Use of Electronic Information Resources at College libraries in Bangalore, India: A Study of College Learners

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Use of Electronic Information Resources at College libraries in Bangalore, India: A Study of College Learners

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Abstract
This research article investigates the accessibility and usage of electronic resources among College libraries in Bangalore, Karnataka, India. In India, most of the institutions initiated electronic information resources in library services. Primary data were collected from four selected college libraries through a structured questionnaire method. Secondary data were collected from various national and international journals, various university libraries, books, magazines, newspapers, reports, etc. Besides, the websites and internet services of the institutions were also used for the purpose of secondary data collection. The result shows that the various e-resources, CD-ROM, e-newspaper, online database, full text database, e-journal and e-books considered as the most importance e-resources by the respondents and 52.41% of the respondents very much satisfied with e-thesis and dissertation.

Key words: ICT, electronic resources, E-Journals, web-resources, Bangalore, e-newspapers

Introduction
The information area nowadays witnesses an explosive situation with the advances in technology. Not only the definition of library resources embedding information has changed but also the concept of information resources has changed completely due to rapid and widespread development in the information technology. Earliest information resources were considered a physical entity but now these have evolved from traditional print documents to electronically stored information i.e. e-Resources, when we process data and convert it in to meaningful and
useful form, it becomes information, when this information is fetched in electronica form: it is called e-Resources. E-resources are one of the emerging environment in libraries and information communication in the competitive service. Electronic resources usually consist of e-journals, e-books, e-articles, e-newspaper, e-thesis, e-dissertation, e-database, and CD-ROM/DVDs which are likely to be the alternative to the print media. EMERALD SCOPUS, EBSCO are some of the examples of online databases. All updated information is published in these e-Resources the familiarity and use of electronic information resources in the libraries for rapid development is necessary and important.

It is the age of information explosion. It have been also recognized the power, wealth and value added phenomenon to an individual, ones, society and nation (Narasappa, 2018). Hence, information, in the electronic form have been admitted an important resource for updating to an individual with what happens in the field of individuals interest in intellectual world.

**College Libraries**

Every college must have a good library and it occupies a prominent position in college campus. It is the pulsing heart of the college (Narasappa, 2016). Therefore the functions of the college library are important. These are Serve the college community, Serve the alumni, Influence the society for the expansion of knowledge and help men and women to quench their quest for truth. In India, the UGC has provided generous funds to purchase reference books and textbooks as well as construction of library building (UGC, 2019). As a result of it, the classroom teaching is now supplemented by library usage. Books on latest teaching methods provide exhaustive knowledge of the subjective to the students.

**Electronic Information Resources**

Kumar, Kumar & Naik, Lokesha (2015) and expressed in his article that any information resource that is accessible through computers or network can be termed as electronic resources. It is also available through the Internet or through online databases. Naik, and Kumar, (2019) again discussed about opinion Electronic Information Resources (EIRs) originally published information in electronic form or in print form made available electronically.

Therefore, any information resource that is accessible through computer or network can be termed as electronic resources like e-journals, e-books and e-data bases have increased considerably. Electronic media has proved its advantages over the print media (Kumar, Kishor
and Naik, Lokesha 2016). Computer storage devices such as optical disk, CD ROM/DVD-ROM
Databases accessible through Internet and other networks can be used or stored for further use.

REVIEW LITERATURE
Kannappanavar and Rajanikanta (2008) paper highlights the use of e-learning resources in
medical colleges. The study has found that Medical education was popularized only after the
independence of the country. It is found that majority of the colleges under the study area have e-
information resources, e-databases. Almost all colleges under study are also becoming members
of a consortium. As far as the infrastructure facilities are concerned, almost all colleges under
study have provided very good infrastructure facilities to their libraries to serve their clients
effectively.
Sambasivan (1998) mentioned the sweeping changes brought about by information and
communication technologies and discussed the phenomena of computer networking, emergence
of potentialities of internet, emergence of list or mail server, application of e-mail and websites.
Also highlighted were hypermedia links, and other revolutionary innovations and technologies,
and their impact on libraries and information centers.
Loan (2011) surveyed the Internet use among college students in Kashmir Valley and found that
students of computer science make use of the Internet most of all followed by students of
business and commerce, general science, social science and humanities students respectively. It
was found that the students of business and commerce leads in using the Internet for information,
students of computer science use it predominantly for communication purposes and students of
social science and humanities use it for education purposes compared to others. Information
overload was the most common problem faced by students of all faculties while searching the
relevant information. The students of general science, social sciences and humanities found the
Internet illiteracy as the major limitation in using the Internet. The students of general sciences,
social sciences and humanities, and business and commerce faced intuitional curbs to the Internet
access. It was needed to make students of all faculties aware about the information and
communication technologies (ICTs) and to train them in using these technologies to bridge the
gap.
Swain (2010) evaluated the level of electronic information services offered by the primary
information reserves of the respective business schools with an opinion pool of sample
respondents. The study found that students expressed keen interest in the use of e-journals, followed by e-books, e-newspapers, e-reports, and e-articles. Least interest was shown towards the use of electronic theses and dissertations. The study also revealed that the majority of students were aware of EBSCO, and Emerald Management Xtra. The study highlighted the practicality of the use of electronic resources, compared to print, among the students of business schools of Orissa (India).

Sampath Kumar and Biradar (2010) examined the use of information communication technology (ICT) in 31 college libraries in Karnataka, India by investigating the ICT infrastructure, current status of library automation, barriers to implementation of library automation and also librarians' attitudes towards the use of ICT. The findings revealed that lack of budget, lack of manpower, lack of skilled staff and lack of training were the main constraints for not automating library activities. Even though library professionals shown a positive attitude towards the use of ICT applications and library automation, they needed extensive and appropriate training to make use of ICT tools.

Kumar, Kishore and Naik, Lokesha (2014) has conducted the study was related to “use pattern of information resources by the users of public library: A case study of district central library, Tumkur (Karnataka).” He knew the frequency of visits of the users to the library and among the time spent and how they get information for their study. He found out use and adequacy of the reading material such as text books and periodicals non book materials etc. He observed whether the arrangements of books and other materials are helpful to the users in the city central library. He adopted Interview Method for the collection of data. After analyzing the data it is found that less no of the users visit the library occasionally. Majority of the user’s spending the time more than two hours. Majority of the users read the newspapers. Majority of the users locate the reading materials directly from the racks. Majority of the users do not use the catalogue cards. Majority of the users refers the information sources like newspapers, books, periodicals etc. Majority of the users are more satisfied with the arrangements of books. Majority of the users are satisfied with the cooperation of the staff were found out.

**Objectives of the study**

- To identify frequently used e-resources by the respondents
- To know the types of e-journals accessed by the respondents.
- To find out purpose of accessing the internet and e-resources by the respondents.
• To study the opinion of the respondents regarding the importance of the e-resources.
• To find out preferred format for downloading articles from the e-resources by the respondents.
• To assess level of satisfaction with e-resources by the respondents.

**Methodology**
A sample questionnaire was prepared keeping in view of the objectives of the study. Based on this the well-structured final questionnaire was designed to collect the data. The question were simple and open ended with ample number of options with the assurance that the data collected would be kept confidential and will be used for the study purpose only. Free and frank options were taken. The questions were asked to the faculty and students to get data. The author has e-mailed and visited four of college libraries in Bangalore, Karnataka, India. Totally 725 questionnaires were distributed to respondents and 696 received back from the respondents. Random sampling method has been applied in this study to collect the data from the respondents. These questionnaires were analyzed and the results were tabulated systematically.

**Data Analysis and Discussion**

**Table 1 Institution-wise respondents’ in different publishers for accessing of e-resources**

<table>
<thead>
<tr>
<th>Institution</th>
<th>Online database</th>
<th>E-Journals</th>
<th>CD-ROM</th>
<th>E-newsletter</th>
<th>E-thesis and dissertation</th>
<th>E-books</th>
<th>Full text database</th>
<th>E-newspaper</th>
<th>Web resources</th>
<th>Open sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jyothi Nivas Women's College,</td>
<td>122 (87.14%)</td>
<td>110 (78.57%)</td>
<td>94 (67.14%)</td>
<td>86 (61.42%)</td>
<td>61 (43.59%)</td>
<td>75 (53.57%)</td>
<td>56 (40.00%)</td>
<td>89 (63.57%)</td>
<td>102 (72.86%)</td>
<td>12 (8.57%)</td>
</tr>
<tr>
<td>Christ college,</td>
<td>126 (88.73%)</td>
<td>114 (80.28%)</td>
<td>98 (69.01%)</td>
<td>100 (70.42%)</td>
<td>65 (45.77%)</td>
<td>79 (55.63%)</td>
<td>60 (42.25%)</td>
<td>93 (65.49%)</td>
<td>106 (74.65%)</td>
<td>18 (12.67%)</td>
</tr>
<tr>
<td>Visveswarapuram Science College,</td>
<td>99 (71.73%)</td>
<td>88 (63.76%)</td>
<td>80 (55.79%)</td>
<td>79 (57.24%)</td>
<td>60 (43.48%)</td>
<td>59 (42.75%)</td>
<td>41 (29.71%)</td>
<td>73 (52.89%)</td>
<td>66 (47.83%)</td>
<td>22 (15.94%)</td>
</tr>
<tr>
<td>Sheshadripuram College,</td>
<td>108 (82.44%)</td>
<td>96 (73.28%)</td>
<td>80 (61.06%)</td>
<td>72 (54.96%)</td>
<td>47 (35.87%)</td>
<td>61 (46.56%)</td>
<td>42 (32.06%)</td>
<td>75 (57.29%)</td>
<td>88 (67.18%)</td>
<td>24 (18.32%)</td>
</tr>
</tbody>
</table>
Table 1 shows that institution wise respondent’s different publishers frequently used e-resources. Out of 696 respondents were from 5 sample colleges. The highest number of respondents 573 (82.33%) used online database and it is followed by e-journal, web resources, and CD-ROM with 73.85%, 66.09% and 63.51% respectively. It is also observed from the above table that only 13.07% respondents used open sources.

Table 2.Institution-wise respondents’ types of e-journals accessed

<table>
<thead>
<tr>
<th>Institution wise</th>
<th>Emerald</th>
<th>Science online</th>
<th>Elsevier science direct</th>
<th>Springer journal</th>
<th>Taylor and Franci s</th>
<th>Blackwell syndegy</th>
<th>Cambridge university press</th>
<th>Institute of physicists</th>
<th>Project muse</th>
<th>Royal Society of chemistry</th>
<th>Others</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jyothi Nivas Women's College</td>
<td>38 (34.54)</td>
<td>20 (18.18)</td>
<td>24 (21.81)</td>
<td>40 (36.36)</td>
<td>70 (63.63)</td>
<td>24 (21.81)</td>
<td>18 (16.36)</td>
<td>6 (5.45)</td>
<td>16 (14.54)</td>
<td>70 (63.63)</td>
<td>12 (10.90)</td>
<td>110 (21.40)</td>
</tr>
<tr>
<td>Christ college,</td>
<td>24 (21.05)</td>
<td>38 (33.33)</td>
<td>20 (17.54)</td>
<td>18 (15.78)</td>
<td>22 (19.29)</td>
<td>17 (14.91)</td>
<td>9 (7.89)</td>
<td>5 (4.38)</td>
<td>12 (10.52)</td>
<td>65 (57.01)</td>
<td>5 (4.38)</td>
<td>114 (22.18)</td>
</tr>
<tr>
<td>Visweswaraparam Science College</td>
<td>19 (21.59)</td>
<td>34 (38.64)</td>
<td>42 (47.72)</td>
<td>30 (34.09)</td>
<td>12 (13.64)</td>
<td>22 (25)</td>
<td>8 (9.09)</td>
<td>6 (6.82)</td>
<td>10 (11.37)</td>
<td>64 (72.73)</td>
<td>6 (6.82)</td>
<td>88 (17.12)</td>
</tr>
<tr>
<td>Sheshadripuram College,</td>
<td>14 (14.58)</td>
<td>42 (43.75)</td>
<td>38 (39.58)</td>
<td>25 (26.04)</td>
<td>10 (10.42)</td>
<td>12 (12.5)</td>
<td>16 (16.67)</td>
<td>18 (18.75)</td>
<td>9 (9.37)</td>
<td>57 (59.37)</td>
<td>5 (5.21)</td>
<td>96 (18.68)</td>
</tr>
<tr>
<td>Malleswaram Women's First Grade College,</td>
<td>29 (27.35)</td>
<td>58 (54.71)</td>
<td>43 (40.57)</td>
<td>32 (30.18)</td>
<td>14 (13.20)</td>
<td>18 (16.98)</td>
<td>14 (13.20)</td>
<td>20 (18.87)</td>
<td>14 (13.20)</td>
<td>62 (58.49)</td>
<td>3 (2.83)</td>
<td>106 (20.62)</td>
</tr>
<tr>
<td>total</td>
<td>124 (24.12)</td>
<td>192 (37.35)</td>
<td>167 (26.65)</td>
<td>145 (28.21)</td>
<td>128 (24.90)</td>
<td>93 (18.09)</td>
<td>65 (12.64)</td>
<td>55 (10.70)</td>
<td>61 (11.87)</td>
<td>318 (61.87)</td>
<td>31 (6.03)</td>
<td>514 (100)</td>
</tr>
</tbody>
</table>

Source: Computed (Note: Figures in parentheses denote percentage)

Table 2 shows that institution wise respondent’s types of e-journals accessed. Out of 514 respondents 318 (61.87%) of them accessed Royal society of chemistry, 192 (37.35%) of them
accessed science online, 167(26.65%) of them preferred Elsevier science direct. It is observed from the table that Royal society of Chemistry is the most preferred and accessed journal while institute of physics is the least accessed journal by the respondents of colleges in Bangalore.

Table 3 Institution-wise respondents’ preferred file format for downloading articles

<table>
<thead>
<tr>
<th>Institution</th>
<th>Pdf</th>
<th>Html</th>
<th>Word format</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jyothi Nivas Women's College,</td>
<td>118 (84.28)</td>
<td>98 (70.00)</td>
<td>56 (40)</td>
<td>13 (9.2)</td>
</tr>
<tr>
<td>Christ college,</td>
<td>122 (85.92)</td>
<td>82 (57.75)</td>
<td>49 (34.50)</td>
<td>9 (6.34)</td>
</tr>
<tr>
<td>Visweswarapuram Science College,</td>
<td>107 (77.54)</td>
<td>78 (56.52)</td>
<td>32 (23.19)</td>
<td>8 (3.79)</td>
</tr>
<tr>
<td>Sheshadripuram College,</td>
<td>102 (77.86)</td>
<td>72 (54.96)</td>
<td>47 (35.87)</td>
<td>11 (8.39)</td>
</tr>
<tr>
<td>Malleswaram Women's First Grade College,</td>
<td>131 (90.34)</td>
<td>102 (70.34)</td>
<td>36 (24.82)</td>
<td>17 (11.72)</td>
</tr>
<tr>
<td>Total</td>
<td>580 (83.33)</td>
<td>432 (64.44)</td>
<td>220 (31.61)</td>
<td>58 (8.33)</td>
</tr>
</tbody>
</table>

Table 3 reveals that institution wise respondent’s preferred format for downloading articles from e-resources. The total number of 696 respondents, 580 (83.33%) of them preferred Pdf format, 432(64.44%) preferred Html format and 220 (31.61%) of them preferred word format.

Table 4. Respondents’ level of satisfaction with e-resources

<table>
<thead>
<tr>
<th>E-resource</th>
<th>Very much satisfied</th>
<th>Satisfied</th>
<th>Somewhat satisfied</th>
<th>Dis. Satisfied</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Online database</td>
<td>419 (73.12)</td>
<td>106 (18.50)</td>
<td>44 (7.68)</td>
<td>4 (0.70)</td>
<td>573 (82.33)</td>
</tr>
<tr>
<td>E-journals</td>
<td>375 (72.96)</td>
<td>82 (15.95)</td>
<td>55 (10.70)</td>
<td>2 (0.39)</td>
<td>514 (73.85)</td>
</tr>
<tr>
<td>CD-ROM</td>
<td>366 (82.81)</td>
<td>65 (14.71)</td>
<td>9 (2.04)</td>
<td>2 (0.45)</td>
<td>442</td>
</tr>
</tbody>
</table>
Table 4 shows that the respondent’s level of satisfaction with e-resources. Among the respondents, more than 80% of the respondents very much satisfied with full text data base and CD-ROM and 70% to 80% of the respondents satisfied with online data base, e-journals and e-newsletter. It is detected that 60% to 70% of the respondents very much satisfied with e-books, e-newspaper, web resources and open sources. It is also observed from the table that only 52.41% of the respondents very much satisfied with e-thesis and dissertation.

Table 5 Respondents’ level of importance of e-resources

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>E-resource</th>
<th>Most Important</th>
<th>Important</th>
<th>Less Important</th>
<th>Not Important</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Online data base</td>
<td>478 (68.68)</td>
<td>136 (19.54)</td>
<td>78 (11.21)</td>
<td>4 (0.57)</td>
<td>696</td>
</tr>
<tr>
<td>2</td>
<td>E-Journals</td>
<td>450 (64.66)</td>
<td>144 (20.69)</td>
<td>100 (14.37)</td>
<td>2 (0.29)</td>
<td>696</td>
</tr>
<tr>
<td>3</td>
<td>CD-ROM</td>
<td>510</td>
<td>115</td>
<td>69 (9.91)</td>
<td>2 (0.29)</td>
<td>696</td>
</tr>
</tbody>
</table>
The data of table 5 indicate that more than 70% of the respondent’s stated that CD-ROM and e-newspaper are the most important e-resources. More than 60 to 70% of the respondents opinioned that online data bases, full text database, e-journal and e-books are the most important e-resources, 50 to 60 of the respondents said web resources and e-newsletter are the most important e-resources and below 50% of the respondents specified that open sources and e-thesis and dissertation are the most important sources.

**Findings of the study**

1. It is found that among the number of e-resources most the respondents frequently used online database, e-journals, web resources, CD-ROM and e-newsletter.

2. The findings shows that among the e-journals, Royal society of chemistry, science online, Elsevier science direct, Springer journal are the most accessed journal by the respondents.

3. It is found that most of the respondents accessed internet and e-resources for the purpose of updating subject knowledge & GK and career development.
4. The result shows that among the various e-resources, CD-ROM, e-newspaper, online database, full text database, e-journal and e-books considered as the most importance e-resources by the respondents.

5. The result shows that PDF and HTML are most preferred file format for downloading articles from e-resources by the colleges in Bangalore.

6. It is found that more than 80% of the respondents very much satisfied with full text database and CD-ROM.

**Suggestion and conclusion**

From the above study that investigator observed and given some suggestion that only 13.07% respondents used open sources. Hence, concerned authorities of these colleges are motivates users to use of open sources. All most all e-Journals are least accessed journal from the above colleges. So concerned authority must accessed e-Journals and motivates users to use.

It is also observed that only 52.41% of the respondents very much satisfied with e-thesis and dissertation. Hence, concerned authority are take initiate to 100% satisfy of e-thesis and dissertation. So the lack of expertness and unawareness leads to the students of the college for avoiding the electronic information resources. Serious efforts should take to conduct studies on the use of EIR and related technologies used by the students and teachers of the college, which is need of the Electronic Information Era.

**Reference:**


[http://digitalcommons.unl.edu/libphilprac/2101](http://digitalcommons.unl.edu/libphilprac/2101)

http://www.escienceworld.in/index.php/ajlis/article/view/51


