

Chapter-1

1. Introduction

“Significance of the Web 2.0 technology in the Services of the Academic libraries: Proposed model for the university libraries of the Gujarat State.”

Contents

1. Introduction	1
1.1 Introduction:-	2
1.2 Rationale of Study.....	5
1.3 Research Objectives.....	6
1.4 Research Hypothesis.....	6
1.5 Importance of present study	7
1.6 Scope of Study.....	8
1.7 Limitation of Study.....	10
1.7.1 Topological Limitation.....	10
1.7.2 Geographical limitation.....	10
1.7.3 Subject related limitation.....	10
1.8 Methodology of present Study	11
1.9 Scheme of Chaptalization	11
1.10 Definition of Technical Terms used in the Study	12
1.10.1 Gujarat State:	12
1.10.2 University Library	12
1.10.3 Web2.0 technology:	13
1.10.4 Library 2.0	13
1.11 References	14

1.1 Introduction:-

Ranganathan's Fifth law depicts that, "The Library is Growing Organism". With emergence of new concepts and techniques library have adopted change in its management, organization and the way it's working. In ancient time libraries were just warehouse of books and Manuscripts of witty persons and emperors. With emergence of academic systems academic library emerge as a heart of academic bodies like universities and Colleges, Schools and other research institutions. Indian academic system has witness of very strong and powerful library system of ancient university like Takshashila, Nalanda and Valabhi and Vikramshila. All four ancient universities having powerful library in it. Library are changing and adopting new methods of working day by day. In modern times where new concepts and methods are introducing day by day, libraries are keeping pace with it. Change is continues process and Libraries have accepted many changes since its inception. Like Classification systems, Cataloguing system and models of management. With emergence of Information Communication Technologies libraries have adopted these ICT based services in no time. Library automation and Digitization are example of it. Librarians of Current era are front runners of accepting and use of technologies.

With emergence of WWW libraries have adopted them and implemented in its management system with library websites and in form of online services. Where limitation of www is reading web libraries are starting providing its services digitally like – old Reference and referral services became Digital Reference service, instead of making files based Current awareness service and Selective Dissemination of Service librarians providing Digital SDI with Mailing List and use of Mail Merge in providing information service. In this change user especially Academic library users don't need to be in touch with library physically but they are solving user's quarries and information needs through Emails. With changing of library management concept libraries are being

automated with Integrated Library management systems, physical catalogue became OPACs in libraries. Users are getting their favorite items with one click instead of going through old dusty catalogue cabinets. This brings novel energy to library ecosystem. With concept of online resources and eBooks libraries are providing listserves, catalogue of e resources and subscribed print periodicals' bibliography, online encyclopedia through emails. This new WWW has change libraries working and delivery mechanism. The only limitation of WWW was its one way communication system or static in nature.

In last decade WWW has change tremendously. The effects of Technology Boom of 2003 have resulted in change in nature of WWW and new concept of Read and write web has emerged. New companies like Google, Facebook and Twitter and others shine of Silicon Valley. India also developed as a technology provider and concept of outsource of work has been came in to practice. With these changes services like social networking, web tagging, RSS, podcast also emerge. Traditionally libraries were temple of knowledge and literature and librarians were gatekeepers of it. They have had a good relationship with its users or we can say patrons. But emergence of Google especially powerful search engine and video streaming services like YouTube, Facebook, MySpace and hand held devices have profound impact on the way libraries are working. The relationship between librarians and its users has been changing under the influence of emerging technologies. (Hall, 2011). Librarian's typical role and task were included like acquisition – which consist of review, Selection & purchase of Book and other literature, checking materials in and check out, Stock keeping and answering users' specific queries and fulfill their referral needs. All those tasks were carried out by librarians without much involvement of users. In such situation, the relationship between librarians and their users were seen as a relationship between book providers and receivers. This means library mostly provide what they have or what they owned mostly books and

other paper based formats while users passively accepts what libraries provide or offers.

As new concepts and technologies emergence in to existence and adopted this relationship also change and evolved. The introduction of newer technologies, E-books formats, E-periodicals, E-Journals, and various electronic formats of information like blogs and Wikies has enriched library collection and so as its services. This resulted in up gradation of role of both librarians and their users. From Book keepers librarians now became Information editors, consolidators and Advisors. Similarly from Readers or Viewers, library users are became Browsers. Hence the relationship between library staff or librarians and their users have been changed to a relationship between Information Service Providers and Client. Moreover in this new relationship users become more independent in choosing and using his/her needs and services. For instance, they can access subscribed library online databases anytime and anywhere at their own convenience, Register to receive notifications on a their own selected topics of interest via email or any other means or comment an give feedback on the usability of the library website. This means that they can flexibly use library services as well as partially contribute to the service improvement according to their needs.

According to Wikipedia “Web 2.0 or social media are primary internet based tools for sharing, discussing information among human Bing. It is as a result of its concepts that have led to the development and evaluation of web based communication hosted service and application ; such as SNS, Video streaming and sharing Sites, Blogs, Wikies, Folksonomies, Podcasts, Instant Messaging and RSS.”

A new user interface cannot be simply pasted onto an outdated WWW application to constitute Web 2.0. It is a method of thinking, a fresh perspective

on the entire software industry or other industries, starting with the idea of content delivery and continuing through marketing and delivery. Web 2.0 focuses on user-centric transformation and replaces one-way communication channels with services that support two-way channels. Richer databases and intelligent apps have developed from row databases to richer artificial intelligence as a result of consumers being free to comment or provide feedback on whatever they choose their likes and dislikes for. Similar to how a library embraced Web 2.0 for its day-to-day management and operation of its services, it expanded in terms of customer expectations and met their needs.

1.2 Rationale of Study

A few years ago, many librarians believed that social media and the internet were more appropriate for personal usage than for professional purposes. However, in recent years, libraries struggling with user engagement have started to pay more attention to how it is used by the user community. Today, librarians all over the world use Web 2.0 extensively to achieve a variety of purposes and objectives.

However, users are also becoming wiser and more selective in what they desire. Since user-centric change is at the core of Web 2.0, it is important to research what users want and assess what they are willing to accept. All service-based industries must adapt to this transformation in order to survive in the increasingly competitive marketplace. Libraries must adapt to the rhythm of evaluation because they are non-profit service organizations. It is challenging to forecast how this web 2.0 or social web and its usage will develop in this continuously changing world. The majority of the best libraries have changed their management practices to be more user-centric and experimental. These days, new ideas like library discussion rooms, digital corners, 3D printers that have arrived in a corner, social librarianship, library entrepreneurship, and green

libraries are hotly debated. Therefore, it is imperative to ascertain what people want, locate users, and offer them efficient services.

The gaps identified by systematic literature review reveal that the main characteristic of web 2.0 has been unattended by many researchers but they only focus on the available platform and how it has been utilized in libraries to provide or to market its services. Web 2.0 tools have influenced the library services which include increased user-generated content in the catalogue, and improved information sharing and communication. The adoption and acceptance of these tools indicated that Web 2.0 technologies can be used to provide and promote library services without damaging their value.

1.3 Research Objectives

- To discover the library services that are cubing with 2.0 technologies
- To investigate the present situation of the university library of Gujarat state in adaptation of 2.0 or semantic technology in their operations.
- To define obstacles and problems in utilizing web 2.0 in university libraries of Gujarat State from uses perceptive.
- To investigate the relationship between library and user in the new era.
- To investigate the acceptance and use of web 2.0 technologies by users of university libraries of Gujarat state.

1.4 Research Hypothesis

Semantic web and web 2.0 tools are useful in academic libraries to promote and provide effective services to faculties and students. This would increase ineffective user of library resources and hence librarians will fulfill third law of Ranganathan that “Every book (resource) it’s Reader”

- Web 2.0 can impact on operations of academic libraries.
- Users are demanding change in present service of libraries.

- There is Significant Difference between user expectations and present Situations of university library services

With help of Technology Acceptance Model following Hypothesis will be tested to check users use and acceptance of Web 2.0 tools and technologies in library.

- Performance expectancy has impact on students' behavioural intention to use Web 2.0 technology for library use.
- Effort expectancy has impact on student behavioural intention to use the Web 2.0 technology for library use.
- Social influence has impact on student behavioural intention to use Web 2.0 technology for library use.
- There is no difference of opinion of Age, Gender & Designation of Library users on PE
- There is no difference of opinion of Age, Gender & Designation of Library users on EE
- There is no difference of opinion of Age, Gender & Designation of Library users on FC
- There is no difference of opinion of Age, Gender & Designation of Library users on SI
- There is no difference of opinion of Age, Gender & Designation of Library users on BI
- There is no association between usage web 2.0 tools for academic use and Age, Gender & Designation of Library users.

1.5 Importance of present study

The study examined the Importance of Web 2.0 tools utilized by Central Libraries and its services in particular Gujarat State universities. With regard to the use of Web 2.0 tools to provide services to its users, the study is anticipated

to contribute to a better understanding of the field of librarianship. The study proposes a variety of effective uses for Web 2.0 tools for academic libraries. One of the key goals of the Vibrant Gujarat 2017 Summit, which was organized by the Gujarat government to promote academic integrity, is to develop more private and deemed universities in Gujarat State. More and more private and deemed universities are establishing in Gujarat State as a result of this summit.

1.6 Scope of Study

The purpose of this study is to provide an overall picture of the use of Web 2.0 tools and technologies in the university libraries of the Gujarat State and Check its Significance on the services of university libraries. Furthermore web 2.0 is a user centric concept; Present study aims to check acceptance and use of Web 2.0 technologies at point of view of library user.

The present study covers below mention university libraries of Gujarat State. The list of Universities has been derived from Govt. of Gujarat website. Below is table for list of universities in Gujarat State.

Table 1-1 List of Universities

No.	University	Type	Place
1	Gujarat University	State	Ahmedabad
2	Sardar Patel University	State	VV Nagar
3	Veer Narmad South Gujarat University	State	Surat
4	The Maharaja Sayajirao University of Baroda (M.S.University)	State	Baroda
5	Saurashtra University	State	Rajkot
6	Bhavnagar University	State	Bhavnagar
7	Hemchandracharya North Gujarat University (NGU)	State	Patan
8	Krantiguru Shyamji Krishna Verma Kachchh University	State	Kachchh
9	Dr. Babasaheb Ambedkar Open University (BAOU)	State	Ahmedabad
10	Shree Somnath Sanskrit University	State	Veraval
11	Children's University Gujarat	State	Gandhinagar
12	Gujarat Forensic Sciences University (GFSU)	State	Gandhinagar
13	Raksha Shakti University	State	Ahmedabad
14	Kamdhenu University	State	Gandhinagar

15	The Indian Institute of Teacher Education	State	-
16	Gujarat Technological University	State	Ahmedabad
17	Gujarat Ayurved University	State	Jamnagar
18	Anand Agricultural University	State	Anand
19	Navsari Agricultural University	State	Navsari
20	Sardarkrushinagar Dantiwada Agricultural University	State	Dantiwada
21	Junagadh Agricultural University	State	Junagadh
22	Gujarat Vidyapith	Central Govt.	Ahmedabad
23	Central University of Gujarat (CUG)	Central Govt.	Gandhinagar
24	Sumandeep Vidyapith (Deemed University)	Central Govt.	Vadodara
25	Dharamsinh Desai University (DDIT)	Private Aided	Nadiad
26	Centre for Environmental Planning and Technology (CEPT University)	Private Aided	Ahmedabad
27	Nirama University (NU)	Private	Ahmedabad
28	Ganpat University	Private	Mehsana
29	Dhirubhai Ambani Institute of Information and Communication Technology (DA-IICT)	Private	Gandhinagar
30	Pandit Deendayal Petroleum University (PDPU)	Private	Gandhinagar
31	Kadi Sarva Vishwavidyalaya	Private	Gandhinagar
32	Calorx Teachers' University	Private	Ahmedabad
33	Charotar University of Science & Technology	Private	Anand
34	Navrachana University	Private	Vadodara
No.	University	Type	Place
35	Amadavad University	Private	Ahmedabad
No.	University	Type	Place
36	Auro University of Hospitality and Management.	Private	Surat
37	Uka Tarsadia University	Private	Bardoli
38	R.K.University	Private	Rajkot
39	Institute of Advanced Research	Private	Gandhinagar
40	Lakulish Yoga University	Private	Ahmedabad
41	Team Lease Skills University	Private	Vadodara
42	C.U.Shah University Wadhwan City	Private	Surendranagar
43	ITM Vocational University-Waghodia	Private	Vadodara

Before final analysis of present study few more new universities started in Gujarat. Researcher has undergone all of them and done content analysis of their Central library Website and included five of them for final data Collection.

1.7 Limitation of Study

Social Science research is based on theoretical framework and primary and secondary data collected. Each social science theory are having further counter theories to question it so every Social Science research would have some limitation based on various variables beyond control. Present study having below mention limitations.

1.7.1 Topological Limitation

The present study only covers the topology of higher educational (Universities') academic Libraries. Other topologies of library like public library, Special Library, School Libraries are not covered.

1.7.2 Geographical limitation

The present study is limited to University Libraries of Gujarat State only. The study covers all State funded and private Universities of Gujarat State listed in department of education, Government of Gujarat, but not covering Open Universities based out of Gujarat state which have distance education centres in Gujarat state like IGNOU, KSOU, Symbiosis University and others.

1.7.3 Subject related limitation

The popularity of various social networking sites and web 2.0 technology is rapidly changes. Hence few highly used web 2.0 technology and social networking sites and their use to the academic library will be covered. These tools have been selected based on Content analysis of its population – All University Library Website of Gujarat State. More over Institute of National importance also not covered based on its specific nature.

1.8 Methodology of present Study

For the present study of significance of Web 2.0 technologies of University libraries the researcher has decided to collect the information through the primary and secondary data.

The secondary data has been collected from the published sources like peer reviewed research journals, magazines, research reports, full text articles of conference proceedings, published and unpublished work of the peers of the field of library and information science on the topic of web 2.0 and library 2.0 as well as Blogs of experts, websites of various academic libraries, search engines and various subject databases and consortium of eBooks and e journals also be used for proposed study.

For Selection of sample from all universities of Gujarat state, Content analysis of Library Website has been done and selected sample of 16 universities.

The researcher has used structured questionnaire to collect primary data related to the study from users (Faculties and students) of university libraries selected as samples.

Data has been analyzed through help of MS Excel and SPSS for statistical analysis.

1.9 Scheme of Chaptalization

- Chapter -1-Introduction
- Chapter -2-Review of Related Literature
- Chapter -3-3Research Methodology
- Chapter-4-Web 2.0 & Library 2.0
- Chapter-5-Various types of Technology Acceptance Models
- Chapter-6-University Profile
- Chapter-7-Data analysis and Interpretation
- Chapter-8-Finding ,Suggestions and Conclusion

- Bibliography
- Appendixes

1.10 Definition of Technical Terms used in the Study

The key concepts in the title are “Web 2.0 technologies”, “Gujarat State,” “Services of academic library” and “University Library.” The definition of these terms has been drawn from various sources.

1.10.1 Gujarat State:

Gujarat is located from 20.6” longitude to 24.42” longitude in north whereas from 68.10” latitude to 74.28” latitude in west direction in India. It is occupied by six crores fifty lacks of population. Gujarat is famous for its tradition and business since ancient times. One the four main ancient universities of India is located in Gujarat Named Valabhi. Sir Sayajirao Gaikwad is one of the leading visionary for library movement in British India. In modern times also Gujarat is famous for its education and novel concepts.

1.10.2 University Library

A library attached or associated with a University and used by students, teachers, researchers, administrative staff etc. of the University as well as by the other research workers, alumni outside the University is known as University library. It is also known as the heart of University. It works like an axis of all educational and research activities in all disciplines.

According to Dr. Krishan Kumar (2009) “a University library is a part of a University set up. Therefore, it exists to serve the objectives of its parent organization. Every library programme must support University’s total programme. In other words, a University library should aim to advance the functions of its University. It should reflect character of the University”.

He also states that the major distinction between a college library and University library that a University library lays emphasis mainly upon research. Thus we find that research is a major objective of a University library. In others words, it circulates knowledge to generate new knowledge.

1.10.3 Web 2.0 technology:

Oxford Dictionary defines Web 2.0 as, “the second stage of development of the Internet, characterized especially by the change from static web pages to dynamic or user-generated content and the growth of social media.”

According to O’Reilly Web 2.0 technologies provide rich and lightweight online tools that let users contribute new data that they can aggregate to harness a community’s “collective intelligence.”

1.10.4 Library 2.0

Library 2.0 term was first coined by Michael Casey on his blog library crunch. Library 2.0 is the integration of Web 2.0 features in library web-based services. According to Maness, Library 2.0 is “the application of interactive, collaborative, and multi-media web-based technologies to web-based library services and collections” The application of concepts and technologies of Web 2.0 applied to the library services and collections is named as “Library 2.0”. (Arora, 2009).

The heart of Library 2.0 is user-cantered change. It is a model for library service that encourages constant and purposeful change, inviting user participation in the creation of both the physical and the virtual services they want, supported by consistently evaluating services. It also attempts to reach new users and better serve current ones through improved customer driven offerings. Each component by itself is a step toward better serving our users; however, it is through the combined implementation of all of these that we can reach Library 2.0.(Casey & Savastinuk, 2010).

“Academic libraries always had elements of the Web 2.0 to them, but without the 2.0 technology. Much the same, the exchange of information in real-time (think phone and F2F reference) is not new to libraries, but we now have the convenience, immediacy and community presence of the real-time web world.

1.11 References

1. Alexander, B. (2006). Web 2.0. A new wave of Innovation for Teaching and Learning. Retrieved, from [http://www.educause.edu:
http://www.educause.edu/ir/library/pdf/erm0621.pdf](http://www.educause.edu/http://www.educause.edu/ir/library/pdf/erm0621.pdf).
2. Alsbjer, P.(2008). Interaction: anything goes 2.0. Retrieved 3 January 2016 from <http://dlist.sir.arizona.edu/2370/01/SPLQ-2-2008.pdf>.
3. Arora, J. (2009). Library 2.0: Innovative technologies for building libraries of tomorrow. Retrieved on 10 January 2016 from <http://ir.inflibnet.ac.in/bitstream/1944/1460/1/5.pdf>
4. Carlson, S. (2007). Are reference desks dying out? Librarians struggle to redefine – and in some cases eliminate – the venerable institution. *The Reference Librarian*, 48(2), 25-30.
5. Casey, M. (2005a). What is Library 2.0? Retrieved December 28, 2015, from http://www.librarycrunch.com/2005/12/what_is_library_20.html
6. Casey, M. (2005b). Working towards a definition of Library 2.0. Retrieved December 28, 2016, from [http://www.librarycrunch.com/2005/10/working_towards_a_defin
ition_o.html](http://www.librarycrunch.com/2005/10/working_towards_a_definition_o.html)
7. Casey, M. (2006). Service for the next generation library: a Library 2.0 perspective. Retrieved December 28, 2016, from [http://www.librarycrunch.com/2006/08/_library_20_theory_web_2
0_and.html](http://www.librarycrunch.com/2006/08/_library_20_theory_web_2_0_and.html)

8. Casey, M. E., & Savastinuk, L. C. (2006). Library 2.0: service for the next generation library. *Library Journal*, 131(14), 40-44.
9. Casey, M. E., & Savastinuk, L. C. (2007). *Library 2.0: a guide to participatory library service*. Medford, N. J.: Information Today.
10. Casey, M. E., and Savastinuk, L. C. (2010). *Library 2.0: Service for the nextgeneration library*. Retrieved June 13, 2017, from <http://lj.libraryjournal.com/2010/05/technology/library-2-0/>
11. Gul, S., Shah, T. A., & Nisa, N. T. (2014).Emerging web 2.0 applications in open access scholarly journals in the field of agriculture and food sciences. *Emerald Group Publishing Limited*, 63(8/9), 670-683.
12. Hall, H. (2011). Relationship and role transformations in social media environments. *The Electronic Library*, 29(4), 421-428.
13. Han, Z., & Liu, Y. Q. (2010). Web 2.0 applications in top Chinese university libraries. *Library Hi Tech*, 28(1), 41-62.
14. Harinarayana, N. S., & Raju, N. V. (2009). Web 2.0 features in university library websites. *The Electronic Library*, 28(1), 69-88.
15. Miller, P. (2005). Web 2.0: building the new library. *Ariadne*, (45). Retrieved from <http://www.ariadne.ac.uk/issue45/miller/>
16. Miller, P. (2006). *Library 2.0: the challenge of disruptive innovation*. Birmingham: Talis.
17. Musser, J and O'Reilly, T. (2007). *Web 2.0 principles and best practices*. Sebastopol: O'Reilly Media. Online Computer Library Center (OCLC). (2010). *Research libraries, risks and systemic change*. Retrieved on January10,2016 from <http://www.oclc.org/research/publications/library/2010/2010-03.pdf>

18. O'Reilly, T. (2005b). Web 2.0: compact definition. Retrieved on January 10, 2016 from http://radar.oreilly.com/archives/2005/10/web_20_compact_definition.html
19. O'Reilly, T. (2005). What is Web 2.0. Retrieved January 10, 2016, from <http://www.oreilynet.com/pub/a/oreilly/tim/news/2005/09/30/what-is-web-20.html?page=1>
20. Oxford Dictionaries: language matters. Oxford University Press, Oxford. Retrieved from <http://www.oxforddictionaries.com> dated on 7/8/2017
21. Ramana, P.V. (2006). The changing role of librarian in a challenging dynamic web environment. Paper presented at the 4th International Convention CALIBER held on 2-4 February 2006 at the Gulbarga University, Karnataka – India. Retrieved on January 8, 2016 from <http://ir.inflibnet.ac.in/dxml/bitstream/handle/1944/562/18%28cal%2006%29.pdf?sequence=1>