

# **SUBJECTSPLUS: INFORMATION MANAGEMENT TOOL - A CASE STUDY, WITH SPECIAL REFERENCE TO B. P. CENTRAL LIBRARY NIT ROURKELA**

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## **Abstract**

Management is a very important part of any governing body whether it is a school, college, institute or university and managing information is a very tough job for any organisation/institution. The same way, managing information in the library is also considered as an important duty. Being a library professional, one has to manage their staff, administration, office, higher authority and the most important, its resources. This paper discusses an overview of managing digital information through various tools. The available tools are required to manage various types of information today and also current trends of managing digital information/ resources. The main purpose of this paper is to highlight the tool - SubjectsPlus as a digital information management tool and its features, the workflow, implementation, customisation and application of SubjectsPlus in Biju Patnaik Central Library, National Institute of Technology, Rourkela.

**Keywords :** Information Management, Digital Resource Management Tools, SubjectsPlus, Lib Guide, Subject Guides, NIT Rourkela.

## **Introduction**

Information plays a central role in the development of the society. A society becomes stronger that has more information. Now a days information is generating from various sources/ channels. Every sector of human society is producing information for their various needs. Managing these huge amounts of information is going very difficult day by day. Today's users are also becoming very specific. They require very pin-pointed information. These may create various problems to manage and handle the resources.

Libraries are the exact solution of these various problems. Basically, libraries are the place where various types of resources are collected, organised and disseminated to needful persons. Various types of libraries like, public libraries, academic libraries, special libraries etc. maintaining several types of resources. Modern libraries are turned into information providing centres. They are providing information according to demand of users rather than just providing available books/ journals as traditional libraries. Various new services are being provided by these libraries to uphold their resource usage. Libraries are also splitting into various sections to manage various kinds of resources, like periodical section, digital section, reference section etc. Specific information centres, cyber libraries are being established to provide specific demand based information. Apart from all these, several library software, management tools and techniques are being used for managing the vast source of information.

BPCL, NIT Rourkela has become an information explosion centre itself. Presently the library acquiring and managing the huge amount of resources especially e-resources. Several sections, particular staffs, various tools are there for managing these resources. SubjectsPlus is one of the most important tools used for managing several resources in the library.

### **1.1 Objective of the Study**

The objectives of the present study are as follows-

- To create awareness about various digital resource management tools for managing the information.
- To enhance the information based services with information management tool
- To create awareness about the implementation of SubjectsPlus among information manager.

### **1.2 Coverage of the Study**

Information has no boundaries. Generating of information is also versatile and from almost every sector now a days. So, professionals have to deal specific things for managing specific types of materials which are really tough. Due to its lengthiness and wide spread off the subject area of the present topic, this study is limited to the SubjectsPlus as a tool for information management, it's various features and benefits, implementation procedure with the need and workflow of SubjectsPlus in BPCL.

## 2. Literature Review

Huge amount of resources is available on Information Management. Many scholar articles are also available on IM. Though SubjectsPlus is developed over a decade ago, but very few literature are available on it. Some of that literature are pointed here-

S. Seetharama<sup>[1]</sup> illustrate the concept of IM and the tools and techniques available for librarians. M. S. Sridhar<sup>[2]</sup> describes various issues of IM in libraries in the light of digital invasion. Education Department, Tasmania<sup>[3]</sup> shows digital IM and storage strategy. The National Archive, Surrey<sup>[4]</sup> describes understanding and managing information and building information framework and its outcomes. V. Sreenivasulu<sup>[5]</sup> illustrate the acquiring, storing, managing and distributing digital information.

E. M. Corrado & K. A. Frederick<sup>[6]</sup> shows the alternate ways to static HTML subject guides. K. A. Coombs & A. Hollister<sup>[7]</sup> describes subject guides tools as anopen source web application. L. Kuo, R. Gilmour & P. Dickson<sup>[8]</sup> states the usability testing of subject guide. J. Laporte and D. St. Aubin<sup>[9]</sup> defines the way to create awebsite through SubjectsPlus. J. Wang<sup>[10]</sup> gives an overview on SubjectsPlus. G. Blackburn & J. B. Kansas<sup>[11]</sup> illustrates various approaches to various libraries. D. Moses & J. Richard<sup>[12]</sup> illustrates problems and their solution to SubjectsPlus.

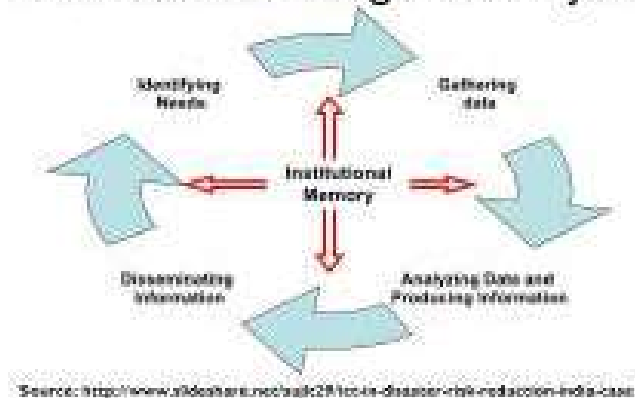
## 3. Methodology

Descriptive method of research is done here due to this study deals with the case study mainly. This study is based on some concept, idea, various resources and their management, a software with its various property and features.

## 4. Information Management: from the past to present

Generally, information means to inform about something or make understand to some expression. Though the term information is very modern but, the expansion of this term evolved day by day. Management means to manage something.

### Information Management Cycle



Source: <http://www.riidcenter.uwo.ca/jl/2010/cv-in-dissemination-reduction-info-case>

Figure 1: Information Management Cycle

So, information management simply means to manage various types of information. But, in present days, it is not as simple as it sounds. In early days information was stored simply and usage of that information is also very rare and selective. No particular or public places were there to manage and handle them. Some high profile individuals are allowed to store information. But, after the revolution, libraries stands for all human kind. After 1970s technologies started to turn information into digital contents. Computer networks used rapidly for storing and dissemination information. After the 1990s, the internet opens the gateway to reach any content within a fraction of a second. Information explosion speared vastly day by day. To manage these vast information, various methods, application, programmes, softwares are developing.<sup>[13]</sup> Because without these, we can't manage these variable information. SubjectsPlus is becoming an important information management tool. Its various feature helps users to found resources more specifically.

## **5. SubjectsPlus: an overview**

Guided to search tools are used to help library users to find the resources they are seeking. Originally paper-based subject guides were the job of subject specialist librarians, but now, the technologies can assist this process. Subject guides can be both broad and specific as according to a librarian. Directing library patrons to useful resources in the electronic age is a much more difficult task, due to the sheer range and breadth of resources available. Some libraries have designed authoring environments that suit their needs in this area and then released them as open source software. Lib Data and SubjectsPlus are two examples of open-source applications based on PHP and MySQL and need someone with expertise in these to configure and maintain them.

SubjectsPlus is a free and open source tool that enables libraries to create and manage online research guides. Earlier it was developed by Ithaca College Library, USA but presently it is maintained by University of Miami Libraries. These guides can be in many forms with the software, sufficiently flexible to allow many different ways of presenting the guides and enabling users to access them like users may want to navigate by subject, by course, by the database or by the type of information they required.

### **5.1 Salient Features of SubjectsPlus**

Subjectsplus has some tremendous features to provides its various services like-

Features	Descriptions
Create Guides	Create unlimited Research Guides via drag and drop interface
Staff List	Sorted A-Z, By Department, By Librarian
Database List	A-Z, By Format, By Subject
Video Management	Ingest video metadata from YouTube or Vimeo, organise and display in one place on your site
FAQs	Store your FAQs in one handy place, integrate them anywhere via API
Suggestion Box	Easy way to display and respond to patron comments; now multi-site
Responsive Design	Looks better on tablets & mobile devices
Installer/Updater	Makes running & managing SP simpler
Multilingual	French & Spanish versions included; new translations coming!
API	Use your data in other applications
Summon Integration	Include SP data in your Summon search results (Beta)
Customisable	You have complete control; add your own headers & footers, tweak the layout & css, add data via the API

**Table 1 : Features of Subjectsplus**

## 5.2 Universities/ Institutes Using SubjectsPlus

Below, list describes the overall institutes benefited by using of SubjectsPlus worldwide and India

Worldwide	India
<a href="#">American University of Central Asia (Kyrgyz Republic)</a> , <a href="#">Anderson University</a> , <a href="#">Calumet College of St. Joseph</a> , <a href="#">Catawba College</a> , <a href="#">Catholic Theological Union</a> , <a href="#">CégepRégional de Lanaudière à Joliette</a> , <a href="#">Cégep de Lévis-Lauzon</a> , <a href="#">Cégep à Terrebonne</a> , <a href="#">Central Washington University</a> , <a href="#">CHUM Centre de documentation (Montréal)</a> , <a href="#">Colgate University</a> , <a href="#">Concordia College</a> , <a href="#">Consejo Superior de Investigaciones Científicas (Spain)</a> , <a href="#">Consortio de Bibliotecas Universitarias de Galicia (Spain)</a> , <a href="#">Curtis Institute of Music</a> , <a href="#">Drew University</a> , <a href="#">Eastern Illinois University</a> , <a href="#">EWAH Womans University Library (Korea)</a> , <a href="#">Elmira College</a> , <a href="#">Emmanuel College</a> , <a href="#">Grinnell College</a> , <a href="#">Hamilton College</a> , <a href="#">Hang Seng Management College (Hong Kong)</a> , <a href="#">Henderson State University</a> , <a href="#">Holland College</a> , <a href="#">Inver Hills Community College</a> , <a href="#">Ithaca College</a> , <a href="#">Lancaster Theological Seminary</a> , <a href="#">Louisiana State University Libraries</a> , <a href="#">Management University of Africa (Kenya)</a> , <a href="#">Massachusetts College of Art and Design</a> , <a href="#">McGill Career &amp; Planning Services</a> , <a href="#">Methodist University</a> , <a href="#">Mills College</a> , <a href="#">Millsaps College</a> , <a href="#">Muhlenberg College</a> , <a href="#">National University of Science and Technology (Zimbabwe)</a> , <a href="#">New England College of Optometry</a> , <a href="#">New England Conservatory</a> , <a href="#">Oakland University</a> , <a href="#">Oberlin College</a> , <a href="#">Onondaga Community College</a> , <a href="#">Oregon College of Oriental Medicine</a> , <a href="#">Paul Smith's College</a> , <a href="#">Raritan Valley Community College</a> , <a href="#">St. Cloud State University</a> , <a href="#">St. Mary's University College</a> , <a href="#">St. Patrick's Seminary and University</a> , <a href="#">Saint Peter's University</a> , <a href="#">School of the Museum of Fine Arts, Boston</a> , <a href="#">Sotheby's Institute of Art Library, London</a> , <a href="#">Sotheby's Institute of Art Library, New York</a> , <a href="#">Southern River College (Australia)</a> , <a href="#">Strathmore University Library (Kenya)</a> , <a href="#">Trinity</a>	<a href="#">Indian Institute of Technology Gandhinagar</a>  <a href="#">Indian Statistical Institute (Delhi)</a>  <a href="#">Pondicherry University Library (India)</a>  <a href="#">National Institute of Technology (Rourkela)</a>

[Christian College](#), [Truman State University](#), [Universidad de La Laguna \(Spain\)](#), [Universidad Nacional Autónoma de México](#), [Centro de Información y Tecnología, Fac. Ciencias Naturales, RRP](#), [Universidad de Puerto Rico](#), [Universidade de Santiago de Compostela \(Spain\)](#), [Universidad Pública de Navarra \(Spain\)](#), [Universiti Teknologi MARA \(Malaysia\)](#), [Universitas Gadjah Mada](#), [Perpustakaan Fakultas Teknik \(Indonesia\)](#), [University of California - Hastings College of the Law](#), [University of Colorado-Boulder - William A Wise Law Library](#), [University of Ljubljana - Central Social Sciences Library](#), [University of Ljubljana - Faculty of Education Library](#), [University of Miami](#), [University of Navarre \(Spain\)](#), [University of North Texas Health Science Center](#), [Université du Québec à Chicoutimi](#), [Université du Québec à Montréal](#), [University of Texas at Austin](#), [University of Texas Health Science Center San Antonio](#), [Wheaton College](#), [Wheelock College](#), [Wichita State University Libraries](#), [Zaman University Library \(Cambodia\)](#)

**Table 2 : Sites using SubjectsPlus**

### 5.3 Benefits of SubjectsPlus in Libraries:

The following are some key benefits of SubjectsPlus-

- Subjectsplus serves as a platform for access to both commercial and open access e-resources so that, patrons can access easily to a variety of e-resources in each area.
- Patrons can benefit both from on-campus and off-campus.
- E-Resources can organise by subjects or topics or by A-Z list of databases. Besides, subject librarians can be visible to their users and can be more reachable to them.
- Subject librarians collaborate closely with faculty and departments of the University/ Institute in the field of creation of the content for the guides and making sure that the guides contain the right information as well as facilitating and promoting of the online subject guides among the students and teachers.<sup>[14]</sup>

### 5.4 Installation and Customisation of SubjectsPlus

SubjectsPlus can be used as a content management tool just like other content management tools (Joomla, Wordpress, Drupal etc.). University of Miami Libraries (<http://library.miami.edu/>) is using their SubjectsPlus interface as the official library website. Here, the basics of installation and customisation of SubjectsPlus is described. The installation part is quite same as other CMS tools but the customisation is quite typical and lengthy.

#### 5.4.1 Installation of SubjectsPlus

As it is said above that, installing SubjectsPlus is quite easy.

SubjectsPlus can be installed and run both in Windows and Linux. At present 4.1 is the most updated version of SubjectsPlus. Other versions are also available on their website. Here the installation on Windows is described. Some packages are needed to install SubjectsPlus like;

- PHP language version 5.3 or more.
- MySQL RDBMS version 4 or more.
- Apache web server.
- JavaScript is required to handle the administration at the backend.

If you are running an XAMPP or WAMP then no need to install all the above packages separately. XAMPP (<https://www.apachefriends.org/index.html>) or WAMP (<http://www.wampserver.com/en/>) is a free and open source web server developed by Apache Friends where all the packages are pre-installed together.

- SubjectsPlus software packages (<http://subjectsplus.com/#section-7>).

These all are enough to install and run SubjectsPlus. It can also run on Linux OS. There are some commands need to be executed for installing all packages. Some video guides (<https://www.youtube.com/user/SubjectsPlus>) and manuals (<http://www.subjectsplus.com/wiki2>) are there for installing and another technical purpose. Except that, Google Groups (<http://groups.google.com/group/subjectsplus>) are there for various help for various purposes.

#### 5.4.2 Customisation of SubjectsPlus

Customisation of SubjectsPlus is a never ending process. It can be customised according to the requirement of the institute. Here also the basic set up is described.



**Figure 2: SubjectsPlus Staff Interface**

The very first step is to create a guide to the resource. It can be created through new guide 'Guides' tab. Fill up the required boxes i.e. guide title, short form, type of guide will be according to the need (subject, course, topic, dept.) visibility will be preferred to all public, parent guide is set according to the need, staff will be set to the concerned as per the institute, and finally the metadata fields. Then save it as anew guide.



**Figure 3: Creating New Guide**

After creating new guides administrators can add and configure it according to the requirement. Here one can set the resource type, add editable/ heading/ link/ image/ video, FAQ/ RSS/ social media/ worldcat etc. boxes, find boxes, layouts, tabs, analytics, guides.



**Figure 4: Record Editing**

Then new record should create. It can be created from the new record under 'Records' tab. Fill the required boxes i.e. record title, description, location, format, access restriction, status, display note, source type and subject then save it as anew resource.





**Figure 5: Creating New Record**

The FAQ tab is set for the user help for users' various query related to search, resource, a guide to users' etc. the 'Talkback' tab is set for the feedback and comments from the users'. Videos can be added and showed in the 'Videos' tab. The 'Admin' tab is for the site configurations. Here the administrator can add a new user if more staff are available in the library. Manage the users by giving them several permissions for several work flows, manage guide and change their values set previously and finally the config site can edit/ change the site description, ports, mail id and extension key, institutional configuration, add/ omit user form, custom css for the theme and much more.



**Figure 6: Admin Configuration**

Various external links can also make here along with social connection and many other things according to the requirement which may extend the site values.

## 6. BPCL at a Glance



**Figure 7: BPCL at a Glance**

BPCL is the central library of NIT Rourkela. The Library caters the educational and research needs of the academic community and its resources are consulted by scholars from all over the country. Biju Patnaik, the then Chief Minister reforms the Regional Engineering College, Rourkela. BPCL has started functioning since 1965. Of late, the Library has been modernised to provide computerised services to NITR academic community at large. The BPCL is automated with an integrated library software package called Libsys - LSmart and modernised with latest Radio Frequency Identification (RFID) based automation system that facilitates self-check-in, self-check-out and automatic security system since 2006. This technology offers fastest, easiest, most efficient way to track, locate and manage library materials. The RFID system of the library counts more than 1.2 lakhs transactions (issue, return and renewal) in a year.

### 6.1 Resources Available & Services provided by BPCL

The library is highly benefited to the NITR community. The website of the library is also an ocean of information and it is a good source of information as internal and external professionals. Here are some tremendous services provides by BPCL-

<b>Services Provide by the Library</b>
<b>Library Loan</b> , User Education, Reserve-Renewal, Information Kiosk, Self-Issue Return, New Arrival, E-newsletter, Library Catalogue, Library Blog, CAS, User Awareness Workshop Ready Reference Service, Android App, Research Support Tools.

**Table 3 : Services Provided by BPCL**

\* The library also provides request based services to the NITR community.

<b>Printed Resources</b>		
<b>Books</b>	<b>Bound Journals</b>	<b>Individual Journal</b>
80000+	17974	90 Titles

**Table 4: Collection of Printed Resources at BPCL**

\* List of Printed Journals- <http://library.nitrkl.ac.in/index.php/resources/print-resources>

<b>Electronic Resources</b>			
<b>e-Books</b>	<b>e-Journals</b>	<b>Consortia</b>	<b>CD-ROM</b>
15940+	6027+ title	e-ShodhSindhu (6000+)	1100+

**Table 5: Collection of e-Resources at BPCL**

\* e-Books- <http://library.nitrkl.ac.in/index.php/resources/e-resources/e-books/downloads>

<b>Databases</b>			
<b>Full-Text Database</b>	<b>Abstract/Citation Database</b>	<b>Standard Databases</b>	<b>Indian Coal Database</b>
25	8	2	1 CD-ROM

**Table 6: Database Collection at BPCL**

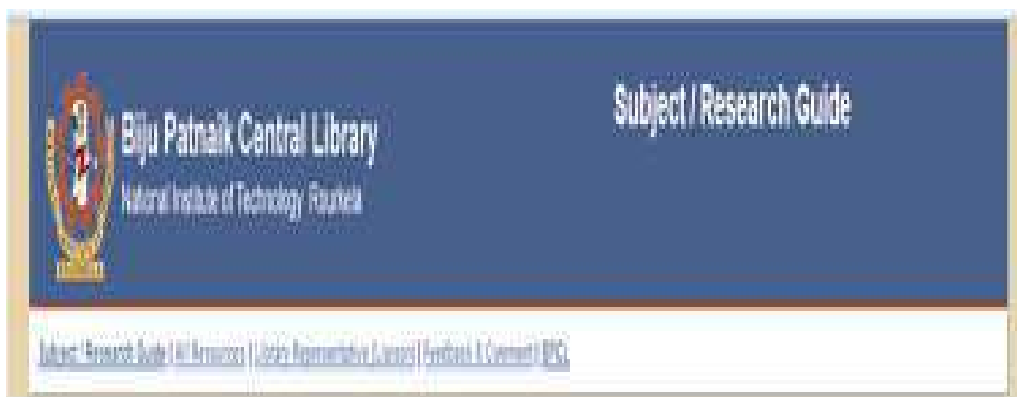
\* Databases-<http://library.nitrkl.ac.in/index.php/resources/e-resources/abstract-databases>

<b>Video Materials</b>	
<b>AV Materials</b>	<b>NPTEL Video Lecture</b>
688	10027

**Table 7: Video Materials acquired by BPCL**

<b>Institutional Repository</b>			
<b>NITR DSpace</b>	<b>NITR EPrints</b>	<b>Project OAOB</b>	<b>NITR Documents</b>
About NITR Publication, Meetings, Senates, Conference Papers, Proceedings etc.	ETD published by the NITR Students	Old & Rare Orisha Literature Collection	Publication by NITR Staffs
2424	5614	551	199

## 6.2 Subjectsplus in BPCL Rourkela



**Figure 8: SubjectsPlus at a Glance**

SubjectsPlus/Guide is the recent initiative of the NIT library. The main objectives of this initiative are to direct/ guide NITR community to the existing resources available in the library on a particular subject. The library has acquired SubjectsPlus 4.0 version.

### 6.3 Need for this Initiative in BPCL

BPCL is a fully automated academic library using most useful technologies being used in the libraries worldwide. The library uses many open source/commercial information management tools such as Integrated Library Management Software 'Koha', 'Libsys', Digital Library Software 'DSpace', 'EPrints', Reference/Research Management Tools 'Turnitin', 'Grammarly', 'Mendeley', 'J-Gate', 'Library Blogs' etc. Having huge resource, it is very difficult for any library to manage these information in an organised manner. So, this tool is used as a guide to all the resources just as a bay-guide in the library stacks. This tool helps to reach and use the resources more efficiently.

### 6.4 Use of SubjectsPlus in BPCL

The decoration of subject guides is very user-friendly. Users can find materials according to their interest. An overview of the structure of subject guides is given below-

Home ( <a href="http://library.nitrkl.ac.in/libguide/subjects/index.php">http://library.nitrkl.ac.in/libguide/subjects/index.php</a> )			
Here links are given to various resources arranged alphabetically. Mainly resources are divided by subjects/ departments.			
Dept. of NITR (22) and Other Support Tools	Other Resources	New Guides	New e-Resources

**Table 9: Subjectsplus Overview at BPCL**

\* Users can receive updates through social media ([https://twitter.com/BPCL\\_NITR](https://twitter.com/BPCL_NITR))

<b>All Resources (<a href="http://library.nitrkl.ac.in/libguide/subjects/databases.php">http://library.nitrkl.ac.in/libguide/subjects/databases.php</a>)</b>	
<b>All publishers have arranged alphabetically from where resources were accessed by BPCL.</b>	
Access to Various Formats	Abstract Database, Institutional Repository, New Databases, Patent Databases, Standards, Trial Access, Audio-Video, Open Access

**Table 10: Types of Resources Acquired by BPCL**

\* They can also search according to Subject wise.

<b>Liaison Programme</b>			
<b>This is a collaborating programmeorganised by the library individually or in associated with departments to enhancing the library resources and services.</b>			
All Programmes	By Library Sections	By Individuals	By Dept.wise

**Table 11: Liaison Programme by BPCL**

\* Contact details of library members are given, users can contact them for any issue.

At the end, users can express their requirement or message in the Feedback and Comments (<http://library.nitrkl.ac.in/libguide/subjects/talkback.php>) tab and various links to other resources and social connection are given in the sidebar.[16]

## 7. Conclusion

Digital information is becoming the only types and source of information. Technology has affected humankind totally. The so-called tradition sources of information are still important but, it is losing its values and becomes rare. Modern institutes/ colleges/ universities even small association/ colleges/ schools are going for these tools for managing their information. Open source is another revolution which leads the technology initiatives to its sky level. It opens the door to modifying the tools from the root level to the extreme. So, today's library professionals have to become technology sounded so that they can handle and deal with the modern users'.

Libraries like BPCL are dealing with huge amount of digital resources. These technology tools are also performing the lead role in handling and provide information to their needy users'. Especially the

information guiding tools like SubjectsPlus are playing very vital role to guiding the right users to the right resource. Though BPCL has initiated the SubjectsPlus very recent and still developing but, it started to perceive its huge important sans application. It's not only a guiding tool; the most fabulous feature is that it can be used as a CMS. Libraries can build their own website through this tool.

In developing countries like India, the use of this tool is very rare. At present 4 libraries are using this tool. It is observed and suggested through this study that, libraries should take the positive initiative to make use of this tool. At least they can set as a trial basis to grasp its features as it is a free and open source tool.

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