2011620%EF%BC%9A2008%20Information%20and%20documentation%20%E2%80%94%20Library%20performance%20indicators.pdf

International Organization of Supreme Audit Institutions. (n.d.). Implementation Guidelines for Performance auditing. Retrieved January 27, 2011, from http://intosai.connexcc-hosting.net/blueline/upload/1implgperfaude.pdf

Klug, P. (2000, August). BIX – The Library Index, or: Why less is often more. Performance Measurement and Metrics , 2, pp. 129–134.

MacDougall, A., OFarrell, J., Williams, & John. (1997, March). Evaluation and Quality in Library Performance: System for Europe. Retrieved April 17, 2011, from Commission of the European Communities.

Manaf, N. A. (2010). The Imapct of Performance Audit : The New Zealand Experience. Retrieved January 31, 2011, from http://researcharchive.vuw.ac.nz/bitstream/handle/10063/1376/thesis.pdf?sequence=1

Oklahoma Department of Libraries. (1977, May 30). Performance Audit. Retrieved February 14, 2013, from http://digitalprairie.ok.gov/cdm/singleitem/collection/stgovpub/id/18730/rec/24

Poll, R., & Boekhorst, P. t. (2007). Measuring Quality, Performance Measurement in Libraries. In 127, IFLA Publications. Munchen: K G Saur.

Sacramento Public Library Authority. (2008, December 8). Performance Audit Final Report. Retrieved July 22, 2011, from http://www.saclibrary.org/auth_board/081208/3.1.pdf

Sarkhel, J. K. (2010). Developing Reference Framework for Performance Indicators in Libraries : Issues and Perspective. XXIV National Seminar of the IASLIC. Gorakhpur: IASLIC.

The Comptroller and Auditor General of India. (n.d.). Performance Audit. Retrieved January 7, 2011, from http://www.cag.gov.in/html/unionaudit.html

The Comptroller and Auditor General of India. (2010-2011). Performance Audit of Activities of National Library of India, Kolkata. Retrieved April 21, 2011, from http://cag.gov.in/html/reports/civil/2010-11_3PA/overview.pdf

The International Centre for Performance Auditing. (n.d.). Performance Audit. Retrieved January 7, 2011, from http://www.performanceaudit.org/

Whitehead, A. N. (n.d.). IWISE Wisdom on Demand. Retrieved January 19, 2012, from http://www.iwise.com/khPGB

Zibaei, G. (2009, May). Performance Audit, How & Why. Retrieved January 7, 2011, from http://www.dmk.ir/pdf/audit.pdf