# A Circulation Analysis of Books at Bangalore University Library, Bangalore: A Study 

Mrs. Sushma H R*<br>Assistant Librarian, Bangalore University, Bangalore, India sushmahrmlis@gmail.com

Mr. Narayanaswamy B V<br>Assistant Librarian,<br>Bangalore University,<br>Bangalore, India<br>bvnswamymlisc@gmail.com


#### Abstract

The users are prime aspect of any type of library. The collection developments, planning, decision making, organizing, delivering of information in the library should cantered around the needs of the users. The main motive of this study was to examine and analyse books transactions among users of Bangalore University Library, Bangalore.In the study it is found that total 9280 books issued to patrons of 45 different departments during July 2015 to June 2016.The study will be helped to the library authorities in identifying the nature and needs of user community and to take necessary steps to build library collections and to satisfy user's requirements.


Keywords: Bangalore University, BUL, Circulation Analysis, Checkouts, Karnataka, India

## 1. Introduction

The Library is the heart of the university; University libraries play a vital role in achievement of the aims and objective of the university. Libraries are the essential part of any university to support teaching, learning and research work. Dr Shankar Dayal Sharma (1988) stated, a library is more important than a university, because a library can function without a university, where as a university cannot do without a library ${ }^{[1]}$. Circulation analysis is one of the traditional approaches taken to use studies and collection evaluation in libraries ${ }^{[2]}$. The results of circulation analyses have been applied to a number of important issues, including evaluating collection acquisition policies; guiding management decisions such as allocating physical space for materials, identifying materials for offsite storage, and allocating funding for materials; and suggesting approaches to deselection ${ }^{[3]}$.

Bangalore University was established in 1964 as a State University and is the third oldest University in Karnataka, India. It has four campuses are JnanaBharathi,Bangalore, Central College, Bangalore, Kolar PG Centre, and Ramanagara PG Centre. It has 6 streams - Arts,

Science, Commerce, Law, Education and Engineering with 48 Postgraduate Teaching and Research Departments offering a total of 209academic Programs. We have 353 Faculties, 751 non-teaching and 230 technical staff. There are 3 University Colleges, 11 Autonomous Colleges and 606 Affiliated Colleges with a total student strength of about 3.5 lakhs ${ }^{[4]}$.

### 1.1 Bangalore University Library

The Bangalore University Library came into existence in the year 1966 by inheriting document collections of about 58000 books and several bound volumes of periodicals held by the Central College Library then affiliated to University of Mysore. The Main Library was set up in the year 1975 at JnanaBharathi Campus. However, the Central College Library continued to serve the Departments located there ${ }^{[4]}$.

The main aim of the Library is to acquire, organise, and provide access to various kinds of information sources including books, journals, theses, etc., both in print and electronic forms and provide excellent IT based information services and be partner in the pursuit of academic excellence by varsity students, researchers and faculty. And also to collaborate with other institutions at local, regional, national and international levels for mutually beneficial resource sharing and to maximise the efficiency of library staff, through continuous training, especially to provide IT based services and help in career development. Library is having rich collection about 3, 50,000 Text books \& Reference books, 9000 Theses and Dissertations, 226 Current journals, 58000 Bound Volumes, 45 News Papers and 37 Magazines are available in libraries.

## 2. Objectives of the study

The aim of this study is to analyse the information-seeking behaviours of patrons like library resource usage at Bangalore University Library (BUL). The other objectives are:-

1. To know the transactions of books by gender of BUL.
2. To find department wise distribution of issued books at BUL.
3. To identify month wise distribution of circulated books at BUL.
4. To know the most circulated books and patron with most checkouts.
5. To determine the scope of the user study.

## 3. Literature Review

Nazia Salauddin(2015), conducted to study Library User Visit of under Graduate Students at an Engineering College, Central Library, Affiliated by APJ Abdul Kalam University, Lucknow, to
improve and increase the user visit, the department authorities and library personnel should take necessary steps to provide latest technologies and information resources in both physical and electronic formats at their best levels, so that the students can extend their skills and knowledge to use the information resources and services by the way of library visit ${ }^{[5]}$.

Justin Littman and Lynn SilipigniConnaway(2004), analysed Print Books and E-books in an Academic Research Library. This study compared the usage of 7,880 titles that were available in both print and e-book format at the Duke University Libraries. Although the results of this study cannot be generalized, it does provide information on the use of e-books in one academic research library and implications for e-book collection development. As librarians continue to acquire e-books, circulation analyses will become increasingly important to identify a more complete understanding of e-book usage patterns. Collection development librarians also can use these data to create e-book collection strategies and policies that better meet user needs ${ }^{[6]}$.
E.B. Lateef, A.O, Omotoso and K.A. Owolabi (2013) described in their study was that all the University libraries have books, journals, CD ROMS which are made available to the post graduate students aimed at enhancing effective teaching, learning and research. The knowledge of users education among the post graduate students is however not encouraging. This showed when the respondents claimed they do not visit the library regularly, on availability of current and relevant materials were identified as the major hindrances facing the use of libraries by post graduate students ${ }^{[7]}$.

## 4. Methodology

The study was conducted based on the books circulation statistics collected which was available in the Bangalore University Library automation website named http://bublibkoha.informindia.co.in:8080/ ${ }^{[8]}$. Data has collected for a period of one year from July 2015 to June 2016. The collected data which was separated based on by gender, department, subject, month, most circulated books and patrons with most checkouts.
5. Scope and Limitations of the study: The limitation of the study is confined to patrons of 45 departments located at Bangalore University, JnanaBharathi campus. The scope of this study is limited for the academic year 2015-2016.

## 6. Data Analysis and Interpretation

In the present study the data was simply put to excel format for executing simple operations like, addition, subtraction, drawing percentage etc. at all the places percentage has
been drawn up to two maximum decimal places and has also been rounded off at some places to next higher percentile value.

### 7.1 Gender wise circulated Books

Table-1 shows that the gender wise circulated books. Books issued to male gender was 4125 books and for female were 5155 books during the study. From the study, it can be notice that female gender ( $55.55 \%$ ) is generally more majority that indicates that female users are using the library resources effectively compared with male users (44.45\%).

| S.. No | Gender | Total No. of Books Issued | Percentage (\%) |
| :---: | :--- | :---: | :---: |
| 1 | Male | 4125 | $44.45 \%$ |
| 2 | Female | 5155 | $55.55 \%$ |
| Total |  |  |  |

Table 1 - Gender wise circulated Books


### 7.2 Department wise distribution of Issued Books

Table - 2 determines department wise distribution of issued books in the JnanaBharathi Campus Library, Bangalore University, Bangalore. During the study we have found the total

9280 books issued to patrons of 45 departments. Maximum number of books 1636 ( $17.64 \%$ ) were issued to Physics department. Followed by 738 books to botany and 735 books to Kannada department. Minimum number of books issued to the department of Chemistry, Electronic Media and Commerce since they are having their own campus library.

| SI No. | Department | Total No. of Books Issued | Percentage |
| :---: | :---: | :---: | :---: |
| 1 | Physics | 1636 | 17.64\% |
| 2 | Botany | 738 | 7.96\% |
| 3 | Kannada | 735 | 7.93\% |
| 4 | Economics | 535 | 5.76\% |
| 5 | History | 504 | 5.44\% |
| 6 | Zoology | 504 | 5.44\% |
| 7 | Computer Science | 448 | 4.82\% |
| 8 | English | 360 | 3.87\% |
| 9 | Library \& Information Science | 352 | 3.80\% |
| 10 | Sociology | 252 | 2.71\% |
| 11 | Social Work | 248 | 2.67\% |
| 12 | Performing Arts | 234 | 2.52\% |
| 13 | Psychology | 231 | 2.50\% |
| 14 | Statistics | 225 | 2.42\% |
| 15 | Geography | 219 | 2.35\% |
| 16 | Electronic Science | 198 | 2.13\% |
| 17 | Geology | 196 | 2.11\% |
| 18 | Bio-Technology | 195 | 2.10\% |
| 19 | MCA | 182 | 1.97\% |
| 20 | Political Science | 180 | 1.98\% |
| 21 | Education | 179 | 1.92\% |
| 22 | Microbiology | 160 | 1.72\% |
| 23 | Biological Science | 148 | 1.60\% |
| 24 | Life Science | 138 | 1.49\% |
| 25 | Mass Communication/Journalism | 70 | 0.75\% |
| 26 | Philosophy | 65 | 0.70\% |
| 27 | Rural Development | 61 | 0.65\% |


| 28 | Women Studies | 54 | $0.59 \%$ |
| :--- | :--- | :---: | :--- |
| 29 | Bio Chemistry | 39 | $0.42 \%$ |
| 30 | MBA | 39 | $0.42 \%$ |
| 31 | Environmental Science | 37 | $0.40 \%$ |
| 32 | Library | 24 | $0.25 \%$ |
| 33 | Hindi | 17 | $0.19 \%$ |
| 34 | Mathematics | 16 | $0.17 \%$ |
| 35 | Visual Arts | 12 | $0.12 \%$ |
| 36 | Applied Genetics | 10 | $0.10 \%$ |
| 37 | Sericulture | 10 | $0.10 \%$ |
| 38 | Finance Section | 4 | $0.08 \%$ |
| 39 | Administrative Section | 4 | $0.04 \%$ |
| 40 | Yoga | 3 | $0.04 \%$ |
| 41 | Urdu | 3 | $0.04 \%$ |
| 42 | Chemistry | 2 | $0.03 \%$ |
| 43 | Telugu | 1 | $0.03 \%$ |
| 44 | Electronic Media | $\mathbf{9 2 8 0}$ | $0.02 \%$ |
| 45 | Commerce | $0.01 \%$ |  |
|  |  | $\mathbf{T 0 0 \%}$ |  |

Table 2 - Dept. wise distribution of issued books during Study

### 7.3 Month wise distribution of Issued Books

Table-3 shows the month wise distribution of books issued according to the number of checkouts. From the table it can be noted that highest number of books issued in the month of November with the total of 1368 checkouts, February stands the second place by 1287 checkouts, March is in third place by 1275 checkouts and October takes the fourth place by 1250 checkouts during study.

| SI No. | Month | Total No. of Books Issued | Percentage |
| :---: | :--- | :---: | :---: |
| 1 | July | 70 | $0.75 \%$ |
| 2 | August | 298 | $3.21 \%$ |


| 3 | September | 572 | $6.16 \%$ |
| :---: | :--- | :---: | :---: |
| 4 | October | 1250 | $13.47 \%$ |
| 5 | November | 1368 | $14.75 \%$ |
| 6 | December | 1006 | $10.85 \%$ |
| 7 | January | 672 | $7.24 \%$ |
| 8 | February | 1287 | $13.87 \%$ |
| 9 | March | 1275 | $13.73 \%$ |
| 10 | April | 916 | $9.88 \%$ |
| 11 | May | 493 | $5.31 \%$ |
| 12 | June | 73 | $0.78 \%$ |
|  | Total | $\mathbf{9 2 8 0}$ | $\mathbf{1 0 0 . 0 0 \%}$ |

Table 3 - Month wise distribution of issued books during Study


### 7.4Top Most-circulated Books

Table-4 shows the top five ranking of most circulated books according to the highest number of checkouts. From the table it can be noted that highest number of issued book entitled Nuclear physics by Ghoshal S Nfrom S Chand publishers, with 72 checkouts. Followed by Research Methodolgy by Kothari C R, Quantum Mechanics by Aruldas G, Programming in ANSI by Balaguruswamy E and Molecular Specroscopy by Colin Banwell N.

| S.. <br> No | Title of the <br> Book | Author | Publisher | No of <br> checkouts | Percentage |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{1}$ | Nuclear physics | GhoshalS N |  <br> company Pvt.Ltd | 72 | $\mathbf{7 . 7 5} \%$ |
| $\mathbf{2}$ | Research <br> methodology | Kothari, C.R. | New Age <br> International <br> Publication | 35 | $\mathbf{3 . 2 4} \%$ |
| $\mathbf{3}$ | Quantum <br> Mechanics | Aruldhas.G | PHI Learning | 32 | $\mathbf{2 . 9 6 \%}$ |
| $\mathbf{4}$ | Programming in <br> ANSI | Balagurusamy E. | Mcgraw Hill <br> Education Private <br> Ltd | 31 | $\mathbf{2 . 8 7 \%}$ |
| $\mathbf{5}$ | Molecular <br> Spectroscopy | Banwell, Colin N | Mcgraw Hill <br> Education Private <br> Ltd | 30 | $\mathbf{2 . 7 8 \%}$ |

Table 4 -Top Most-circulated books

### 7.5 Patrons with the most checkouts

Table-5 has been crafted with the view to give a better understanding of the top five ranking of patrons with the most checkouts of 9280 books issued over 12 months. On the whole we can see there are 81 checkouts belonged to patron of Biological science department, following patrons of Botany and Physics departments. It is also observed that science department patrons are using library resources most.

| Sl. <br> No | Patron Name | Department | No of checkouts | Percentage |
| :---: | :--- | :--- | :---: | :---: |
| 1 | V, Ashok Kumar | Biological Science | 81 | $\mathbf{7 . 5 1 \%}$ |
| 2 | Raju, Ramya | Botany | 66 | $\mathbf{6 . 1 2} \%$ |
| 3 | B, Pramodh | Physics | 62 | $\mathbf{5 . 7 5} \%$ |
| 4 | N R, Pavithra | Botany | 56 | $\mathbf{5 . 1 9} \%$ |
| 5 | Bist Ganesh, <br> Kumbu | Physics | 53 | $\mathbf{4 . 9 1 \%}$ |

Table 5 -Patrons with the most checkouts

## 8. Findings and Conclusion

From the study it is found that highest number of books issued to department of Physics and most of the issued books are Nuclear physics by Ghoshal S N from S. Chand publishers, it is
in top place with 72 checkouts, Research methodology by Kothari C R from New Age International publication takes the second place with 35 checkouts. Maximum number of books issued to patron of Biological science department with 81 books out of 9280 . It is also observed that Science stream students are very much interested to use library resources.

This study will be helped to the library authorities in identifying the nature and requirements of user community and to take necessary steps to satisfy their requirements. More than demonstrating the usage of books, this study suggests some approaches to collection development. As librarians continue to acquire books, circulation analyses will become increasingly important to identify a more complete understanding of book usage patterns. Collection development committee also can use these data to create book collection strategies and policies that better meet user requirements.

## References:

1. Venkata Raman, P. (2004), Information technology applications in libraries,Delhi: EssEss Publications, 86.
2. Mosher, Paul H. (1984), "Quality and Library Collections: New Directions in Research and Practice in Collection Evaluation ",Advances in Librarianship, Vol.13, pp. 211-238
3. Richard L. Trueswell, (1969),"Some Behavioural Patterns of Library Users: The 80/20 Rule",Wilson Library Bulletin, Vol.43, No.5, pp. 458-461.
4. http://bangaloreuniversity.ac.in/accessed on $30^{\text {th }}$ July 2016.
5. Salauddin, Nazia (2015),"Library User Visit of under Graduate Students at an Engineering College, Central Library, Affiliated by APJ Abdul Kalam University, Lucknow: A case Study ", International Research: Journal of Library \& Information Science Vol. 5, No. 4, pp. 682-690.
6. Littman, Justin, and Lynn SilipigniConnaway (2004),"A Circulation Analysis of Print Books and e-Books inan Academic Research Library, Library Resources \& Technical Services"Vol. 48, No. 4, pp. 256-262.
7. E.B. Lateef, A.O,Omotoso and K.A. Owolabi (2013),"A Survey of Postgraduate Students Perception of University Library Resources in Selected Nigerian Universities", International Research: Journal of Library \& Information Science, Vol. 3, No. 1, pp. 102115. http://bublib-koha.informindia.co.in:8080/accessed on $10^{\text {th }}$ July 2016.

Follow us on: IRJLIS, Facebook, Twitter

