Web 2.0 and Library 2.0: A Survey of the University Libraries in NE India
Tilak Hazarika

1. Introduction

With the introduction of MARC and the spread of technological developments mostly on the lap of the computer and telecommunication technology, libraries began to exploit the computer enabled technologies to change the depth and breadth of the services they could offer. The advent of internet technologies during the 2nd half of the last century added a new parameter in the whole gamut of the library services with the focus on the logical extension of library which advocate reaching out users irrespective of the physical location. The very idea of the library started changing when much of the visibility of the library environment was available to its users on the computer screen (Wallis, 2007). With introduction of the new technologies particularly the Internet technologies there witnessed a conceptual shift of the libraries where the distance between the user and the document slashed down to a click of mouse. This eventually opened opportunities for better participation of the users in acquisition, organization and dissemination of information. Parallel to this, the convergence of different technologies in production, packaging and dissemination of information resource also witnessed a sea change pausing a challenge before the library managements to equip itself abreast with the changing trend towards satisfying the very ethics of librarianship. The internet technologies

clubbed under the term Web 2.0 which basically the web technologies has influenced the librarians worldwide inspiring to adopt these technologies to the library services specially due to the obvious advantages with the web technologies to reach out to more and more users which is otherwise beyond the scope of the conventional library.

1.1 Web 2.0

One of the focal notion of the digital world started gaining popularity since 2004 has been the Web 2.0, a term coined and popularized by O'Reilly (2005). Web 2.0 is largely defined by a plethora of web based services collectively termed, and such there lacks a precise definition. Typically quoted technologies include blogs and podcasting, RSS feeds, instant messaging, mashups, social networks and social tagging (O'Reilly 2006a). Various services such as flickr, youtube, myspace, facebook, twitter, skype, wiki and digg are almost synonymous to the phenomenon (Anderson 2007). The "user-centered design" was one of the basic urge in Web 2.0 postulates, where it was emphasized of a web design which is created in a way that it fulfills every possible need of the end user and empowers the user to perform certain customizations within the design. "Crowd-sourcing" and "Collaboration" are another two concepts, which advocates every small unit of contribution is important to a Web 2.0 service. Millions of such contributions eventually lead a website to a state of higher relevance.

1.2 Library 2.0

Library 2.0 is a borrowed term of Web 2.0. It was first used in 2005 by Michael Casey (2006) on his LibrayCrunch blog. According to Casey, Library 2.0 as a concept that empowers the user, encourages

constant change, and reaches those who do not otherwise have access to or use libraries. Just as "Web 2.0" implies that it is radically different from an earlier web, "Library 2.0" implies that it is also radically different from the earlier library *i.e.* the libraries of the pre 1960s while the libraries were lacking the required technologies to reach out to users beyond the physical boundaries of the library. As such "Library 2.0" concepts advocates of the new generation of the libraries grown up amidst tremendous developments of computing technology *viz.* database system, networking technologies, web technologies and later the Internet driven technologies which together facilitated for chalking out the roadmap for participatory, "client-centred", "user-centred", "patron-centred", or "people-centred" library which had always been the very philosophy of since the very antiquity of modern librarianship. As libraries and library managers have usually been early and enthusiastic adopters of new information technologies they have welcomed Web 2.0 with the same zeal. Libraries played a very pioneering role in the implementation of the web technologies. It was librarian Louise Addis of the Stanford Linear Accelerator who started the first web server outside of CERN in 1991 (Berners-Lee, 1999) . Though the term "Library 2.0" is said to be a borrowed term from Web 2.0, relevant literature leads us to the fact that, it is not about the implementation of the web 2.0 simply by imitating the web 2.0 prescription into the libraries but it was moulded, before applying in such a way

that the library 2.0 may be able to address the vital issues in the line of the very philosophy of the librarianship.

There are many views and comments on what compose of the concepts underlined in Library 2.0, but still there lacks a precise definition covering the contents of technologies and services the Library 2.0 embraces. Wallis (2007) defines Library 2.0 as the combination of Web 2.0 and the libraries' traditions of serving users. Lankes *et al.* (2007) defines the concept Library 2.0 as an attempt to apply Web 2.0 technologies to the purpose of the library, together with goals for greater community involvement. They suggest that the term Library 2.0 is focuses rather on the term participatory networking through which the very objective of a library that is to reach to more and more users beyond the physical boundaries of the library might be achieved. Stephens (2007), on the other hand, claims that Library 2.0 is much more than a set of Web 2.0 tools. According to him it is about applying open participation of the users to the library services. His viewpoint is similar to the broad definition advocated by Casey and Savastinuk (2007) which reads as "participation service and change are the heart of Library 2.0 and technology is a tool that can help us to get there". This definition calls for introducing participatory service in the library where the patrons of a given library can participate in the activities of the library by their required input. At the same time, a given library much also introduce certain user driven services to reach out to both present users and invite more and more future users.

In view of the focus paid by different scholars on the content and coverage of the term Library 2.0, Holmberg *et al* (2009) tried to extract key components of the Library 2.0 by applying the

technique of co-word analysis. Co-word analysis is a content analysis technique that uses both the frequency of objects and their relationship or existing connections between them (Courtial, 1994; He, 1999). Accordingly, they identified seven key components that define the whole gamut of the Library 2.0 *viz.*

1) interactivity;

2) users;

3) participation;

4) libraries and library services;

5) web and web 2.0;

6) social aspects; and

(7) technology and tools.

Also, correlations of the seven building blocks were mapped out in as in Figure 1.
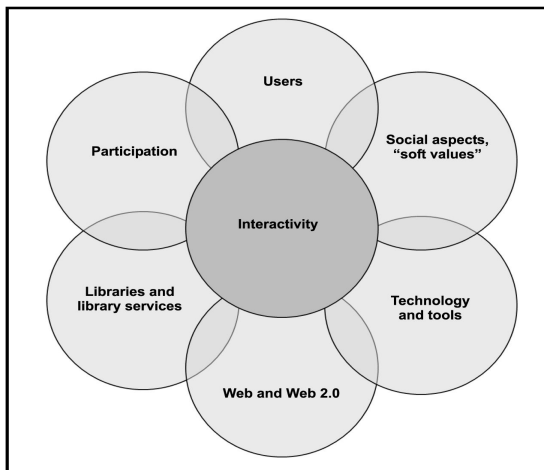
Figure 1: The Building-blocks of Library 2.0 (Holmberg *et al* (2009))

Accordingly, Holmberg *et al* (2009) lined up a definition of the Library 2.0 as "It is a change in interaction between users and libraries in a new culture of participation catalysed by social web technologies." This definition seems in the line of the earlier definition with emphasis on the

application of web technologies as a means to bridge the gap between users and the libraries in an interactive way. As such new innovations, new thought specific to a given library environment is must to reach to a wider range of users followed by ploughing the library work culture to accommodate the changes and or introducing services the users desires in the newer environment to support and sustain the interactivity of libraries and users.

Many academic libraries most prominently in the western world have embraced the concepts of Web 2.0 and Library 2.0. To date, there are numerous articles reporting the genesis, rationale and implementations of various Web 2.0 applications in the libraries. Some latest studies are Balaji and Kumar (2011); Ram *et al* (2011); Garoufallou and Charitopoulou (2011); Adekannbi (2011); Nesta and Jia (2011), Joint (2010); Mahmood and Richardson Jr (2011), Harinarayana and Raju (2009); Holmberg *et al* (2009); Yang *et al* (2009), Gross and Leslie (2008). However, so far Indian context is concerned, yet there has been little research carried out investigating and evaluating the implementations of Library 2.0 features in libraries. In a latest study Balaji and Kumar (2011) has discussed the status of using new generation web technology, social media and Web 2.0 features among the technological university library websites in south India. Ram *et al* (2011) have studies the users responses to the Web 2.0 prescribed services in the Jaypee University of Information Technology (JUIT), Solan and described the effectiveness of the use of the Shelfari (www.shelfari.com) portal for virtual display of books, use of YouTube and the NPTEL as a medium for delivering scholarly videos.

2. Objectives of the Study

The university library websites to serve as primary access point of information access and resource

discovery. The information resources and services provided by the libraries are expected to be well displayed and have online presence enabling the users community to access to it bypassing the spatio-temporal barriers. The augmentation of websites of a university library as the resource discovery tool, it is supposed to be re-dressed by adopting and implementing the Library 2.0 standards and prescription primarily with the objective to bring satisfaction to the end-users. In view of this trend witnessed in the university library services and activities, this study has undertaken is in its scope to identify and discuss the Library 2.0 components based on a literature search followed by an attempt to visualize the real situation of the university libraries in the North Eastern region of the country in accommodating the features of library 2.0 in the library web pages. A further attempt is to make to identify certain vital issues relevant to the implementation of the web based technologies in the libraries in question.

It is no way intended to explore the width and breath of the resources, services or other parameters of IT applications as it is neither to rank the university libraries based on the findings nor to explore parameters to look down upon any organizational web pages. As mentioned above, only a sincere attempt is made here to identify certain common issues pertaining towards strengthening the university libraries in this region.

3. Some Library 2.0 Features

❖ **RSS Feed:** RSS (Really Simple Syndication) is lightweight XML format which is used for publishing frequently updated content such as blog entries, news headlines, and podcasts in a standardized format. RSS automated feeds, if properly implemented, acts as a marketing tool that can promote the use of a library's collection by keeping users informed about new acquisitions. According to Marshall Breeding, "RSS ranks as one of the top technologies for distributing content" and that librarians should "Think of RSS as a syndication service to distribute content as well as an advertising ploy to entice potential users to visit your web site" (Breeding, 2009). He made the point that providing content that satisfies, the special interests of users is an important marketing tool to attract users back each time the library adds new content. In a recent studies Nesta and Jia (2011) found that out of the 52 libraries in New Jersey only 18 libraries used RSS feed mostly used to feed library news. Similar findings have been documented by Harinarayana and Raju (2009).

❖ **Instant Messaging (IM):** IM is a live online communication synchronous channel which facilitates online interaction between two parties It is used as a tool for real time online reference service to in the act of seeking information. Harinarayan and Raju ((2010) found 65% top ranking university libraries in the world using Instant Messaging for real time reference services.

❖ **Podcast:** It is a tool for steaming video and audio content into the Web. Audio content available on the internet can be automatically delivered to a personal computer or MP3 player – simply using podcast. Podcasting is a converged medium bringing together audio, the web and portable media player. The podcasts offer the user an opportunity to listen to recorded intellectual outputs online without any additional software and to download for later use. This process can be automated so that new files are downloaded automatically. Files are stored locally on the user's

computer or other device ready for offline use, giving simple and convenient access to episodic content (http://en.wikipedia.org). This format provides potential benefits for delivering library instruction in a medium that will supplement traditional methods and also provides a useful alternative for the increasing number of online courses and distance students. Podcasts and videocasts have been successfully used in delivering library web-based services. Lee (2006) has listed the potential areas of application of podcast in libraries. Jowitt (2008) conducted a study on use of library instructional podcast by the staff and students at the Universal College of Learning (UCOL), New Zealand and 71% of the respondents voted in favour of Podcast as a very good format for delivering library instruction. In a recent study Bierman and Valentino (2011) found that approximately one-third of American research libraries have podcasting initiatives. Podcast subjects vary widely, and social media are only used occasionally to promote the podcasts.

❖ **Social networking Sites:** The video sharing site YouTube, community sites like MySpace, Facebook, Twitter, Orkut, Friendster, photo sharing sites Flickr, photobucket, digg, LinkedIn have made a strong impact among internet users around the world. Social Networking websites allows libraries for facilitating access to their resources by developing tools for patrons to use in their personal slice of the web (Harris and Lessick, 2007). Facebook which is one of the very popular social networking sites now, adjudged at par with the Google in a recent survey by (Rashid, 2010) and commented that social networking primarily to have a social function of allowing people to interact, make friends, talk online and share resources. The main purpose of Facebook

and Twitter is to connect friends with friends on a regular basis. An increasing number of libraries have established Facebook pages hoping to leverage these social medias to increase their online presence and be part of the Web 2.0 world. However, there is always a question how far the social networking helps the libraries in attainments of its very objectives. In a recent study on 230 academic libraries in the USA it was found that while 73 percent offered RSS feeds, only 10.8 percent of students and faculty subscribed to, with a preponderance of those users among doctoral students and faculty (Kim and Abbas, 2010). The authors went on to note that "one can draw a conclusion that the implementation of Library 2.0 functionalities and the utilization of those functions are not well matched". Joint (2010) viewed Social networking sites just as a information tools, and it is not really the place of information professionals to make judgements about the quality of content managed by means of an information tool. Various earlier studies on the utility of participating of libraries in the social networking sites indicate less effective to interact with or attract users (Smith, 2009; Bell, 2008).

❖ **Social Book Marking/Tagging**: Social bookmarking is a method for internet users to store, organize, search, and manage bookmarks of web pages on the internet with the help of user-driven metadata (uncontrolled vocabularies). Tagging is a significant feature of social bookmarking systems, enabling users to organize their bookmarks in flexible ways and develop shared vocabularies known as folksonomies. Folksonomy is also called social tagging. Traditional library web products, whether online public access catalogs, library databases, or even

library web sites, have long been rigidly controlled and difficult to use. Because of this, patrons mostly preferred Google's simple interface to get access to these links. Social bookmarking and tagging tools help librarians bridge the gap between the library's need to offer authoritative, well-organized information to the users, at the same time lessen the trouble of the users which otherwise might end up searching through the Google or else. One most used social book marking site is http://delicious.com/ wherein users may bookmark web pages for themselves and others, check out what others bookmark, and organize bookmarks in one place for portability. Besides its well-known basic tagging and bookmarking capabilities it offers a built-in tool set an application programming interface (API) that let libraries do practically anything with their data.

❖ **Wiki:** Wiki is another of the major applications of Web 2.0. is a website whose users can add, modify, or delete its content via a web browser using a simplified markup language or a rich-text editor. Wikis are typically powered by wiki software and are often created collaboratively, by multiple users. Examples include community websites, corporate intranets, knowledge management systems (http://en.wikipedia.org). If a librarian thinks to have materials that would be helpful to other librarians, that may be added to the wiki. Similarly if anyone knows of a librarian or a library that is doing something great, may consider including such information or links to it. Basically, if anyone knows of anything that might be useful to other librarians (including useful websites), Wikis may be the place to put it. After all wiki is one of the best tools where people can share ideas with one another, and librarians

can use this to replicate the successes of other libraries. Engard (2006) and others have discussed extensively on how libraries can use wikis. Fichter (2006) in particular, discusses the various applications of wikis in libraries.

❖ **Blogs**: Blog is a web tool, usually maintained by an individual, with regular entries of commentary, descriptions of events, or other material such as graphics or video. Entries are commonly displayed in reverse chronological order (Wikipedia.org). Library blogs may be an effective tool in reaching to the remote user by regular updating of the contents. Library blogs that simply repeat mundane library news may not encourage interaction. In order for a blog to be successful, content that gets user interaction and provide a definite service to readers should only be included.

4. Methodology

A set of web enabled services coinciding the library 2.0 were chalked out through literature search followed by visit to the university web sites to gather relevant data with the objective to evaluate the extent of library services being offered by the university libraries in the region of studies incorporating the web based tools. The data gathered are tabulated and analyzed to substantiate the objective lined up.

5. Library 2.0 *vs* University Libraries in NE India

A web based survey on library web pages of all the universities in the NE Region the country was conducted to study how far these university libraries has adopted the tools and features prescribed in the Library 2.0 viz. RSS Feed, Blog, Wiki, Podcast,

Instant Messaging, Social Bookmarking/ Tagging and presence in Social Networking Sites. As presented in the Table-1 it is found that university libraries in this region are lying far behind to accommodate the Library 2.0 features in the library. The survey recorded only the NEHU library having presence of the Instant Message in the library web page. Most of the university libraries are yet to develop their library page.

Having experienced with the findings in Table -1, a further attempt was made to look at the content and coverage of the web pages of the university libraries and the findings are presented in Table - 2. Following is a brief discussion of the features against each University surveyed.

❖ **Tripura University:** The university web page of Tripura University giving a link to library at the top bar. There are four drop-down links with the link namely – General Information, Facilities Available and Rules, UGC-INFONET E-Journal Program, Inflibnet ISI Web of Knowledge and INFLIBNET Open Journal Systems. A brief history of the library along with different resources, services and facilities is available under the link 'General Information'. Different resources and rules of the library are presented in the link 'Facilities available and rules'. UGC-Infonet e-resources are presented in a three separate links at the University page.

❖ **Tezpur University:** The index page of the Central Library page of Tezpur University carries nine links in the top menu bar and 11 in the side menu bar. The links contain overview of the library, current journals, web Opac, link to UGC-Infonet, Subscribed e-resources, library rules, directory of staff, trial access of different e-resources, and other useful links. A brief

description on different resources and services being offered by the library is giving at the index page. Active links to book database, thesis database, back volume journals database, CD-ROM databases are available on the body of the index page. A link namely *Ask librarian* is available at the index page giving the e-mail addresses of top officials of the library with an appeal to post any consent, comment and advice relating to the library. E-journals available to the university through the UGC-Infonet consortia are available with active hyperlinks to each title available within the respective sites. Same treatment is also available in case of other consortia available to the university *i.e.* DeLCON consortia, IEEE, ASME, etc. Current journals are available with active links wherever applicable with *Current Contents* in case of the print journals.

❖ **Sikkim University:** A page link on the central library is available at the university web page of Sikkim University. Physical facilities of the library along with different resources and services are available in a single page.

❖ **North Eastern Hill University:** The index page of the central library of NEHU giving a brief description of the mission and vision of the library and efforts made to accomplice these. The top bar carries Overview, Location Guide, Membership, Library Rules, Library Revised Rates, Sections & Units, Directory (of library staff), Useful Links (29 outlinks), FAQS, and Forms. The index page in its body carries links to OPAC, Subscribed Journals, User's Services, Subject Information Gateway**,** Free e-books, Trial Access, link to American Libraries in India Catalogue, and the DeLCON consortia of the DBT (GoI). Links to different sites of e-resources provided to this university.

❖ **Mizoram University Library:** Brief introduction to the library, library holdings data, users data, staff position and different activities of the library described in a single page.

❖ **Manipur University Library:** The index page of the central library page of Manipur University giving a brief introduction of the library covering physical facilities, resources, library rules and users data are narrated in the index page. Separate link for book database, journal database, etc. are absent. There are two other links namely – membership and enquiry but the pages were not found. A list of different sites under the UGC-Infonet consortia is available but incomplete in hyperlinks. Out of 19 naming, 14 sites are hyperlinked.

❖ **Nagaland University:** A single page on library is available in the university web site of Nagaland University. Resources, services and staff information is available in the page along with a brief statement on the initiative for automation and modernization of the library.

❖ **Gauhati University:** The index page of the central library of Gauhati University (the Krishna Kanta Handiqui Library) giving a brief introduction including mission statement along with a very brief history of the library. There are five links found in the central library of Gauhati University *i.e.* administration, infrastructure, holdings, visitors and contacts. Under "administration", listing of the library staff along with contact information is available. Under the link "infrastructure" the physical facilities of the library is described. Different resources in the library are innumerated under the link "holdings" with no active links to resources. Visitors statistics

is made available under a separate link however no tools for generating the visitors data was seen. The library page is absent of any functional links to book database, journal data base, and even no link is found on Infonet resources.

❖ **Dibrugarh University:** There are three links available in the library page of the Dibrugarh University namely profile, resources and e-journals. The index page giving the physical facilities, description of various resources, tools for indexing, services offered, etc. A very brief statistical data on its various print and e-resources is available under the link -resources.

❖ **Assam University:** A link on Library and a link named E-resources are available at the side bar and top bar of the home page of the university respectively, but the pages could not be located during the search.

6. Discussion and Conclusion

The impact of web 2.0 on the wider world of information gathering, information sharing, and web usage outside the sphere of libraries has been truly extraordinary. What is more difficult to calculate is the ability of libraries to incorporate web 2.0 applications successfully into their own repertoire of information services. In order to move with the times and meet expectations of library users in the latest technological environment, it is important that libraries investigate the potential of new technologies, whether they can be used in libraries, by whom and for what purposes. Rapid developments in the in the computing technologies has brought changes in almost all services irrespective of government or public sector. Obviously, people will expect services from the libraries in the same degree as are available in other spheres of their walk of like. Libraries being the

forerunner in adopting technologies as evident from its landmark transitions over history of librarianship, it is true in case of adopting and implementing advantages brought by the Internet technologies. Following are the few areas, library management may examine and explore the possibilities to address local situations at their own towards bridging the gap between the users and resources by adopting the technologies brought forward by the Library 2.0.

a) Attitude: A very positive attitude of the library management is desired to materialize any attempt of novelty in the library. This is must to initiate by the library management first by drawing a roadmap towards attaining the same visualizing the real situation in terms of resources, facilities in terms of network strength and other related aspects, the utility and acceptability of the users for whom the services are being designed. However, a positive attitude of the top authorities of the universities is also equally desired. It is the librarian who may explore possibility of convincing the authority concern by a well laid out plan and program.

b) Strength of Staff: Library manpower strength must be tuned up to accomplice the desired change in terms of number and competency. Most of the time it is experienced, inspite of having a keen desire and required know how, a desired task may left unattended due to paucity of time of the staff. This happens mostly due to the fact that libraries are understaffed. In order to adopt the Library 2.0 standards, certain basic platforms must be built up. Mention may be made of the i) Structured Database of library print and e-resources with adequate interfaces searching and data retrieval, backup facilities, etc. ii) Intranet and Intranet

infrastructure, and iii) Parameters for support of the system in terms of computing and networking.

c) Examples: A good example always inspires us to take up a new initiative may be it is in library of in day to day life. University libraries may imbibe example from leading libraries in the country as well as the abroad, adopting Library 2.0 features towards sharpening the existing services and reaching out to more and more users. The libraries listed in the top ranking world institutions may be a good example in this regard.

d) Role of INFLIBNET: Being the UGC nodal agency for automation and networking, INFLIBNET has tremendous scope to play a vital role in modernization of the university libraries in this region. A regional hub of the centre equip with definite plan and program in line with the certain limitations unique to this region may be an attempt towards addressing the issues responsible to the comparatively low pace of development of the libraries in this region.

e) Role of Professional Organizations: Professional organizations and schools of library & information sciences in this organizations may play a vital role by organizing workshop etc. specially with focus on the Library 2.0 standards and different tools and techniques for implanting the standards with scope for hands of demonstration on the tools *i.e.* Use of XHTML,, JavaScript, CSS 2.0, Ajax, flex and similar other rich media producing technologies.

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About Author

Dr. Tilak Hazarika, Information Scientist, Central Library, Tezpur University. E-mail: tilak@tezu.ernet.in

Table.1: Features of Web2.0 in the University Library web sites of NE India

Sl	Name of University	Link to Central Library	RSS Feed	Blog	Wiki	PDCS	IM	SB/T	SNS
1	Tripura University	http://tripurauniv.in/index.php/library/ general-information.html	0	0	0	0	0	0	0
2	Tezpur University	http://www.tezu.ernet.in/Library/	0	0	0	0	0	0	0
3	Sikkim University	http://www.sikkimuniversity.in/webforms/ Library.aspx							
4	RGU, A. Pradesh	http://www.rgu.ac.in/facilities/library.html	0	0	0	0	0	0	0
5	NEHU, Shillong	http://www.nehu.ac.in/library/index.html	0	0	0	0	1	0	0
6	Nagaland University	http://www.nagauniv.org.in/index.php/ facilities/libraries/central-library-kohima	0	0	0	0	0	0	0
7	Mizoram University	http://www.mzu.edu.in/central_library.html	0	0	0	0	0	0	0
8	Manipur University	http://manipuruniv.ac.in/en/Library/ Library.html	0	0	0	0	0	0	0
9	Gauhati University	http://www.gauhati.ac.in/home/library /index.htm	0	0	0	0	0	0	0
10	Dibrugarh University	http://www.dibru.ac.in/page.php?cat= Facility&id=Library	0	0	0	0	0	0	0
11	Assam University	http://www.aus.ac.in/library.html							
12	AAU, Jorhat	NA							

PDCS = Podcast, IM = Instant Messaging, SB/T = Social BookMarking/Tagging , SNS- Social Networking Sites

Table-2: Features of Web2.0 in the University Library web sites of NE India

Sl	Name of University	Number of links												
		Lib. page	Web OPAC	Infonet	Bk DB	Thes DB	CD-DB	CJ	BVJ	SIG	OAJ	OAB	CR	Othr
1	Tripura University	1	0	3	0	0	0	0	0	0	1	1	0	1
2	Tezpur University	1	1	24	1	1	1	1	1	0	1	0	0	0
3	Sikkim University	0	0	0	0	0	0	0	0	0	0	0	0	0
4	RGU, A. Pradesh	0	0	0	0	0	0	0	0	0	0	0	0	0
5	NEHU Shillong	1	1	10	1	0	0	1	0	1	0	8	1	9
6	Nagaland University	1	0	0	0	0	0	0	0	0	0	0	0	0
7	Mizoram University	1	0	0	0	0	0	0	0	0	0	0	0	0
8	Manipur University	1	0	14	0	0	0	0	0	0	0	0	0	0
9	Gauhati University	1	0	0	0	0	0	0	0	0	0	0	0	
10	Dibrugarh University	1	0	25	0	0	0	0	0	0	0	0	0	1
11	Assam University	0	0	0	0	0	0	0	0	0	0	0	0	0
12	AAU, Jorhat	0	0	0	0	0	0	0	0	0	0	0	0	0

RGU, A.Pradesh = Rajib Gandhi University, Arunachal Pradesh; NEHU = North Eastern Hill University, AAU = Assam Agricultural University Yes = 1, No = 0, Numbers >1 indicating number of links, BkDB= Book database, ThesDB = Thesis database, CD-DB = CD-ROM database, CJ = Current Journal, BVJ = Back Volume Journal, SIG = Subject Information Gateway, OAJ = Open Access Journals, OAB = Open Access Books, CR = Chat Room, Othr = Other links