

E-Resources Collection Development Process

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Abstract—The appearance and use of ICT significantly affect libraries in collection development and services. Libraries cannot leave ICT in operating their functions to provide speed and timely access to users from both local and remote areas. In this ICT age, libraries with only printed materials are impossible to be long term survival. Therefore, e-resources are becoming a core part of library collection. E-resources are very essential in scholarly community because of up-date information which not included in printed materials. Unlike printed materials, selection and acquisition of e-resources has technical and legal issues. This paper reviews literature on e-resources collection development process. It also attempts to address definition of e-resources and collection development. The purpose of this paper is to give trend regarding e-resources collection development process. This paper analyzed literature published in library science on e-resources collection development pertaining to user studies, collection development policy, selection and acquisition, evaluation and deselection. This paper provides a useful overview of step by step of e-resources collection development process for libraries.

Index Terms—e-resources, collection development, e-resources collection development, library

I. INTRODUCTION

Due to contribution of ICT, information explosion and impact of internet, the world of information continues its march towards the electronic format. As the result, libraries cannot stand only with traditional print material collection to attract and provide better services with greater speed to their users. In the electronic environment, library users have become internet independent who want desktop access to information resources by mouse click without visiting the library and browsing the library collection. Those have compelled libraries and knowledge centers to change the way information is generated, stored and accessed from physical to virtual. At the present time, libraries are gradually shifting towards electronic resources collection development to meet the user needs and demands. Ref. [1] (M. Suresh Bahu, 2015) In ICT age, academic and research libraries have no other alternative to choice digital resources because most of the scientific and technical resource journals are now changing from printed to digital formats. Hence, libraries should plan to acquire e-resources as user need or else the role of library will be

restricted as a store house. It is very important not to designate like that by the users for a library. It makes library's image to fade.

II. E-RESOURCES

Ref. [2] (Sharon Johnson *et al.*, 2012) Electronic resources refer to those materials which require computer access or any electronic product that delivers a collection of data. They may be used with either remote or local access. Some of the common types are;

- E-journal
- E-book
- Full-text (aggregated) databases
- Indexing and abstracting databases
- Reference databases
- Numeric and statistical databases
- E-image
- E-audio/visual resources

III. COLLECTION DEVELOPMENT

Collection development is building library collection systematically, based on meaningful data rather than individual choice. It is the process of assessing the strength and weakness of the library collection and then planning to correct the weakness and maintain the strength. Ref. [3] (Basavantappa Doddhamallappa Kumbar & Gururaj Shivanand Hadagali, 2005) The process of collection development encompasses selection of both current and retrospective material as well as the evaluation of the existing collection. Ref. [4] (Alvin Sherman Library, 2014) Collection development is also defined as a process of selection, acquisition, evaluation, and maintenance of a library collection which meets the needs of the users it is intended to serve.

Ref. [5] (G. Edward Evans & Margarest Zarnosky Saponaro, 2005) Collection development refers to the process of identifying the strengths and weakness of materials collection of a library in terms of needs of the user and resources of the community, and attempting to correct existing weakness of the collection.

Therefore, a universal factor of collection development is investigating the information needs of users and then building library collection in accordance with users' needs.

Ref. [5] (G. Edward Evans & Margarest Zarnosky Saponaro, 2005) Collection development process covers the following elements:

- Users studies

- Collection development policy
- Selection and acquisition
- Evaluation and de-selection

Ref. [6] (Okan E. Ani & Blessing Ahiauzu, 2008) Moreover, appropriate ICT infrastructure such as reliable internet connectivity and website to provide users with access to relevant information is needed by a library to build e-resources collection.

Fundamentally, the objective of any library is to meet information needs of user that are being served. A library which cannot meet those needs is not reliable one for the users. For that reason, libraries need to be careful in selection of library materials to meet the informational, cultural, social and educational needs of different types of users. That is also main responsibility of a librarian leading a library. In accordance with that, the libraries efficiently need to perform collection development process which is intellectual activity of the library to be reliable and systematic library collection for user.

A. User Studies

Building library collection which cannot meet the information needs of users would be useless. To be effective collection development, library collection should be build, based on information needs of users who are the primary stakeholders of the institution. User needs analysis is the process of investigating what users need. Ref. [7], [8] (Arzu Coltekin, 2015 and Jacqueline Borni & Hua Yi, 2008), different methods to conduct user studies are survey, discussion group, interview, and direct observation, questionnaire, etc. Survey is frequently used method to get user's opinion on collection and perception on use of the collection. Ref. [9] (Diva Andrade & Waldomiro Vergueiro, 1996) also discuss that direct contact can be performed through informal interviews with users who visit the library to make clear their needs, demands, compliments and complaints.

B. Collection Development Policy

The existence of collection development policy is immensely significant for any collection development process. Developing of collection development policy makes selection decision making much easier by providing guidance of the selection and protects from being haphazard the collection. Libraries could not build excellent collection without collection development policy. Ref. [10] (Peggy Johnson, 1994) alleges on it that a library without collection development policy is like a business without business plan. Ref. [11] (Suzanne Mangrum & Mary Ellen Pozzebon, 2012) defines that collection development policy refers to a formal document that describes issues such as scope of the collection, budget, selecting responsibilities and weeding. Ref. [3] (Basavantappa Doddhamallappa Kumbar & Gururaj Shivanand Hadagali, 2005) Collection development policy also enhances the library staff for better performance and also makes easier to build a continuous, consistent and balanced growth of library collection.

Ref. [12] (Gary W. White & Gregory A. Crawford, 1997) indicates justifying library decisions on purchasing has become gradually more significant. When the library purchases books, they can be shown on new book shelves for browsing by users and will then be available in the stacks for use. He further alleges for electronic resources, when what has been purchased with library funds is asked to see by users and financial authority, the library may show CD-ROMs or floppy disks, but how can it show electronic resources purchased from online vendors or Internet Web sites? These issues can be resolved with development of electronic resources collection development policy. Ref. [13] (Prachi Srivastava, Lambodar Parabhoi & S. K. Sonkar, 2016) also suggests that collection development policy which helps to smooth the library functions in the e-resources collection development should be had.

Ref. [12] (Gary W. White & Gregory A. Crawford, 1997) adds that having an electronic resource collection development policy can get different benefits. Firstly, it guides librarian in acquisition of information resources to support the mission and programs of the institution. Secondly, it directs librarian in using restricted resources for acquisition. Thirdly, it provides guidance librarian trying to choose specific resources or one format. Finally it can be used to justify the selection of certain resources. Thus, collection development policy is very essential in taking initiative of e-resource collection development. E-resources collection development with collection development policy is beneficial to both library and librarian to be balance and systematic collection without bias in collection development.

Ref. [14] (Vicki L. Gregory, 2000) points out that there are three approaches to integrate acquisition or retention of electronic resources into the collection development policy;

- Making acquisition of electronic resources pursuant to traditional policies
- Creating separate policies in relation only to electronic resources
- Mainstreaming electronic resources into a revised, integrated collection development policy

Ref. [15] (C. Laguardia, 1992 in Praveen Shukla & Rajani Mishra, 2011) There is no agreement on whether to formulate a comprehensive collection development policy statement to include selection and acquisition of e-resources, or a separate one for e-resources. Whatever it is separate collection development policy or integrated policy for e-resources, having collection development policy protects librarian from complaints about selection and acquisition. It also serves a framework in building library collection to make systematic library collection.

C. Selection Process

Ref. [16] (J. M. Welch, 2002 in Smita Joshipura, 2008) Selection of information resources is the foundation of collection development function, and the main objective of the selection decision for any format is satisfying user needs. At the present time, with rapid growth of availability of e-resources, selection of e-resources

becomes difficult for the selectors. Therefore, selection tools need to be consulted to make right resources available to right user with fair price. Ref. [16] (Smita Joshipura, 2008) suggests the use of various selection tools such as trail offer, demonstration from the publisher/vendor, faculty/patron suggestion, vendor exhibition at conference, consulting with librarians already subscribing to a product about their experiences, publisher catalog and reviews in print and electronic sources, etc.

With the dawn of e-resources, tasks of selectors have changed radically. Ref. [16] (J. M. Welch, 2002 in Smita Joshipura, 2008) In the past, selectors recommended new titles on an individual basis in line with traditional selection criteria such as quality, relevance, use and cost. Ref. [16] (Smita Joshipura, 2008), however, those selection criteria that apply to print resources are not enough to apply for selection of e-resources. The selector must consider the other criteria in the selection process such as ease of access, content, search capability, functionality of the interface, technical support, and method of pricing and licensing agreement.

Another important thing in selection of e-resources is developing check list and establishing evaluation team. Ref. [2] (Sharon Johnson et al., 2012) suggest the library should develop check list of selection criteria for e-resources to ensure consistency of approach, to make sound purchasing decision. Traditionally with print resources, selector mostly makes decision to acquire in accordance with collection development policy in isolation. They also point out, however, the selectors can't make decision to acquire an electronic resource in separation because electronic resources include complex issues such as licensing, access, networking and ownership, etc. Ref. [17] (Moin Ahmad & K. C. Panda, 2016) observe that library committee is playing a vital position in the selection process of e-resources.

Ref. [16] (Smita Joshipura, 2008) further says the selectors to consult with staff responsible for technical services for legal and access issues, technology for compatibility with software and hardware and public services for training and ease of use in selection of an e-resource. Ref. [2] (Sharon Johnson, et al., 2012) opines that the library should establish e-resources evaluation team comprising of a group of e-resources stakeholders from various departments of institution to evaluate an e-resource. Ref. [14] (Vicki L. Gregory, 2000) similarly recommends that today many libraries are establishing selection team with subject and technical expertise to be effective in selection of e-resources rather than individual selector.

Whether a library has qualified information resources and meet information needs of user depend on selection process because selection process is very important hub of collection development which is existence of the library. Only when the selector chooses information resources in line with collection development policy identifying guidelines of selection systematically it is possible to be qualified and effective library collection for user. For that reason, selection of electronic resources needs to be developed with very careful attention.

D. Acquisition Process

Ref. [18] (M. G. McSweeney, 1993) Acquisition is the process of obtaining all materials to be added to the library collection. Ref. [19] (Donnelyn Curtis, Virginia M. Scheschy, & Tarango, 2000 in Frances C. Wilkinson & Linda K. Lewis, 2003) discuss that acquisition librarian must identify order, receive and pay for the items in acquiring electronic resources, as with print resources. They, furthermore, add that the acquisition of electronic resources is more intricate and time consuming than other library resources because of verification of IP (Internet Protocol) addresses, various pricing models and licensing agreements. Ref. [14] (Vicki L. Gregory, 2000) the standard acquisition functions of electronic resources include verifying the bibliographic information of the product, identifying the pricing models and establishing licensing agreement.

Ref. [16] (Smita Joshipura, 2008) To verify bibliographic information of electronic resources, acquisition librarians need to investigate information about publisher of the product, coverage, frequency of updates and cost. That information can be gathered from publisher's website but acquisition librarians must work with publisher/vendor to make clear various features of the product and to negotiate for pricing. Prices of electronic resources differ from publisher to publisher because there is no standardized price for electronic resources. For that reason, acquisition librarians must negotiate with publishers for pricing electronic resources. Ref. [16], [19] (Smita Joshipura, 2008 and Frances C. Wilkinson & Linda K. Lewis, 2003) the publishers may set various prices according to the size of the library, the number of users or the nature of the product. They reveal some of the frequent pricing models are as follow

Product type: The publisher may set prices with various options according to type of product.

Institution Size: When the publishers sell the products to universities they may charge higher prices for large university with multiple branches than small university or community colleges according to institution size.

Number of Users: Some publishers may charge price based on total number of student, faculty and staff, while others include only number of students as potential users. Publishers may also base price on limited number of users or unlimited simultaneous users.

Consortia: In consortia purchasing, libraries especially small ones can get expensive electronic products at a lower price due to publishers' special price for consortia.

Journal Package Deals: Some publishers sell electronic journals as bundle in an electronic journal package. Libraries may acquire not only relevant content but also less or not relevance for the users without individual selection in such deal. Some publishers of electronic journal packages propose pay-per-view option. Occasionally, prices are based on print plus electronic subscription.

Content Access: Some publishers require that libraries pay a large initial fees and then smaller annual fees for electronic packages. In such cases some publishers may

charge different fee for access to current and older information. Full-text databases have higher prices than abstract and indexing databases.

Due to various pricing models for electronic resources acquisition librarians need to choose pricing option suitable for institution.

The other acquisition function after identifying pricing models is establishing licensing agreement. Ref. [16], [19] (Smita Joshipura, 2008 and Frances C. Wilkinson & Linda K. Lewis, 2003) licensing agreements take in description of the products, the parties who are signing the licensing agreements, authorized users to use the products, use of products and rights of all parties. Ref. [16] (Smita Joshipura, 2008) also suggests acquisition librarians to inquiry about the license agreement with the publisher before ordering the product. Ref. [19] (Frances C. Wilkinson & Linda K. Lewis, 2003) furthermore allege that each term and condition in the agreement should be reviewed by acquisition librarians responsible for licenses with careful attention. And then, they also add that each provision in the agreement is clear should be assured by acquisition librarians. While reviewing the agreement, librarians must work closely with publishers and necessary changes should be made to conform to the institution's policies.

Licensing agreement is one of the complex technical issues in acquiring electronic resources and takes long time for negotiation. Therefore, librarian responsible for license patiently needs to negotiate with publisher to get agreement which can be accepted and signed by both institution and publisher.

E. Evaluation Process

Ref. [20] (Jim Agee, 2005) Collection evaluation is important activity of collection development because librarian can know the current status of their collections such as the strength and weakness of the collections by conducting collection evaluation. Ref. [21] (Elizabeth Henry, Rachel Longstaff & Doris Van Kampen, 2008) Quantitative and qualitative data for evaluating the usefulness and utility of a library collection are provided by effective collection analysis and assessment. Moreover, they add that determining budget requirements is helped by collection assessment paying attention on the extent of the library's collections in particular areas meet user needs and the needs of the institution. Whether the investment of institution in the collection is being managed responsibly is pointed out by collection assessment as well.

Ref. [20] (Jim Agee, 2005) indicates librarians need to aware of current library collection in order to have a better basis for decision making when acquiring electronic resources in the future. If librarians know the collection they can acquire electronic resources that add to existing collections, either being better weak areas or enriching strong areas. Ref. [22] (Vicki L. Gregory, 2011) discusses that information gathered from traditional collection evaluation methods such as circulation data, title count, median age of item, shelf observation by subject specialists, collections checked against standard list/bibliographies, interlibrary loan statistics, user survey

and focus group are equally significant in evaluating e-resources. Ref. [8] (Jacqueline Borni & Hua Yi, 2008) assert when libraries are acquiring more and more electronic resources traditional collection evaluation methods don't fully meet to meet users' need any longer. Ref. [14] (Vicki L. Gregory, 2000) some technological additional data collection methods can be used to get necessary additional information as to e-resources. These methods are scripted user surveys/assessments, transaction log or web log analysis and network usage analysis. Ref. [8] (Jacqueline Borni & Hua Yi, 2008) further indicate usage patterns of electronic resources can be tracked through log analysis.

To know what the library have, what the library does not have, what user needs, what resources can satisfy the user and whether library budget are being spent correctly by meeting information needs of user, librarians must evaluate their e-resources collections. Acquiring e-resources which cannot meet users' need is wasting valuable limited budget of the library because e-resources are expensive. And then, the results from collection evaluation are also helpful in deselecting e-resources.

F. Deselection Process

Ref. [23] (C. Rosanne, 1991 in Syombua Kasalu & Joseph Bernard Ojambo, 2012) indicates that a well-planned and ongoing weeding program whose motivation is the need for periodic or continuous assessment of resources with the intention of removing those items that are no longer useful from the collection and ensuring that what is kept in the collection is useful and accessible are required to be effective management of a library collection.

Ref. [23] (G. E. Gorman & B. R. Howes, 1989 in Syombua Kasalu & Joseph Bernard Ojambo, 2012) When library does not weed the collection on a regular basis, user has difficulty in finding relevant materials. Hence the library collection is not only more visually good-looking and more inviting to users, but also the library can provide information that is easy to find and up-to-date by removing out of date or no longer useful items.

Ref. [24] (Alice Crosetto, 2012 in Kathleen A. Lehman, 2014) also discuss for electronic collection the shelf space may not be needed by libraries, but reducing the number of old and irrelevant records the patrons must wade through in their search results to find what they really want make a user's searching experience better. Ref. [13] (Prachi Srivastava, Lambodar Parabhoi & S. K. Sonkar, 2016) state various criteria for renewing or cancellation e-resources. The resources may be withdrawn when;

- No longer supporting the research needs of the users
- Being unavailable or not maintained
- No longer being reliable or relevant
- Being material in another resource which presents more wide coverage of the subject
- The accessibility of information in a more suitable format.
- Usage statistics with a decreasing level of interest

- Cost is not equivalent with usage
- Being not in good condition or damaged
- The cancellation of resources depend the budget

Library should have compact collection with reliable and relevant materials than big collection with unreliable and irrelevant ones for users. Therefore, de-selection process is one of the very critical activities of a library to be effective collection management for both print and e-resources. Therefore, guidelines for de-selection should be included in collection development policy.

IV. CONCLUSION

The growth of electronic resources has changed trend of collection development process along with technical and legal issues. Consequently, today libraries need to possess technical and legal professionals to address technical and legal issues in building e-resources collection. As library professionals, having only professional skill is not enough for today library professionals. They also need to have technical and legal knowledge to build e-resources collection users prefer. Therefore, they need to keep pace with technology and study legal issues on e-resources as knowledge because librarians have to handle those issues in libraries without technical and legal professionals.

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