Impact of E-resources on Collection Development and Library Services of Major Research Institutes in Lucknow: A case study

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ABSTRACT

The purpose of the study is to know the impact of the e-resources on collection development, collection development policies, and the changing role of library professionals in the selection of library resources. The study found that the collection development policy and selection criteria have changed due to the emergence of e-resources and the increasing involvement of non-professionals. Now libraries are moving towards cooperative selection and sharing of resources through cooperative collection development and consortia agreements. It is also found that selection of resources at consortia level has faded the autonomy of local library.

KeyTerms: E-resources, Collection Development, Library Services, Research Institutes, Collection Management, Electronic Resources.

INTRODUCTION

Due to the emergence of e-resources over the last two decades, many libraries have changed their collection development policies and emphasis has been shifted from ownership to access. The e-resources in scientific libraries of Lucknow region have been growing steadily. There are three types of materials to be considered as well, when we look at the shifting from ownership to access: reference works, journals, and books. The shifting has been nearly completed for the first two types of materials and began for third one too. Bibliographic databases are the first to be replace by their printed versions, followed by journals which nowadays are available in both print as well as electronic format. Compared to the printed books, the proportion of e-books is still small but growing continuously. Now, all the major publishers have started providing majority of their titles in electronic format. In the beginning of 21st century, the National Knowledge Resource Consortium (NKRC) (formerly known as CSIR Electronic Journals Consortium) and Consortium for e-Resources in Agriculture (CeRA) came into existence to provide access to e-resources to CSIR and ICAR institutes and their libraries and information centers. Apart from this, other databases, standards, online multimedia resources, e-journals and e-books have been subscribed by these libraries as per their own requirement to support teaching and research.

Due to significant increase in number of available e-resources and their use by the scientific libraries, one logical question emerges as to how this continuing increase affects the collection development practice and services. As expenses and workload for new e-resources and services are rising, libraries need to justify the investment into change and to prove the efficiency and positive impact of the new resources. It is a fact that the subscription of e-resources in many cases can be managed only with special funding or consortium and funding institutions also want evidence of positive effect. Another reason for assessing the impact of e-resources is to determine the policy of fund allocation. If newly added e-resources are widely accepted and yield positive results, the library needs to allocate more funds and depute more staff into that section and plan to add other resources of similar kind.

LITERATURE REVIEW

A dearth of studies has been carried out on impact of e-resources on collection development and library services in different types of libraries in different parts of the globe. However, a few studies
have been conducted in India. Some of the studies which deserve mention are as under:

Kavitha describes various trends in collection development in digital environment. The changes that have occurred in acquisition, retrieval and storage of information due to the technological developments have been discussed. The way these developments have affected the academic environment and change the role of a librarian has also been portrayed. Wallis in his study argues that e-resources are affecting collection management policies and tries to draw attention in two areas that have been hither to neglected for too long in libraries, namely how do libraries change to meet the new searching habits of users of the Internet and how do collection managers react to the changing information needs of users. The above study has found that implementation of online databases affects internal library use, particularly when databases can be accessed through the Internet.

Chandra in his study observed that there is 35% increase in e-journals subscription and 34% decrease in print only subscription in ARL university libraries during 2000 to 2006. Martell also found that the usage of electronic resources is high and increasing, and patrons are requesting access to even more. Kaur examined the impact of e-journals on the services provided by the university libraries of India. The findings revealed that majority of libraries saved time on checking print issues, calming non-arrivals, cataloguing and maintenance of print arrivals. The libraries under study recorded decrease in photocopying services, but increase in reference and inter library loan services. Ghosh & Panda also provide a vivid picture about the status of serial collections in the libraries attached to the premier institutions of India like IITs.

Yasar noted that the number of information sources available in both printed and electronic media is ever increasing. Even libraries with sizable collection development budgets are having difficulties in coping with this increase as observed from the findings of the study. Yet, with the development of new technologies, the possibilities of innovating interlibrary cooperation projects emerge: libraries combining their efforts, through various consortia are trying to get access to electronic information sources more economically. Thornton examines the role of librarians and library consortia on collection development. He noticed an increasing trend of adding audiovisual materials to the library collections and the electronic resources. However, with the advent of the Internet and the ability to simultaneously share virtual resources, cooperative collection development through consortia arrangements become popular as the findings of the study indicate.

Norman investigated the effects of electronic information sources on collection development in 15 academic libraries, primarily in the Midwest. The survey identified that most of the libraries are attempting to integrate selection of Internet sources into their collection development programs. A variety of library positions deal with negotiating licenses and pricing structures. The acquisition librarian and dean/director, however, tie for being most involved with negotiations in most libraries surveyed. It is also found that the size of electronic collection remains relatively small but growing and the role of the collection development librarian appears to be changing to become more of a quality filter, collaborator, and boundary spanner. White & Crawford have addressed the development of an electronic information resources collection development policy to guide the librarian at Penn State Harrisburg in the selection of electronic reference resources that include and address several crucial issues such as relevance and potential use of the information, redundancy of the information contained in the product, demand for the information, ease of use of the product, availability of the information to multiple users, stability of the coverage of the resource, longevity of the information, cost of the product, predictability of pricing, equipment needed to provide access to the information, technical support, and availability of the physical space needed to house and store the information or equipment etc.

Zahid et al. investigated the perception of Professionals/ Librarians about the impact of electronic resources on collection development and reference services in Government College University Library, Lahore (Pakistan). The findings revealed that electronic resources cause to increase the library visitors and the needs of library users fulfilled while adding the e-resources to the library services.

To the best of our knowledge no study has yet been conducted in Lucknow (capital of Uttar Pradesh) to evaluate the impact of e-resources on collection development and services, as emerged from the review of literature. Therefore, the purpose of this survey is to gain an understanding of the actual impact of e-resources on the collection development and services of scientific libraries of Lucknow. The findings of the study will certainly help librarians for formulating a better collection development policy and a user friendly environment for optimal use of e-resources.

**Purpose and Objectives**

It is a fact that, the trend of subscription and use of e-resources is increasing every year. As S&T libraries usually have the users with special kind of need and the research in their respective fields changing the things very fast. Updating fast changes of the research become difficult in print sources. As information are updated on e-resources very fast besides their alluring features such as access, availability, format (i.e. multimedia), etc. they are proving very useful to users. Thus, periodic study becomes imminent so as to assess and evaluate the effect and use of e-resources on the collection development in S&T libraries as such, study provides the right kind of boost to the administration and information professionals, so as to set the right kind of standards and strategies for building good, balanced and clientele-friendly collections. Several studies have conducted in different parts of the world to evaluate the effect and use of e-resources on collection development in different kind of libraries but no study has yet been conducted for evaluating the effect of e-resources on collection development of S&T libraries with specific reference to Lucknow (UP), thereby making this study imminent. This study however, started with an assumption that e-resources have changed the collection development policy of libraries and have motivated them for formulating new collection development policies such as cooperative collection or consortia agreements. This study, therefore, sets forth the following key objectives to achieve:

- To examine the impact of e-resources on collection evaluation and library staffing pattern;
To assess the impact of e-resources on collection development and services of the libraries;

- To study the impact of e-resources on collection development policies; and

- To study the possible impact of e-resources and technology on collections and collection development policies in future.

**Scope and Methodology**

This study utilized two phase sequential transformative mixed methods approach starting with a survey, followed by in-depth search of websites, annual reports and personal discussions with library staff and observations during personal visits. To know the impact of e-resources on collection development and services, libraries of ten R & D institutions run by central government in Lucknow city of UP, were selected for the study. A structured questionnaire was chosen as data collection instrument. The data was collected through a printed questionnaire survey, since the questionnaire was institution-based and the information and opinions asked were concerned with different sections of the library. The structured questionnaire was divided into eight different sections to ascertain the impact of EIR on different aspects of libraries. Two kinds of scales were used in designing the questions. They are: non-metric scale including nominal (criteria of selection of documents, people who maintain e-resources and Yes/No questions) and ordinal scale (indicating level of agreement, prediction for the future etc. to measure the attitudes of the respondents). One filled-up questionnaire was collected from each of the ten libraries surveyed. Apart from this, the library staff was consulted by visiting each library personally. The details of libraries participating in the study are shown in Table 1.

**Data Analysis**

- **Libraries Collection and Budget**

  It can be observed from Table 2 that only 30% of libraries have less than 20 thousand monograph collection, 40% of libraries have collection between the range of 50 to 99 thousand and the remaining 30% have more than one hundred thousand volumes of monograph collection. 50% of libraries are allocated funds more than Rs 5 million for collection development, 40% of libraries have their budget between Rs 2-5 million, and only one library has its budget less than Rs 1.5 million. On the question of the allocation of funds, it is ascertained during personal interaction with librarians that they spend 90% of their annual budget on print periodicals alone and the rest on other resources. As far as the subscription of e-resources is concerned most of the institutes studied get the access of e-resources through consortia rather than subscribing the same at individual level.

- **Availability of e-resources**

  As shown in Figure 1, almost all the respondents indicated that their libraries provide access to e-journals. However, availability of e-book seems to be almost nil as only one respondent indicated the access to e-books. It is observed that, 70% of the respondents indicated that their libraries have CDs/DVDs of Audio Visual resources; while 50% of libraries provide access to abstracting and indexing databases, and 40% of respondents provide access to other types of databases such as newspaper, reports, and theses etc.
Collection Evaluation

As figure 2 clearly illustrates 60% of respondents agreed that the acquisition of print books is same and rest 40% of respondents accepted that the acquisition of print books decreased. As far as the subscription of print journals is concerned 60% of the libraries responded that they subscribed less number of titles, and the rest indicated that their subscription remained same. While on the subscription of audio visuals sources 50% of libraries agreed that it remained same and the same percentage of respondents indicated that it has decreased.

On institutional access of e-resources, such as indexing & abstracting database, and full-text e-journals databases, 60% of libraries responded that they are accessing more, while 40% of responded that it remains same. In the case of access of e-resources via consortia, 60% of libraries responded that it increased and remaining 40% indicated that it remained same. As far as e-books are concern only 30% of libraries responded on this and out of these 20% responded that it remained same.

**Fig. 2: Impact of E-resources on Acquisition (N=10)**

<table>
<thead>
<tr>
<th>Status of resources</th>
<th>Printed Books acquisitions</th>
<th>Printed Serials titles received</th>
<th>E-resources such as indexing, Abstracting and Full-text databases</th>
<th>Audiovisuals and CD-ROM resources</th>
<th>E-books</th>
<th>Products via consortia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fewer</td>
<td>4</td>
<td>6</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Same</td>
<td>6</td>
<td>6</td>
<td>4</td>
<td>5</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>More</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

**Fig. 3: Subscription to e-resources (N=10)**

<table>
<thead>
<tr>
<th>No. of Response</th>
<th>E-resources are too costly.</th>
<th>E-resources are a good value.</th>
<th>E-resources are not needed by library users.</th>
<th>E-resources are needed by library users.</th>
<th>Collecting e-resources is not in accordance with the library’s mission or goals.</th>
<th>Collecting e-resources is in accordance with the library’s mission or goals.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Statements</td>
<td>True</td>
<td>Partially True</td>
<td>Not at all</td>
<td>True</td>
<td>Partially True</td>
<td>Not at all</td>
</tr>
<tr>
<td>Opinions</td>
<td>2</td>
<td>8</td>
<td>0</td>
<td>10</td>
<td>0</td>
<td>2</td>
</tr>
</tbody>
</table>

As indicated in Figure 3, all libraries agree that e-resources are a good value and collection of e-resources is needed by library users. Similarly, 80% of libraries responded that collection of e-resources is in accordance with the libraries mission and goals and only 20% of libraries indicated that e-resources are very costly. On the question of feedback collected by the libraries from users regarding e-resources, all libraries responded that e-resources were found to be very useful for library users.

Time Span of the Availability of Different Types of E-resources

Further, respondents were asked to indicate, how long their library has been subscribing or providing access to different types of e-resources to their users. As shown in Figure 4, 60% of respondents indicated that their libraries have started subscription to e-journals during the last 0-5 years, 20% of respondents indicated that their libraries have been providing access to e-journals for 5-10 years and the remaining 20% indicated the time span of the subscription of e-journals as 11-20 years. Regarding the question on the availability of e-databases and Web OPAC, 50% of respondents indicated that subscription of e-databases and facility of Web OPAC is available in their respective libraries for the last 5-10 years; whereas 50% of respondents stated that Multimedia resources are available in their libraries for 11-20 years. It is also clear from the Figure 4 that, e-books are the latest e-resources for the libraries, and only 20% libraries responded that they have it.
Role of Different Stakeholders in the Selection of Print Resources

Library professionals played a significant role in the selection of documents in print environment. The researchers tried to identify the role of different stakeholders in the selection of print resources. Figure 5 illustrates the role of the people in the selection of print resources, which shows that the roles of Library Committee, Head of the departments and research scholars play a major role. This means, librarian and library staff don’t play any substantive role in the selection of print resources for their libraries.

Role of Different Stakeholders in the Selection of E-resources

As shown in Figure 6, Library Committee, Head of departments, Director/Dean and consortia are still given more weightage in the selection of e-resources. The major change, which is noticeable, is the involvement of consortia in the selection of e-resources. In print environment, the selection of resources used to be an internal procedure and Library Committee, Departmental Heads and Research
scholars were playing important role. After the emergence of e-resources through consortia, the role of internal bodies has considerably decreased. Now, mainly the committee at consortia level decides which e-resources are to be included or excluded. However, they take into consideration the opinions of the representatives of the consortia members too.

- **Maintenance of E-resources**

The access of e-resources in most of the libraries is IP-based and e-resources are listed on the institute/library website. The maintenance of e-resources particularly, e-journals, is a continuous process due to the changes in journals holding, frequency, access points, links, and contents. A question related to the person responsible for maintenance and updating of e-resources was asked to the libraries under study. As shown in Figure 7, most of the libraries rely on e-resources in-charge and consortia, while only 20% responded that they rely on link maintenance software, user’s feedback and cataloguer.

![Fig. 7: Maintenance of E-resources (N=10)](image)

- **Impact of e-resources on Collection Development Policy**

As shown in Table 3, majority of respondents, 8(80%) strongly agreed (including agreed) that the use of computerized circulation control system has given them information that has led to change in their collection development policy. On the statement “In the past five years, our collection Development Policy has been changed to reflect the effects of e-resources and technology on our library,” 8(80%) respondents have agreed (including strongly agreed), while only 2(20%) disagreed on the statement.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Not Sure</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>The use of computerized circulation control system has given us information that has led to change in our collection development policy.</td>
<td>Nil</td>
<td>2(20%)</td>
<td>Nil</td>
<td>3(30%)</td>
<td>5(50%)</td>
</tr>
<tr>
<td>In the past five years, our collection Development Policy has been changed to reflect the effects of e-resources and technology on our library.</td>
<td>Nil</td>
<td>2(20%)</td>
<td>Nil</td>
<td>6(60%)</td>
<td>2(20%)</td>
</tr>
<tr>
<td>The e-resources have changed the collection development policy of library and raised new issues which call for the involvement of the administrative authorities.</td>
<td>Nil</td>
<td>2(20%)</td>
<td>1(10%)</td>
<td>4(40%)</td>
<td>3(30%)</td>
</tr>
<tr>
<td>The library has shifted the acquisitions budget to cover the e-resources cost and emphasis is shifting from ownership to access.</td>
<td>2(20%)</td>
<td>Nil</td>
<td>Nil</td>
<td>3(30%)</td>
<td>5(50%)</td>
</tr>
</tbody>
</table>

With regard to the views of the respondents on change in the collection development policy and involvement of the administrative authorities, it was found that 7(70%) respondents agreed (including strongly agreed), followed by 2(20%) disagree, and 1(10%) was not sure. Similarly, with regard to the statement, “The library has shifted the acquisitions budget to cover the e-resources cost and emphasis is shifting from ownership to access,” 8(80%) respondents agreed (including strongly agreed) while only 2(20%) strongly disagreed on the same statement.

- **Impact of e-resources on Collection Development Practices**

As shown in Table 4, 5(50%) respondents agreed (including strongly agreed) that e-resources are changing the role of selectors and now libraries need to involve technical, subject, IT experts and copyright experts to insure the compatibility of e-resources with existing IT infrastructure and license agreements. But on the other hand an equal percentage of respondents did not agree on this. Similarly, with regards to the statement “Libraries are moving towards cooperative selection and sharing of resources through cooperative collection development and consortia agreements,” 8(80%) respondents agreed (including strongly agreed) and only 2(20%) of the respondents disagreed on this statement.
As illustrated in Table 5, majority of respondents (80%) think that the ICT and e-resources have provided an opportunity for libraries to develop their own collection. On the other hand, 70% of respondents either agreed or strongly agreed with the statement that, purchase of e-resources solves the problem of space in the libraries.

It is interesting to note that, 8(80%) respondents either agreed or strongly agreed that the use of e-databases has increased their need for journal holdings followed by 10% who disagreed while an equal percentage of respondents are not sure about this and as such remain non committed. The resultant responses show that before subscribing any expensive e-resource, somehow majority of libraries agreed that they cooperate with fellow network members in acquisition, decisions and check the online holdings of other library before we decide to buy/subscribe an expensive title e-resource.

### Impact of e-resources on Collection Management

As illustrated in Table 5, majority of respondents (80%) think that the use of e-resources has increased their need for journal holdings followed by 10% who disagreed while an equal percentage of respondents are not sure about this and as such remain non committed. The resultant responses show that before subscribing any expensive e-resource, somehow majority of libraries agreed that they cooperate with fellow network members in acquisition, decisions and check the online holdings of other library before we decide to buy/subscribe an expensive title e-resource.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Not Sure</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>We now cooperate with fellow network members in acquisition, decisions and check the online holdings of other library before we decide to buy/subscribe an expansive title e-resource.</td>
<td>Nil</td>
<td>2(50%)</td>
<td>Nil</td>
<td>5(20%)</td>
<td>3(20%)</td>
</tr>
</tbody>
</table>

### Summary

- From the data analysis of library’s collection and budget, it is found that 40% libraries have their collection between 50 to 99 thousand and 50% libraries have funds more than 5 million for their collection development.
- Regarding the allocation of funds on different resources, all libraries have accepted that they spend 90% of their annual funds on print periodicals and get access to e-resources through consortia.
- On the availability of e-resources, it is found that all the libraries have access to e-resources and 70% libraries have offline e-resources such as CDs/DVDs, Audio and Video resources.
- On collection evaluation, 80% respondents indicated that they evaluate the usage of e-resources periodically.
- It is interesting to note that 90% libraries don’t have their personal web site for providing access to e-resources. Access is provided either through the publisher website or consortium website.
- Around 60% libraries have accepted that print resources are decreasing and access to e-resources is increasing, which is an indication of the impact of e-resources on the acquisition of print resources.
- All the libraries have also accepted that, e-resources are a good value and needed for their users and 80% of them have agreed that they fulfill the mission and goals of their respective institutes.
- 70% libraries have their written Collection Development Policy and out of them 40% have revised it during last 10 years after the inclusion of e-resources in to their collection.
- The resultant responses also show that, Library Committee plays a significant role in the selection of e-resources and Head of Departments and Directors/Dean also have a considerable weightage in the selection.
- 80% respondents agreed that the use of computerized circulation system have an impact on collection development policy and libraries have been shifting their budget on e-resources and emphasizing on shifting from ownership to access.
- Furthermore, it is found that, 80% respondents feel that due to e-resources, identification of the required information become easy, all the respondents, however have agreed that e-resources solves the problem of space in the libraries while 80% of them feel that purchase of e-resources through consortia agreements has faded the autonomy of their respective local libraries.

### Conclusion

On the basis of the findings of the study, it may be concluded that e-resources have great impact on all library activities and information is quite easier compared to printed resource. As far as space problem is concerned, all libraries agreed that this problem is solved after emergence of e-resources into the library. This is quite a positive sign towards e-resources.
services. Emergence of consortia has substantially affected the collection development policies of libraries and role of library professionals in collection development has also been changed. As, the form of information resources has changed from print to electronic during last decades, acquisition of print resources in libraries decreased. Now most of the libraries are providing access to e-resources and e-resources are accepted as valuable sources of information for libraries and their users. Libraries are moving towards sharing of resources through cooperative collection development and consortia agreements. Emergence of cooperative collection development in the form of consortia brought a tremendous impact. The advent of consortia has also substantially affected the collection development policies of R&D libraries and the role of library professionals in collection development. The role of internal bodies has substantially been decreased and the role of committee at consortia level has increased in the selection of e-resources.

REFERENCES


