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## Application Of web 2.0 Tools And Technologies By Library Professionals In Select Libraries In Delhi: A Study

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# **Application of web 2.0 tools and technologies by library professionals in Select libraries in Delhi**

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## **Abstract**

*The intent of this paper is to probe the application of web 2.0 in selected libraries in Delhi and awareness of web 2.0 technologies by library professionals. The main focus on the research was to be aware of web 2.0 tools and its use by libraries in providing better services and enhances learning process to users. A questionnaire was framed and used for collection of data from library professionals from selected libraries in Delhi. The study reflects the familiarity and awareness of library professionals with web 2.0 tools such as blogs, wikis, Facebook, twitter, Instant messaging etc. The study revealed most frequent purpose of using web 2.0 tools was reference service, training, blogging, announcements, OPAC, new arrivals, sharing purpose with users. There was some of the challenges faced by library professionals in using web 2.0 tools such as power failure, slow internet, lack of skills etc.*

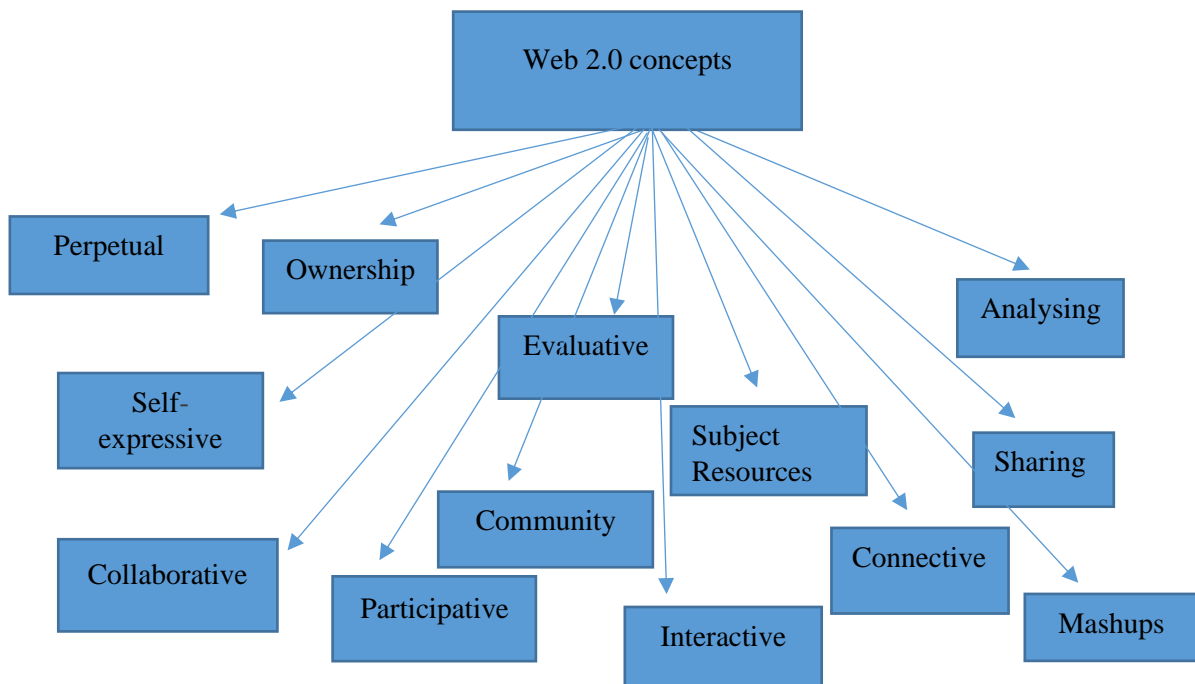
**Keywords:** Web 2.0, Library 2.0, Web Technology, RSS, Blogs, SNS

## **1.Introduction**

Library and library professional's role in development of society is just astonishing. The availability of information and its resources by library to users plays a dominant role in quality management and greater output. The competencies of staffs have been transformed on regular basis for better services and accessibility. In this techno savvy world, there has been a lot of advancement in technology trends and its application. The world has been shifting rapidly in terms of innovation with the help of tools and technology. Web 2.0 tools such as Facebook, twitter, wikis, blogs, Instant messaging, podcast, RSS, tagging tools, mashups etc. are making its importance in each and every second of life to almost every people connected a little bit to technology. The application of web 2.0 in libraries is indispensable and is being adopted in the libraries for social networking, service delivery, collaboration, communication channel, online cataloguing. All types of libraries all over the world have been experiencing the value of the application of web 2.0 for creating databases to making accessible the information held in these libraries.

The race to grasp the opportunity, utilize time and produce greater research output is somehow possible due to technology advancement. To utilize these new innovations in right direction either it may be content development, library collection, library management, current awareness, web publishing etc is topic of discussion. The need of web 2.0 in library and its proper utilization in resource sharing will define the proper use of technology.

**Figure 1: Web 2.0 concepts**



**Table-1: A COMPARISON OF WEB 1.0, WEB 2.0 AND WEB 3.0**

Web 1.0	Web 2.0	Web 3.0
Read only web	Read write web	Portable personal web
Millions of global users	Billions of global users	Focus on individual
Home page	Blogs	Consolidating dynamic content
Owing content	Sharing content	semantic web
HTML, portals	RSS, XML	User behaviour
Web forms	Web applications	Net vibes, I Google
Directories(taxonomy)	Tagging(folksonomy)	User engagement

## 2.Review of Literature

The review of literature is core component of any research. The research activities are incomplete without the review of literature. It can be said as systematic study of related literature. Basically, it deals with analysis of gap of literature and it attempts to bridge the gap. This study is carried to analyze the application of web 2.0 tools by library professionals and the awareness of web 2.0 tools among them to cater the need of users.

**Kroski (2007)** stated how Web 2.0 enables libraries opportunities to interact with their users. The valuable resources are easily created, maintained and accessed with the help of new technology advancement. It allows libraries to keep current contents, promote programs, build relationship with user's other libraries, and provide web functionality to avail library services. These new Web applications enable libraries to create, contribute, and connect in global community. **Peltier-Davis (2009)** stated RSS, Blogs, Wikis, ratings, user-added reviews,

podcasts, Vodcasts, IM, Folksonomies, tag clouds, Tagging, social networking sites, bookmarking, streaming of audio and video, community photo services and sharing of book services are foundation of web 2.0. Libraries are using Wikis, Blogs, RSS feeds, Podcasts, videos, photo sharing on Flickr, and IM via Twitter. For improving internal and external communication, collaboration services, librarians must learn about Web 2.0 tools and technologies. Web 2.0 tools implementation proves to be key survival for library and its services. **Usluel and Mazman (2009)** study focuses on two purposes. First one is about the educational utilization of web 2.0 tools, such as wikis, blogs, podcast, SNS in interaction for distance learning education. The second purpose of this study is to investigate the process of adoption of web 2.0 tools by defining models and theories in distance learning education. Web 2.0 and Distance learning include dynamic and multifaceted variables. Single acceptance model theory is underlined which can handle different theories suitable for research variables.

**Anttiroiko and Savolainen (2011)** described “Web 2.0 is the term which indicates technologies, services, applications, tools that enable users to interact websites”. The four main purpose identified for adoption of web 2.0 tools in public libraries are: content sharing, communication, social networking and crowdsourcing. RSS feeds and short messaging enables to serve the ends of communication. Content sharing is been served by blogs and content sharing sites such as YouTube. Social networking is also supported by public libraries. **London (2012)** expressed how the web 2.0 environment helps in team work and learning effectively and efficiently. It enables to work in synchronous and non-synchronous interaction way all over the world without any hassle of boundaries. Web 2.0 tools avoids limitations of communication and collaboration. **Sawant (2012)** investigated LIS instructors' familiarity with Web 2.0 term, concept, tools, techniques and services, and applications related to LIS education. The familiarity of web 2.0 in some Indian university is of low level. For video sharing most of the instructors use YouTube. Nearly, half of instructor have never used Wikis. Lack of training programs organized by universities was the main problem in use of Web 2.0 in teaching and other aids.

### 3.Scope and limitations of the study

The research paper included application of web 2.0 in only three selected libraries. The research is limited to Delhi. The information about web 2.0 tools, its awareness and use in libraries by library professionals is being collected.

The information about selected libraries of Delhi is given below in table 2.

**Table-2: WEBSITE AND LIBRARY PAGE**

Name	Abbreviations	Website	Library page
Central Library DU	CLDU	www.du.ac.in/du/	crl.du.ac.in
DR. Bhimrao Ambedkar Central Library	BRACL	<a href="http://www.Jnu.ac.in">www.Jnu.ac.in</a>	lib.jnu.ac.in
Central Library IIT Delhi	CLIITD	www.iitd.ac.in	library.iitd.ac.in

### 4.Objectives of study

Every work is incomplete and meaningless without having clear objectives. The present research has been designed to study the application of web 2.0 technology, tools in the libraries of Central library (University of Delhi), Central Library (IIT Delhi), Dr. B.R. Ambedkar Central Library (JNU). The study has been conducted with the following objectives:

1. To analyse the existing web2.0 based library services in different sections of the libraries under study;
2. To examine the tools and techniques being used in the selected libraries under study.
3. To identify the constraints towards the emerging web technologies applications.
4. To analysis the Technological skills of library professionals in the libraries under survey.

## 5. Hypothesis

Keeping in view the objectives and scope of the study the following hypothesis has been framed:

1. Web 2.0 tools are mostly used in libraries functioning in the present study.
2. More than 80% library operation is done technologically.

## 6. Research methology

For the present study the data have been collected by researcher from three libraries through survey method where questionnaire was basic tool for collection of data. The professionals were distributed the questionnaires on Application of web 2.0 technology in libraries of CLDU, BRACL, CLIITD. The questionnaire was framed open-ended and close- ended to carry our smooth survey and gather important information regarding topi. This was done to be aware of the status of use of web 2.0 tools in libraries.

## 7. Data analysis and Interpretation

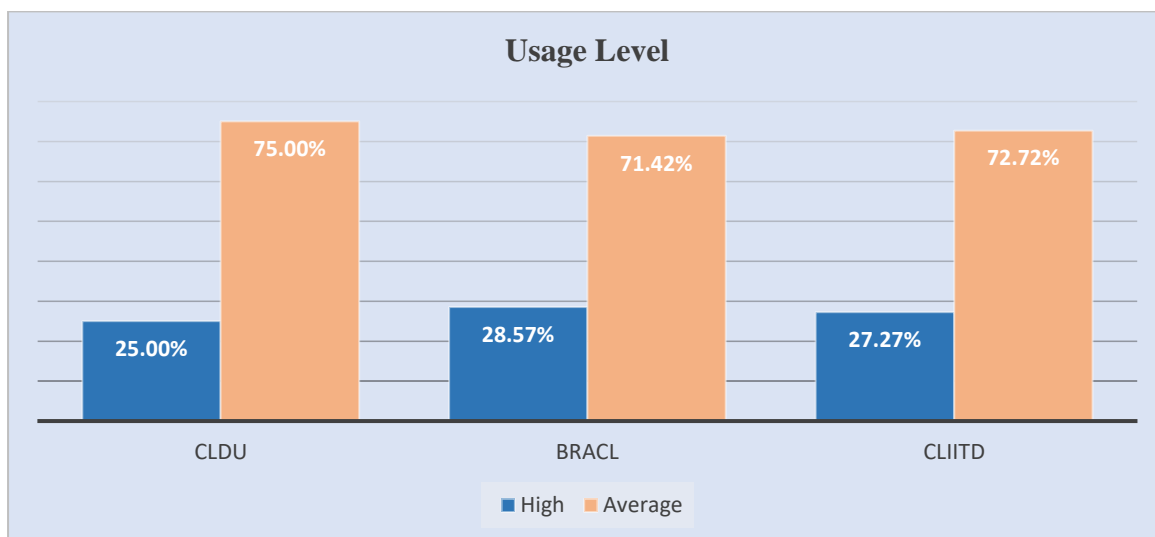
The analysis and interpretation of data is a process of making statistical analysis. The data collected was scrutinized by comparing one answer to other to check consistency and reliability. The Data collected through questionnaires by library professionals was analysed and put in the form of tables and graphs. Useful findings and conclusions have been derived in the end.

**Table-3: Frequency of use (N=41)**

<b>Institute</b>	<b>Daily</b>	<b>Weekly</b>	<b>Once a month</b>	<b>Never</b>	<b>Total</b>
<b>CLDU</b>	16(100.00%)	0(0.00%)	0(0.00%)	0(0.00%)	16(100.00%)
<b>BRACL</b>	14(100.00%)	0(0.00%)	0(0.00%)	0(0.00%)	14(100.00%)
<b>CLIITD</b>	11(100.00%)	0(0.00%)	0(0.00%)	0(0.00%)	11(100.00%)
<b>Total</b>	41(100.00%)	0(0.00%)	0(0.00%)	0(0.00%)	41(100.00%)

The above table represents frequency of use of Web 2.0 by the Libraries in response of question asked about frequency of use. The frequency of usage of web 2.0 tools was on daily basis by all the three libraries CLDU, BRACL, CLIITD which was 100%. It is evident from the data that web 2.0 tools are used on daily basis by trio library. None of the library responded weekly or monthly.

**Figure 2-: Usage Level of web 2.0 (N=41)**



The figure represents “Usage Level of web 2.0 “

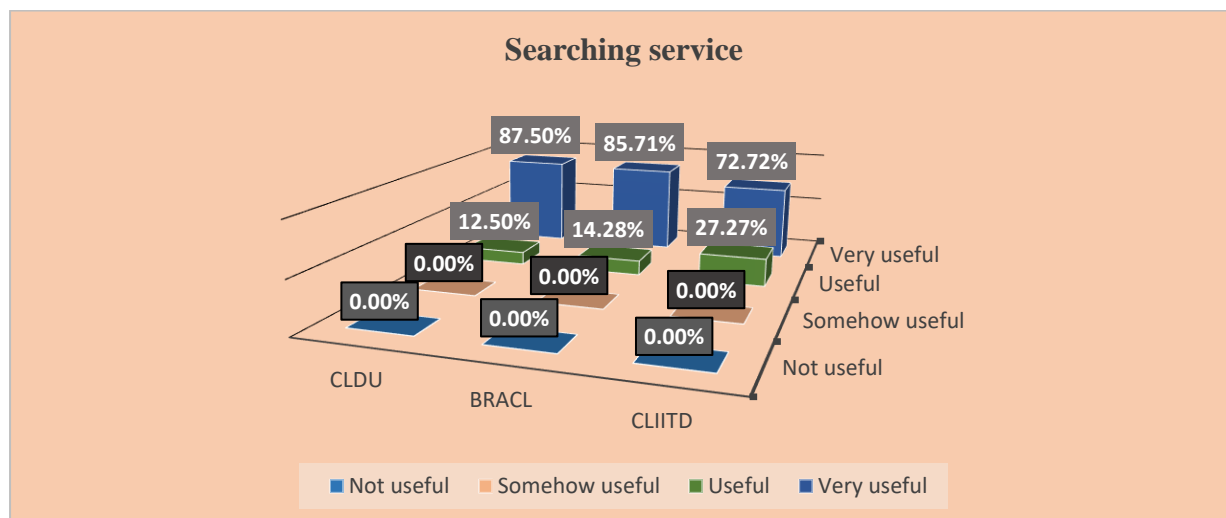
by the respondents in response of question asked about usage level. 4(28.57%) of use of web 2.0 is highest at BRACL and average at CLDU which is 12(75.00%). It is evident from the data that Usage Level of web 2.0 by BRACL is highest and average use of Web 2.0 tools is high by CLDU. No library responded to low use of web 2.0 tools.

**Table-4: Communication (notice, alert) (N=41)**

Institute	Not useful	Somewhat useful	Useful	Very useful	Total
<b>CLDU</b>	0(0.00%)	0(0.00%)	11(68.75%)	5(31.25%)	16(100.00%)
<b>BRACL</b>	0(0.00%)	0(0.00%)	9(64.28%)	5(35.71%)	14(100.00%)
<b>CLIITD</b>	0(0.00%)	0(0.00%)	8(72.72%)	3(27.27%)	11(100.00%)
<b>Total</b>	0(0.00%)	0(0.00%)	28(68.29%)	13(31.70%)	41(100.00%)

The table represents web 2.0 tools use for the purpose of communication (notice, alert) by all the libraries. The highest response 8(72.72%) was gained from CLIITD which shows it as useful. CLDU proves to be less than CLIITD 11(68.75%) and BRACL proves to be minimum 9(64.28%) among the three. It is evident from the data that BRACL 5(35.71%) shows maximum response in very useful category. The lowest response in very useful category was by CLIITD 3(27.27%).

**Figure 3. Searching services (OPAC) (N=41)**



The figure represents web 2.0 tools use for the purpose of searching services (OPAC) by all the libraries. The highest response 3(27.27%) was gained from CLIITD which shows it as useful. BRACL 2(14.28%) proves to be less than CLIITD and CLDU 2(12.50%) proves to be minimum useful among the three.

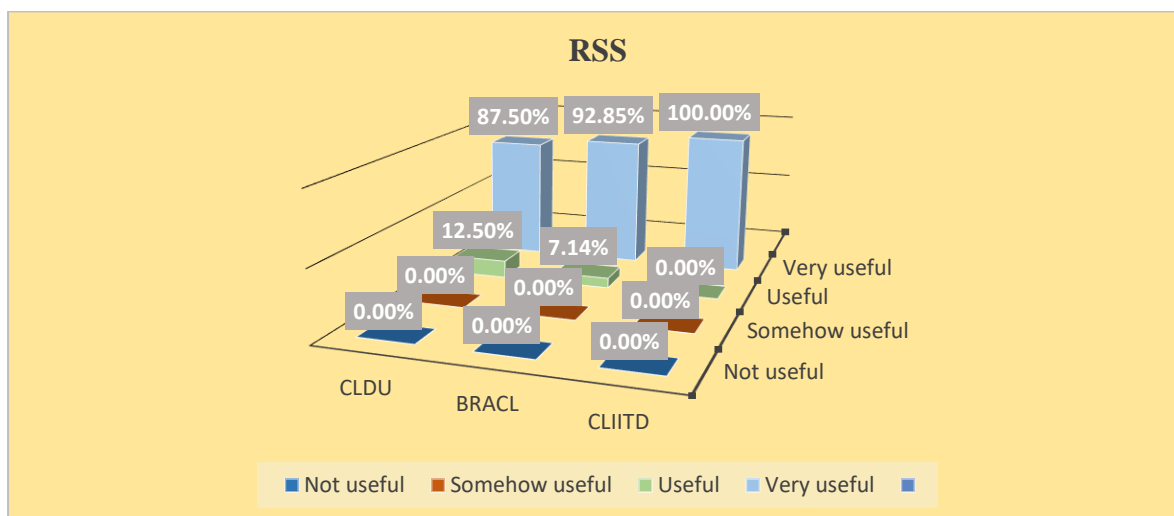
It is evident from the data that CLDU 14(87.50%) shows maximum response in very useful category. BRACL 12(85.71%) proves to be less than CLDU. The lowest response in very useful category was by 8(72.72%) CLIITD.

**Table-5: Usefulness of Blog**

Institution	Not useful	Somehow useful	Useful	Very useful	Total
<b>CLDU</b>	0(0.00%)	0(0.00%)	14(87.50%)	2(12.50%)	16(100.00%)
<b>BRACL</b>	0(0.00%)	0(0.00%)	11(78.57%)	3(21.42%)	14(100.00%)
<b>CLIITD</b>	0(0.00%)	0(0.00%)	9(81.81%)	2(18.18%)	11(100.00%)
<b>TOTAL</b>	0(0.00%)	0(0.00%)	34(82.92%)	7(17.07%)	41(100.00%)

The table represents web 2.0 tools, “Blog Usefulness by all the libraries”. The highest response 14(87.50%) was gained from CLDU which shows it as useful. CLIITD 9(81.81%) proves to be less than CLDU and BRACL 11(78.57%) proves to be minimum useful among the three. It is evident from the data that BRACL 3(21.42%) shows maximum response in very useful category. CLIITD 2(18.18%) proves to be less than BRACL. The lowest response in very useful category was by CLDU 2(12.50%).

**Figure 4.: Usefulness of RSS**



The figure represents web 2.0 tools RSS usefulness by all the libraries. The highest response 2(12.50%) was gained from CLDU which shows it as useful. BRACL 1(7.14%) proves to be less than CLDU and CLIITD 0(0.00%) proves to be minimum useful among the three.

It is evident from the data that CLIITD 11(100.00%) shows maximum response in very useful category. BRACL 13(92.85%) proves to be less than CLIITD. The lowest response in very useful category was by CLDU 14(87.50%).

**Table-6.: Usefulness of SNS**

Institution	Not Useful	Somehow Useful	Useful	Very Useful	Total
<b>CLDU</b>	0(0.00%)	0(0.00%)	10(62.50%)	6(37.50%)	16(100.00%)
<b>BRACL</b>	0(0.00%)	0(0.00%)	9(64.28%)	5(35.71%)	14(100.00%)
<b>CLIITD</b>	0(0.00%)	0(0.00%)	7(63.63%)	4(36.36%)	11(100.00%)
<b>TOTAL</b>	0(0.00%)	0(0.00%)	26(63.41%)	15(36.58%)	41(100.00%)

The table represents web 2.0 tools SNS usefulness by all the libraries. The highest response 9(64.28%) was gained from BRACL which shows it as useful. CLIITD 7(63.63%) proves to be less than BRACL and CLDU 10(62.50%) proves to be minimum useful among the three.

It is evident from the data that CLDU 6(37.50%) shows maximum response in very useful category. CLIITD 4(36.36%) proves to be less than CLDU. The lowest response in very useful category was by BRACL 5(35.71%).



**Table 7-: Promote library holdings (N=41)**

<b>Institute</b>	<b>Not useful</b>	<b>Somehow useful</b>	<b>Useful</b>	<b>Very useful</b>	<b>Total</b>
<b>CLDU</b>	0(0.00%)	0(0.00%)	5(31.25%)	11(68.75%)	16(100.00%)
<b>BRACL</b>	0(0.00%)	0(0.00%)	4(28.57%)	10(71.42%)	14(100.00%)
<b>CLIITD</b>	0(0.00%)	0(0.00%)	3(27.27%)	8(72.72%)	11(100.00%)
<b>Total</b>	0(0.00%)	0(0.00%)	12(29.26%)	29(70.73%)	41(100.00%)

The table represents web 2.0 tools use for the purpose to promote library holdings by all the libraries. The highest response 5(31.25%) was gained from CLDU which shows it as useful. BRACL 4(28.57%) proves to be less than CLDU and CLIITD 3(27.27%) proves to be minimum useful among the three. It is evident from the data that CLIITD 8(72.72%) shows maximum response in very useful category. BRACL 10(71.42%) proves to be less than CLIITD. The lowest response in very useful category was by 11(68.75%) CLDU.

**Table-8: Web 2.0 contribution**

<b>Institution</b>	<b>Publish content</b>	<b>Review</b>	<b>Enable participation</b>	<b>Acquire information</b>	<b>Reference queries</b>
<b>CLDU</b>	16(100.00%)	16(100.00%)	16(100.00%)	16(100.00%)	16(100.00%)
<b>BRACL</b>	14(100.00%)	14(100.00%)	14(100.00%)	14(100.00%)	14(100.00%)
<b>CLIITD</b>	11(100.00%)	11(100.00%)	11(100.00%)	11(100.00%)	11(100.00%)
<b>TOTAL</b>	41(100.00%)	41(100.00%)	41(100.00%)	41(100.00%)	41(100.00%)

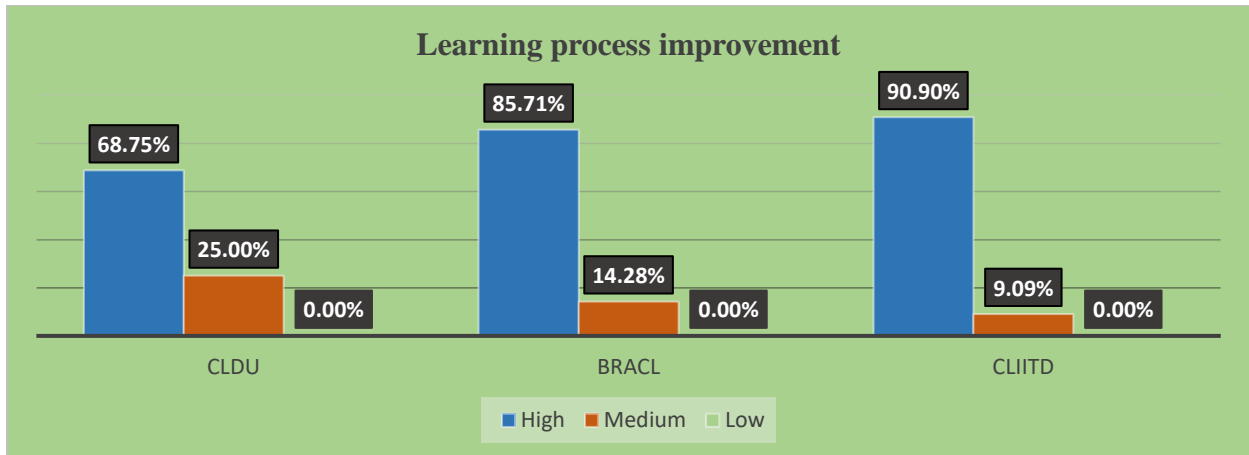
The table represents web 2.0 tools contribution by all the libraries. All the three libraries use web 2.0 tools as to Acquire information, publish content, Review, Enable participation, Reference queries. There was 100% response by all the three libraries.

**Table-9: Orientation programme, Workshop for training**

<b>Institution</b>	<b>Yes</b>	<b>No</b>	<b>Total</b>
<b>CLDU</b>	16(100.00%)	0(0.00%)	16(100.00%)
<b>BRACL</b>	14(100.00%)	0(0.00%)	14(100.00%)
<b>CLIITD</b>	11(100.00%)	0(0.00%)	11(100.00%)
<b>TOTAL</b>	41(100.00%)	0(0.00%)	41(100.00%)

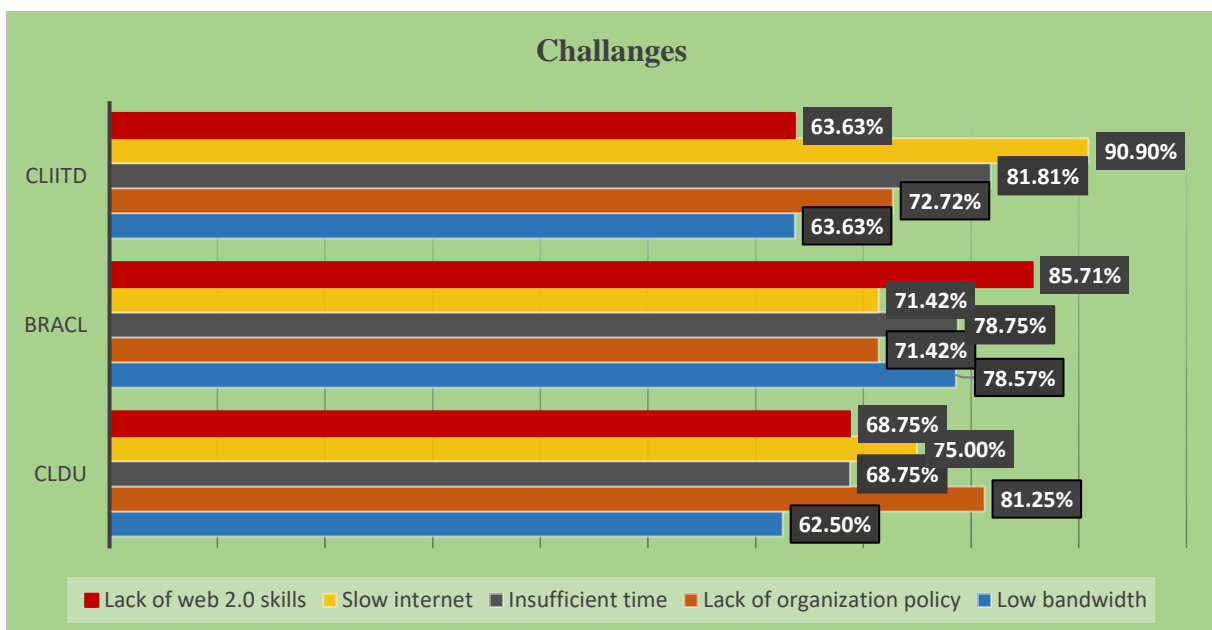
The table represents the conduct of workshops, orientation programmes, training to use web 2.0 tools by all the libraries. All the three libraries conduct workshops, orientation programmes, training to use web 2.0 tools. There was 100% response by al the three libraries.

**Figure 5: Web 2.0 in Improvement of Library and learning performance**



The figure represents web 2.0 tools helpful in learning process by all the libraries. The highest response 10(90.90%) was gained from CLIITD which shows Improvement of Library and learning performance as high. BRACL 12(85.71%) proves to be less high than CLIITD and CLDU 11(68.75%) proves to be minimum in high category among the three. It is evident from the data that CLDU 4(25.00%) shows maximum response in medium category. BRACL 2(14.28%) proves to be less than CLDU. The lowest response in very medium category was by CLIITD 1(9.09%).

**Figure 6: -Challenges**



The figure represents web 2.0 tools Challenges by all the libraries. There were some challenges like Low Bandwidth, Lack of Organization policy, insufficient time, slow internet, Lack of

web 2.0 skills. 11(78.57%) Low Bandwidth was a challenge for BRACL which was maximum. Other challenge Lack of Organization policy was maximum at CLDU 13(81.25%). Insufficient time, at CLIITD 9(81.81%) was noted at maximum. Slow internet was a major challenge at CLIITD 10(90.90%). Lack of web 2.0 skills was a major challenge at BRACL12 (85.71%). The highest response 12(85.71%) was gained from BRACL which shows it as useful Lack of web 2.0 skills. CLDU 9(81.81%) proves to be less than BRACL and CLIITD 8(72.72%) proves to be minimum useful among the three.

## **8. Conclusion**

The present research reveals the status of web 2.0 tools use in libraries by professionals. In the study we found that web 2.0 is used for communication (notice, alerts,) searching services (OPAC) Library promotions, RSS, SNS is most frequently used by all the three libraries, it is also observed that the use of web 2.0 has made library operations to be done swiftly. Library 2.0 concept is enhancing libraries image from static to dynamic which is based on tools and techniques of web 2.0. Library professionals are trying to provide easy and accessible services to the patrons on large scale and trying to be library 2.0. The users are satisfied by the advancement of new technology but there is need to integrate more with web tools for better research and learning process.

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