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ELECTRONIC RESOURCE COLLECTION DEVELOPMENT IN SELECTED ETHIOPIAN
HIGHER INSTITUTION LIBRARIES: EVALUATIVE ASSESSMENT AND FUTURE
DIRECTION

By

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Acronyms

AAU.....	Addis Ababa University
AAULS.....	Addis Ababa University Library System.
AU	AdamaUniversity
AU.....	Adama University Library System
EHIL.....	Ethiopia Higher Institution Libraries
ICT.....	Information Communication Technology.
JU.....	Jimma University
JULS.....	Jimma University Library System
IFLA.....	International Federation of Library Association.
MARC.....	Machine-Readable Catalogue
UNESCO.....	United Nation Educational, Scientific and Cultural Organization

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Abstract

Technological developments have tremendously impacted on the activities of libraries, causing a major paradigm shift, which challenges libraries and the library profession. Such impact and change in information technologies forced libraries to change the way of collecting information materials or collection development process. As the transfer from paper to electronic resources occurs, especially in the acquisition of resource, it is necessary to examine the process academic libraries practice to select and evaluate electronic resources. The objective of this study was to assess in depth and comprehensive coverage of the work flow for electronic resource collection development process from selection to acquisition in the selected Ethiopia higher institution libraries: Addis Ababa, Jimma and Adama Universities. Along the way it addressed the status of e-resource, process, procedures, issues and challenges in e-resource collection development and shows guiding direction for libraries to learn best practices for collection development of e-resource. This study covers various facets of collection development process including selection and evaluation process, licensing agreement, challenges, and criteria and provides future direction for libraries on how to overcome challenges. Cross-sectional descriptive survey research was used to assess current practice of e-resource collection development. A total of 59 librarians were purposively sampled to fill self-administered questionnaire. Finding of the study shows, these libraries have attempted to develop e-resource or they are in the process of developing one. Libraries have made efforts to develop IT infrastructure and associated support mechanisms to manage and deliver e-resources. However, when it comes to collection development such as selecting, evaluating and acquisition of e-resources, a number of related challenges come to the foreground. The finding proved that there is a significant relationship between e-resource collection development policy and e-resource collection development practices. Thus, the dearth of e-resource development from the collection development policy has a negative impact on the status of e-resource collection development. These include lack of selection and evaluation criteria, lack of budget, skilled professional as well as support from the management. Therefore these libraries should formulate a comprehensive e-resource collection development policy, allocate separate budget, and recruit skilled professionals in order to achieve better collection development.

Chapter One

1 Introduction

1.1 Background of the study

Academic libraries are at the forefront of technological innovation within academic institutions. Networking and communication technologies have enabled distributed library services across college and university campuses. As various sectors of academic communities are harnessing technology to enhance academic programs, the library, at the center of research and scholarship, is also leveraging the new technology capabilities to provide new and enhanced services. The pace of technology innovation in libraries has steadily accelerated over the past decade. Initially technology tools were being applied to the same fundamental library service paradigms to make the work more efficient, but now library work itself is beginning to change, with technological innovation leading to design of new services for users. As a result, new roles for librarians have also emerged in facilitating access to, and navigation of electronic collections and other resources. The modern electronic library has much more to offer in terms of service modalities and options for users (Moyo, 2004).

In the last decade however, there has been a sharp rise in the number and complexity of e-resources in library collections. Moreover, use patterns are shifting from print to electronic materials. Because of the proliferation of e-resources and user preferences for the electronic format, these resources are becoming essential main stays of any library collection. Today's e-resources consist of wide varieties of materials including journals, books, indexes, abstracts, encyclopedias, reference books, aggregator databases, and full-text or partially full-text databases (Joshpra, 2008). Such growth and availability of different format of Electronic resource forced a library to change the traditional library work. Welch, (2002) stated the development and rapid change of the electronic and digital resources forces a re-examination of all facets of library methods for collection development particularly on how to select, acquire and renew the resources.

Recently, electronic resources have increasingly becoming the preferred resource format for students and faculty. Because of this academic library collections have become proportionally more electronic based than print based and continue to move in this direction. This trend makes

it essential for academic librarians to measure the usage of library electronic resources to understand which electronic resources our users are accessing and to assess where our investment in electronic resources is best placed (Yi and Borin, 2006). White and Crawford, (1997) also stated Electronic resources are now recognized as being of great importance to even small academic and public libraries and they are consuming an ever increasing share of library budgets, often to the detriment of monographic acquisitions. CD-ROMs, local area networks, computer equipment, online resources, the Internet, and other remote databases all provide libraries with vast resources for their user populations. In addition to the benefits of additional access, the information explosion has also produced a considerable amount of confusion on the part of library users and librarians.

Ethiopian higher education proclamation 650/2009 also clearly stated that "University shall be designated as University by the Ministry and shall fulfill among others it include establishing physical teaching and research facilities as class rooms, workshops, laboratories and libraries". Ethiopian Libraries must demonstrate their value and document their contributions to overall institutional effectiveness and be prepared to address changes in higher education. The proclamation states the need to establish a library and allocating budget for libraries, the government oversees the importance of modern library in the provision of user needed services. So libraries to meet their patron's need they must have to develop their e resource collection and advocate technologies.

Ethiopian higher institution libraries selected for this study, have also began to include e-resource in their collection. However due to various reason there is confusion and challenges on how to evaluate, select, acquire and archive e-resources in their libraries. As Kiondo (2008) noted the advent of electronic publishing has led to the emergence of electronic or e-resources with associated challenges of their selection, acquisition, storage and information delivery. On the other hand, the emergence of the Internet as a source of information, not only for news, business and entertainment, but also for teaching and learning and research has equally led to a number of challenging issues confronting librarians and information professionals. In the past, collection development was paper based and selectors used printed selection tools like publisher's catalogues and trade bibliographies, unlike today where most of selection tools are available electronically and librarians need to be computer and information literate to surf

through the various tools at their disposal. Library staff members also have a new cohort of vendors and suppliers, and for e-resources there are different procedures required to license, acquire, and list in library online catalogues.

Studies in the area of e-resource collection development in Ethiopia can play a crucial role in improving the collection development practice and allow libraries to provide better services. So this study mainly focus on evaluative assessment of the current status of e-resource collection including practice of e-resource collection development activities in the selected Ethiopian higher institutions libraries, namely Addis Ababa, Jimma and Adama Universities, tries to state the challenges and come with future direction on how to overcome those challenge.

1.2 Statement of the Problem

Rapid growth and complex format of e resources combining with other technical and organizational issue have changed libraries traditional method of collection development and challenged the service libraries provide. Yu & Breivold (2008) stated the developments of electronic resource coupled with the new expectations of the Internet-savvy user, affected all types of libraries who had to rapidly shift from print-based to electronic resources. Whether the electronic resource comes from a commercial publisher or a local digitization effort, this trend is also rapidly changing library operational and organizational practices. Along with the increase in electronic resource acquisitions, librarians must quickly adapt and address an ever complex set of new challenges and changes related to: workflow management and planning; selection and acquisition procedures; copyright and license negotiation; cataloging practices; public access interfaces; and utilization of usage statistics. Libraries must now come to terms with how to better evaluate, acquire, store, and manage this wealth of electronic resources.

Most literatures show libraries in the world have experienced a tremendous shift in content from print to electronic. However the breadth and variety of what is available in e-format is overwhelming and quite different from traditional print format. Vignau et al. (2006) stated that today electronic resource constitute wide variety of materials, As these resources change at a very rapid pace and as libraries continue to build larger collections of e-resources, finding ways to manage them effectively, from selection to licensing, is becoming a major challenge for librarians. So the question that naturally arises is how do librarians make decisions on what to

purchase and what to cancel, simply stated how do they manage electronic resource collection development.

Archiving of e-resource is also the biggest challenge in e-resource collection development, since libraries can lose resource any time making them unable to own the resource subscribed. As Baker (2008) stated to make things more complicated the trends in collection development include more consortia deals and more package deals (local or consortia) and measuring this collection effectively is immensely difficult. As a result of these trends:

- Ownership and access is not always clear for e-resources. E-resources are a constantly changing resource where titles /issues/volumes can be added and dropped anytime making it difficult to count titles or volumes.
- The library has less local control of the content it acquires (the same title may appear in several different package).
- Aggregators' databases may have selective full text content from titles, issues or volumes for example selective issues from volumes or selective articles from issues that make it virtually impossible to track titles or volume.

Now a day's many university libraries in Ethiopia by observing the benefit and demand of the user have began to include e-resource in their collection and some universities already began building digital library. However inefficient and largely ill-managed collection development of the e resources makes the resource not to use for the purpose they planned to serve and the user also didn't get the full service from the electronic and digital resources. In addition lack of clear understanding on usage of e-resource collection development makes the library ineffective in planning, selecting and acquiring the e-resources. Additionally, absence of professional collection development librarians in most libraries makes the libraries unable to understand the behavior and technical nature of the resources. This has had very negative and damaging effect on learning and teaching process as well as research capacities and has limited the possibilities for creating potential and competent professional.

This complex and changing landscape of library problems on e resources makes it even more important to assess and show future direction. By identifying the current challenges and showing

future direction, this research described the current level of collection development of e-resources and serves as a guide line for libraries develop their e resources.

1.3 Objective of the Study

1.3.1 General objectives

The general objective of this study was to assess the current e-resource collection development practices of selected Ethiopian Higher Institutions Libraries: Addis Ababa, Adama and Jimma universities, identifying challenges and envisage future direction.

1.3.2 Specific objectives

- To describe the current status of e-resource collection development at the selected universities.
- To identify the challenges libraries of the selected universities face on e-resource collection development.
- To discuss the current practice of e-resource collection development activities and issues on e-resource collection development at the selected universities.
- To assess impacts of collection development policy on e-resource collection development activities at the selected universities.
- To show future direction for libraries on e-resources collection development.

1.4 Research questions

- What is the current status of electronic resource collection development in the selected EHIL?
- What are the challenges the libraries face in e-resource collection development?
- What is the impact of e-resource collection development policy on the activities of e-resource collection development?
- What the future directions of e-resource collection development should be in the selected EHIL?

1.5 Hypothesis

H₀: The lack of e-resource collection development policy has no impact on the activities of e-resource collection development.

H_a: The lack of e-resource collection development policy has a negative impact on the status of e-resource collection development.

1.6 Significance of the study

Now a day's most educational material are found in electronic format and they are also becoming preferred format for users. Meanwhile many academic libraries have begun massive inclusion of e resources in their collection. So assessing e-resource collection development, from selection to acquisition, of one library can benefit in variety ways. As Yi & Borin (2006) stated electronic resources have increasingly becoming the preferred resource format for students and faculty. Because of this academic library collections have become proportionally more electronically based than print based and continue to move in this direction. This trend makes it essential for academic librarians to measure the usage of library electronic resources to understand which electronic resources users are accessing and to assess where our investment in electronic resources is best placed.

More over the complex nature and format of e resource create confusion to librarian and changed the traditional method of collection development. Studying how the selected Ethiopian higher institution libraries address such issues combining with absence of previous study which focuses on e-resource collection development is very important. So the principal significance of this study creating knowledge and to find solutions for issues pertaining to the e-resource collection development in the selected universities. This can assist collection development librarian to be familiar with issues that occur in developing e-resource collection so that they can easily plan, select and acquire e-resources.

Providing issues for libraries on licensing agreement of e-resource was the other significance of this study. The finding of this research helps collection development librarian to know and consider basic e-resource licensing agreement in acquisition of e-resource. Okerson (1996) stated that due to the cost of digital resources, which is further exacerbated by the present economic

climate, libraries are finding themselves to choose between digital resources and materials in other formats. In order to best serve patrons and steward a library's budgetary resources, libraries will have to carefully monitor their license agreements and try to negotiate terms that are favorable to libraries. Most licenses are written by publishers to protect their interest and as such can rarely be signed without at least some minor amendments. Unlike print publications, e-resources are not purchased outright and usually require a license agreement to be in place. Prior to purchase, the license must be reviewed and negotiated to inform and support the evaluation process, and to ensure that it reflects the selector's expectation (IFLA, 2012). In addition the finding of this research provide information for libraries on archiving of e-resources, this in turn help libraries to upload work for their institutional repositories either pre or post print format.

1.7 Scope of the study

The present investigation was conducted from Sep – May 2012/13 with the main aim to assess the current practice of e-resource collection development and challenges and future direction in the selected Ethiopian higher institution libraries.

The scope of the study is limited on evaluative assessment and current practice of e-resource collection development and challenges only from librarian perspective. In addition in this study e-resource collection development were evaluated using various e-resource issues considered by libraries in collection development activity.

1.8 Limitation and Delimitation of the study

The limitation of the research include time and lack of local literature written on academic libraries and collection development. The other was budget, the study encompass three universities which are located far from each other.

The population considered in this study was only librarians purposively selected who are directly or indirectly involved in e-resource collection development processes. The study assumed that librarians are the only ones who currently and actively participate in e-resource collection development process. Information gathered from them was considered to be enough to conduct this research.

1.9 Assumption

This study has the following assumptions:

- The data collection instrumentations and procedures are valid and reliable based up on their previous use.
- E-resource collection development is new concept for most African countries and in the selected Ethiopian Higher Institution Libraries. So the research did not discuss each university collection development activity separately.

1.10 Operational Definition of terms

Collection development - Term for the selection, evaluation, acquisition, and analysis of materials in relation to an institution's materials needs or mission.

Collection development department- is a department permanently involved in selecting, acquiring, renewing and archiving educational materials in a library.

Collection development policy- documents which define the scope of a library's existing collections, plan for the continuing development of resources, identify collection strengths, and outline the relationship between selection philosophy and the institution's goals, general selection criteria, and intellectual freedom.

E-resources- are electronic materials which are accessed and transmitted using computers, CDs and other technologies. E-resource consist of wide varieties of materials including journals, books, indexes, abstracts, encyclopedias, reference books, aggregator databases, and full-text or partially full-text databases.

Librarian-is permanently hired in the library with a minimum academic rank of diploma in library science and above in information science, information technology, computer science and any related field.

Chapter Two

2.0 Literature Review

2.1 Academic Library

Academic libraries have been established to accomplish a specific purpose, that of fulfilling the key mission of the university: teaching, learning, research and service to the community. For years academic libraries have been fulfilling this role with professionalism in the context of paper based resources which called for explicit collection development policies, users needs analysis, selection and acquisition in order to satisfy real and potential needs of users. Technological developments of the past three decades have brought to the forefront a challenging and complex environment for libraries, and thus called for a paradigm shift for collections, organization and provision of information services (Kiondo, 2004).

Moyo, (2004) also stated Academic libraries are at the forefront of technological innovation within academic institutions. Networking and communication technologies have enabled distributed library services across college and university campuses. As various sectors of academic communities are harnessing technology to enhance academic programs, the library, at the center of research and scholarship, is also leveraging the new technology capabilities to provide new and enhanced services. The pace of technology innovation in libraries has steadily accelerated over the past decade. Initially technology tools were being applied to the same fundamental library service paradigms to make the work more efficient, but now library work itself is beginning to change, with technological innovation leading to design of new services for users. As a result, new roles for librarians have also emerged in facilitating access to, and navigation of electronic collections and other resources. The modern electronic library has much more to offer in terms of service modalities and options for users.

Borin and Yi (2008) stated academic libraries are at a critical crossroads in terms of collecting, evaluating and managing resources. As the balance between electronic and print resources shifts, traditional resource evaluation methods no longer fully meet our needs, but the need to continually evaluate our electronic and print collections remains. The diversity and variety of resources currently available require evaluation from multiple perspectives. Libraries have tried

to evaluate electronic resources within their existing structures based on print resources. Our research-based method combines old and new evaluation methods – the best of the older criteria based evaluation methods for print resources combined with the newer usage based statistics for electronic resources.

Library collections are transitioning from being predominantly made up of printed books, to incorporate electronic hypermedia. With the increasing and obvious user preference for electronic access to information, it is quite probable that the most actively used segments of many library collections are the electronic sources. This has great implications on how user services are planned. Libraries now have to cater to the needs of users who are primarily working with electronic information and, therefore, may not even be in the library's physical space (Moyo, 2004).

Academic libraries, which are attached to academic institutions in Ethiopia, support the university's curriculum as well as staff and students research of the university faculties. The support of teaching requires material for class readings and for student papers. In the past, the material for class readings, intended to supplement lectures as prescribed by the instructor, has been called reserves. In the period before electronic resources became available, the reserves were supplied as actual books or as photocopies of appropriate journal articles. Traditionally, one copy of a book was made available for each 10 students — this is practical for large classes only if paperback copies are available, and the books reused from term to term. But today, Academic libraries serve as access points to print, electronic and digital resources. The changing role of academic libraries resulting from the digital technology allows libraries to participate in universal access (Gojeh, 2011).

2.2 Overview of Electronic Resource in Libraries

The library profession recognized the potential of computers to make library resources more accessible early in the development of computer technology. Librarians were often enthusiastic and sometimes early adopters of technology. The use of electronic resources in libraries began with the development of the machine-readable cataloging (MARC) format in the mid-1960, a full 30 years before the introduction of the World Wide Web and its subsequent ubiquity. Bibliographic databases became available at approximately the same time. Libraries provided

access to data sets such as census and survey data as early as the 1970's. During the microcomputer revolution of the 1980's, libraries acquired software and data on diskettes and offered databases on CD-ROM. Databases on CD-ROM began to contain full text. Search interfaces became more straightforward and simpler to use. Online catalogs became more common, and libraries began to offer them through the pre-World Wide Web Internet. Tim Berners-Lee created the World Wide Web in 1990. The subsequent development of the Mosaic browser in 1992 led to widespread use of the Web beginning in 1993. The graphical interface and the later development of Web search engines such as Yahoo! made resources on the Internet more accessible to average patrons. Web-based electronic resources were widely available beginning in the mid-1990's. Libraries offered Web-based catalogs, bibliographic and full-text databases, electronic journals, and eventually electronic books through the Web. Patrons no longer had to go to the library to do a significant amount of their research (Hawthorne, 2008).

The twenty-first century has been referred to as the "knowledge era" or the "information economy" era, characterized by systematic acquisition, development, storage, usage and sharing of knowledge (Yi, 2005). Consequently many world governments especially in the developed countries have consciously taken steps to create an "information society", through the establishment of efficient methods of production, organization, transfer, and retrieval of digital information and its use to create new knowledge, values, products and services. Similarly Lewandowski, (2010) stated that one of the basic postulates of a knowledge society is availability of knowledge. Due to the development of ICT, the process of learning and researching has been changed in recent years. In the past knowledge was available to researchers usually in print form (papers published in journals, scientific monographs, papers published in proceedings of scientific conferences) unlike today when a lot of knowledge can be found in digital form using various applications.

The pursuit of electronic resources by libraries was driven by the core values of library science. It is possible to recognize in Ranganathan's five laws of library science the motivation that drove libraries to incorporate electronic resources into services and collections. Paraphrased to better suit electronic resources, the laws read: resources are for use, every person his or her resource, every resource its user, save the time of the user, and the library is a growing organism (Ranganathan, 1963). Each technological development in library electronic resources during the

20th century was intended to make access to resources more direct, convenient, and timely for the user. The implementation of electronic resources made the library a growing organism as libraries adapted processes and reorganized staff repeatedly to accommodate the changes inherent in the use of constantly changing technology.

Electronic access to information has transformed libraries. Not only has it changed collection building policies and practices, but it has also transformed library public services as a result of the ability for library patrons to access this electronic information remotely. Electronic resources offer an unprecedented means of reaching dispersed library users. In an academic setting, the category of “remote users” does not only incorporate geographically distant students taking distance education courses from another state, or even country, it also incorporates students who are using library resources from their dorm rooms or classrooms on campus, or outside the campus, at home. The fact that access to library electronic resources is unbounded by space or time is a major boon to distance education programs in many higher education institutions (Moyo, 2004).

Srivastava and Taglienti (2005) also stated the benefit of electronic and digital resource, “We all know how the information explosion and the information revolution have occurred in the last three decades. But the advent of Information and Communication Technologies, the Internet and particularly the World Wide Web, have revolutionized literally everything under the sun. To my perception, the Libraries and Information Centers have been the biggest beneficiaries. These technologies have emerged as boons to us. A job that hitherto used to take hours, days and weeks, is now just a mouse click away. The publishers round the globe have reaped the advantage of these technologies to an increasingly appreciable extent and brought in a plethora of electronic resources in abundance. This has consequently resulted in a paradigm shift in the original philosophy of actual possession of resources to actual access of the same. Naturally, the collection development in the electronic environment had to metamorphose”.

However due to various reasons most libraries in third world countries did not get the benefit from e resources. UNESCO study shows “Even so there is evidence that in Sub-Saharan Africa print-based library services have failed in providing relevant and timely information for different purposes” (Unesco, 1995). All categories of library services in the region are presently inefficient and largely ill-managed to service the information needs of the people. As a result

they remain peripheral in the educational, scientific and social and political life of the people and especially those in rural areas (Rosenberg, 2005). Libraries in Sub-Saharan countries depend mainly on government funding but often without comprehensive strategy for development (Unesco, 1995).

2.3 Issues in Collection Development

Application of information and communication technologies in information management has transformed the way libraries provide information services to the user community. The advent of electronic publishing has led to the emergence of electronic or e-resources with associated challenges of their selection, acquisition, storage and information delivery. On the other hand, the emergence of the Internet as a source of information, not only for news, business and entertainment, but also for teaching and learning and research has equally led to a number of challenging issues confronting librarians and information professionals. In the past, collection development was paper based and selectors used printed selection tools like publishers' catalogues and trade bibliographies, unlike today where most of selection tools are available electronically and librarians need to be computer and information literate to surf through the various tools at their disposal. Library staff members also have a new cohort of vendors and suppliers, and for e-resources there are different procedures required to license, acquire, and list in library online catalogues. IFLA, (2012) report puts some basic issues to consider while developing electronic resource collection such as selection and evaluation, content, technical requirement, licensing agreement, vendor support and review and renewal of e-resources.

2.3.1 Selection and Evaluation of E-Resources

For analog library materials, the selector or acquisition librarian makes the decision to acquire an item with only limited consultation with other departments following established policies and guidelines. E-resources present a number of hurdles not encountered with traditional library materials. In addition to the criteria that apply to analog materials, electronic publications raise complex issues around licensing, access, networking, pricing, ownership, and rapidly changing technology and standards. The selector cannot make a decision to acquire an e-resource in isolation and must liaise closely with other departments in the library and beyond to evaluate the suitability of a resource prior to the decision to acquire. Typically this will involve consultation

with staff responsible for technical systems and services, acquisitions, resource discovery (cataloguing and access), contracts and licensing, and service delivery (IFLA, 2012).

Selection of information sources is the core collection development function, and the primary objective of the selection decision for any format is fundamentally the same: satisfying user needs. With the advent of e-resources, responsibilities of selectors have changed drastically. In the past, selectors recommended new titles on an individual basis using traditional selection criteria such as quality, relevance, use, and cost (Welch, 2002). Selectors analyzed faculty and user requests for new titles and made requests to add to the collection. But in the cyber world, the role of selectors has changed remarkably as e-resources have expanded and developed. Selectors must now address new issues as part of the selection and management processes, issues such as easy and quick accessibility for users, continuous content evaluation and technological and legal concerns (Joshipra, 2008).

2.3.1.1 Content of E-Resources

Initially e-resources need to be reviewed and evaluated for selection from a content perspective against the same policies, guidelines and criteria that apply to print resources. Typically such criteria might state that the resource should: Support the main research aims and goals of the organization. Complement or add depth or breadth to the existing collection supported by subject profiles. Be of a certain quality, e.g., peer reviewed, or have a reputable producer, support the requirements of key audience and generate an acceptable level of use.

For content evaluation, the selector reviews the content of the electronic format and compares it with the print counterpart, if available, to find out about coverage in full text; availability of retrospective material; authoritativeness to determine the accuracy of the content, and completeness of content such as access to graphs, tables, illustrations, and advertisements. Also, it is important to check for duplication of the content in other e-resources, especially in the case of electronic journal packages (Joshipra, 2008).

Once the main selection criteria have been met, then a number of additional content criteria, unique to e-resources, need to be considered. These criteria are particularly important in helping to determine the preferred format in which to acquire an item where there is both a print and electronic equivalent. These include the consistency of the electronic publication with any print

equivalent, the currency of the online content and frequency of updates, the availability of back issues, archiving, and the added value of the e-resource over other formats, and pricing (IFLA, 2012).

2.3.1.2 Technical Requirements of E-Resources

Technology can now support the creation, storage and transmission of large volumes of information in various electronic/digital formats. This has in turn led to changes in information needs of users as they become aware of the capabilities of technology in facilitating access to these various forms of content. Kebede, (2002) argued that the unique/distinguishing characteristics of information needs of users in the electronic environment are a result of the differences in the “physical form” or medium of information rather than the “content” because it is the medium that differentiates information in print form from information in electronic form. Therefore, the various media available in an electronic library is a key factor in the determination of user needs and preferences. Users prefer convenient, easy-to-use information media, and technology that is easily available, requiring skills that they currently possess. Library environments with advanced technology infrastructures offer a broader range of electronic media, and their patrons are generally more technology savvy than those in libraries with limited infrastructures.

E-resources are sometimes difficult and intimidating to use, unlike print resources, which do not require training. Thus, technical support is an important criterion to consider when selecting a resource. It is important to determine if the product is compatible with existing hardware and software, the flexibility of the software to accommodate users with disabilities or compliance with the Americans with Disability Act (ADA), the operating platform, and training availability for staff, online help, and detailed help pages for the users of the product (Joshi, 2008).

E-resources also present a number of technical issues that need to be considered to ensure resources are compatible with existing library hardware and software and that the library has the capability to provide and effectively maintain access to resources on an ongoing and cost effective basis.

2.3.1.3 Vendor Support

Consideration needs to be given to how well establish and build up reliable relationship with e-resource vendor to the range of technical and user support services. It is useful to determine the range of vendor support services available.

It is preferable for the resource to be available for trial and for the vendor to provide, if required, product demonstrations. Trials are particularly useful in supporting the evaluation process of a product in terms of technical issues and functionality and reliability. And also the vendor should be willing to provide initial and ongoing training, including the provision of documentation or online manuals, in the use of the product.

The vendor should be willing to agree to service levels in terms of system availability and response times for resolution of technical issues. The vendor should also have an advance system notification process in place to effectively manage and communicate planned downtime, and content and platform changes. Support provided should be timely, professional, and effective.

Consideration needs to be given to the options available from the vendor for customization and branding of the product. Also consideration should be given to how frequently system data is backed up and what will happen to the resource and library patrons ability to access it if the provider declares bankruptcy, decides to liquidate, or otherwise ceases or transfers publication.

If bibliographic data provision required, the vendor should be able to provide permanent URLs and bibliographic data in the libraries preferred file format. These must adhere to appropriate quality standards, reducing the burden on the library in setting up links or creating catalogue records for access (IFLA, 2012).

2.3.2 Licensing Considerations for E-Resources

Libraries have to carefully select and use licensing agreement Okerson (1996) stated due to the cost of digital resources, which is further exacerbated by the present economic climate, libraries are finding that they have to choose between digital resources and materials in other formats. In order to best serve patrons and steward a library's budgetary resources, libraries will have to carefully monitor their license agreements and try to negotiate terms that are favorable to libraries. Most licenses are written by publishers to protect their interest and as such can rarely

be signed without at least some minor amendments. From the library point-of-view, it is important that licenses be negotiated to allow libraries to continue their mission of promoting access to information. This is especially important as electronic resources have continued to be more expensive than their print counterparts despite the consensus among librarians that electronic format materials should be less expensive than the print because of the elimination of printing, binding, and shipping costs.

Though reviewing a license agreement is not considered a selector's job, it is important to carefully consider the general agreement such as various restrictions, access to archived information, definition of authorized users, use for distance education, off-campus access, and availability of usage statistics (Joshipra, 2008).

Unlike print publications, e-resources are not purchased outright and usually require a license agreement to be in place. Prior to purchase, the license must be reviewed and negotiated to inform and support the evaluation process, and to ensure that it reflects the selector's expectation. It is preferable to obtain, where possible, a standard model license agreement that describes the rights of the library in easy-to-understand and explicit language.

2.3.3 Review and Renewal Process

Given the rapidly changing nature of technology, the emergence of new offerings from information providers in terms of the pricing and packaging of content, and continued pressure on library budgets, it is essential that libraries regularly review their e-resources to ensure they continue to be relevant and provide demonstrable value for money.

Workloads in managing and coordinating the annual renewals process for continuing e-resources (i.e. those resources to which the library has a subscription or lease arrangement, as opposed to those it has purchased outright) should not be underestimated. Like other continuing resources, e-resources will not always have a uniform renewal date, as subscriptions or leases may run for one or more years from any particular date on the calendar. The library should ensure that as part of the license agreement, the vendor is required to provide sufficient advance notification in relation to renewals to allow for sufficient lead time to undertake an effective review of the resource. This is particularly important if the library has a large number of significant renewals due on or around the same time (IFLA, 2012).

2.4 Collection Development Policy

A collection development policy is very valuable as a planning tool for collection development. A policy provides clear but simple guidelines on planning, selecting, acquiring, evaluating, weeding and preservation of material would clearly be of benefit to academic libraries and would lead to them making more consistent and informed decisions.

The library's primary task is to select, maintain, and provide access to relevant and representative information resources. Due to technological developments, libraries are, in the main, moving from holdings ('just in case') to access ('just in time') strategies. This implies that collecting policies are significantly changing and that libraries need to disseminate information widely on their collecting policies. A policy statement is a kind of framework and set of parameters within which staff and users work. It serves many functions beyond being merely a tool for selection of materials. In addition to describing current collections, it forces the staff involved to (re)consider the aims and objectives of the organization, both long and short term, and the priorities to be attached to different activities. It assists with budgeting, serves as communication channel within a library and between the library and outside constituents, supports cooperative collection development, prevents censorship, and assists in overall collection management activities, including the handling of gifts, de selection of materials and serial cancellations (IFLA, 2001).

The use of collection development statements has long been a standard practice in all types of libraries. The American Library Association states that they are documents which define the scope of a library's existing collections, plan for the continuing development of resources, identify collection strengths, and outline the relationship between selection philosophy and the institution's goals, general selection criteria, and intellectual freedom (American Library Association, 1987). They serve many functions beyond being merely a tool for selection of materials. In addition to describing current collections, they establish priorities, assist with budgeting, serve as a communication channel within a library and between the library and outside constituents, support co-operative collection development, protect intellectual freedom and prevent censorship, and assist in overall collection management activities, including the handling of gifts, de-selection of materials, and serials cancellations (Johnson, 1994). They also minimize personal bias in the selection of materials, identify gaps in collection development

responsibilities, and serve as information resources for new collection development librarians (Frank et al., 1993).

A policy document provides a sound foundation for future planning, thereby assisting in determining priorities, especially when financial resources are limited. This provides a basis for the fair allocation of resources, and helps to protect library funds by explaining the rationale behind acquisitions bids. Having a formal publication to refer to ensures continuity and avoids confusion. Compilation of a formal document is beneficial in itself, in that it involves acquiring knowledge of existing collection strengths, and obliges staff to reflect on the library's goals. The stated aims help other collection-related activities such as cataloguing, preservation and storage to form a coherent strategy, and support reader services, for example by identifying areas that are ripe for de selection, or more suitable for inter-library loan, document delivery or Internet access than for acquisition (IFLA, 2001).

Collection development policy guides libraries on issues and processes of selecting information resources to satisfy the needs of its users. It spells out issues related to content of the collection, format of the collection, the responsibility of selecting and acquiring library resources. It provides criteria for monitoring and evaluating the effectiveness of a developed collection in meeting the information needs of the intended users. The main question that librarians grapple with is the impact of technological developments, and specifically, the impact of the emergence of e-resources on collection development and collection development policies. One main difference between traditional collection development and e-resources collection is that the former is based on ownership of materials; however, with IT applications libraries rely more on access from commercial vendors and cooperative programs (White and Crawford, 1997).

Gregory and Hanson (2006) stated selecting and adding e-resources for the collection becomes easier for the selectors when a collection development policy is in place. Such a policy provides a framework for decision-making and is a necessary planning tool, the use of which leads to consistent, informed decisions. It is a blueprint for the selectors and helps them to ensure uniformity in procedures and appropriate balance in the library collection. As more and more e-resources are acquired, it is wise to integrate these products into the library's overall policy. The three main purposes of a collection development policy include informing, directing, and protecting.

2.5 Challenges in Collection Development of Electronic Resource

For the past several decades, new information technologies have dramatically changed the way academic libraries collect provide information and services to their patrons. The profession has become adept at adapting new technologies to best meet the needs of users. The impact of the digital environment on library collections, providing access to electronic resources, and the need to manage hybrid collections of print and electronic resources are ongoing challenges. The increasing demand for electronic resources has resulted in the need for more librarians and library staff devoted to job functions related to planning, selecting, implementing, and evaluating electronic resources (Joshpra, 2008).

Rapid growth and availability of different format of Electronic resource create new challenge in a library work. Welch (2002) stated the development and rapid change of the electronic and digital resources forces a re-examination of all facets of library methods for collection development particularly on how to select, acquire and renew the resources. Selection of information sources is the core collection development function, and the primary objective of the selection decision for any format is fundamentally the same: satisfying user needs. With the advent of e-resources, job responsibilities of selectors have changed drastically. In the past, Selectors recommended new titles on an individual basis using traditional selection criteria such as quality, relevance, use, and cost (Welch, 2002). Selectors analyzed faculty and user requests for new titles and made requests to add to the collection. But in the cyber world, the role of selectors has changed remarkably as e-resources have expanded and developed. Selectors must now address new issues as part of the selection and management processes, issues such as easy and quick accessibility for users, continuous content evaluation and technological and legal concerns.

Lack of perpetual access to e-resources is the other challenge library face. A majority of e-resources is licensed for a limited time. Thus, at the end of the license period, if the selector decides to cancel the subscription, it results in a loss of access to the content. Thus, preserving and archiving e-resources adds different problems for selectors. Moreover, the content of the resource may change over time and require periodic review by the selectors. It requires a continuous evaluation process by the selectors, which is a time consuming job. There can also be serious duplication of the content across databases, resulting in a waste of purchasing power.

Duplication and availability of content from various sources add confusion to users as well as to the selectors (Joshiyura, 2008).

Similarly due to the overwhelming growth and availability of a variety of electronic products, the workflow of acquisitions has changed significantly, becoming more complex. The primary responsibility of the acquisitions department is getting the materials needed by the library's users in the most desired format and in the most efficient and economical manner. Even though the process of identifying, ordering, and paying for materials such as books, serials, and media is very similar to that of electronic formats, the life cycle of e-resources is more convoluted than that of print resources. It requires additional levels of details including tracking, recording, and reviewing the license and business terms, and investigating variable pricing ranges. Acquiring information for an electronic product is often much more time-consuming than for print resources. It requires more time for decision making at every step as well as higher levels of skills and knowledge among staff (Wilkinson & Lewis, 2003).

The other challenge library face in collection development of electronic resource is absence professional librarian who can understand and solve the complex nature of the resource. Bothmann and Holmberg (2008) stated that Staffing for electronic resources is perhaps the biggest challenge most libraries face. The results of the authors' survey indicate that the majority of libraries, regardless of total staff size, typically have only one or two professional librarians involved in electronic resource management. Paraprofessional involvement varied widely with one-third having no paraprofessional involvement, a tenth having more than five, and the rest having one to three paraprofessionals involved in the workflow. In response to challenges related to planning for electronic resources, one librarian answered: "How can you plan if you don't have enough people to do the work?" (Bothman & Holmberg, 2008).

Most libraries in the world, by observing the benefit and advantage, have making tremendous shift towards collecting and building e-resources. However e-resources present a number of hurdles not encountered in traditional libraries especially in areas of collection development. Academic libraries in Africa including Ethiopia, due to various reasons are not beneficiaries from e-resources. Assessing and evaluating the e-resource collection development helps academic libraries in identifying challenges and enable them to provide better service through competent professionals. This research focuses on evaluative assessment of e-resource collection

development in the selected Ethiopian Higher Institution Libraries, namely Addis Ababa, Jimma and Adama Universities and tries to identify challenges and provide future direction.

Chapter Three

3.0 Methodology

3.1 Study Location and Period

The study was conducted on three well established Universities of Ethiopia: Addis Ababa, Jimma and Adama University Library Systems. The investigation was conducted during Sep – May 2012/13).

Addis Ababa University (AAU) is the oldest institution of higher education in Ethiopia; it is now engaged in a mission to enlarge the nation's capacity in higher education. The AAU main library is known as John F. Kennedy Memorial Library, which was opened in August 1969. It is located at Sidist Kilo in the main campus of Addis Ababa University, whose major objectives is to serve the instructional and interdisciplinary research functions of the University, it is the largest library in Ethiopia.

Adama University is an internationally orientated institution of higher education that promotes and supports the international academic mobility of students, guest lecturers and researchers. Adama Science and Technology University Library (ASTUL) is one of the academic units of the university. It is the center of all academic activities which supports the teaching, learning, and research process of the university. The library, as a subsystem, derives its objectives from the mission of the University.

Jimma University Library System (JULS) was established in 1999 and commissioned to promote the Instructional Research, and Public Service goals of the entire university community through the expert provision of information. In its attempt to achieve the mission and objectives of the University, the JULS sets out deliberately to function as follows: develop and manage collections; identify and provide learning resources to teachers, researchers, and students; manage available resources efficiently, effectively and economically; establish an environment conducive to study which caters for multiple learning styles; liaise with users to establish their needs and to cooperate with management and other university services to meet these needs; train users and staffs to develop their information exploitation skills for efficient and effective utilization of information resources; carry out appropriate development work in library and

information professionalism with the aim of improving library's multiple purpose services and maintain effective links with other systems at domestic as well as international level.

3.2 Study Design

A cross-sectional survey study design was employed for assessing the practice and to provide the future direction of collection development of e-resource in the selected Ethiopia higher institution libraries. The selected university libraries were Addis Ababa, Jimma and Adama University Library Systems.

3.3 Study Population and Sample Size Determination

The study Population was all librarians who were currently participated in e-resource collection development of Addis Ababa, Adama and Jimma Universities.

Due to small number of librarians who currently involved on e-resource collection development in the three universities, all librarians of selected universities were considered. The total numbers of librarian of the three universities were 19 from Jimma University, 25 from Addis Ababa University and 15 from Adama University. The total study size was 59; in addition the study uses 9 for interviews considering 3 from each University.

3.4 Sampling Technique

Among the librarians in the selected Ethiopia higher institution libraries: Addis Ababa, Jimma and Adama Universities, were considered as the population of the study, purposive sampling technique was used in the selected universities to contact the librarians working in the e-resource collection development of the libraries. Among these librarians 19 from Jimma University, 25 from Addis Ababa University and 15 from Jimma University were purposively contacted. Data for this study was collected from these 59 librarians working in e-resource collection development. From the 59 respondents, 9 of them 3 each from the three universities were selected and interviewed.

3.5 Instrument of Data Collection

The instrument used for data collection for this study was self-administered questionnaire and Interview. Questionnaire is used as the major data collection instrument in this study. To support and complement the data collected using questionnaire, interview was also used as a supporting data collection instrument. The validity and reliability of the instruments used for data collection was assessed by the researchers before they were administered.

3.6 Method of Data Collection

For this study data was collected from the librarians, who currently work in the three selected universities. Primary data source was used for this study. Primary data is the main data collected from librarians who participate in e-resource collection development. According to the nature and objective of the study self-administered questionnaire which includes closed and open ended questions were prepared and distributed to respondents. Nine (9) of the respondents were also interviewed to complement the data collected using questionnaire.

3.7 Method of Data Analysis

In order to arrive at the results of this study, the collected data was cleared and edited by checking the respondents' answers from the questionnaire. Then the data was coded, entered, classified and organized using frequency distributions, graphs like bar-charts and pie-charts using SPSS (V16.0). Finally, descriptive statistics (mostly mode) was used to process and describe the data together with inferential statistics analysis (chi square test) was used to test the hypothesis in this research.

Finally, descriptive statistics was used to describe the patterns of the data, mode was used to identify the average value in a sense that most data are in a frequent variable form.

3.8 Data Clearing and Quality Control Methods

To ensure the quality, the collected data was checked for the completeness, accuracy and clarity. This quality checking was done daily after data collection and amendments was made before the next data collection. Data clean up and cross-checking was done before analysis. Besides data

clearing training was given to data collectors on how to approach study subjects and on how to use the questionnaire hence to collect accurate and complete data as much as possible.

3.9 Ethical Considerations

Ethical clearance was obtained from postgraduate & research office of Jimma University. All the study population was requested for oral or written informed consent prior to enrolment to the study. The purpose of the study was clearly described to the study participants including the benefits and risks of the study. Any information concerning the study participant is kept confidential and the data collected from the study participants was only analyzed for the intended purposes. Appropriate and ethically accepted scientific research methods were used in every step of the research process in this study.

Chapter Four

4.0 Description of Results

4.1 General Characteristics of Respondents

Of 31 Public Universities, Addis Ababa University (AAU), Jimma University (JU) and Adama University (AU) were purposefully selected; of which 59 participants were selected in the study with response rate of 100%. This figure comprised of librarians who are directly and indirectly involve in e-resource collection development.

4.1.1 Professional Qualification of the Respondent

Among 59 of professionals, As depicted in figure 4.1 below, 20.34% (11), 16.95% (10) and 15.25% (9) were first degree holder with the highest response rate from AAU, AU and JU respectively, whereas 18.64% (11), 8.47%(5) and 11.86%(7) were Msc holder, second most response rate from AAU, AU and JU respectively and 3.39 (2) and 5.8%(3) were diploma holders with lowest response rate from AAU and JU.

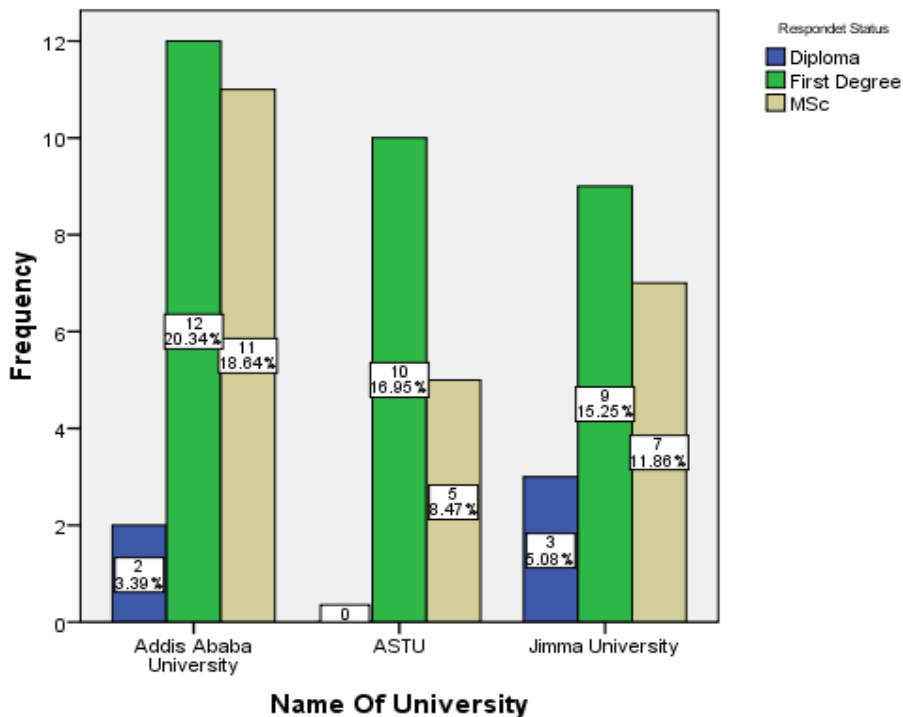


Figure 4.1 Librarians' qualification levels within selected University

4.1.2 Gender of Respondents

As presented in figure 4.2 below, it is apparent that both gender categories are represented in all the research entities. Accordingly male respondents constitute 79.66% and females' counterparts were 20.34%.

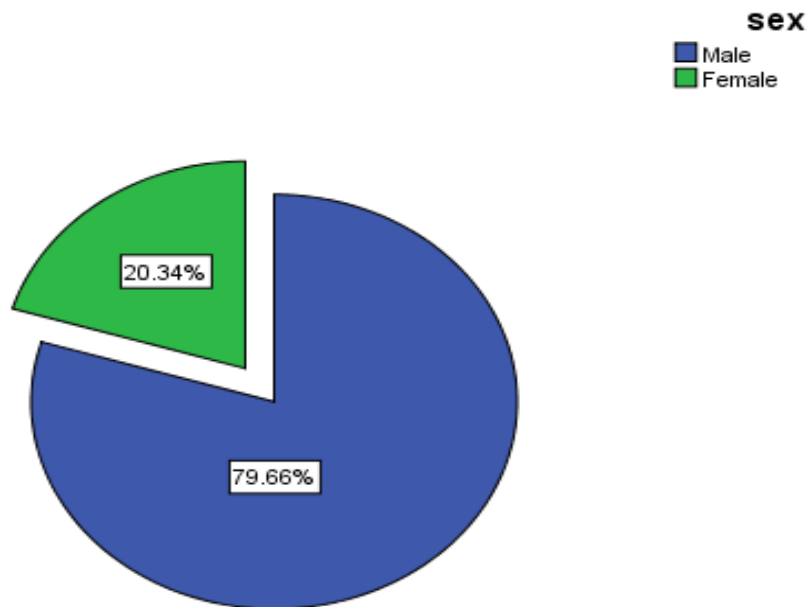


Figure 4.2 Librarians' gender profile

4.2 Current Status of E resource Collection Development in the Selected Libraries.

One of the objectives of the study is to assess the current status of e-resource collection development and the method the libraries use for management and delivery of electronic resources. Accordingly the study assessed general information on e-resource to address different issues such as total collection of e-resource, software package used to manage e-resource, hardware and network facility, implemented digital library software, e-resource service delivery method, who are their users, e-resource budget allocation, professional staff working in library and e-resource section and selection, evaluation, acquisition, cataloging, weeding, vendor support and collection development policy of e-resources. The research findings are described in this section as follows:

4.2.1 Total Collection of E-Resource

4.2.1.1 E-Resource Collection of the Libraries

Table 4.1 Type and number of e-resource collection

	e-resource owned by libraries	AAULS	AULS	JULS
No	E resources	Number	Number	Number
1	CD ROM titles	500	Not known	Not known
2	Databases	>48	>50	50
3	Journals	Not known	>1500	Not known
4	Reports /proceedings	Not known	Not known	Not known
5	Magazine	Not known	Not known	Not known
6	Books	20,000	100,000	>25000
7	News letters	Not known	Not known	Not known
8	E audio/visual resources	>150	Not known	Not known

All university library systems considered under this study currently hold a various e-resources including CD ROM titles, databases, journals, e-books, report/proceedings, books, newsletter, magazines and e-audio/visual resources. However the libraries cannot indicate the number of their total e-resource collection. AAULS only indicate the number of databases (50), journals (>1500) and books (100,000) whereas JULS indicate only the number of journals and books (25000) and AULS indicate the number of CD ROM (500), databases (48), books (20000) and e-audio/visual resources (>150). Interview results also confirm the questionnaire results with regard to e-resources used in the libraries. The results from the 9 interviewees indicated that their libraries have and use all the e-resources listed in table 4.1 although the number of the e-resources available was not specified.

4.2.1.2 Full Text Databases Accessed By the Libraries

Table 4.2 full text e-resources accessed from international databases

University libraries	Full text e-resource from international databases
Full text e-resource accessed by all university libraries	Emerald, Elsevier’s Science Direct, EBSCO Database, Nature, JSTOR, Institute of Physics, American Chemical Society, Project Mouse Journals, Springer Verlags Link, American Institute of Physics, Cambridge University Press Journals, Human Development Database and IEEE/IEE Electronic Library Online (IEE).
Full text e-resource accessed by only by AAULS	Bio MedNet Reviews, Pub Med, Math Science, Citation Index, INIS, IBP, Annual Reviews, Biological Abstracts, AGRIS, Prowess, Copex, Socio file UNDP Human Development Report, American Physical Society and World Development Report
Full text e-resource accessed by only JULS	NLM, HINARI, EIFLENET and AGORA
Full text e-resource accessed by only ASTULS	MIT open source ware, Wiki-Books, and World Digital Library.

As shown in the above table all university libraries have access to full text e-resource from international provider/suppliers. Full text e-resource which are accessed by all libraries include databases such as Emerald, Elsevier’s Science Direct, EBSCO Database, Nature, etc. In addition to aforementioned databases, libraries also own additional databases which are accessed only in their libraries. E-resource such as Bio MedNet Reviews, Pub Med, Math Science, Citation Index, INIS, IBP, Annual Reviews, etc are accessed only in AAULS library. Whereas databases such as NLM, HINARI, EIFLENET and AGORA accessed in JULS and AULS access MIT open source ware, Wiki-Books, and World Digital Library. Although all the 9 interviewee did not list all the full-text databases accessed by their libraries, they were able to mention the major databases like emerald, nature, American chemical society and Elsevier.

4.2.2 Usage of Software Package for Management of E- Resources

Table 4.3 software packages for management of e-resource

Software for management of e-resource	AAULS	JULS	AULS
Automation package implemented	Koha	ABCD	koha
Digital library software used	Greenstone	D space	Greenstone

The study find out that, for the management and delivery of the e- resources, all library system have implemented library automation package with a server to run the package, and also implement digital library software. As table 4.3 shows both Addis Ababa (since 2011) and Adama (since from 2012) university library systems implemented koha automation package and Green stone digital library software whereas Jimma University library system (since 2011) implemented ABCD automation package and D space digital library software. The interview results perfectly match with the results of the questionnaire which is shown in table 4.3. All the nine interviewees know the software packages used in their libraries and have provided answers accordingly.

4.2.3 E-Resource Collection Development Policy

Table 4.4 E-resource collection development policy

E-resource collection development policy	Frequency	Percent
Yes	8	12.1
No	51	87.9
Total	59	100

Among respondents who were asked about availability of e-resource collection development policy 87.9% responded that there was no collection development policy for e-resource in their libraries, however 12.1% indicate they have policy. As table 4.4 interviewee responded that they do not have e-resource collection development policy while 2 interviewee responded that they do not clearly know whether their libraries have or haven't such policy.

4.2.4 E-Resource Collection Development Activity

Table 4.5 e-resource collection development activities

Collection development activities		Frequency	Percent
Collecting the statistics of e-resource user	Yes	14	23.7
	No	45	76.3
Cataloging of e-Resources	Yes	7	11.9
	No	52	88.1
Getting technical support from vendors	Yes	12	20.3
	No	47	79.7
Archiving of e-Resources	Yes	10	11.9
	No	49	88.1
Weeding of resource	Yes	11	18.6
	No	48	81.4
Availability of selection criteria for e-resources	Yes	11	18.6
	No	48	81.4
Availability of evaluation criteria for e resource	Yes	15	20.3
	No	44	79.7

Among respondents who were asked about e-resource collection development activities 76% indicates libraries don't collect the statistics of e-resource and users, meanwhile respondents 88.1%, 79.7%, 88.1% and 81.4% also reveal that libraries do not, catalogue, get technical support, archive and weed e-resources. In addition respondents were asked about availabilities of selection and evaluation criteria's, 81.4% and 79.7% of them indicate that libraries has no formal criteria to select and evaluate e-resources.

Regarding e-resource collection development activities each of the interviewees provided more or less the same answers. They all responded that they don't have selection criteria, evaluation criteria, do not capture e-resource users' statistics, and there is no weeding, and archiving of e-resources. However, the interviewees replayed that they catalogue their e-resources to some level and they get technical support occasionally.

4.2.5 Hardware and Network Facility

Result from interview shows all libraries have LAN as well as broad band Internet facilities and provide e-resources service via their website, Addis Ababa university library use <http://www.aau.edu.et/libraries>, whereas Jimma and Adama use www.ju.edu.et/library and

www.astu.edu.et/service/library. Beside the software's and website, all libraries own hard ware devices which are used as instrument in e-resource section to facilitate the work; Bar Code reader, Digital Camera, Scanner and Photocopy machine are among the device used by the library. However all libraries has no separate section, and did not give printing service for e-resource user.

4.2.6 Budget

Table 4.6 e-resource budget

Provision for separate budget for e-resources	Frequency	Percent
Yes	16	27.1
No	43	72.9
Total	59	100

As table shows respondents 72.9% indicate libraries have no separate budget for e-resource, meanwhile respondent 27% shows they have separate budget.

However regarding the budget allocation, all interviewee from the selected libraries have said that their libraries have no separate budget for e-resource.

4.2.7 Staff of the Library and E-Resource Section

Table 4.7 Staff of the library

Staff of the Library	Name Of University			Total
	AAULS	AULS	JULS	
Librarian	1	1	1	3
Deputy librarian	1	3	0	4
Assistant librarian	13	10	14	37
Document officer	0	1	0	1
Cataloger	8	5	4	17
IT professionals	5	5	4	14
Total	28	25	23	76

As shown in a table 4.7, all university libraries have a total of 76 professional staffs including 3 Librarian, 4 Deputy Librarian, 37 Assistant librarian, 1 Document officer, 7 Cataloger and 14 IT professionals.

4.2.7.1 Staffs of E-Resource Section

Table 4.8 Staffs in e-resource section

Staffs work in e-resource section	Name Of University			Total
	AAULS	AULS	J ULS	
No. of Professionals with computer knowledge	5	4	4	13
No. of Non-Professionals	0	0	4	4
Total	5	4	8	17

As shown in table 4.8, all libraries have a total of 17 staffs that works in e–resource section among them 13 with computer knowledge, and the rest 4 are Para professional.

4.3. E-Resource Collection Development Activities and challenges.

The other objective of this study is assessing the recent activities of e-resource collection development practice and identifying challenges in selected libraries. Accordingly the study assessed and identified criteria used to select and evaluate e-resource, acquisition method used to acquire e-resources, licensing agreement used, format used for preservation, challenges in implementing digital library software, challenges in selecting and evaluating e-resource, challenges in acquisition of e-resources, and recommendation on acquisition and collection development policy.

4.3.1 Challenges in implementing digital library software

Table 4.9 challenges in implementing digital library software

Challenges in implementing digital library software	Frequency	percent
Shortage of professionals	34	(34.69)
Lack of budget	44	(44.90)
Shortage of computers	19	(19.39)
other	1	1
Total	98	(100)

As the above table 4.9 show respondents indicate major challenges of the library while implementing digital library software. Among respondents 44.90% lack of budget, 34.69% shortage of professional, 19.39% shortage of computer and other challenge 1.07% lack of support from the management list as challenge in implementing digital library software. The result shows lack of budget was a challenge in implementing digital library software, since it accounts 44 out of 99 responses.

Similar to table 4.9 results, almost all Interviewee mention challenges on implementing digital library software and have said complex nature of metadata standards, shortage of professionals, and lack of budget and management support were challenges they face while implementing digital library software.

4.3.2 Preservation of E-resources.

Table 4.10 format used for preservation

Format for preservation	Frequency	Percent
No preservation	23	(39.0)
PDF Format	28	(47.5)
PDF and HTML Format	8	(13.6)
Total	59	(100.0)

As a table 4.10 show respondents indicate the formats they prefer to preserve e-resources. Respondent 47.5% prefer Pdf format to preserve e-resource, mean while respondents 39% also indicated that they did not preserve e-resource. Whereas respondents 13.6% indicate that both html and Pdf format is used for preservation of e-resource. Modal variable shows pdf was a format used for preservation of e-resources, since it accounts 28 out of 59 responses.

4.3.3 Licensing Agreement with Providers/Publishers

Table 4.11 Licensing agreement used

Licensing agreement	Frequency	Percent
No licensing agreement	31	26.96
Archival Backup	20	17.39
Negotiations	22	19.13
Multiple format	6	5.22
Electronic links	11	9.56
Fair use	13	11.30
access	6	5.22
Other	6	5.22
Total	115	100.0

Most respondents indicate that no licensing agreement was made with providers/publishers while asked to indicate the terms they consider in licensing agreement of e-resources; however other respondents indicated that they consider Access, fair use and electronic links as licensing

agreement to conclude with providers/publishers. As table 4.11 show respondents 26.96% use no licensing agreement, 19.13% use negotiation, 17.39% archival backup, 11.30% fair use and 9.56% relies on electronic links as licensing agreement whereas only 6% of the respondents use multiple format, access and fair use as licensing agreement. Meanwhile respondents that account about 6% use inter library loan and dispute resolution as other licensing agreement elements. The result shows no licensing agreement used by respondents; the modal variable indicates no licensing agreement since it accounts 31 out of 115 responses.

4.3.4 Selection Criteria

Table 4.12 criteria used to select e-resource

Selection criteria	Frequency	Percent
No selection criteria	42	12.28
Cost effectiveness	39	11.4
Currency of information	36	10.53
Period of Access	35	10.23
Subject relevance	32	9.36
Preservation	32	9.36
Authenticity of information	30	8.77
Legal issues	27	7.89
Quantity to meet user need	25	7.31
Ease of accessibility	16	4.68
After sale maintenance	9	2.63
Vendor reliability	7	2.06
Added Value	5	1.46
Distributed access	5	1.46
Back Issues Facility	2	0.58
Total	342	100.00

The selection criteria, the respondents used in selection of e-resource, on table 4.12 shows that respondents 12.28% use no selection criteria in selection of e-resources, meanwhile respondents also indicate criteria's which accounts 11.4% cost effectiveness, 10.53% currency of information 10.23%, period of access, 9.36% subject relevance and preservation, 8.77% authenticity of information, 7.31% quantity to meet user need, 4.68% ease of accessibility 2.63% after sale maintenance, 2.06% vendor reliability, 1.46% added value and distributed access and 0.58 back issue facility as vital elements used by respondent criteria to select e-resources. The

result shows that respondent don't use selection criteria's to select electronic resource. The modal variable indicates no selection criteria, since it accounts 42 out of 342 responses.

4.3.5 Evaluation Criteria

Table 4.13 criteria used to evaluate e-resource

Criteria used to evaluate e-resource	Frequency	Percent
No evaluation criteria	28	28.00
Limitations	6	6.00
Performance	25	25.00
Time lag	9	9.00
Cost	8	8.00
Coverage	6	6.00
Access facility	6	6.00
Other	12	12.00
Total	100	100.00

The evaluation criteria, the respondents used in evaluation of e-resource, on a table 4.13 shows that 28% use no evaluation criteria, among which 25% performance, 9% time lag, 8% cost and 6% limitation, coverage, and access are elements used by respondents as criteria to evaluate e-resources. Twelve percent 12% of them belongs to other criteria's like content evaluation and performing under existing environment. The result shows that respondent don't use evaluation criteria's to evaluate electronic resource. The modal variable shows no evaluation criteria, since it accounts 28 out of 100 responses.

Regarding the use of selection and evaluation criteria all interviewee did not give the same answers, among (9) interviewee (5) have said they use criteria in selection of e-resource even if their library lacks formal criteria. Content, performance, vendor support, subject relevance and trial before use were criteria used to select and evaluate e-resources. However, four interviewees said that they don't use any criteria in selection and evaluation of e-resources.

4.3.6 Challenges in Selection and Evaluation of E-Resource

Table 2.14 challenges in selecting and evaluating of e-resource

Challenges in selection and evaluation of e-resource	Frequency	Percent
Lack of professionals	38	21.84
Lack of selection and evaluation criteria	37	21.26
Lack of e-resource collection development policy	46	26.44
Complex nature of e resources	19	10.92
Lack of management support	29	16.67
Legal issue	5	2.87
Total	174	100.0

As table 4.14 shows, most respondent face challenges while selecting and evaluating e-resources due to lack of e-resource collection development policy. Among 174 responses 26.44% indicated lack of collection development policy as the challenge they mostly face in selection and evaluation of e-resources. About a quarter of responses 21.84% also indicated lack of professionals, 21.26% lack of selection and evaluation criteria, 16.67% lack of management support, 10.92% complex nature of e-resource and 2.87% legal issue as significant challenges. The modal variable indicated lack of collection development policy, it accounts 46 times out of 174 responses. The result shows lack of collection development policy was a challenge in selection and evaluation of e-resources.

Regarding challenges in selection and evaluation of e-resource, similar to table 4.14, all interviewee have said lack of formal criteria, lack of basic knowledge about e-resource issues, lack of collection development policy and lack of clear work flow were challenges they faced mostly.

4.3.7 Method of Acquisition for E-Resources

Table 2.15 method of acquisition for e-resource

Acquisition method	Frequency	Percent
Purchasing	29	16.96
Donation	39	22.81
Free	36	21.05
Gift	13	7.60
Other	54	31.58
Total	171	100.0

As table 2.15 shows most method followed to acquire e-resource were donation, free resource and purchasing whereas gift is the least method to use. Respondents 22.81% donation, 21.05% free resource and 16.96% purchasing of e resources were used as method for acquiring e-resource. However gift of e-resources is the least acquisition method only respondents 7.60% said gift for acquiring e-resources. Surprisingly other results 31.58% indicated that they have no idea about the acquisition method of e-resources in their libraries. The modal variable for acquisition method of e-resources is donation, since it accounts 39 out of 171 responses. The result shows that most of selected EHIL rely on donation and free resource to acquire e-resources.

Similar to table 2.15, regarding acquisition method most interviewees said donation of e-resource were used mostly while acquiring of e-resource meanwhile they also mention free resources and purchasing used as other means in acquiring of e-resource. However interviewee two also said doesn't have the idea how e-resources were acquired.

4.3.8 Challenges in Acquiring E-Resources

Table 2.16 challenges occurred in acquisition of e-resources

Challenges in acquiring e-resource	Frequency	Percent
Lack of acquisition procedure	28	10.98
Lack of collection development policy	47	18.43
Lack of selection criteria	23	9.02
Lack of knowledge about e-resource	27	10.59
Lack of budget	43	16.86
Insufficient budget	36	14.12
Complex nature of e-resource	10	3.92
Lack of support from the management	26	10.20
Legal issue(lack of licensing agreement)	10	3.92
Poor collection development policy	4	1.57
Lack of technical support from vendors	1	0.39
Total	255	100.0

As a table 2.16 show among respondents who were asked to list the challenges in acquisition of e-resource 18.43% lack of collection development policy, 16.86% lack of budget, 14.12% inappropriate (insufficient) budget allocation, 10.98% lack of acquisition procedures, 10.59% lack of knowledge about e-resource, 10.20% lack of support from the management, 9.02% lack of selection criteria, 3.92% complex nature of e-resource and Legal issue (lack of licensing agreement) and 0.39% lack of technical support from vendors appeared as a challenge mostly occurred. The modal variable for challenges in acquiring of e-resources was lack of collection development policy since it accounts 47 out of 255 responses. The result shows that lack of collection development policy was a challenge in acquisition of e-resource.

Similarly the interviewees also identified lack of budget, inappropriate budget allocation, lack of acquisition procedure, lack of knowledge about licensing agreement and lack of collection development policy as challenge in e-resource acquisition.

4.3.9 Recommendation to Improve Current Acquisition Method

Table 2.17 Recommendation for acquisition methods

Recommendation	Frequency	Percent
Approving sufficient budget	42	15.38
Getting support from the management	40	14.65
Recruiting Professional staff	48	17.58
Improving licensing agreements	38	13.92
Implementing e-resources collection development policy	44	16.12
Giving training for staff	32	11.73
Getting vendors support	29	10.62
Total	273	100.0

As table 2.17 shows recruiting professionals, implementing e-resource collection development policy and approving sufficient budget listed mostly as a recommendation to improve the current acquisition practice. Seventeen percent 17.58% believe recruiting professionals, 16.12% implementing e-resource collection development policy, 15.38% providing sufficient budget and 14.65% extending support from the management as recommendation to improve the current e-resource acquisition method. Since it accounts 44 out of 273 responses, recruiting professional staff is the modal variable for recommendation to improve current acquisition method.

4.3.10 Recommendation for E-Resource Collection Development Policy

Table 2.18 recommended elements for collection development policy to include

Collection development policy element	Frequency	Percent
Acquisition Procedures	49	17.88
Appropriate budget allocation	46	16.79
Technical requirement of e-resource	36	13.14
Licensing consideration of e-resources	25	9.12
Renewal of e-resources	33	12.04
Selection and evaluation of e-resources	54	19.71
Other	31	11.32
Total	274	100

As table 4.18 shows, respondents recommend elements to be included in collection development policy, among which 19.71% Selection and evaluation of e-resources, 17.88% acquisition procedures, 16.79% appropriate budget allocation, 13.14% technical requirement of e-resource, 12.04% renewal of e-resources, and 9.12% licensing consideration of e-resources were the elements. Other 11.32% recommended vendor technical support to be included in collection development policy. The modal variable is selection and evaluation criteria accounting 54, out of 274 responses.

4.4. The impact of e-resource collection development policy on e-resource collection development activities?

To test the hypothesis on the relationship between e-resource collection development policy and its practice, chi-square test was performed. The result of the test is shown in table 4.19. Which implies there is an impacts of e-resource collection development policy on selection criteria ($p < 0.001$) and also with archive of e-resources and evaluation criteria at significant probability value of 0.002.

Table 4.19. The impacts of e-resource collection development policy on e-resource collection development activities.

		Collection Development Policy		Total	Fisher's Exact Test P- value
		Yes	No		
Do you have selection criteria to select e-resources?	Yes	7(87.50%)	4(7.80%)	11(18.60%)	<0.001
	No	1(12.50%)	47(92.20%)	48(81.40%)	
Do you Archive the e-Resources?	Yes	5(62.50%)	5(9.80%)	10(16.90%)	0.002
	No	3(37.50%)	46(90.20%)	49(83.10%)	
Do you have evaluation criteria to evaluate e resource while subscribing them?	Yes	6(75.00%)	9(17.60%)	15(25.40%)	0.002
	No	2(25.00%)	42(82.40%)	44(74.60%)	
Total		8(100.00%)	51(100.00%)	59(100.00%)	

The following were the null and the alternative hypothesis of the research:

H_0 : The lack of e-resource collection development policy has no impact on the activities of e-resource collection development.

H_{a1} : The lack of e-resource collection development policy has a negative impact on the activities of e-resource collection development.

Since there is a significant relationship between e-resource collection development policy and e-resource collection development activities, we reject the null hypothesis and we accept the alternative hypothesis. The alternative hypothesis states that lack of e-resource collection development policy negatively affects e-resource collection development activities. Specifically, the lack of e-resource collection development policy negatively affects the use of selection criteria for e-resources 81%, archiving of e-resources 83% and the use of evaluation criteria for

e-resources 74%. Use of selection criteria for e-resources, archiving of e-resources and use of evaluation criteria for e-resources are the three activities among the major activities in e-resource collection development. In a nut shell, given the results of the hypothesis test, we can say that the lack of e-resource collection development policy has a significant and negative impact on e-resource collection development activities in the three universities.

Chapter Five

5.0 Discussion

5.1 Current Status of E-Resource Collection Development

5.1.1 Total Collection of E-Resource

All libraries which were included in the study have a variety of e-resource in their collection the results shows, such as e-books, journals, newsletters, books, databases, magazines CD ROM titles and have also access to full text e-resources from various international providers. However libraries only knew few about the total number collection of their e-resources and cannot indicate the total number for most of their resources. Based on the result, it's found that, even if they hold variety of e-resources, the libraries are very poor in capturing statistical information about e-resources. However other studies, shows that statistical information is necessary and helps libraries in various ways. According to Hults, (2009) statistical information improves evaluation and decision making throughout the life cycle of electronic products, including new purchases, renewals, and cancellation projects. More than just a product evaluation tool, they help us improve access to and use of electronic materials. Statistics enhance our ability to understand how and who uses our libraries, and how they use the products the libraries offer.

5.1.2 Management and Delivery of E-Resources

All libraries which were part of the study tried to manage their e-resource using different automation package and digital library software, libraries use Koha and ABCD automation package and Green stone and D space digital library software, meanwhile libraries have broadband as well as LAN connectivity and also provide service via their website. E-resource requires more management and delivering facility, the selected Ethiopian Higher Institution Libraries have to continue their effort to manage and deliver e-resource continually. According to Hogarth and Bloom, (2008) user behavior supported increased use of digital resources and fueled the demand for easier, more convenient, Google-like functionality. Electronic resources demanded more and more management, yet ILSs were not able to capture the complex nature

and relationships of these resources. Libraries continued to build local automated tools to fill the gap (Hogarth & Bloom, 2008).

5.1.3 Usage of Collection Development Policy and Criteria

Even if libraries hold variety of e-resources, they have no policy and criteria for e-resources which can be used as a guide line to collection development activities. Majority of the respondent 87.9% indicated that they have no e-resource collection development policy and 81.4% and 79.7% indicated they have no formal selection and evaluation criteria respectively. Even if such policy and criteria's have seen as guideline for good collection development activities, the selected Ethiopian Higher Institution Libraries, however lacks e-resource collection development policy and criteria. According to White and Crawford, (1997) Collection development policy guides libraries on issues and processes of selecting information resources to satisfy the needs of its users. It spells out issues related to content of the collection, format of the collection, the responsibility of selecting and acquiring library resources. It provides criteria for monitoring and evaluating the effectiveness of a developed collection in meeting the information needs of the intended users.

Similar studies by Johnson (1994) indicate Collection development policy serve many functions beyond being merely a tool for selection of materials. In addition to describing current collections, they establish priorities, assist with budgeting, serve as a communication channel within a library and between the library and outside constituents, support co-operative collection development, protect intellectual freedom and prevent censorship, and assist in overall collection management activities, including the handling of gifts, de selection of materials, and serials cancellations. They also minimize personal bias in the selection of materials, identify gaps in collection development responsibilities, and serve as information resources for new collection development librarians (Frank et al., 1993).

5.3 Current Practice of E-Resource Collection Development

5.3.1 Licensing Agreement

Results revealed that respondent 26.96% use no licensing agreement; the modal variable shows no licensing agreement since it accounts 31 out of 115 responses. Based on the result it is

possible to conclude most staffs, who work in libraries collection development activity, either don't use or have no clue about licensing agreement. However, studies reveal that libraries and library staffs have to be careful while select and use licensing agreement element. According to Brown, (2008) in order to protect a library's interest as well as the interests of a library's patrons, librarians must become more knowledgeable concerning electronic resource license agreements and the licensing language and terms included in them. Okerson, (1996) also stated that due to the cost of digital resources, which is further exacerbated by the present economic climate, libraries are finding that they have to choose between digital resources and materials in other formats. In order to best serve patrons and steward a library's budgetary resources, libraries will have to carefully monitor their license agreements and try to negotiate terms that are favorable to libraries. Most licenses are written by publishers to protect their interest and as such can rarely be signed without at least some minor amendments.

5.3.2 Method of Acquisition of E-resources.

The selected Ethiopian Higher Institution Libraries rely mostly on donation to acquire e-resources. The modal variable shows that donation is a method of acquisition since it accounts 47 out of 255 responses. Results shows that respondent mostly use donation 22% and free resource use provision 21% to acquire e-resources even if they also use purchasing 16.96%. Unlike traditional method of acquisition, e-resource acquisition is complex which requires details of requirement that libraries need to consider. The selected libraries also have to find other acquisition ways rather than donations, in order to survive in the market and satisfy the need of their users. Study from Wilkinson & Lewis (2003) revealed due to the overwhelming growth and availability of a variety of electronic products, the workflow of acquisitions has changed significantly, becoming more complex. The primary responsibility of the acquisitions department is getting the materials needed by the library's users in the most desired format and in the most efficient and economical manner. Even though the process of identifying, ordering, and paying for materials such as books, serials, and media is very similar to that of electronic formats, the life cycle of e-resources is more convoluted than that of print resources. It requires additional levels of details including tracking, recording, and reviewing the license and business terms, and investigating variable pricing ranges. Acquiring information for an electronic product is often

much more time-consuming than for print resources. It requires more time for decision making at every step as well as higher levels of skills and knowledge among staff.

Libraries need to find another alternative in acquisition of e-resources; studies indicate collaboration gives power in purchasing of e-resource. A library membership in a consortium is another way for a library to get more electronic resources for less money. As Kohl and Sanville (2006) noted this should not be confused with getting electronic resources more cheaply via a consortia membership (i.e., a library can increase its access to electronic resource titles, usually e-journals or e-books, for a percentage more money than it currently pays for the titles it holds in print). While the relatively cheap additional expenditure for access to a large number of new titles can be a tantalizing incentive, consortia deals can have other costs including high administrative costs (Stange, 2006),

5.3.3 Criteria Used to Select and Evaluate E-Resource

Surprisingly, the result shows, most respondent don't use selection and evaluation criteria while acquiring e-resources. The modal variable shows no selection criteria accounts 42 out of 342 responses and no evaluation criteria accounts 28 out of 100 responses. The modal variable for usage of e-resource selection and evaluation criteria's shows no evaluation and selection criteria used. Libraries have to select and evaluate e-resource using criteria before acquisition of e-resources, since e-resource presents various issues which need to be address. According to Welch (2002) selection of information sources is the core collection development function, and the primary objective of the selection decision for any format is fundamentally the same: satisfying user needs. With the advent of e-resources, job responsibilities of selectors have changed drastically. In the past, selectors recommended new titles on an individual basis using traditional selection criteria such as quality, relevance, use, and cost. Selectors analyzed faculty and user requests for new titles and made requests to add to the collection. But in the cyber world, the role of selectors has changed remarkably as e-resources have expanded and developed. Joshipra (2008) also stated, selectors must now address new issues as part of the selection and management processes, issues such as easy and quick accessibility for users, continuous content evaluation and technological and legal concerns.

Evaluation also helps the selectors determine the cost, the reliability of the content provider, and most importantly the authoritativeness of the resource. A selection tool such as a trial or demonstration of the product by the provider, as well as reviews in print and electronic sources, helps in evaluating the product and leads to sound decisions. Traditionally with print resources, the selectors consider the credentials of the author, currency, intended audience, accuracy, ease of use, reputation of the publisher, the subject, cost and the curriculum or research needs of students/faculty/patrons. They also use methods such as citation analysis, user surveys, and so forth. However, with e-resources the selector must consider additional elements such as easy access to the content, coverage, search capability and functionality of the interface; quality of technical support; method of pricing; and provisions of licensing agreements (Joshpra, 2008).

5.3.4 Archiving of E-resources

The result shows libraries don't archive e-resources, as 88.1% of the respondents indicate they did not archive e-resources. However libraries can lose e-resources anytime, since ownership and access issue of e-resource is very difficult and challenging, it's necessary to archive e-resources. According to baker (2008) ownership and access is not always clear for e-resources. E-resources are a constantly changing resource where titles/issues/volumes can be added or dropped at any time making it difficult to count titles or volumes. The result shows the selected Ethiopian Higher Institution Libraries do not archive e-resources, but reports indicate libraries must archive e-resource and have to make sure that the resource provider should present a clearly articulated archiving policy for the information being licensed. The resource provider should have an arrangement with LOCKSS, Portico, or other similar types of archival products, or with an open source compliant archiving system (IFLA, 2012).

5.4 Challenges of E-Resource Collection Development

5.4.1 Challenges in Selection and Evaluation of E-Resources

Results of the study on the challenges of selecting and evaluating e-resources shows, lack of collection development policy was mostly occurred challenge followed by selecting and evaluating the e-resources. The modal variable indicates lack of collection development policy is a challenge since it accounts 46 out of 174 responses. It's not easy for librarian to select and evaluate e-resource without collection development policy. Joshpra 2008 stated that selecting

and adding e-resources for the collection becomes easier for the selectors when a collection development policy is in place. Such a policy provides a framework for decision-making and is a necessary planning tool, the use of which leads to consistent, informed decisions. It is a blueprint for the selectors and helps them to ensure uniformity in procedures and appropriate balance in the library collection.

5.4.2 Challenges in Acquisition of E-Resource

The result from the study shows among challenges in the acquisition of e-resources, absence of collection development policy was mostly occurred; the modal variable indicated that it accounts 47 out of 255 responses. The result also shows that 18.43% lack of collection development policy, 16% lack of budget, and 14% inappropriate budget allocation. It's not surprising that facing various challenges in acquisition of e resource, because acquisition of e-resource present a number of serious hurdles not encountered within the traditional library. The selected libraries of EHIL have to work hard to address and overcome challenges in acquisition of e-resource. Yu & Breivold (2008) stated, along with the increase in electronic resource acquisitions, librarians have had to quickly adapt and address an ever complex set of new challenges and changes related to: workflow management and planning; selection and acquisition procedures; copyright and license negotiation; cataloging practices; public access interfaces; and utilization of usage statistics. Libraries must now come to terms with how to better evaluate, acquire, store, and manage this wealth of electronic resources.

5.5. The Impact of E-Resource Collection Development Policy on E-Resource Collection Activities

The result of the hypothesis test revealed that there is a significant relationship between e-resource collection development policy and e-resource collection development practices. The test disclosed that the lack of e-resource collection development policy negatively affects e-resource collection development activities. The major e-resource collection development activities negatively affected by the lack of e-resource collection development policy in the three university libraries include archiving of e-resources, the lack of proper selection criteria for e-resources and lack of appropriate evaluation criteria for e-resources. Although these activities are crucial for libraries to develop e-resource collection that meets users' needs, they are not being

addressed in the three universities properly and they are not being performed following proper policy.

Chapter Six

6.0 Summary, Conclusion and Recommendation

6.1 Summary

According to the data collected for this research purpose all libraries included in the study have a number of e-resource in their collection including e-book, journals, newsletters and other CD ROM titles. In addition libraries have access to full text e-resource from various international providers. For the management and provision of e-resource the libraries have developed software package and IT infrastructure including hard ware and network facility. Koha and ABCD software's are implemented for the automation purpose whereas green stone and D space digital library software implemented for digital library. Lack of budget, shortage of professional and less attention from the managers listed as a challenge by the libraries while implementing the software's.

IT infrastructure and network facility, server which run the automation package, internet facility with broad band connection and LAN facility also used by the libraries to facilitate the provision of electronic resource. In addition libraries also have different hardware devices used as instrument in e resource section. Bar code reader, photocopy machine, digital camera and scanner are among the devices which are used in e-resource section. The libraries provide e resource service via their web site using broadband internet connectivity. However, libraries don't have separate section for e-resources and didn't give printing service for e-resource user. In addition the libraries also don't collect the statistics of e-resource and users so they cannot indicate which member of their user use most.

All the selected EHIL has no separate budget to execute sustainable acquisition of e resources. All rather carry out acquisitions when either the demand comes from influencing body or request submitted through various research projects.

Even if the libraries hold variety of e-resource they are largely ill managed and did not follow right collection development process. All Libraries do not have selection, and evaluation criteria for e-resource, in addition, did not catalogue, and weed e-resource. Libraries also don't get technical support from vendors, do not archive e-resources and lacks licensing agreements. The libraries put lack of e-resource collection development policy, lack of professional and lack of selection and evaluation criteria as a challenge.

Libraries rely on donation and free resource to develop their e-resource collection, they also use purchasing. The libraries put lack of collection development policy for electronic resource, and lack of budget as a challenge in acquiring of e-resource. Implementing e-resource collection development policy recommended by the libraries to overcome the challenges.

All the selected libraries do not have collection development policy for e-resource which can use a guideline for good collection development. The libraries also recommend their collection development policy to include selection and evaluation of e-resource, acquisition procedure, and appropriate budget allocation.

6.2 Conclusion

Technological developments have tremendously impacted on the activities of libraries, causing a major paradigm shift, which challenges libraries and the library profession. With the increase in growth and demand for e-resources, libraries need to purchase and maintain significant e-resources in the collection. Such revolution of e-resources has drastically changed the entire process of collection development of materials for collections and has added various challenges for librarians. E-resources have virtually transformed the way libraries and librarians collect and manage resource. In addition to possessing subject-matter knowledge, libraries were involved in the organization of resources so that users can have quick and easy access. Now, they also are required to possess technology expertise for selecting, evaluating and acquiring resources or the overall collection development activity. Similarly, libraries need e-resource collection development policy and appropriate budget allocation meanwhile electronic resource librarians also require selection and evaluation skill, legal and technological knowledge and business negotiations skills. It is also very important for librarians to keep up-to-date on various changes and developments taking place in the areas of collection development. The selected Ethiopian

higher institution libraries have various e-resource collections and make effort on building ICT infrastructure for management and delivery of e-resource. However resources are largely ill managed and not followed right collection development process. Absence of e-resource collection development policy and lack of criteria to selection, evaluation, licensing agreement and acquisition combining with budget issues were challenges for libraries in e-resource collection development. Libraries need for future to implement e-resource collection development policy which address basic e-resource issues, selection and evaluation criteria's, acquisition procedure, archiving and weeding regulations and appropriate budget allocation. In addition keeping the statistics of e-resource and user helps to know the overall collection and guide for future to plan on e-resource collection development.

6.3 Recommendation

Ethiopian higher institution libraries have developed electronic resource or they are in the process of developing one. However e-resources present a number of hurdles not encountered with traditional library materials. Therefore, the following recommendations can be considered as a stepping stones towards e resource development in all Ethiopian Higher Institutions Libraries:

6.3.1 Libraries should strategically plan and managed their resource and allocate separate budget for E resource.

6.3.2 The libraries also should continue their tremendous effort to develop ICT infrastructure for the provision of electronic resources.

6.3.3 Recruiting professional librarians and allocating budget can reduce challenges to implement digital library software. In addition libraries should make sure that software developed must be compatible with resource acquired.

6.3.4 Libraries also should prepare separate section for electronic resources, collect statistics and feedback of users, and prepare computers by considering the number of their user and need to include printing in their service.

6.3.5 Establishing national consortium among Ethiopian Higher Institution Libraries would curb the problem with powerful publisher/dealer. The libraries should also be-

careful in monitoring and using licensing agreement; the agreement must be compatible with the mission and goal of the libraries. It's also important for libraries to consider such issues in their license agreement, access concerns; such as authorized users and sites, method of access and institutional archives/self-archiving and use of the electronic information resource; interlibrary loan, viewing, downloading and printing and user statistics. Archiving of e-resource is another important issue which need to be address in the libraries licensing agreement.

6.3.6 Libraries should select and evaluate e-resources using formal criteria before acquiring them. It's useful to collect and consider basic e-resource issues for the libraries while selecting and evaluating e-resources. E-resource issues such as content, technical requirement, functionality and reliability, vendor support and supply have to be addressed in libraries selection and evaluation criteria.

6.3.7 Most of academic libraries should develop and implement e-resource collection development policy to overcome challenges impeding e-resource collection development activity. The policy must address the budget allocation, selection and evaluation criteria, acquisition procedures and licensing agreement in clear terms. Such a policy should be used in conjunction with the more traditional collection development policy and not in isolation.

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