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SWOT Analysis of National Digital Library of India

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Abstract:

The exponential growth in the production of knowledge has made it more and more impossible for the library to purchase all the relevant material. The effect has been that libraries and library users have become more and more dependent upon external sources other than that of parent institution. With the application of digital technology and ICT technology it becomes possible to access sources from more reputed institution. There is a provision of library & information services from last some years. Access of information is not restricted to information available in particular library. National Digital Library of India is such a project which provides authentic sources to its users but as every system has its advantages and disadvantages; National Digital Library of India also having this. This paper describes National Digital Library of India (NDL), Concept of institutional repository, Strength, Weakness, Opportunity and Threats (SWOT) of NDL.

Key words: NDL, Digital library, Institutional repository, SWOT analysis.

Introduction:

Due to information explosion it is very difficult to retrieve particular information. Funds available to libraries are limited. Digital libraries have emerged as a suitable solution to this problem. Digital libraries provide more facilities than traditional libraries. It is become possible that library everywhere with the help of digital library. Library resources and services are available anywhere and everywhere. In campus and out of campus access to resources is possible. Using digital library technology many repositories has been created. Repository is a digital archive. Repository is economical comparatively. Every person in a country has a right to learn from basic and great sources, sources may be physical or human. To support open access movement, Indian Institute of Technology (IIT), Kharagpur has created a repository National Digital Library of India.

Digital Library:

Digital information means information stored using 0 & 1 bit, Information stored and accessed with the help of computer and communication technology. Digital library means information not only stored and accessed through computer online and offline but it is systematic functions like traditional library.i.e.collecting, cataloguing, disseminating and long-term archiving of information in digital form. Digital library provide digital document electronically through online or offline. Digital libraries have beneficial features like

hypertext, on-sequential reading, text material along with images, pictures, graphics, sounds, video-clips etc.

Digital libraries are libraries with the same purposes, functions and goals as traditional libraries. Collection development and management, subject analysis, index creation, provision of access, reference work and preservation (Cleveland Gary, 1998).[17] Digital libraries can be created by three ways i) digitization of print material ii) acquisition of digital work i.e. electronic journals, electronic books and electronic databases iii) access of external materials that may be from other library collection or publishers servers (Cleveland Gary, 1998).[17]

Digital Libraries at National Level:

1. Nalanda Digital Library
2. Vidyanidhi Digital Library
3. ERNET
4. Indian Institute of Science,Banglore
5. Kalasampada
6. Electronic Thesis and Dissertation Digital Library
7. INFLIBNET
8. Librarian's Digital Library
9. Raman research Institute
10. National Library of India.

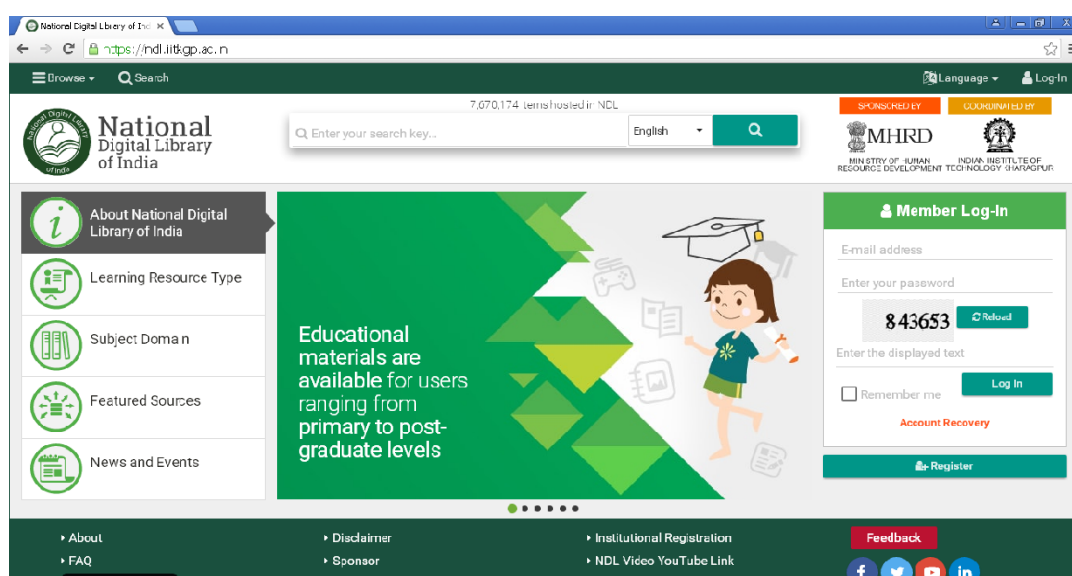**About National Digital Library of India:**

National Digital Library of India is sponsored by Ministry of Human Resource Development, Govt. of India (MHRD) and is co-ordinated by Indian Institute of Technology; Kharagpur.National Digital Library of India is a repository which integrates contents from different Indian institute repositories.

It contains educational material ranging from primary to post-graduate levels. Repository hosts contents from multiple subject domains like technology, science, humanities, agriculture and other subject's. More than 60 types of learning resources are available.

More than 7,704,116 item hosted in NDL Items are available in more than 70 languages. National Digital Library project is framework of virtual repository of learning resource with a single window search facility, filtered and federated searching is employed to facilitate focused searching so that learners can find out the right resources with least effort and in minimum time, NDL is designed to hold content of any language and provide interface support for leading vernacular languages (currently Hindi and Bengali). It is being arranged to provide support for all academic levels including researchers and lifelong learners, all disciplines all popular form of access devices and differently able learners. It is being developed to help students to prepare for entrance and competitive examination. It contain learning resources like book, article, thesis, manuscripts, audio lectures, video lectures.

National digital library of India is useful to access to rich digital content of libraries across the country and even foreign repositories to users even in the remotest of area, where is unique not just in Indian, but also in global context. NDL is first digital repository which focused on education. Android Mobile phone app is also available. It is a one click solution to academic searches. It not create only content but also provide metadata-like to catalogue of library.

Every university or may be college has its own digital archive of its intellectual output and syllabus, known as the Institutional digital repository. Whose access is limited to the it's staff or students only.NDL derived from institutes of all types of specialisation and which include study material from school level up to PhD level.

Institutional Repository concept

Institutional Repository linked to notion of a digital library i.e. collecting, housing, classifying, cataloguing, curating, preserving and providing access to digital content, analogous with the library. Institutional Repository is a new concept for collecting, disseminating and preserving scholarly works created in digital form. A repository is an online archive for collecting, preserving and disseminating digital copies of intellectual output. Peter Suber defines institutional repository as "Open access is immediate, free and unrestricted online access to digital scholarly material primarily peer-reviewed research article". Wikipedia define "A repository is a central place where data is stored and maintained. A Repository is a multiple databases or files are located for distribution over network or a repository can be located i.e. directly accessible to users without having to travel across a network".

Benefits of Institutional Repository:

- Offers wider dissemination of scholarly communication.
- It provides global visibility for an institution's scholarly research.
- It collects content in a single location.
- IR enhances the professional visibility of the faculty.
- Open access online articles are highly cited.
- Publication in IR can be immediately found in global search service.
- Enabling and encouraging interdisciplinary approach to research.
- Supporting student endeavours, providing access to theses and dissertations and a location for the development of e-portfolios.
- Raises the prestige of institution.

Institutional Repository Contents:

- Theses and dissertations
- Books or chapters of books
- Research database
- Pre-prints of articles or research report submitted for publication.
- Conference proceedings
- Audio-video recording
- Teaching material
- Question papers
- Unpublished work
- Research papers

Objectives of the study:

1. To analyse National Digital Library of India (NDL).
2. To Study NDL strengths and opportunities as compare with other Digital library projects.
3. To focus on weakness & threats of NDL from the eyesight of its users.

Review of Literature:

SWOT analysis of the digital libraries has been analyzed by different types of studies. SWOT analysis of digital libraries was carried by different investigator. The studies shows that the SWOT analysis helpful for strategic planning of any system. Cervone H. Frank carried the study on 'Strategic analysis for digital library development' indicates that by using SWOT analysis the project manager get guidance about success and failure of any project[6].Mangesh Talmade et al (2012) carried study 'SWOT analysis of N-List Programme' states that SWOT analysis helps in evaluating any system by using strength to overcome weakness ,while using opportunities to overcome threats. They also suggest that member libraries should use common automation standards.

Methodology:

Analysis of National Digital Library of India website done by SWOT method. Discussion done with the users of NDL.

Scope & Limitation:

Purpose of this paper is to review the NDL facilities and services. Scope is restricted to the national digital library of India (NDL).

SWOT analysis:

SWOT analysis is a structured method used to appraise the strength, weakness, opportunities, and threats in front of an organization or any system. Strengths entail those characters which give it an advantage. Weaknesses are those characters that place disadvantages relative to other such system. Opportunities are the external possibilities to improve performance in a given environment. Threats are those external elements in the environment that could cause trouble. According to Mathew M.J. in Strategic management (2014) SWOT analysis requires data and information about the internal environment. This analysis refines this information by applying a general framework for understanding and managing the environment under which a company operates SWOT analysis consist of evaluating company's internal strength and weaknesses and external oppurnities and threats.

Strengths of NDL:

- Educational material available from primary to post-graduate level.
- More than 60 types of teaching resources are available of various subjects.
- Items are available in more than 70 languages.
- 15, 00,000 + items have been authored by 1.5 lakh authors.
- Repository integrates from different Indian institutional repositories.
- Variety of reading material-video lectures, global classical books, journal articles, thesis and audio books.
- Free of charge and easy to register, Institutional registration is also available.
- Designed to benefit all kinds of users like students (of all levels), teachers, researchers, librarian, library users, professional, differently able persons and all other lifelong learners.
- Single window search facility. Information can be personalized based on the education level.
- Choice of language, different level and customized service.
- Information availability 24×7
- Metadata includes information that enables users to identify, discover, interpret and manage content.
- Different and suitable standards are used for each item.
- Android mobile phone app is also available.

Most studies shows that the digital libraries & repositories are advantageous over conventional libraries.NDL provide educational material from primary to post-graduate level, majority of repositories, MOOCs; digital libraries provide educational material for certain level of education. Generally it is seen that consortia or repositories favours English but as in NDL, material available in regional language also. Most of the consortia, repositories acquire fees for membership but NDL provide free of cost membership to all level of users. From the library collection development perspective-book have the advantage of greater resilience, cost effectiveness, maintenance and scalability compared to the maintenance of physical real estate (Dowdy et al, 2001). Major strength of e-material is interactivity, keyword searches and other integrated functions facilitate quick browsing and targeted navigation, offering a new non-sequential approach to learning (Dresang, 1999).

Weakness of NDL:

- NDL not produce its own data or information, it gets from another sources, so not in a position to authenticate the accuracy of content.
- Sometimes much time is requiring downloading the pages if rich in graphics.
- Current issues not upload soon.
- Internet connection is required.
- Browsing and searching will initially start with the language Hindi, English and Bengali only.
- Accessing of information determined by the policy of those institutions from where information stored, not by NDL.
- The option to save or download an article will depend on the access right provided by the content provider.
- Sometimes limit to the number of pages that can be printed.
- Rendering to some content may require additional software plug-in to be installed at client end.
- Access to full text content in many cases may require institutional membership.

One of the major weakness of NDL that it not produce its own data or information, as it get from another source, so if source produce irrelevant information it may directly use by user on the reputation of NDL..For libraries the growth of e-material requires maintenance of costly networks and broadband connection to enable mobile access to the collection (Bosch et al, 2011). E-book processing can often be more complicated and time consuming than print and is associated with "inefficient and varied order processes on different publisher websites" (Renner,2009).

Opportunity of NDL:

- User can access information by democratic nature.
- Information access through single station.
- Growth of interdisciplinary research.
- Information access without personal bias.
- Visually handicap users get opportunity to study and research.

- Not yet use, hidden information come in the focus of researchers.
- Developing fast dissemination of Information.
- Accessing of information from high profile institute.
- Fast accessing of information from worldwide.
- In information explosion situation user can access right information at right time.

NDL given a big opportunity all types of material can access through single window and which provide material from primary to post-graduate level. It is useful for research activity. People from remote location can use NDL material as their course materil. Hence NDL giving opportunity for distance education. Joining to NDL can enables libraries to diversify offering without increasing budget, library can save time and money which it can use for another beneficial work. A positive effect e-book adoption is that librarians will need to become knowledgeable in digital rights, copyright, DRM which can benefit library community as a whole (Donlan, 2011; Goodson &Frederickson 2011)

Threats of NDL:

- No 100 % population aware of internet technology.
- Electricity is big problem in rural India.
- No 100 % population in a position to purchase gadgets necessary to use NDL.
- Continuous reading on computer screen may create problem related to eyes.
- Stimulation variation is a big problem and also challenge in case of internet, sometimes users not concentrate only on study material like that of book.
- It may decrease the print format reading.

NDL is online resource, it requires computer and communication technology, but in Indian context 100% population or libraries also not in position to purchase such technological gadgets. Reading from print media is used from centuries; many users still prefer print form than that of electronic. Other threats are the difficulties reading on screen. A study by the university of California libraries showed that many of their students found it easier to concentrate and remember information when reading from a print book as opposed to digital text (Li, 2011). Publishers of e-publication are still struggling to create an appropriate business model.(Lynch,2012).

Role of Library and Librarians:

- As Libraries functions are important in education system. No library in position to acquire all published knowledge therefore libraries need to adopt digital and ICT technology.
- Library should provide adequate information and communication technology, ICT infrastructure like computers, networking equipments and proper bandwidth, connectivity of internet. Enhancement of ICT infrastructure and up gradation of the connectivity to the internet may improve the situation for using online resources.
- If library provide Wi-Fi facilities then users can use NDL facilities through their own lap-tops and mobile phones also.

- As continuous supply of electricity is big problem in rural India's it is needed to provide facilities for uninterrupted supply of electricity.
- Parent organization provides financial support to purchase gadgets necessary to use NDL facilities.
- Users must have sufficient access to digital technologies and the internet in their study area.
- Librarians and other library personnel must have knowledge and skills to use the new digital tools and resources to help all users.
- Information literacy and library orientation may be beneficial to improve situation to use online resources.
- Librarian and library personnel should work as an intermediary between information and user.
- Librarian has responsibility to help users through information service.
- The role of librarian in digital environment as intermediary, facilitator, end-user trainer.
- It is generally observed that in case of internet available information peoples are chaotic, so it is need librarian should guide them for proper access of information.
- Librarian need to equip with technical skills, knowledge of software and hardware basics.
- Librarian need to interact with knowledgeable users and IT professionals to understand their specific needs and to add value of their products (Smee et al, 1999)
- Librarian to acquire necessary skills in effective use of modern gadgets and associated softwares to locate and retrieve widely dispersed information (K. Nageshwara Rao et al, 2001).

Conclusion:

SWOT analysis is a tool for analysis of overall strategic position of any system. As positive and negative factors inside and outside the system gives shapes to system. SWOT analysis is instrumental in strategy formulation and selection. SWOT analysis found lot of strengths in NDL, but need to concentrate on weakness and threats also, so that they will convert in to strengths. The SWOT analysis is done from the view of users, so the opportunities are from user's side. It is need to concentrate on how number of opportunities will be increase by using strategic alternatives.

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