

Design and Development of Library Gateway: Special Reference to University of Peradeniya, Sri Lanka

R. Maheswaran

Acting Librarian, University of University of Peradeniya, Sri Lanka
E-Mail: rmahes@pdn.ac.lk

Abstract: The library professions are nowadays heavily involved in providing access to information through library websites and it is a challenge to design a website that has reliable content and a user interface that is easy and intuitive to those who use it. This article explains how we can develop University of Peradeniya Library website that also provides online services, searchable and browsable catalogues of Internet-based resources. This Library website provides online resources and often linked up with other relevant and related sites for more information on the same area. This paper describes how the University of Peradeniya Library gateway helpful to provide the services in the field of all the subjects related to the university. The service aims to provide a trusted source of selected, high-quality Internet information and also promote the electronic resources which result from research and teaching in the University of Peradeniya.

Keywords: Library Website; University of Peradeniya Library, Web Resources

I. INTRODUCTION

Knowledge is a familiarity, awareness, or understanding of someone or something, such as facts, information, descriptions, or skills, which is acquired through experience or education by perceiving, discovering, or learning. Knowledge is increased with the correct sources where the information is available (Suriya, Surulinathi, Balasubramani, & Amsaveni, 2004). Identifying the knowledge keepers is the very important term in the knowledge attains process. This study widely covers the resources which are more relevant for University of Peradeniya Library and how they can get all the valuable resources at one place (Hundzin, Hundzina, & Cheshkin, 2016). This study clearly explains the usage of Library gateways, which are created for the sake of knowledge dissemination at a single platform. By creating the Library gateways for University of Peradeniya Library, the user can easily identify the online resources which are very useful for their research and gathering their relevant information quickly (Murugesan & Balasubramani, 2011). The researcher has decided to select and use the various website tools to design and develop the Library Gateway for University of Peradeniya.

II. OBJECTIVES OF THE STUDY

1. To provide information exhaustively on University of Peradeniya Library and its resources concerned as it is scattered in different sources.

2. To provide address of Popular information resources, most relevant works, organizations that can be surfed through web
3. To make the information available at anytime, anywhere. (24/7)
4. To boost the traditional library services with the Internet oriented services that can offer current resources to user community.
5. To reduce the difficulty of using different search engines, by using this directory.
6. To make it available the content information/data through Library gateway network effectively to end-users.
7. To filter and organize the scholarly open access resources on University of Peradeniya Library.
8. To identify the web links of scholarly open access resources on University of Peradeniya Library.
9. To provide single entry point for multiple resources on University of Peradeniya Library.
10. To provide links for the leading institution and experts scattered over the net.
11. To reduce the difficulty of using different search engines, by using this gateway.
12. To make available the content information / data through network effectively to end users.

III. DESIGN AND DEVELOPING LIBRARY WEBSITE

Planning: The purpose, goal(s), target audience, content needed and the overall style wanted are outlined.

Designing: Designing is the generation of a Design (or Designs) by an agent under the influence of certain constraints, preferences and evaluation knowledge.

These influences derive from various sources, such as the knowledge, skill and experience of the agent doing the designing, the available tools and methods, external imposition (such as needs, requirements, and the current state of the world), and physical limitations (such as scientific laws or physical properties). The design process is guided and supported by a wide variety of knowledge and data. (Krishnamurthy & Balasubramani, 2014)

Colors: One should learn about using color on the Website, what the key to using color is, what are browser safe colors, and what colors to use and not to use.

Consistency: One should learn why Website consistency is important and what roles our one's, colors, image styles, layout styles, navigation style, and footers play.

Content: One should learn why one's Website content is considered the most important aspect building of a Website.

Graphics: With a careful selection of icons, bullets, and bars one can give the site a personality all its own. One should learn how to use graphics properly on Website.

Navigation: One should learn how to create a simple and effective system to navigate the Website.

Gateway Style: Style is defined through layout, design and personalization of Web pages. One should learn about the basic styles used for Website design and which style is best suited according to the requirement. (Kamatchi & Balasubramani, 2012)

IV. PLAN OF THE WORK

The major steps that are followed in designing a gateway for Resources are as follows:

1. Identification of target users
2. Planning of the gateway
3. Study of subject as discussed with Experts.
4. Identification of several information items available in Internet using various search engines.
5. Selection of information sources
6. Categorization and arrangement of information sources
7. Finally presentation of sources i.e. Library gateway designed with the help Web Tools

V. NATURE AND CHARACTERISTICS OF LIBRARY WEBSITE

There is no precise definition of a library gateway. However, as noted above, they share several characteristics. They are necessarily, subject specific, including resources pertaining to some restricted topic, and/or type of user. Unlike search engines, whose indexes are automatically constructed by software agents following automated identification of resources, gateway resources are selected intellectually by human experts. Explicit, and often strict, criteria are applied in the selection of resources, and the resources thus chosen are described and classified and/or indexed by the same human experts (Jayaprakash & Balasubramani, 2011). Resources are selected on two general counts: appropriateness of subject content, and quality of the information resource. Appropriateness of subject coverage, or 'scope' of resource, is usually regarded as easier to assess than quality. By definition, one criterion for inclusion is that the resource must be accessible from the Internet, but this covers a wide variety of format.

The Library gateway specifically includes the following types of resource

1. Electronic journals
2. Digitized book
3. Reports and papers
4. Scholarly mailing lists and archives
5. Educational software
6. Bibliographic databases
7. Electronic newsletters
8. Datasets
9. Bibliographies

VI. NEED FOR A LIBRARY WEBSITE

In order to access information, students, researchers as well as teachers keep shuttling between e-books, e-journals, patents, theses, and so on. To give a bird's eye view of various resources in the field of University of Perdeniya Library, a single window service was conceptualized in the form of a English portal. It aims to provide information related to Language and Literature, through a single user interface and to access a wide variety of electronic resources in the field, scholarly information sources that are available in full text on the web. Searching and filtering the sources available on the web and then judging what will prove useful to English students was of course a very tedious job.

1. Researcher had a regular meeting with faculty and research scholars of English department to know the requirements of their research.
2. Based on their requirements, researcher has planned the Library gateway.
3. Researcher started collecting all the scholarly open access resources from various internet sources on University of Perdeniya Library.
4. Before adding to our Library gateway the researcher has evaluated the contents based on the following criteria.

VII. COVERAGE

1. *Subject:* All the Subject literature subjects covered under the Science
2. *Acceptable Sources:* Academic sources are all acceptable.
3. *Level:* The Target group for included journals should be primarily researchers.

Content: A substantive part of the journal consists of research papers. All identified content available in full text.

Access: All content freely available.

Quality: For a journal to be included it must exercise quality control on submitted papers through an editor, editorial board and / or a peer-review system.

Responsibility for Maintenance: Most library website are created and maintained by small teams of subject specialist information professionals, based in institutions with subject relevance, often academic libraries. Usually, they are the product of a single institution, although collaboration is an increasing trend. A few are still maintained by enthusiastic individuals, e.g. the Human Languages Page, and Business Information on the Internet. One consequence of the nature of the maintainers is that the gateway may focus on the needs of a particular group of users, or on information provided by the maintaining institution.

Statement of the Problem: The Researcher identifies the thrust area of research and the valuable resources scattered all over the web. So the research plans to build the scattered resources for library in single platform. The creation of library website for the University of Perdeniya Users helps all the knowledge thirsty in their own field to acquire their needs and wants in single step. It also save the time of the

user and provide them the correct information regarding to their studies.

VIII. DESIGN AND DEVELOPMENT OF UNIVERSITY OF PERADENIYA LIBRARY GATEWAY

A wide variety of resources are enriching the Web day by day in the form of journals, books, research papers, conference proceedings, ETDs and a lot more. Web resources are pointers to web pages that we can access with any Web browser (e.g.; Netscape, Mosaic and so on). These are the most versatile kind of resources; available with images, sounds and links to other Web pages and even link us to other resources. In a layman's language, a Web resource is a unit of replication on Web. It is an entity referenced by a URL typically; a resource corresponds to a single file. A Web resource may contain a set of logical URLs to refer other resources. Web resources are many

things to millions of its users. These serve as a market place, art gallery, library community center, school, publishing house, Library gateway, directory, bibliography, paper report, article, Web log, and whatever else their authors wish them to be. These web resources are arranged and gathered in one platform, Library gateway.

IX. UNIVERSITY OF PERADENIYA LIBRARY GATEWAY

Home page is the first page of the University of Peradeniya Library Gateway (Fig. 1). Using the home page the library users can access all resources from anywhere. There were many resources and information accounting that make our users to know about but home page alone is not Suffice to highlight and the resources. In addition to the regular navigation and links, we have created a few features on our home page that allow us to promote new or existing management resources and services.

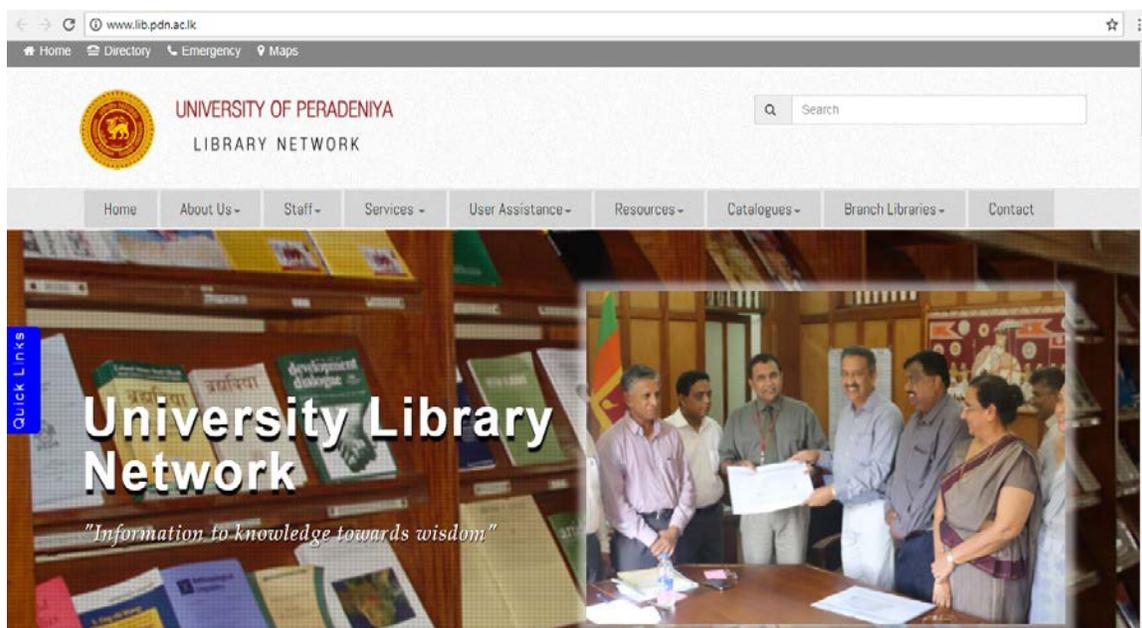


Fig. 1 University of Peradeniya Library Gateway

The links provided in the top line are Home, Digital Resources, at the lowest bottom a link of Site Map has also been provided to know about the overall areas covered in the website.

A. Full Text Databases

University of Peradeniya, Sri Lanka Subscribed online full text databases offer access to full text articles from peer-reviewed journals published by many of the world's most prestigious academic publishers. Full text databases offer tremendous value to an academic library by expanding access to the content of important publications already in the library's print or e-journal collection while, at the same time, providing new access to a great number of highly

valuable full text resources previously unavailable to the library's users. It covers Sciencedirect, Emerald, Springer, and JSTOR and so on.

B. Special Collection

Special Collections Received as Bequests from Scholars and Well Wishers. One of the initial benefactions which contains 1384 Rare items on Social Sciences and Humanities gifted by late Mr. Leslie F. de Saram. Many traditional bibliographic databases contained fields to store information about a limited range of printed works, books, articles, meeting abstract, Conference Publications, Notes manuscripts etc.

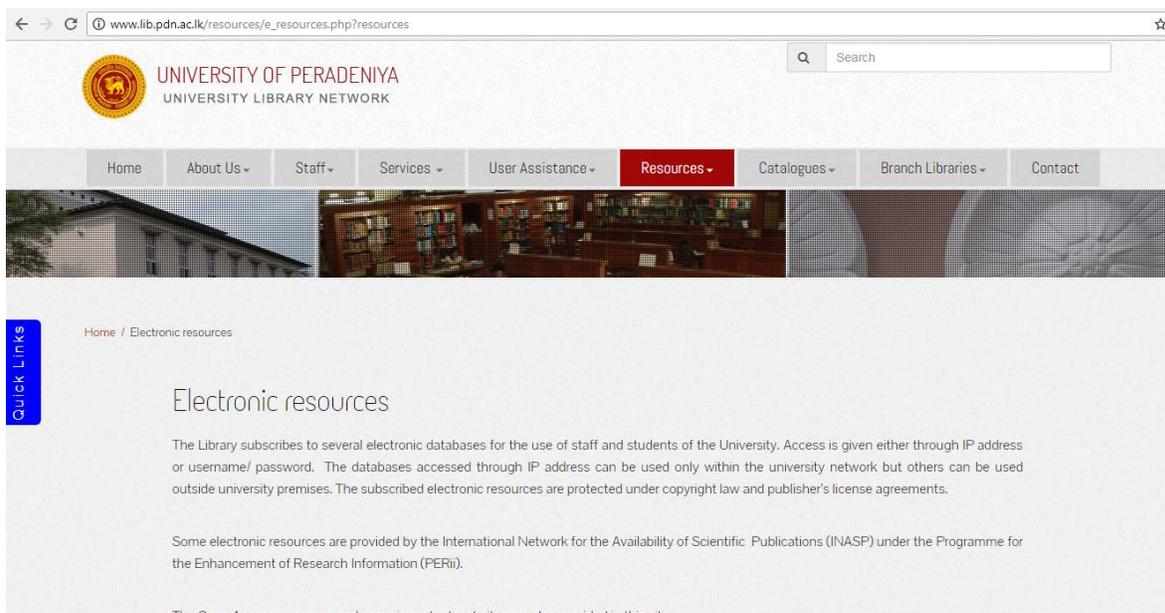


Fig. 2 Electronic Resources

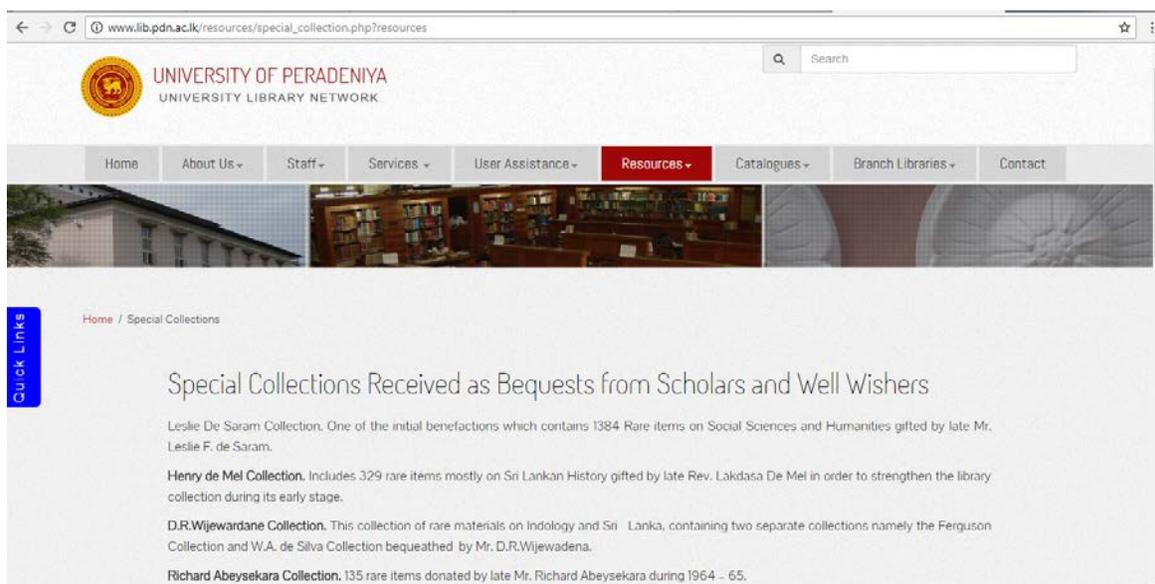


Fig. 3 Special Collections Received as Bequests from Scholars and Well Wishers

C. Site Map

A site map is a kind of interactive table of contents, in which each listed item links directly to its counterpart sections of the Web site. Site maps perform the same service that the layout maps in large shopping malls perform: without them, it is possible to explore a complex site by trial and error and so on.

Salient Features of University of Peradeniya Library Gateway

The main challenge after launching University of Peradeniya Library Gateway, SRI LANKA is how to make it live, how to guarantee its future success, and how to encourage users to use it. Here are some policies we have adopted:

1. Ensuring the information is kept up to date:
2. Clear and suitable organization of the information:
3. Quality of the content:
4. Listening to the users needs.
5. Friendly interface

X.CONCLUSION

The vast amount of information available on the Internet can make searching a long, Complicated process. The Library gateway provides a more productive search by

1. Focusing only on sites with subject-specific data.
2. Mining the “deep” web.
3. Filtering out irrelevant data.

Library and Information Science professionals should aware of invisible web tools and it helps to save the time and access to quality of information in short time.

1. The researcher working experience to give few suggestions, here, the researcher's made for implementation in future Library gateways.
2. Modern and innovative ways of providing information and services such as electronic resources, course specific, and document delivery.
3. Library gateway is a structured compilation of resources of specific subject with a browsing mechanism.
4. Complex library searches due to the cross functions and links between the online catalogue, journal aggregator databases, electronic resources etc.
5. A Library gateway can be also considered as services which provide access to web based resources of specific subject area in easier manner.
6. Simple Library gateways contain reference to the internet resources and index that references list and give simpler search interface.
7. A complex gateway gives a much improved facility via a system consisting of a resource database and indexes, which can be searched all through a web based interface.

REFERENCES

- [1] Hundzin, A. A., Hundzina, M. A., & Cheshkin, A. N. (2016). Processing of Digital Images of Industrial Object Surfaces during Non-Destructive Testing. *Science & Technique*, 15(3), 225–232. Retrieved from <https://doi.org/10.21122/2227-1031-2016-15-3-225-232>.
- [2] Jayaprakash, M., & Balasubramani, R. (2011). Status of Automation in university libraries of Tamilnadu: A survey. *European Journal of Scientific Research*, 53(1).
- [3] Kamatchi, S., & Balasubramani, R. (2012). Effectiveness of Web Enabled Information Literacy Module among the teacher education students in Chennai City. *European Journal of Scientific Research*, 79(2).
- [4] Krishnamurthy, V., & Balasubramani, R. (2014). An association rule mining approach for libraries to analyse user interest. In *Proceedings - 2014 International Conference on Intelligent Computing Applications, ICICA 2014*. Retrieved from <https://doi.org/10.1109/ICICA.2014.34>
- [5] Murugesan, N., & Balasubramani, R. (2011). Application of ICT based resources and services in research and development libraries in Tamilnadu: An analytical study. *European Journal of Social Sciences*, 23(1).
- [6] Suriya, M., Surulinathi, M., Balasubramani, R., & Amsaveni, N. (2004). The role of librarians in the digital environment. In *Digital Information Exchange: Pathways to Build Global Information Society*.