

HUMAN RESOURCE DEVELOPMENT IN MODERN LIBRARIANSHIP AND THE USE OF SUBJECT GATEWAYS FOR INFORMATION DISSEMINATION

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ABSTRACT

Libraries will not be able to provide and render effective information services in the modern librarianship without competent workers and proper use of their efforts and knowledge put into practice in the performance of their professional responsibilities using technology. Human Resource Development is the process of training librarians to make their efforts to embrace new trends in information retrieval and effective delivery of services capable of leading the library towards the achievement of its aims and objectives. For effective information dissemination, there is need to integrate Subject Gateways and academic Search Engines. This is due to large number of resources in various digital formats which majority of the users are not capable of dealing with in this drift, because of the necessity to understand the different information searching tools and the techniques involved in information retrieval. The issue here is not having large information resources but means of accessing them with ease. So, the main concern is for users to be able to harness these resources in order to meet their specific information needs. This is also a fact that human resource development is needed in order to be able to operate in this technology driven society, since the advancement in technology has made a system easier to collect, index, retrieve, analyze and use data and information far and near.

Keywords: *Human Resource Development, Modern Librarianship, Subject Gateways, Library Gateways.*

INTRODUCTION

The potential to illustrate adequately, the effectiveness and efficiency of human resource development in the modern library system and practice as well as librarianship as Alhazimi (2021) noted, lies greatly on how well one understands the meaning of human development in the current age of digital library development and implementation. Libraries especially in academic institutions according to Srivastava et al. (2022) are perceived as the heart of the institutions. Anjum (2022) submitted that they are the brain house from where knowledge is acquired through various means. Therefore, the libraries as Kaffashari et al. (2022) asserted, are dynamic and knowledge hubs in every aspect from which they are viewed. With this recognition, libraries can gain and sustain due to the efforts and competencies of their human resources which according to Majib & Ayob (2022) are available for utilization in the provision and delivery of effective information services which the libraries are popularly known for rendering to users. Libraries as Singh & Kumar (2022) postulated, will not be able to provide and render effective information services without competent workers and proper use of their efforts and knowledge put into practice in the performance of their professional responsibilities. Nikta (2022) believes that the basic principle of human resource philosophy as expounded by its proponents may be briefly expressed as ear viewed as an investment that will provide long-term rewards to the organization

in the form of greater productivity if they are managed and developed effectively. Managers create policies, programs, and practices to satisfy both the economic and emotional needs of the employees. Thite (2022) narrates that, they create a working environment in which the employees are encouraged to develop and utilize their skills and abilities to the maximum extent. Personnel programs and practices as Thite (2022) observes, are evolved to balance the needs and requirements of the organization and those of the employees.

In modern librarianship as well as in the context of library system and practice, a process by which librarians are aided in the continuous and organized ways to gain new advanced knowledge through planning, performance, feedback, retraining, periodic review of performance, evaluation of the development needs of the library account more for the actual meaning of human resource development in modern librarianship (Jotaba et al. 2022). The modern library as Baykal (2022) conceives, explains an organization moving along with the advancement offered by technology. A modern library according to Guler (2022) is a library that has transformed the traditional system and form to an advanced and modern stage in both service provision and delivery. Digitization boasted by the electronic process of accessing, storing, retrieving and usage of information as Ghosh (2022) points out, demonstrated the features of the modern library. The modernization of the library from its initial traditional system and practice to a modern system and practice as reported by Zhong et al. (2022) implies that librarians would also have to be trained appropriately to improve the human resource capacity of the library to handle the changes that technology has introduced in the modern library system and practice. The process of training librarians to make their efforts effective and capable of leading the library towards the achievement of its aims and objectives to Marhgherita & Bua (2021) captures the real view of the concept of human resource development in modern librarianship.

In library systems and practice, the issue of human development is an essential matter, not a new one. Human Development in the library system has been an important issue necessary for improving the nature of information services delivered by the library right from the organization`s era of traditional or analog practice. In the prevailing digital age, human development is and will continue to be an important issue in the management of libraries and the improvement of their information services to satisfy the demands of users. The acceleration of digital technology which resulted in the modernization of library systems and practices globally which became loudly pronounced in the 1990s reshaped to a larger extent, the professional practice of librarianship as well as the methods through which information services are provided and delivered to users by the library. Rigby et al. (2018) observed that the changes introduced by accelerating digital technologies in library practice have in no small measure transformed the manners in which services rendered by the libraries are done.

Bombiak & Marciniuk-Kluska (2018) in their study confirmed that the digitization of libraries brought about by the advancement of technology has resulted in the development of sophisticated tools for service delivery in the library. This development implies that human resource development will be needed to facilitate the proper utilization of the tools for effective and efficient service delivery by the library. Collins (2021) supported this by submitting that, the digitization of libraries for better service provision and delivery equally means that, the case of unskilled librarians will have to be corrected through human resource development. Lee & Lee (2021) concurred that, in some cases, librarians are not well literate in information technology to be competent enough to use the facilities provided by technology in providing cum delivering library services to users. Therefore, Srour (2022) advised that library management needs to invest

hugely in the area of human resource development to equip librarians with the adequate skill needed to be able to use technologically developed tools for rendering information services to the users.

The Meaning of Human Resource Development

Though human resource development is complex and dynamic hence, it changes based on the dimension taken by technology and innovation introduced in library information service. Changes are not static. They are ongoing. Therefore, human resource development is not a one-time task in library systems and practice. It is a continuous task needed to place librarians in the proper position of delivering their professional practice in consonance with the needs and satisfaction of the users`. Human resource development in library practice is some learning process that librarians are drafted into experiencing to adjust their manners practice in line with the innovations or changes introduced in their profession by the advancement of technology. Grada-Arroyo & Osca (2021) noted that, in library practice, human resource development imports their ideas of improving librarian skills in line with best professional practice as technology demands. In another related effort, human resource development in the library context has been viewed by Divya & Gupta (2022) to be a process of helping librarians in the library system and practice continuously gain and sharpened their knowledge as part of the need to perform their information provision and delivery role well and with less difficulty. Srour (2022) also believed that human resource management is a basic requirement for not sensitizing the librarians in line with their best professional practice but also equipping them with the necessary and competent skills needed to deliver information services to users effectively and efficiently. Zhong et al (2022) found that, in the effort to skill librarians through the human resource development process, the library is also positively allowing library professionals to realize their hidden potential which they can explore and apply in the best practice of their profession. Human resource development in the library system and practice as Guler (2022) narrated, is essential in so long as it will continue to serve as an investment step taken by library management to develop the required manpower and skill needed by librarians to deliver the role of information service provider and deliver to users` effectively and efficiently in a less cumbersome way and manner.

Importance of Human Resource Development in Modern Librarianship

It is a documented issue that, the library is one of the active institutions or organizations charged with the responsibility of promoting learning in human society. Technological advancement has resulted in several changes in the library system and practice in the present era. These transformations saw the library adopting necessary measures and means to understand how well and best to adopt and utilize the facilities provided by such innovations in discharging their major role of information delivery to users`. The library seems to be rising to the aging challenges introduced by technology in information service but then, Bohonos & James-Gallaway (2022) argued that, unless and until the librarians are regularly trained and motivated through various incentives as human resource development provides, automation and sophisticated facilities offered by technology to make information services easier for delivery will only yield ineffective and inefficient results in information service rendered by the library through its information professionals.

In the general management of the library, human resource management is an integral process adopted to lead the organization to goal achievement with little or less stress. Librarians are made valuable and skillful in job performance through human resources development. Ashiq et al. (2022) also posited that the library itself by developing its librarians strengthens its assets and

prepares a solid basis for satisfying the needs of the users`. Therefore, needs and satisfaction are intertwined in the general basis of library and information services.

Needs and Purpose of Human Resource Development

Librarians need to be skilled in various aspects of computer literacy and information technology to be able to adapt to the changes introduced into library practice by technological advancement. The library management itself needs to be willing and able to invest in the area of human resources development to improve the skills of librarians and information professionals on how the knowledge they put into the conduct of their professional practice will lead the library toward successful goal achievement. Human resource development in the library system and practice for numerous reasons. But as an organization charged with the primary responsibility of providing and delivering information services to users, Baykal et al (2022) submitted that, human resources development is needed in the library system and practice because of its benefits to the organization. Human resource management facilitates the survival and stability of the library, it is required by the library management for the continuous development of librarians' skills and competency to perform the job well and, encourages librarians to put in their best professional efforts in the delivery of library services to users.

Majib & Ayob (2022) also pointed to the fact that human resource development in library management, creates a good nature of trust among librarians, stimulates them toward embracing changes introduced by various factors, and provides a sound basis for collaboration toward goal achievement by the librarians. With the reasons for human resource development achieved in library management, the organization according to Lee & Lee (2022) will in no doubt boast of increased quality of information service and productivity capable of meeting the demands and satisfaction of the users. The purpose of human resource development is to provide the coaching needed to strengthen and grow the knowledge, skills, and abilities that an employee already has. The goal of development and training is to make employees even better at what they do than before believing that improved performance will lead to the achievement of the organization`s aims and objectives.

Component and Quality of Human Resource Development

One of the significant plans of an organization is the human resource development strategy or program. Such a program maps out the objectives for which the program is initiated. The men, procedures, and essential tools required to make the objective realistic. Organization varies in terms of the human resource development strategy they adopt. The strategy of human resource development is adopted and designed to the objectives the organization itself is established to achieve. The library`s basic objective is to provide and deliver information services to users` among others. Therefore, its human resource development strategy is often designed in pursuance of the basic responsibility it is established to pursue. Ghosh (2022) asserted that, in the area of library and information science, the component of human resource development and management deals with inculcating information literacy skills and other related knowledge to make them functional in the area of providing and delivering library services to the users`. These services are also expected to suit the demands and satisfaction of the users`.

The main objective of human resource development in an organization as Zhong et al (2022) affirmed encompasses the quality and performance level of employees which are harmonized to determine whether the organization is on its right way toward goal achievement or not. Guler (2022) opined that five calibers of changes comprised the major concerns of human resource development in the organization. In the context of library systems and practice, these changes

as Lee & Lee (2022) posited have to do with changes in skills, knowledge, attitudes, level of employees' awareness, and innovation towards job performances.

Dynamic and growth-oriented organizations like libraries will require human resource development to succeed in a fast-changing environment. Normally, human resource development systems as Collins (2021) pointed out, would include the following mechanisms or sub-systems:

- 1) Performance appraisal of employees
- 2) Career planning of employees
- 3) Training and development
- 4) Quality management
- 5) Productivity improvement
- 6) Improving the quality of work-life
- 7) Rewards for achievement-oriented performances
- 8) Promoting team spirit
- 9) Periodic employee surveys and diagnosis of organizational health
- 10) Research and systems development
- 11) Storing of Human Resource Information

The quality and components of human resource development set the paste for the implementation of the human resource development strategy in an organization.

Effective Human Resource Development in Modern Librarianship

The nature of library and information service delivered to users depends mainly on the knowledge and skills of the providing librarian or information professional. Sometimes, librarians and information professionals may be skillful in the knowledge required to efficiently and effectively provide and deliver information services to users but the facilities available for them to carry out the duty may not be adequate. In cases where they are adequate with new technology, they might not be functional in usage. These phenomena to some extent affect the nature of information services provided and delivered by the librarians and information professionals. The Library and Information Science professionals are considered as one the vital elements that can make a library the center of knowledge acquisition and transfer. If the working professionals of a library are competent enough then he/she could build a collection of information resources which really mean resources and could attract user through his/her services (Lee & Lee, 2021).

The information service provision and delivery discourse as Jatoba et al. (2022) observed, has created opportunity for debate and argument on the effectiveness and efficiency of capacity building to create sustainable ways which are in line with emerging changes in the area of library service provision and delivery. Over the years, with the advancement in technology and the changes it has brought to the library system and practice, Sing & Kumar (2022) confirmed that several capacity buildings in library and information science have focused on the various aspect which to Rigby et al. (2018) deals with strategic management, policy development, Ethics based on good governance, target setting, benchmarking, team building, effective communication skills and information management system among others. The role and place of human resource development toward the achievement of library goals and objectives are far much crucial than imagination.

Subject Gateways

A "Gateway" is a word with several meanings. It generally refers to a network point that acts like an entrance to another network. An information gateway is by analogy a point on the networks that leads to several other information resources. It is in the form of a special purpose web site linking users to information on the Net (Gudodagi et al 2001). The researchers went further to

assert that, 'subject gateway is a web site that provides searchable and browsable access to online resources focused around a specific subject.'

In order to answer the user's search for specific information needs timely, Subject Gateways and Academic Search Engines have been introduced to provide targeted and organized collection of digital information tailored towards facilitating the retrieval of current, concise, accurate and subject concerned with sources of information. This serves as a means of aiding the end-user to locate authentic relevant information on a subject. This is also a fact that human resource development is needed in order to be able to operate in this technology driven society, since the advancement in technology has made a system easier to collect, index, retrieve, analyze and use data and information to solve problems. This is answer to the fourth law, "Save the Time of the User" and the fifth law, "Library is a Growing Organism", of library science by Ranganthan, and which means, both human and resources must embrace change in terms of knowledge and skills for human and growth, quality, quantity, and technology advancement for library resources and facilities while the information seeker retrieves information in his area of interest. So, to tackle this issue, the concept of 'Subject Gateways' has emerged in the early 1990s.

What are Subject Gateways?

Subject gateways are Internet services which supports systematic resource discovery. They provide links to resources (documents, objects, sites or services) predominantly accessible via the Internet. (Sanjay et al., 2019). In order word, is a computer interface that functions as a frontend to an online library catalogue as well as to other information resources on the Internet. It is important to note that service is based on description of resource as browsing is done via subject structure which is an important feature. Sanjay describes Subject gateways as "Internet-based services designed to help users locate high quality information that is available on the Internet. Subject gateways are places for gathering specific resources that concerns a discipline. Subject gateways are database for metadata (or catalogue) records which describe Internet resources and provide a hyperlink to the resources for direct location. Which means that all the gathered resources are filtered, described, processed for easy identification, classified and indexed before they are added to a database which can be accessed freely by users via World Wide Web. Thus, Subject Gateways is cataloguing of information resources online which provide effortless and quick access to the internet resources as librarians do same locally for the books in their various libraries. According to Sanjay (2019), Subject Gateways are supposed to be working as librarian of internet resources that provides access of e-resources to e-users via internet.

Reasons for Subject Gateways

Why should libraries go for subject gateways? How can the library benefit from gateways? Of what use are gateways to users? These queries are very important in the line of duty as it concerns the aspect of human development in modern librarianship and effective service delivery to users. Libraries are the most appropriate institution to integrate subject gateways due to their expertise in relevant areas such as abstracting, classification, acquisition, keywords, Information, seeking behaviour, guiding and helping users. Since the information in digital form is so numerous and varied, which makes it difficult for users to locate a particular piece of relevant information with limited time. Gateways simplifies search by bringing together all related resources and providing links to them, as users are encouraged to access the links directly to locate quality and relevant information on the net, without going through the rigorous search process.

The library benefits by leading the way into the information age as it creates access to huge-high quality collection. The library also integrates into existing structures on the Internet. At the course of carrying out research by users, diverse resources are brought together, the users benefit in terms of research, learning, leisure, as queries like: What’s good? What’s where? And What’s what? Are attended to by carefully filtered resources by subject gateways. Here, it is clearly understood that subject gateways are Internet-controlled information services that allow users easier access to different information resources including websites, documents, data, multimedia files and other resources provided through the web. According to Sanjay, et al., 2019, who explains that, “users can decide to either look for the database by keywords, or browse the resources categorized under the subject headings.” He further stressed that it helps the users to judge the relevance and authenticity of the resources and minimize the possibility of repetition in search results. Subject Gateways direct serves as a guide to users who in turn harness the best information for their queries regardless of the material and format. Subject gateways also offer on-screen guides that aid users to find, locate, identify and select materials that might be useful in their research area.

Subject Gateways has additional searching facility which general search engine lacks, as it provides enhanced searching e.g. SOSIG (Social Science Information Gateway) which incorporates a thesaurus containing social science technology. This option gives the user great opportunity to generate alternative keywords/terms as they search the resources catalogue for the best results.

All the resources hosted in the subject gateway databases have been scrutinized by various subject experts who classified each material content which has gone through publication process. The sorted resources must fulfil the criteria according to their subject content, relevance and usefulness. Therefore, all resources must go through quality control, which is the main concern of subject gateways; and is based on authority, adequacy, appropriateness, validity, accuracy and accessibility of the resources to be accessed through these gateways.

Difference between search engines and subject gateways

Table 1.

Subject Gateways	Search Engines
High level of human input is there, as the selected resources must meet a number. Of criteria applied by a librarian or academic, who ensures that only high quality, relevant resources are included in the database.	It totally depends on the powerfulness of the Search-engines algorithms.
It is a “gathering place of discipline specific resources”	General resource is available.
The results are specific, precise, and linked to relevant documents.	The results can be overwhelming, unmanageable, and full of irrelevant references and are often too prolific to meet user needs.
It indexes resources	It indexes pages
Records are created by a cataloguer, which is designed to highlight the main features of resource in an easily readable, concise fashion.	Records are created by an automatic process and typically consist of a mixture of metadata offered by the author of the page (if this is available) and text picked up from the page itself.

Provide refined results. It gives Information and links to the resources on the specific area of subject interest as it saves time of the user.	WWW is not well organized & does not provide the results as expected by users. It serves links to relevant and irrelevant information without looking at the context.
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Adopted and modified from Kumar, 2001

Library Gateways

Library gateways are group of databases and informational sites, organized by subjects that have been assembled, reviewed and recommended by subject experts, usually librarians. These gateway collections are used to support reference needs and research of users by identifying and indicating to recommended, recognized and academically oriented pages on the web. In a nutshell, these gateways contain all subjects' information. Examples of Library Gateways and Subject Gateways description is given below:

- Academic Info ([URL:http://www.academicinfo.com](http://www.academicinfo.com))

Some Important Gateways Table.2

Name of Gateway	Subject Coverage	Classification	Search Facility	Browsable
ADAM www.adam.ac.uk	Art, Design, Architecture and Media	Yes	Yes	Yes
AHDS ahds.ac.uk/	Arts and Humanities Data Service	No	No	Limited Extent
Biz/edbized.ac.uk/	Business and Economics	Yes	Yes	Yes
EELS eels.lub.lu.se/	Engineering Electronic Library, Sweden	Yes	Yes	Yes
GeoGuide www.geo-guide.de/	Geography and earth sciences	No	Yes	Yes
MathGuide www.mathguide.com	Mathematics	No	Yes	Yes
SOCIG www.socig.ac.uk	Social Sciences	Yes	Yes	Yes
OMNI omni.ac.uk/	Organizing Medical Networked Information	Yes	Yes	Yes
BUBL Link bubl.ac.uk/link/	Bulletin Board for Libraries: All Subjects	Yes	Yes	Yes

Adopted from Gudodagi et al. 2001

Table. 3

Aerospace and Defense - AERADE
American Literature, English Literature and Western philosophy - Alex Catalogue of Electronic Texts
Art and Architecture - ArtSource - Art History Resources
Astronomy - AstroWeb

Bio Sciences, Health Sciences, Physics/Chemistry, Earth & Space and Engineering - SciCentral: Gateway to the best science news sources
Business, Economics, Accounting, Leisure and Recreation and Travel and Tourism - Biz/ed
Chemistry - Chemdex - chemistry.org.uk - chemweb
Criminology and Criminal and Community Justice - Crimlinks
Digital Preservation Resources - PADI : gateway to international digital preservation resources and to ICADS
Economic and Finance, Sports, Social Science, Entertainment Industry - Links to Useful Data
Economics - EconData.Net - RFE: Resources for Economists on the Internet - Guide to Financial Sources on the Internet
Economics, Business & Finance, Politics, Law and ICT - International Economics Network
Education - Fachportal Pädagogik: The German Education Portal
Engineering, Mathematics and Computing - TechXtra
Finance and Economics - Financial Resources on the Internet
General - Digital Librarian: a librarian's choice of the best of the Web
Humanities - Voice of the Shuttle
Information Technology - Subject Information Gateway in Information Technology (SIGIT)
Language Learning and Education - iLoveLanguages
Law - infolaw: internet for lawyers - Civil Rights Litigation Clearinghouse - Lawlinks - Legal Resources in UK and Ireland
Library and Information Science - LIS Learning - LISGateway.com - Infolibrarian - AILLMIS- All India Libraries and Librarians Management Information System
Mathematics - Internet Mathematics Library

- vifamath: Virtual Library of Mathematics
Media - media.info
Multidisciplinary - DMOZ - INFOPORT: INFLIBNET Subject Gateway for Indian Electronic-Resources - The WWW Virtual Library - ipl2
Philosophy - Philosophy around the World - PhilPapers
Physics - physicsworld.com
Political Science - Political Science Resources - A Guide to Selected Population Resources on Government Web Sites - IREON - The International Relations and Area Studies Gateway
Psychology - Psych Web - Encyclopedia of Psychology
Science - WorldWideScience.org
Social Sciences - Social Science Cyber Library - Research Resources for the Social Sciences - Internet Data Sources for Social Scientists - UK Data Service
Social Work - AgeInfo - Eldis
Sociology - A Sociological Tour through Cyberspace
Statistics - Statistical Sites on the World Wide Web - The World Wide Web Virtual Library: Statistics

SciCentral: https://old.amu.ac.in/pdf/amulib/Subject_Wise_Gateways.pdf

Conclusion

Human resource development is the need of the hour for libraries and librarians as they are considered the heart of the organization`s system. Libraries can become dynamic and knowledge hubs in the true sense only through the efforts and competencies of their human resource. Personal policies can keep the morale and motivation of the people high, but these efforts are not enough to make the organization dynamic and take in the right direction. There is need for a proper guide on information retrieval that gives direct answer to the seeker. That is why subject gateways are needed to answer the quest of the users. The knowledge, skills, and abilities of librarians must continuously need to be acquired, sharpened, and used to make the libraries dynamic and efficient. Therefore, it is very much essential that Libraries must re-orient their personnel policies with a human resource development program as the guiding philosophy so

that the new methods and subject gateways can be utilized by both users and information professionals.

Moreover, one of the pressures which intensify the need for personnel development in libraries is the influence of modern concepts (integration of technology) that have tried to adapt to such contemporary realities which is the digitization and libraries. Libraries and librarians in their best professional practice must adapt to the changes technology has introduced into the modern library system to function effectively as library and information science professionals.

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