Designing and Development of Biochemistry Subject Portal using Bluevoda Web Building Software: A Practical Approach

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Abstract

The portals are considered as the advanced tools of information retrieval where the information can be personalize, customize and integrate in a web based environment for the user's individual preference. The present study focuses the issues related to designing of subject portal for biochemistry subject. Study outlines the guidelines for creating a web page and an attempt has been made to design a subject portal with having qualitative information with all the ease of learning. This paper also discusses the issues related to how to get free web space and hosting of subject portal and submission of portals to search engines. The URL of model Biochemistry subject portal in www.biochem-ku.webs.com.

Key words: Subject portal, Biochemistry, free web space, Kuvempu University

1.   Introduction

With the vast development of various technologies, learning today is no longer confined to classrooms with lecture delivery as the only method of conveying knowledge, rather, an electronic means of learning has continued to evolve. Electronic learning (e-Learning), which facilitates education using communication network, has made learning possible from anywhere at anytime using the Internet, wide area networks or local area networks. A subject portal can assist the students in e-learning by providing wide variety of digital resources and web based library services. Subject portals are important tools for users to access and utilize library and information services over a network. Thus the subject portals are act as a single user interface for accessing wide variety of resources in a single window. After knowing the demand of this kind of portal we have develop a subject portal in Biochemistry discipline to assist the Biochemistry learners in accessing variety of information related to their subject in single a log in.

2.   Need of the Study

Due to the continuous research and development activities in all the sphere of knowledge it leads to establishment of multidisciplinary nature of subjects. The reason behind this is fragmentation of basic subjects. The basic subject Chemistry is not exception from this. Now the subject chemistry is fragmented and put in different compartments such as General Chemistry, Industrial Chemistry, Bio Chemistry, Organic Chemistry and Pharmaceutical Chemistry and so on. Whereas the students, teachers, and scholars in these discipline finds difficult to get access to needed information from the library. Because the cost of printed journals and books are so high meanwhile library can't meet all the demands of the research community. The solution to this is World Wide Web. Today various types of search engines are available like Yahoo, Google, Info seek, etc. to dig out the relevant information from the web. The students, teachers, and scholars in Bio-chemistry are using these

search engines to search the information of their demand in the form of online databases, open access journals. E-books etc. But to retrieve the relevant information through these search engines one should be aware of use of search strategies. If the users succeed in getting the information using search engines the information is redundant because the exhaustively is more in case of search engine hit and specificity of information is very less. To over come this problem the web portals are considered as the best tools for retrieve the relevant information in personalized web environment. These web portals offers well organized scholarly information in a single interface. Nowadays the information seekers need every pinpoint information and scholarly information in a particular subject in more specific and well organized format.

3.   Objectives of the Study

♦ To create a subject portal in Bio-chemistry discipline using BlueVoda web design tool

♦ To assist the bio-chemistry students, teachers, and scholars by providing well organized and scholarly information.

♦ To save the time of users by providing comprehensive literature in a single window.

♦ To make search easy and present resources of biochemistry subject in a consistent, organized way.

♦   To provide search results from various spread searches in an intelligible way to the users of biochemistry, ideally with the de-duplication and sorting of results.

4.   Scope and methodology

The present study is focusing on creating of subject portal in Biochemistry using BlueVoda web designing tool. The scope of this study is limited mainly to Bio-Chemistry subject offered in Bio chemistry department of Kuvempu University. Bio chemistry is a major branch of study related to many interdisciplinary components such as Biological Science, Medicine, Pharmaceutical Industry etc so the available information is more both in terms of printed and online. For the convenience of the study we consider curriculum structure of the subject as a limitation to surf the information. For designing the subject portal we collected the some relevant sources of information according to the syllabus offered by the Kuvempu University. Those collected information is organized in single portal which is designed using Bluevoda web building software. Further the designed subject portal is hosted in webs.com a free web space provider by accepting the terms and condition posed by the web host. At the end the designed portal is submitted to the search engines.

5.   Guidelines for creating a Web Page

Getting a website is no big task in today's world. With scores of small and big website development companies vying the customers, the customers are the happiest lot. However sometimes people may decide to create websites all by themselves. But creating websites or getting websites developed

by people who have limited technological expertise and experience has its own risks. Economical and cost effective website may help save money but they may prove unproductive in the long run. Such website may be low in quality and also not appeal to the target audience. So whenever we plan to get a website for our self, we should look for some very basic features and should evaluate our website on the following parameters which constitute a good website:

i) **Template:** We have to choose best template that matches our work and company or institution's profile. We should avoid the use of free template available on the other site because these types of template are repeated on many websites and fail to give the required unique identity to our web page.

ii) **Content**: Content is a soul of any website, which take our more time. We should ensure content which is more related to the theme of the website and also ensure availability of fresh content for each and every page. It will help to attract new customers.

iii) **Meta Tag & Title:** Each and every page should have a title and be supported by appropriate Meta tags. This will help in getting good ranking in search engines like Google, Yahoo & MSN.

iv) **Internal navigation:** We must ensure that our website is properly interwoven. We must try to keep internal pages maximum three click away from the index page.

v) **Broken links:** Make a cross check of the entire active links on the website. Broken link have a very bad impact on the customer and it also harm search engine rankings.

vi) **Search Box:** Include a search box option in the webpage. It will always help the customer in finding important information on the web site. A good website is an asset for any organization.

So we must keep in mind the above general guidelines while creating a web site. Then it's necessary to discuss with website providers about the parameters and finally figure out the best deal and go ahead with any one of them.

6. Contents of Biochemistry Subject portal

In this Biochemistry subject portal we have been focused only on the biochemistry related information. Here we have covered the main facets of biochemistry subject which are selected from the curriculum structure of Kuvempu University and organized according to semester scheme of the University. Following contents are covered in the model biochemistry subject portal:

Home	About Department	Curriculum structure	Hyperlinks
About Project Objective Project team	About Biochemistry Department Vision and Mission Faculty Syllabus Events	I Semester II Semester III Semester IV Semester	Net Syllabus Journals Databases Institution in India Job opportunities

7.   Designing of Biochemistry Subject Portal

Designing and development of a subject portal is a complicated job for those who are not aware of mark up languages like HTML, XML but the web editors have made this job easier. Here, the designer must have an idea about designing languages, software, and the web space providers which are essential for a simple designing. When we start a simple designing we must take care of the entire things like selecting a background template, colour, images, icons, content organization and other related links which are to incorporate in the subject portal. For this purpose we plan to write a storyboard for the model which is like a blue print of the model subject portal. While designing the present model we have followed the following steps:

♦ In the first step we selected the major topics from the Biochemistry curriculum of the Kuvempu University.

♦ Organized curriculum according to the semester scheme.

♦ Surf the internet for collecting the information related to Biochemistry topic

♦ Collects the URL addresses of the relevant sources from the web

♦ In the next step of designing we selected the Bluevoda as a portal designing software.

♦ The designing process has been started from selecting the layout of the page and ended with providing links to every selected topic.

♦ After the designing of the page, previewed the designed pages and saved the page as HTML with necessary editing.

♦ In the next step edit the source code according to our need and saved it.

♦ At the last step uploaded our pages to the web using free web space providers.

8.   How to get free Web Space

To get the free web space for Biochemistry subject portal from www.webs.com, we must follow the following steps:

♦ In the first step create an account by giving a site address and ensure the password for the account and then click on the option 'Create a Web site'.

♦ In the next step fill the account information box with required information like, User name, Site name, Birth year, Country name, etc.

♦ After filling the above information, there is an option to select a template for portal which is offered by the webs at free of cost. But already we have designed the template using Bluevoda software so no need to use this option. So we skip this option by clicking on "Use advanced (HTML) mode".

♦ Then to continue the advanced mode we must fill some words which is given by the webs.com in the given box.

♦ Then click on the "Create My Site" and agree with Webs.com terms of conditions. Then our site will create.

♦ In the last step to upload the files click on the 'Edit My site' and use the 'Single file up loader' option to upload the files one by one.

♦ Before uploading our Home Page we have to rename it as 'index.html'

By following the above steps we are able to host our model portal to the web and the present URL of the Biochemistry Subject Portal is www.biochem-ku.webs.com.

9.   Home Page of the Model Biochemistry Subject Portal

In the home page we have given links to all aspects of Biochemistry subject as mentioned above in the content of the portal section. Here we provide hyper link to all the headings and sub headings just by clicking, it will navigate the user from broader to specific information on Biochemistry discipline (Figure-1).
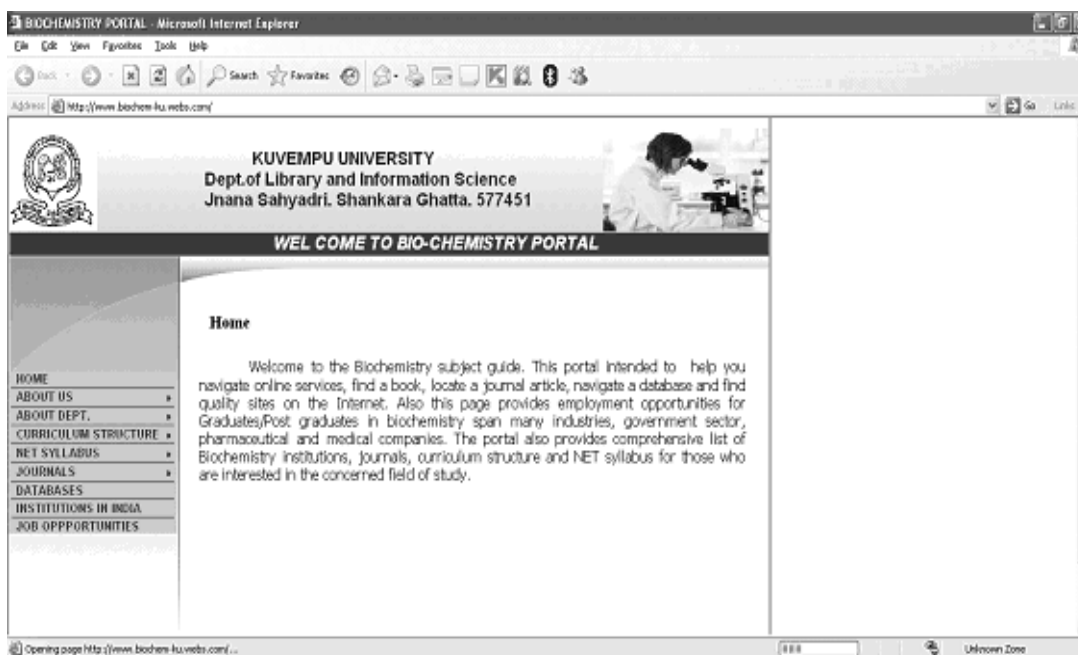

Figure1: Home page of the Biochemistry Subject Portal

9.1   Curriculum Structure

In the present model we have taken some important concepts from all four semester syllabus. From each semester we have chosen major topics and its sub branches further the topics are organized according to relativity between the subjects.

Figure 2: Curriculum Structure

9.2   Journals

In this page an attempt has been made to provide links to all free access journals related to Biochemistry discipline. Just by clicking the heading of the appropriate journal it will navigate the user to original document which is available in their database. (Figure-3)
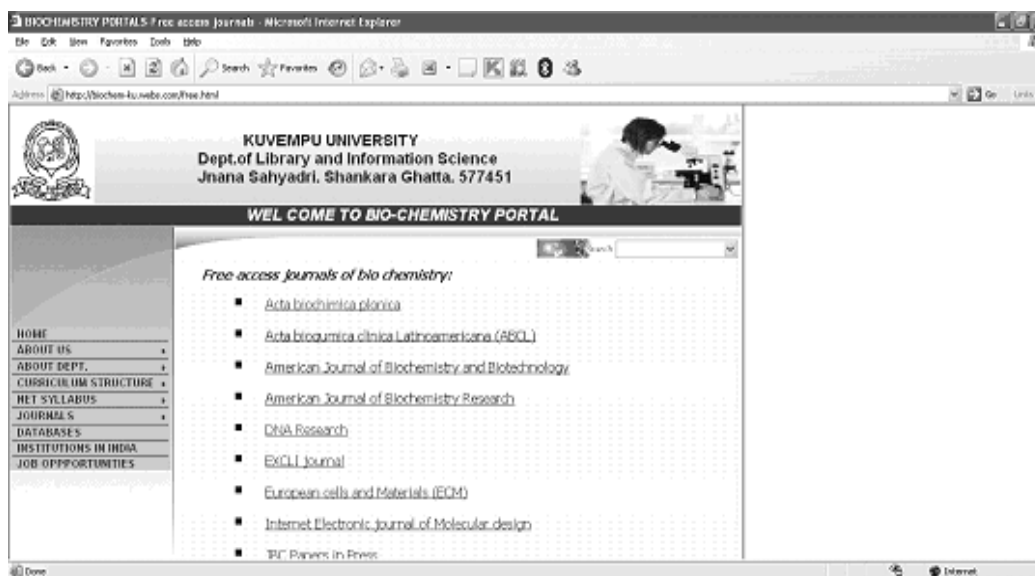

Figure 3: Free access Journals of Biochemistry

Similarly we have designed many pages for different aspects of biochemistry subject. Apart from this we made an attempt to provide information about NET syllabus, job opportunities in Government and Industrial sectors, major database list, list of major R&D institutions and Universities in India and information about the moderator.

10. Hosting of Biochemistry Subject Portal to the Web

Various portal activities are taking place across the e-research, e-learning and digital library communities and there is a need to look and see if it is possible to make it available for all those communities. It can be achieved through hosting the portal to the web. With this objective we decided to host the subject portal to the web. Further to host the portal to the World Wide Web need some space which is provided by the service providers. These Internet service providers offer free web space through Free Web Hosting service.

Free Web hosting is a service which stores our website data and delivers its web pages to the Internet in a free of cost. There are many such kind of free web hosting services are available online but after analyzing the offers of all service provider we prefer to use webs.com for our study.

11. Submission of Biochemistry Subject Portal to the search engines

The information available on the internet is seamless. It is the repository of information which can be accessible through the search engines. Search engines are the software where the programs are written in such way to dig out the relevant information from the web and provide it to the users in response to query received from them. So the search engines are act as a best tool to access the information which is available on the internet.

To make available of our site to user we must submit the site to any search engines like Google, Yahoo, AltaVista, Hotbot etc. There are many ways to submit the site to the search engine like add me.com, or even through the free web space provider itself. In the present study we submit our subject portal to Google search engine while submitting site to the search engine we must follow following steps.

- ♦ Log in to the biochemistry subject portal using user name and password.

- ♦ Click on the site 'Promotion' option

- ♦ Then go to the search engine optimization menu
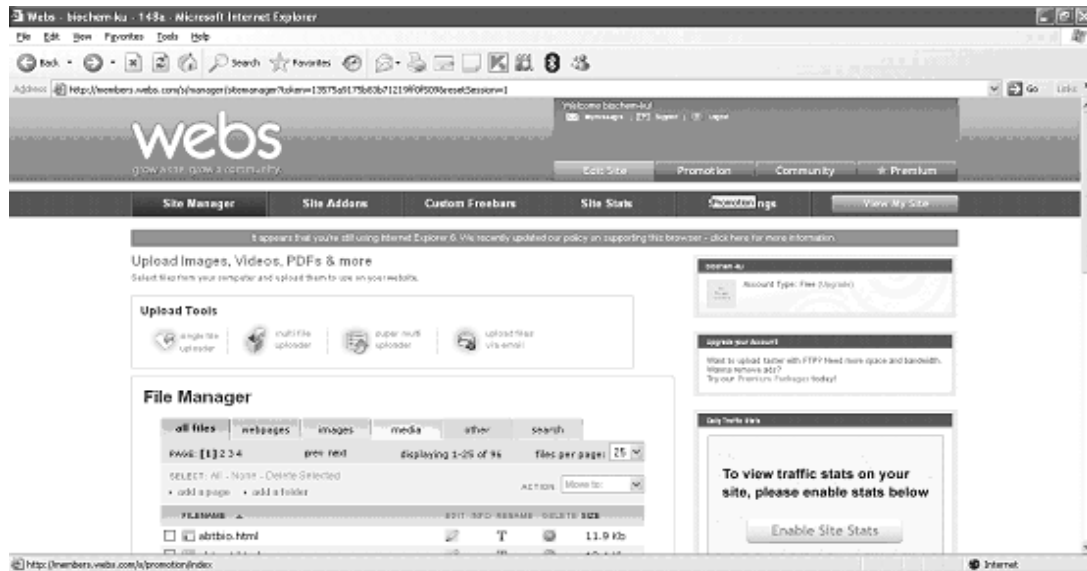
- ♦ Add key word and description

Figure 4: Site Promotion

♦ Then click on the submit your site to Google
♦ Then add the URL of our site and some key words in given place.
♦ Then submit it by clicking on the 'Add URL'

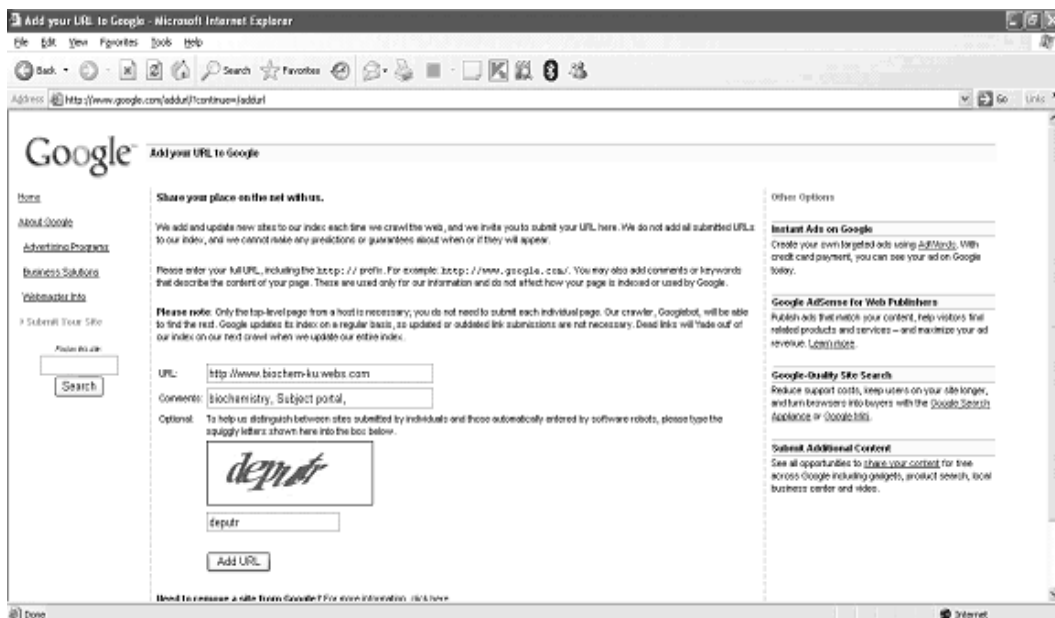Like this we submit the website to other search engines like Yahoo, Alta Vista etc.

Figure-5: Submit site to Google

12.   Conclusion

Thus the subject portals are very essential tool to effective access of information in a particular discipline. Most library patrons need information regardless of their form and where they available. Most of the user struggle hard to get access to needed information in library and information centers and on the Internet but the fact is getting relevant information is like a searching of needle in hay stack because of abundant publication of both printed and electronic information sources. To overcome such a situation this biochemistry subject portal is best tool to search integrated information on biochemistry discipline in a single window.

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