

Chapter 2

2. Review of Literature

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2.1 Introduction

Since the inception of libraries, they are changing as per requirement of time and user's needs. The Fifth law of library and information science also describes that libraries are growing organisations. In previous chapter we have gone through objective, importance, scope and limitation of this study. This chapter describes reviews of various studies which have been conducted previously.

This literature review has been carried out based on various secondary data 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reviewed research journals, magazines, research reports, full text articles of conference proceedings, published and unpublished work of the peers of the field of library and information science on the topic of web 2.0 and library 2.0 as well as Blogs of experts, websites of various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.

The purpose of referring the research paper, project reports, articles, websites and other secondary sources of information related to study was, it also provides supportive drive and evidence for the findings of the study. A number of studies have been conducted in the world, India and Gujarat which examined the above subject.

2.2 Various Studies of Web 2.0 & library 2.0

2.2.1 Web 2.0 Studies in Education

Barhoumi, Chokri & Ben Mahmoud (2017) conducted study using both analytical and descriptive method on "**Analysis of technological, individual, and community factors influencing the use of popular Web 2.0 tools in LIS education**". The present study was conducted using activity theory and TAM.

This study explores factors influencing teachers of LIS professionals' participation in online consultations through the popular Web 2.0 tools of WhatsApp, Google+, Facebook, and Twitter. The study also explores the educational benefits of these tools in education and the types of information shared most often between teachers and their students. Researchers are adamant that Web 2.0 tools are a crucial channel for student-teacher communication during online instruction. The current study had two main goals: to determine whether the teachers it surveyed were familiar with various Web 2.0 tools and were using them in their daily lives. According to their definition in the activity theory and the TAM as factors that influence favourable attitudes toward technological innovations, the present study shows that the ease of use and perceived usefulness of the Web 2.0 tools implemented by LIS educators immediately had an impact on the behaviour of users toward them. Twitter and WhatsApp are regarded as useful tools for exchanging information and knowledge in any educational institution, not just library science education. The study also shows that LIS professors' social presence and interactions with students help them succeed academically. Studies have revealed cognitive, motivational, and affective benefits of collaboration, and there is an increasing amount of interest from researchers in researching collaborative learning activities in LIS education.

Eze, Eberechukwu Monica (2016) have **studied “Awareness and use of Web 2.0 tools by LIS Students at University of Nigeria, Nsukka, Enugu State, Nigeria”**. The study's major goals were to determine how well UON students in Nigeria were aware of Web 2.0 tools and how they could be used to promote libraries and train future library information science workers. Additionally, the study looks into the motivations behind students' social network participation and the channels they use to learn about web 2.0. Author employed a structured questionnaire and descriptive survey instrument. 220 students in all took part in

the study and provided insightful input. According to 97% of respondents, the study shows that social networking sites are the most common. Among students, IM came in second. Although, according to the students (62.3, 58.6 and 54.1% respectively), additional Web 2.0 capabilities including RSS feeds, Podcasts, and social bookmarking are unfamiliar to them. When asked why they used web 2.0, students stated that they did so to communicate with their friends and family. Only 25% and 30% of consumers said they utilised it for knowledge exchange and satisfying their curiosity, respectively. The majority of responders credited their peers and self-practice for helping them master the abilities. Only 27% users have given credit to library school for teaching web 2.0 tools. Author concluded with observation of present generation of students that they are very much tech savvy and learn new things very quickly and enjoy using new technology which makes them trend setters. To fulfil their information needs, librarians have to be more techno savvy and updated. Now in changing scenario where libraries are lacking users, librarians have to grab this opportunity to render services to these new gen users on their favourite platforms.

Moshahid, Mohd. & Pt, Abdunnazar (2017), in their Research paper “**study on awareness of web 2.0 resources in education among B.Ed. students**” studied awareness of Web 2.0 resources in education among B.Ed. Students of Government institutions and private institutions. They have elaborated various tools like Wikis, Blogging, Social Networking, Synchronous Communication, Multi Media Archives, and M- Learning in depth. The study was conducted on 200 B.Ed. Students of (100 from govt. colleges & 100 from private colleges) from Malappuram and Kozhikkode districts of Kerala state. They have used Gender & type of institutions (Government & Private) as variable in study to compare awareness of Web 2.0 resources for educational use. Analysis of study was done on three point scale of “agree, disagree and I don’t know” with the help of statistical tools like Mean, Standard Deviation & T- test. Study results

were on various variable shows that, with t value of 2.71 % the B.Ed students from government colleges are having advanced level of awareness on web 2.0 resources than the B.Ed students from private colleges. With gender as variable the male B.Ed students are possessing higher level of awareness on web 2.0 resources in education than their female counterpart in both government and private institutions with t- value of 4.35 & 3.76 respectively with 0.01 level of significance on all tests. While comparing both govt. and Private institutions male students' awareness, govt. institutions students are having higher level of awareness than private male students with t- value of 2.15 with 0.05 level of significance. Researchers also concluded that teachers cannot make their class effective without proper use of web 2.0 technology. Lastly they added that technology facilitated teaching and learning is the need of hour and proper integration of web 2.0 resources in teaching and learning will surely have a constructive influence in creating and disseminating information in the current educational consequences.

Tabiso, Mwiinga & Chrispin, Hamooya (2016) Conducted study on “**An investigation on the usage of web 2.0 applications for educational purposes among undergraduate students at the University of Zambia**”. The objectives of above study were to examine the purpose and means of using web 2.0 technology by UG students of university of Zambia. Moreover they try to found out which type of web 2.0 technology users use for academic purpose. They also investigate various factors influencing uses to adopt new Web 2.0 technology and challenges they found using it. The study was conducted with self-structured questionnaire on sample size of 279 UG students and analysed through SPSS. The results of study was – Students widely used various type of Web 2.0 tech. for academic purpose like SNS mostly used, subsequently wikis, videos and finally blogs. Social media tools were largely used for communicating with family and friends, wikis for research to meet coursework

demands, and blogs for exchanging knowledge on general knowledge. Their perception of Web 2.0 in learning was positive as it improved student-librarian interaction. It was also revealed that students were not using web 2 tools because of the lack of knowledge and skill in the use of Web 2.0 applications for educational purposes. Researchers recommended that libraries must play a role in shaping which Web 2.0 tools their students should adopt for educational purposes and Students need to be educated on the internet use as well as the necessary hardware and software to enhance the use of Web 2.0 applications.

Tyagi, (2012) conducted a study **“Adoption of Web 2.0 technology in higher education: A case study of universities in National Capital Region, India”** to be acquainted with the intention of using Web 2.0 technologies by faculty members of universities of New Delhi (National Capital Region).the said study was conducted on 300 educators of 6 university of NCR through self-administered questionnaires. 147 questionnaires were found valid. Out of them 43 were professors, 41 were Associate Professors, and 63 were Assistant Professors. Researcher revealed that popularity of WWW resulted in use of Web 2.0. Web 2.0 sites such as Flickr, Facebook, MySpace and Wikipedia have abilities to smooth the progress of education. The result stated that (72.09 %) educators use social bookmarking followed by Wikis and Blog; Social bookmarking is the most frequently used Web 2.0 tools among the respondents which followed by Wikis and Blogs. Very also use RSS Feed. Very few respondents use Podcasting, SNS and Mashup. Study concludes that educators were using Web 2.0 tools for different purposes like mostly being used for: web based teaching & research activities (89.11 %); secondly for interactive learning activities (92.51 %) & lastly keeping updated on related topics (93.87 %). The study also explores benefits and contributions of web 2.0 in higher education institutions.

Meredith Farkas (2012) has conducted a study on **“Participatory Technologies, Pedagogy 2.0 and Information Literacy”**. A detailed literature review was conducted on the use of participatory technologies in education as well as theories related to collaborative learning. This review formed the basis of the proposed pedagogy 2.0 model. This paper seeks to explore the impact participatory technologies have had on education and the information environment in which students operate. It seeks to define a pedagogical approach that will capitalize on the benefits of participatory technologies in the classroom and applies this “pedagogy 2.0” to information literacy instruction. Web 2.0 and the growth in use of participatory technologies have had a tremendous impact on the information environment. Instructors seeking to take advantage of participatory technologies in the classroom should also consider altering the classroom learning environment to one that embraces social constructivist and connectivity pedagogies. Changes in the information environment also require a corresponding shift in the way information literacy is conceptualized and taught.

Durodolu, Oluwale Olumide (2016) in his paper **“Technology Acceptance Model as a predictor of using information system’ to acquire information literacy skills”** used model to represent behaviour of users to acceptance of technology. This paper critically evaluates various behavioural studies done in the area of technology acceptance. The technology acceptance model is based on the theory of reasoned actions. TAM uses two variables like Perceived Usefulness (PU) and Perceived Ease of Use (PEU). Perceived Usefulness includes factors like - the intention to use, user training, and computer experience and system quality. Perceived Ease of Use consist of factors like computer self-efficacy, perception of external control, ease of use, internet self-efficacy, efficacy of library use, computer anxiety, information anxiety, perceived enjoyment, objective usability, behaviour and intention. The study

identified resistance to information systems as a main reason for the failure of adoption of new technology in attaining information literacy. It was suggested that appropriate instruction and training on the use of technology and application to real life situation can lead to better information literacy.

The same factors and models will be used for evaluation of significance of web 2.0 technology on services of libraries. As they tries to studying various usefulness and behaviour of end user regarding any new technology and impacted on any system like services of library.

Lili Luo (2010) has conducted a study on **“Web 2.0 Integration in Information Literacy Instruction: An Overview”**. The main objective of the study is to examine the adoption of the Web 2.0 technology in information literacy instruction. A total number of 50 valid responses to the survey questionnaire were received and 8 follow-up interviews were conducted. According to the findings, Web 2.0 technology has been actively used by the surveyed librarians in teaching IL courses. Their adoption of Web 2.0 tools is manifested in a three-level hierarchy. At the first level, librarians (4%, n=50) only use Web 2.0 tools for their own purposes without engaging students. At the second level, librarians (84%, n=50) use Web 2.0 tools to facilitate the delivery of content to students. They either use the tools to publish content for students to access and interact with, or involve students in using the tools to complete coursework collaboratively or enhance interaction. At the third level, librarians (38%, n=50) draw upon certain features of the Web 2.0 technology to better illustrate IL concepts. Survey and semi-structured interviews were conducted to analyse the perception of the respondents. Five questions were asked in the survey to collect demographic information about respondents remaining questions were asked to know the perception of respondents about web. 2.0

2.2.2 Web 2.0 and library 2.0 Studies

Chen Xu, Fenfei Ouyang and Heting Chu (2009) have studied “The Academic Library Meets Web 2.0: Applications and Implications”. The purpose of the study is to propose a conceptual model of Academic Library 2.0. The study has explored the websites of 81 academic libraries in the New York State to find out to what extent Web 2.0 tools were adopted. Academic libraries in the New York State have begun embracing the Web 2.0 movement although less than half of them we surveyed adopted any Web 2.0 tools. Those libraries collectively implemented, albeit on varying scales, IM, blogs, RSS, tagging, wikis, social networks, and podcasts to enhance or improve their library operations and services. Among the seven Web 2.0 tools adopted by the academic libraries in our sample, IM takes the lead in terms of adoption frequency, followed by blogs and RSS.

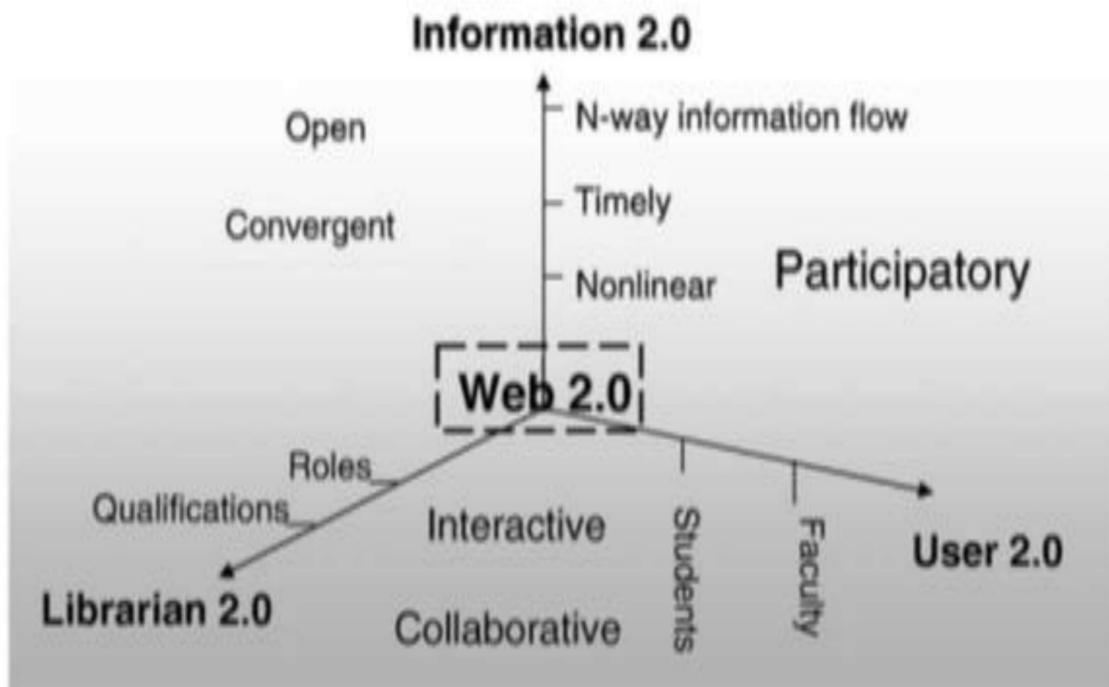


Figure 2-1 The Academic Library 2.0 Model by Xu, Ouyang and Chu

The above model is intended to capture major rudiments and constituents when Web 2.0 tools are introduced into academic libraries. Even though the model was visualized three dimensionally, the actual relationships among what is involved in Academic Library 2.0 far exceed the space we can use physically. On the other hand, the Academic Library 2.0 model we proposed is only an initial step towards our efforts to fully explore the applications and implications when Web 2.0 and the academic library interact.

Paula Torres-Pérez, Eva Méndez-Rodríguez and Enrique Orduna-Malea (2016) have explored “**Mobile Web Adoption in Top Ranked University Libraries: A Preliminary Study**”. The main goal of the present work is to ascertain if the quality of academic apps and mobile websites are at the level of the overall web impact of world-class universities. 50 universities were chosen and for this purpose, we designed an evaluation model composed of 14 indicators based basically on the combination and an update to the models already proposed by (Aldrich, 2010; Méndez Rodríguez, 1999; Paterson & Low, 2011). A good proportion of the university libraries studied 88% (44) are accessible through mobile devices (through an app or mobile web), showing a high level of mobile web adoption in universities. Regarding evaluation of the content, no library provided all 14 services, and the results are quite varied. During study 14 Indicators were used like Library hours, Library directory, Library catalogue, Contact us, Main library, Ask a librarian, Library news, Renew material, My account, Computer availability, Floor plans/maps, Databases, Loan periods, Reserve study. In order to compare the quality of the mobile website/app with the web impact of each university, the score of each mobile website/app to their position in the Web Ranking of Universities through the coefficient of correlation of Pearson ($\alpha = 0.1$) has been Compared.

Noa Aharony (2009) has conducted a study on “**Web 2.0 use by librarians**” The research examines whether personality characteristics (resistance to change, cognitive appraisal, empowerment and extroversion or introversion), as well as computer expertise, motivation, importance and capacity towards studying and integrating different applications of Web 2.0 in future, influence librarians' use of Web 2.0. Different questionnaires were distributed to 168 randomly Israeli librarians throughout the country. The researcher sent 200 questionnaires via mail and 50 online questionnaires to randomly selected librarians who work in central libraries in the north, south, and center of Israel. Of this group, 168 librarians answered the questionnaires. This study highlighted the characteristics that affect librarians' use of Web 2.0, including personality characteristics (resistance to change, cognitive appraisal, empowerment, and extroversion or introversion), computer expertise, motivation, importance, and the capacity to study and integrate different applications of Web 2.0 in the future. Pearson correlations among importance, motivation, appraisal and Web 2.0 use, and means and standard deviation of different measures toward Web 2.0 use. Researchers conducted a hierarchical regression analysis using Web 2.0 use as the dependent variable.

Linh Cuong Nguyen; Helen Partridge & Sylvia L. Edwards (2012) in their research paper published in journal library hi-tech "**Towards an understanding of the participatory library**" stated problem of changing scenario of library environment. These Web 2.0 technologies have enriched library collections and services, and upgraded the roles of both libraries (librarians) and users. From book keepers library professionals are becoming information editors, information organisers, and information advisors and users are becoming library client or participant in library processes. It is marked as new highly professional atmosphere of library 2.0 were users' role is also participatory or library work for users' perceptive rather than policy oriented.

They also try to find out new relationship between Library as an institution and its user in this paradigm shift. They define it as *“such emerging technologies and social media have enabled users to play new and extended roles which they were unable to do in the past”*. They have given various principles like: a) from information users (consumers) to information (co-)creators and information providers. b) Users are becoming (playing the role of) librarians. c) User-centeredness is being heightened. d) Users are being offered more power. e) The relationship is being balanced. The concept of user centeredness has been given by them. In this conceptual study they have define various characteristics of Participatory library system which is now part of library 2.0 concept in it. This paper clearly defines use of web 2.0 technology for libraries and thus evolving Library 2.0 or participatory library system.

Hanif, Mohammad (2009) have given his views on **“Need for Web 2.0 Technology for the Libraries”** during 7th International CALIBER-2009. He has defined various characteristics of Web 2.0 technology for library and its features. He has describes web 2.0 features which has been given by Andrew McAfee which is now popular as features of SLATES, & they are – Search, Link, Authoring, Tag, Extension and Signals. He also discusses various characteristics of Web 2.0 technology like – Participation, Standards, Decentralization, Openness, Modularity, User Control and Identity. He also describes various types of Web 2.0 technologies that can be used by libraries with examples. He also given benefits observed by him for using Web 2.0 technology for library. They are - Faster time to market, Closer relationship with customers, Increased responsiveness. He has concluded with paradigms of change with use of Web 2.0 technology in field of library. They are –

- User-centralism is neither new nor special to Library 2.0 but user-participation is new and special.
- Not only the terminology shift from Library to Library 2.0 but there is a shift in tools & techniques used to deliver the information services.
- Shift is observed in reaching out the larger user community.
- There is a certain paradigm in the speed of the updated information and its reach out.
- Paradigm shift is observed in social tagging where everyone is allowed to categorize the information from the user's perspective.
- Paradigm shift is observed in automation of open access to information.
- Copyright will no longer exist because it will be replaced by clickable licenses among communities.
- Individual access converts to community access.

Thus lastly he has made concluding remarks like “Web 2.0 is not just a technology or a thing but a new paradigm and a state of mind. The heart of Library 2.0 is user-centered change. It is model that encourages constant and purposeful change, inviting user participation. The library has had a web-presence for many years, and with Library 2.0, its patrons will be joining it. There is a certain need for implantation of Web 2.0 technologies in libraries.”

Michael Ahenkorah-Marfo and Harry Akussah (2016) have conducted research on “**Being where the users are Readiness of academic librarians to satisfy information needs of users through social media**”. The objective of the research is to investigate the preparedness of librarians to use social media in Ghana's public and private universities, the policy implications and the challenges associated with the use of social media. The interview method was used to collect qualitative data from six top-ranked universities in Ghana. These included University of Ghana, Kwame Nkrumah University of Science and

Technology, University of Cape Coast, Ashesi University College, Valley View University and Ghana Technology University College. Most users of academic libraries are on social media and could be linked with their information needs irrespective of their location. It has therefore become imperative to employ social media to provide information to users on the go. Unfortunately, academic librarians in Ghana, unlike most of their counterparts elsewhere, are not adequately prepared for the global revolution in information provision with regard to social media. Either many librarians have seen the benefits of social media but lack training, or that the uptake of social media is growing but lacks the institutional support to make it pervasive. All interviews were audio-recorded, transcribed and put into themes. Qualitative content analysis was used to analyse the data that were gathered from the interview transcripts. The findings under their thematic areas were compared and contrasted with other findings in the literature.

T. Matingwina (2014) Studied **“Knowledge, attitudes and practices of university students on Web 2.0 tools: Implications for academic libraries in Zimbabwe”** The study was divided in to three level of objectives like to establish the knowledge levels, to determine the attitudes& found out level of adoption and use of web 2.0 tools by university students. He Studied sample of 352 Students of National University of Science and Technology, Bulawayo-Zimbabwe with response rate of 75%, 280 responses received. The study reveals that Most of (99%) students are aware about use of ‘good’ to ‘excellent’ knowledge levels on Instant Messaging& Majority (46%) were using Facebook or any social networking sites as educational purpose. Most of the students indicated that they had ‘average’ knowledge level son Wikis, Document sharing tools, Presentation sharing tools, Photo sharing tools, Blogs, Microblogs, Podcasts. While determining the attitudes of university students on web 2.0 tools, Study results were-majority of students (96%) agreed with the belief that

web 2.0 technologies are useful in academic libraries. Most of the students (54%) strongly agree with statement that web 2.0 tools would improve access to information; overall, the majority (79%) believe the usefulness of web 2.0 technology in university libraries.

Manoj kumar (2014) conducted study on **“Students opinion about the success of mobile technology in libraries: A case study of Jawaharlal Nehru University (JNU), New Delhi”** The main purpose of said study was to find means of providing better service with a help of mobile technology. Secondary purpose of study was to found out user’s expectations regarding use of Mobile technology for educational functions like library catalogue and other library web pages related to remote access, user participation and which is base of web 2.0 technologies. The study revealed that use of mobile technology and web presence is likely improving quality of library services and satisfaction among users reading library and its environment. Present study was conducted on 200 library users in which researcher received 180 responses with 90% response rate. More than 93% users were using mobile access to library services. more than 75 % users demands library catalogue online in their mobile and majority demands online web services. Very few found difficulty in using library services through mobile.

Kumar, Amit & Bhatt, Rakesh (2014) studied **“Student opinion on the use of social networking tools by libraries: A case study of Jawaharlal Nehru University, New Delhi”** this wider study have various objectives like , to know users view regarding use of various SNS for personal as well as academic use. To found out extent they used SNS and level of difficulty they found during use of web 2.0. With response rate of 85%, researchers were received 170 valid responses in present study and they have found out that most of users are using SNS in their personal life very frequently.50 % use them for both academic and

personal use while very few only 14 % users are using only for educational use. In response to medium to use SNS, majority users revealed that laptop is most favourable means to use SNS. Unlike academic use majority 66 % users wants library related news through their mobile or other SNS rather than on library notice board. Lack of time and privacy issues are their major concern or hurdle while using SNS and web 2.0. Overall study found out that SNS are turned out as a new means or platform to share and gain information.

Mpoeleng, Dimane; Totolo, Angelina and Jibril, Lynn (2015) have studied **“Perceptions of University of Botswana Librarians on the Potential of Web 2.0 Tools”**. With objectives of checking access of Web 2.0 on university library web site, and actual use by library professionals of university. More over one more objective is like to check hurdles that hamper the implementation of web 2.0. To fulfil their objective researchers used UTAUT model of technology acceptance on collected data through structured questionnaire and content analysis of University library web site. Due to heavy popularity of Facebook, blogs, Twitter, wikis, podcasts, and LinkedIn, they were chosen. Total 30 librarians out of 66 in higher management cadre were responded to it. The study results are showing that library staff has implemented Facebook and use it individually, but some tools such as wikis, podcasts, Twitter, LinkedIn and blogs were not very popular. The research also recognized some facilitating conditions (FC) and social influences (SI) which negatively impacted the librarians and slowed down the rate of adoption and use of Web 2.0 technologies. However performance expectancy (PE), effort expectancy (EE) have turnout very positive in this study which clearly indicted web 2.0 technology can be very useful at personal level and improve efforts to market library services. To implement Web2.0 more effectively library have to work upon organizational behaviour and work culture.

Gross, Julia & Leslie, Lynette (2008) have given “**Twenty-three steps to learning Web 2.0 technologies in an academic library**” in their experimental paper for journal electronic library. It reports the adoption and evaluation of a Learning 2.0 program in a pilot program at the Edith Cowan University Library during 2007. This program was deployed via blog –which lasts till 9 weeks after that a focus group was held and the pilot group members responded to questions about the significance of the program, and the efficiency of their learning outcomes. Authors stated that ECU library was first in Australia to adopt Web 2.0 technologies in day to day operations and services. The program consist of setting up a web 2.0 enabled web site for library, set up wiki for library and starting of library blog. The program was grand success that it is supported by current learning theory and adheres to adult learning principles. As a result of the training program at this academic library in Western Australia, Web 2.0 technologies are now being synthesized and integrated into day to day operations of libraries of Australia and are providing new opportunities to connect with our users.

Procter,Rob; Williams, Robin; Stewart, James & others (2010) in their research named “**Adoption and use of Web 2.0 in scholarly communications.**” In this in depth study data has been collected through questionnaire and then structured interviews with responded. This survey was very broad in nature as data has been collected through Higher Education Statistics Agency. 12000 emails has been send to UKs academicians and PhD students and 1477 responses have been received. This consists of total 27 % PhD students of all disciplines but widely from Economics and Social Sciences. They define some factors shaping Web 2.0 adoption during analysis of study and they are – 1) Collaboration 2) Local support 3) Skills 4) Information discovery practices 5) Attitudes towards novel scholarly communications 6) Changes in practices of peer review 7) Open science.

Findings suggest that Web 2.0 services that are generic, intuitive and easy to use, build incrementally upon existing practices, are available for free or very little expenses, and to be offered near-zero adoption costs and clear advantages to users, are experiencing rapid acceptance.

Sodt, Jill M. & Summey, Terri Pedersen (2009) have shared their views on web 2.0 technology in descriptive study “**Beyond the Library’s Walls: Using Library 2.0 Tools to Reach Out to All Users**”. Present study nicely describes the concepts of Web 2.0 and Library 2.0. The Library 2.0 movement or term emerged out of the Web 2.0 phenomenon. The present study have examine several tools under the Web 2.0 and discuss the ways in which these technologies may be used in the library to help to reach end users to serve long tail or to reach last user who is not coming to library frequently, making parent institutions more appropriate in today’s technology driven information society. They have describes various tools like Social Networking tools, Publishing tools like blogs and wikis, Podcasting and RSS, Social Bookmarking and Tagging to offer effective Library 2.0 services. Here Library 2.0 services means traditional services which can be given more effectively with use of above Web 2.0 tools. Researchers conclude that Library 2.0 is not only about the technology. Library 2.0 takes the technology and user input to create a more user-cantered – or participatory environment. They have quoted Fichter (2005) wrote, “*Creating successful online collaborative communities isn’t necessarily easy—or always necessary. Just because you can create an online dimension of community doesn’t mean you should. Technology should be a supporting player in any collaborative effort, not the driver*”

Brantley, John S. (2010) in her study “**Exploring Library 2.0 on the Social Web**” describe Web 2.0 refers to dynamically generated Web sites that allow information sharing between users and are characterized by social networking.

Library 2.0 is defined as Web 2.0-enabled content contributed by and/or commented on by librarians and library users. This study adds context to the largely unidentified area regarding the use of Library 2.0. There is much discussion surrounding the meaning and use of the concept of Library 2.0. In present study researcher had done content analysis of nine popular social software-enabled Web sites which consists of three type of web sites like Social Networking, Blog Search Engine and Social Bookmarking Sites. These web sites are searched with various library related web term or key words and phrases. Results of this analysis revealed several design of searching. Moreover regarding SNS suggest that SNS users have chosen Facebook or Friendster as the place for their library's profile. Libraries should focus on these sites rather than MySpace as a place to promote their institution. Same is the case with Blogs and Social Bookmarking sites. Very few blogger librarians were widely reads and only some of them are consistently writing their blogs. The results suggest only a small percentage of Library 2.0 content creators are making a sustained effort. But low frequency does not make the Library 2.0 movement less significant. Assuming the validity of Pareto's rule, and 80 % of the users of Library 2.0 generate only 20 % of its content, so be it. Librarians enable communication, increase the accessibility of information, and encourage an informed and participatory citizenry.

Howard, Heather; Huber, Sarah; Carter, Lisa & Others (2018) have conducted study on **“Academic Libraries on Social Media: Finding the Students and the Information They Want”**. This study was part of a pilot project of Purdue University, as they want to know which type of social media their students' use and what content users would like to see from the library on each of these platforms. Data has been collected from students of four campus libraries to determine student social media habits and preferences. Total 128 students participated and the majority (93%) are visiting the library more than once a

week. While in response to social media presence users gave difference opinion but top five were Facebook (88 %), YouTube (79 %), Snapchat (70 %), Instagram (66 %), & Twitter (32 %). Next how much time users spend on SM and purpose of visiting it, Responses are that students overwhelmingly use social media daily or weekly to watch videos (94 %), keep in touch with family/friends (93 %), and to get news (81%). The least popular activities, those that students do less than once per month or never, were research (47 %) and following public figures (34 %). Here in survey students gave their preference to social media platforms they thought the library should be on & top Five the results Were Facebook (82 %), Instagram (55 %), Twitter (40 %), Snapchat (34 %), and YouTube (29 %).users prepared content on social media are with the most selections made for library logistics and the fewest made for business news).This study improved understanding of the social media usage and preferences of Purdue University Students and it came out as a tool to create new channel to market library services.

Koltay, Tibor (2017) in his book **The End of Wisdom?** Published by Elsevier Ltd. chapter 8 “**Library 2.0: Lost Illusions?**” have discussed various criticisms of Library 2.0 term and it’s so called benefits, especially Blogging. The blogging was defined by him in another article by an author called a historical dustbin. This article is full of term Library 2.0. Author believes that library technologies have witnessed long term changes and it cannot be limited to only this technological dotcom boom or incorporation of Web 2.0 into day to day use. Although he also accepts the use of Web 2.0 tools in libraries. Author believed that general enthusiasm for library 2.0 had vanished & scepticism about its merits had appeared. Librarians have to give second thought about use of web 2.0 as we cannot disregard what price we have to pay for using Web 2.0. He was right in underlining that these apparently free tools have often come at the price of the invasion of privacy as we are the product that social media sells

to advertisers. Regarding fair use of SM, the author gives example of Blogging. As Blogging has a question on trustworthiness of subjects written as well as sometimes bloggers change topics of blogs as per their need and monetizing policy of platforms. On other hand some blog publish editorials of reputed journals and hence it will reach to larger public. In a different environment some of blog posts are to be published in a reputed daily or weekly newspaper as articles but masked as blog entries. Author concluded with remarks like both examples show that the picture of social media is complex and intricate. While we have undoubtedly lost our initial illusions, we are also able to find real innovation.

Foo, Schubert & Ng, Judy (2008) in his article “**Library 2.0, Libraries and Library School**” explores challenges from the point of libraries and library schools, and examines whether these entities, locally in Singapore and overseas, have been able to meet the needs of its users and its clientele, as well as employers of LIS graduates. It reviews Web 2.0 and Library 2.0 progresses and provide examples of how these technologies have been incorporated by libraries around the world. In this article they have quoted impacts of web 2.0 technology on libraries (Miller, 2005) and realities define by rainie (2008).According to authors Web 2.0 and Library 2.0 is yet another wave of rapid development driven by user-centred change that revolutionize and evolves libraries to deliver a new range of functions and services to meet the varying and new demands of its web savvy users. They have observed that library schools in general, have not kept pace with these changes – they have been slow to react and update their curriculum. There is a need for library schools to act promptly to ensure the gap is closed quickly so that their graduates remain relevant to industry. A number of ways to incorporate Web 2.0 and Library 2.0 education is proposed in their concluding remarks.

Library 2.0 is a concept of a very different library service, geared towards the needs and expectations of today's library users. In this vision, the library makes information available wherever and whenever the user requires it, and seeks to ensure that barriers to use and reuse are removed.

Niedbala, Mona Anne & Fogleman, Jay (2010) in their research paper on **“Taking Library 2.0 to the Next Level: Using a Course Wiki for Teaching Information Literacy to Honours Students”** have studied about features of an introductory course for an impact of library 2.0 on students' knowledge of library research, resources, efficient research skills, and scholarly writing. They have prepared a course wiki introductory course based on The Association of College & Research Libraries' (ACRL) Information Literacy Competency Standards for Higher Education. In this standard ACRL had defined characteristics, performance indicators, and learning outcomes of an information literate student. These features have done groundwork for developing a model for Course wiki. Moreover, researchers have used the backward design model developed by Wiggins & McTighe. The backward design model is a model of instructional design organized around big ideas and essential Questions. After completing the course, students were supposed to give their views or feedback on features of the course regarding their learning, library instruction and writing activities.

Majority of students have found the course very useful or useful. Library instruction, writing the context and data table provided by the library on research pages were come out as a very useful feature of the course. There was a direct impact of web 2.0 on students' learning which can be seen in pre-course and post-course surveys of web 2.0 tools. Students have given preference to web 2.0 tools like collaborative tools like Google docs, Zotero, Google reader and social bookmarking tools diigo.com. They believed that these web 2.0 tools instructed by

library are very useful or useful. Authors concluding remarks were – *“Research-based learning theories such as backward design, scaffolding, and writing to learn can inform and empower the use of new online tools with students. Web 2.0 tools provide opportunities to develop new teaching approaches.”*

Vyas, Meghna & Trivedi, Mayank (2014) have conducted study on **“Role of social networking tool in dissemination of information at Smt. Hansa Mehta Library”**. The said study evaluate role of Social networking sites in dissemination of information. How SNS is helping staff of Smt. Hansa Mehta library is revealed in this study. Study shows that Smt. Hansa Mehta library is using Facebook, Twitter, RSS, and Blogger for Blog, You Tube, Google plus Share, Wikipedia for information dissemination. Researchers also describe other tools of social networking sites that can be used for information dissemination for libraries. In concluding remarks they stated that SNS serve as an important tool for broadcasting information that may be used to reach the users and in turn be used in designing and development of policy in an organization. With help of SNS academic librarians can get firsthand information about the user through communicating with them. They can then recognize the behavior of the user and design services to meet the needs consequently

Tella, Adeyinka & Soluoku, Taofeeqat (2016) have commence study on **“Usage analysis of Web 2.0 and Library 2.0 tools by librarians in Kwara State academic libraries”**. During their survey on usage on web 2.0 and library 2.0 tools used by librarian of Kwara State academic libraries, Nigeria, They have taken sample of 40 libraries through total enumeration sampling technique from four different tertiary education institutions libraries in Kwara State, Nigeria. The main objectives of above study were to find out perceptions and accessibility of web 2.0 and library 2.0 tools to librarians. Besides this another objectives were to examine the role of Web 2.0 and Library 2.0 tools in

providing of effective library services to users and to identify problems faced by librarians when using Web 2.0. With sample of 40 librarians from 4 major libraries of Kwara state they have selected 35 valid responses. They have found out that majority of the librarians (80%) are aware of the Web 2.0 and Library 2.0 tools. The major tools used by them were Blogs, Facebook, RSS, Tagging and Social booking, Micro blog, MySpace, LinkedIn, and YouTube. Further study reveals that revealed that Web 2.0 tools are used among librarians for the purpose of selective dissemination of information (SDI), current awareness services (CAS), information delivery, document delivery, and indexing, abstracting, cataloguing, classification and reference services. The challenges reported faced by librarians in using Web 2.0 and Library 2.0 tools in this study are unstable supply of power, lack of necessary facilities, inadequate computer literacy skills and interest. Authors hope that the findings of this study will provide invaluable information about the usage of Web 2.0 and Library 2.0 tools in Nigeria tertiary institutions.

Trivedi, Mayank & Suthar, Vishnu (2011) have conducted experimental research on **“A plan of M-Library for Smt. Hansa Mehta Library: A study”**. The study is demand of time when new mobile technology has evolving. With objectives of checking concept, challenges and facilities of M-Library, to introspect and check feasibility of M- Library in Smt. Hansa Mehta Library and to examine present situation and propose most favorable model of M-Library to improve the efficiency and usage of Smt. Hansa Mehta library. The present exploratory study proposes the M-library system design of the Smt. Hansa Mehta Library (HML), the University Library of M S University of Baroda, The plan for M- library and its importance has been and services and deploy the M-library are discussed. The M-library system can auto-detect users, devices and bring them to the appropriately formatted version (mobile or desktop) of the site. The library website has been re- created to ensure that it displays well on a

variety of mobile devices. The study has resulted in a very positive way. Students can access a wide range of digital resource and library services and truly engage in learning activities using any mobile devices wherever and whenever they choose, not just at their desktop PCs. Developments in MP3 format, pod casting, and support for a third generation of smart phones puts Smt. HMUL Library at the leading edge of new and emerging trends in mobile learning and education.

Olasina, Gbola In his research paper **“The use of web 2.0 tools and social networking sites by librarians, Information Professionals and other Professionals in workspaces in Nigeria”** studied various types of web 2.0 tools and SNS used by professionals in Nigeria. With objective of determine perception towards Web 2.0 and SNS and identify various tools used by them.

Patel,Sandip & Bhatt, Atul (2017) in their research paper **“A Study of Web 2.0 Application in Libraries of Premier Institute of Gujarat”** published in international Journal of library and information studies found out that all Libraries deployed web 2.0 technology to provide information services. 66.7 percent of the Libraries applied RSS, vodcast, OPAC 2.0, Instant Messaging, Mashup, Social Bookmarking & Tagging where as 33.33 percent Libraries are using Blog, podcast, Social Networking Services, Google Docs and YouTube. In this survey none of the Libraries adopted wikis. They have further suggested that the library personnel are to be proactive, skilled and passionate to provide the web based information services in according to the present and future needs of the users, at the same time the users are also required to be well versed with this kind of technology.

Aqil, Mohammad, Ahmad, Parvez, & Siddique, Mohammad Asad (2011) in their theoretical research paper **“Web 2.0 and Libraries: Facts or Myths”** talked about various potentials of web 2.0 technology in the field of Library and

information science. They have discussed The concept of Web 2.0 such as social networks, RSS feeds, blogs, streaming media, podcasts, Wikis, tags, mashups, etc. is defined and the possible applications in various library functions and activities. In the last they concluded that web 2.0 will increase the user's participation in various library functions such as cataloguing, classification, reference services, current awareness services, collection development process, Information delivery, information retrieval, user orientation programs and library events & news, etc. The change in library functions and services into Web 2.0 services is going to be very thought-provoking and indistinguishable in its appearance. With hope they remarked that this will bring new larger section of the user community and will actively participate in the various library functions and services. They also noted that currently the third world countries are not much aware and using web 2.0 for its libraries. The reason behind this behavior is their restricted and tight budget.

Sheikh, Syed, & Naseer (2016) have published research paper titled **“Use of social media tools by reputed University libraries of the world: A comparative study”** in Pakistan Library and Information Science Journal. They have review world's all top universities regarding use of web 2.0 and then compared it with Pakistan's top university libraries and concluded paradigm shift in working style of it. They have observed that University libraries in Pakistan are extremely lacking in use of social media tools as compare to other reputed University libraries of the world. While out of 28 University libraries in developed countries 25 (89.28%) have provided the links of social media tools on their library's web-portal. In their concluding remarks they suggested that librarians to think critically about making use of Web 2.0 tools for marketing of their library services. Additionally, libraries should make determination to manage web 2.0 in a well-organized way.

Bera, Modak, & Das (2019) have published theoretical paper “**Library 2.0: The application of web 2.0 technology to library and information services.**” in international journal of advanced research. They have aims at seeking the use of Web 2.0 applications by the library and information professionals. Further they suggest that that recent thinking describing the changing “Web” as “Web 2.0” will have substantial implications for libraries. the theory and definition to the practice of librarianship, specifically addressing how the technology Web 2.0 such as synchronous messaging and streaming media, blogs, wikis, social networks, tagging, RSS feeds library thing, podcasts, YouTube, Second Life and mash-ups might intimate changes in how libraries provide access to their collections and user support for that access. In concluding remarks they have suggested that implementation of web 2.0 technology will be very much useful to library fraternity.

Hatua, (2019) in his research paper “**A journey from OPAC to Library 2.0: empowering users**” discussed about various development in operations of libraries. Author described necessary change in day to day operations that took place from traditional library to modern library system. He has defined characteristics of Changes that have occurred in library then he talked about changes occurred in services of library due to that characteristics. He had defined new services that have been come in to existence. More he have talked about Change in user seeking, some landmarks about digital Era and technologies that empowered users like library Automation, OPAC, Library Management Software like ILMS, library networks, library portals, Library Consortia, Subject gateways and institutional repositories and ETDs. Lastly Hatua discussed about various library 2.0 tools that have been used by libraries around and proposed model for content management for resource sharing.

Patil, (2014) in her Research paper “**Web 2.0, Library 2.0 & Librarian 2.0**” talked about various web 2.0 technologies and its connection with library and librarians. She tried to elaborate the skills & qualities of a Librarian 2.0. It discusses that the Librarian 2.0 is more about changing attitudes and ways of thinking than anything else. The challenge librarians now face is trying to clearly communicate the nature and scope of this new professional attitude. In this paper her emphasis on practical implementation rather than standard copybook theories. In concluding remarks she suggests that Blogging which is worth using in the library for knowledge or information transfer. Blogging becomes greatly supportive for Librarian in providing latest & useful information & knowledge to the users of the library.

Barik & Biswal (2018) in their work talked about “**Library 2.0 Implications for Innovative Library Services**”. They have discussed about various types of web 2.0 applications used in library and concept of library 2.0, Characteristics of web 2.0, benefits and various useful tools used in library. In concluding remarks they have preached that it is completely user centred and user driven. It is technology for 21st century which is rich in content, interactivity and social activities. They hoped that use of these tools will bring meaningful and constitute change in history of libraries. They espouse a focused definition for the term that: *“The application of interactive, collaborative and multi-media web based technologies to web based library services and collections”*

Shukla, Akhandanand & Tripathi, Aditya (2018) have presented paper on “**Library 2.0: Tools & Techniques**”. They have discussed about various roles of libraries in new paradigm shift of 2.0 environment. He discussed about change in role of library to users, user to user, library to library and users to library. They also described characteristics, importance and various tools of web 2.0. Library 2.0 concept is elaborated in this paper. More over Dr.

Ranganathan's five laws of library and information science has been transformed into five laws of library 2.0 environment. They are 1. Community knowledge is for use. 2. Every user should have access to his/her community knowledge. 3. All community knowledge should be made available to its users. 4. Save the time of the user in creating and finding community knowledge. 5. Local community knowledge grows continually. In concluding remarks they have suggested that Web 2.0 tools will bring new services in interesting way and these services make library more interesting and user friendly and better place. They also hoped that new web 2.0 services will bring conceptual, cultural and physical changes in libraries to keep pace with the changes in communities and their information seeking behaviour.

Darries, Fatima (2014) in her presentation of project TUT 23 Things "**Web 2.0 and Libraries 2.0: an introduction**". She discussed about full chronology of evaluation of web 2.0 and then development of library 2.0 concepts. She also talked about various web 2.0 tools and objective of web 2.0 set by its founder of web Team Burners Lee. She further discussed about various library 2.0 services and skills necessary for Librarian 2.0 and 7 ½ habits of learning 2.0. In her concluding speech she demonstrated library model developed by TUT library.

Arora, Jagdish (2009) have set benchmark in India during *Open Access to Textual and Multimedia Content : Bridging the Digital Divide - ETTLIS 2008* organised by IIIT University, Noida in his research paper "**Library 2.0 : Innovative Technologies for Building Libraries of Tomorrow**". This paper brings new concept of web 2.0 in India and all other researchers from countries followed it as point of reference for future research on web 2.0 in India. He has divided various web 2.0 tools into five categories like 1. Synchronous Communication tools. 2. Content Delivery tools. 3. Collaborative Publishing Tools. 4. Collaborative Service Platforms. 5. Hybrid Applications, Programs

and Programming Tools. He also describes transformations library field faced from web 1.0 to 2.0. In concluding remarks he anticipated that Implementation of some of these tools and techniques are likely to expand reputation and standing of libraries in the community. Some of them may successfully appeal new patrons to the library, others may help to retain existing members or make libraries even more significant as centres of the culture and history of their places and academic organisations. The library's collection will change, becoming more collaborative and fully accessible.

Abram, Stephen (2007) have published a research paper on **“Web 2.0, library 2.0 and librarian 2.0: preparing for the 2.0 world”**. This early work on web 2.0 and concept of library 2.0 as well as librarian 2.0 have conceptualize concept of library 2.0. he discussed about web 1.0 ,2.0 or participatory web and 3.0 or semantic web. Being software developer Stephen is amused as well as distress because of pros and cons of web 2.0 in future. He listed various web 2.0 tools that can be used in library for better services. The distressing thing about web 2.0 in his point of view is applications of it and growing expectation of users towards libraries in recent future. Paper also suggest some positive things that will prepare an average librarian to librarian 2.0. he forecasted that the web 2.0 movement will setting the foundation for exponential business growth and another major shift in the way library users live, work and play. Librarians have the ability,insight and knowledge to influence the creation of this new dynamic – and to guarantee the future of library profession.

Trivedi,Mayank (2010) had conducted study on **“Blogging for Libraries and Librarians”**. This theoretical study have discussed definitions, various types and use of blogs for libraries. Author finds blogs essentials to market library's various services. As an experiment athon has created a blog of himself and described in study.

K G Sudhier; C Devi Priya, (2017) have studied about **“Use and awareness of school library blogs: a case study”**. They have investigated the use of blogs and social networking sites in the school library blogs by the students of Kendriya Vidyalaya(KV), Pattom, Thiruvananthapuram, Kerala. They reviewed the characteristics and evaluated the helpfulness of various blogs maintained by the library- the primary library blog, LibZine, Homework and Assignment online, My dear Book and Library junction. The study was conducted with primary data collected from 110 respondents through structured questionnaire. The findings directed that the school library blogs have an influence on the academic and other activities of the student community.

Agyekum, Baffour Ohene, Arthur, Beatrice & Trivedi, Mayank (2016) have conducted a study on **“Adoption of Social Networking Tools in Public University Libraries in Ghana”**. The main objective of this study is to measure the extent of utilisation of web 2.0 tools and techniques adopted in the well-resourced public universities in Ghana. The study used quota sampling to select 32 professional librarians from UG, KNUST, UDS and UCC to answer questionnaires. The study revealed that, the most utilised social networking tool used among professional librarians was Facebook then Instant messaging. Study found very low useage of tools like LinkedIn, Twitter, Blogs, Wikis, Flickr, Slideshare, and YouTube. Only verymuch professional librarians with high commitment are using these tools. In concluding remarks researchers suggests that the libraries should be stocked with adequate ICT infrastructure and vibrant internet connectivity to ensure proper functioning and effective usage of networking tools.

Kwanya, Tom; Stilwell, Christene & Underwood, PG (2010) have conducted documentary analysis on **“Library 2.0 principles and Ranganathan’s Law #5”**. In this paper they have discuss importance of Ranganathan’s laws of

library and information science and its relevance in today's world. With observation that the pace of current societal change is so fast that the traditional library change management mechanisms cannot cope effectively with it. A paradigm shift characterized by new models of service delivery, user participation and rebranding has been recommended. Authors have recognised Library 2.0 as a model for to cope up with this change. Authors also describe various other versions of Ranganath's laws of library and information science like Alireza Noruzi's derivation of five laws for WWW, Jim Thompson's laws for Library services. Author describes then importance of library 2.0 models and its relevance with Dr. Ranganathan's Fifth law "***Library is a growing organisation***". In concluding remarks authors describe "Library 2.0 recognizes that though change is inevitable, it is largely un-predictable. It advocates flexibility in responding to change. Instead of specifying parameters, Library 2.0 focuses on principles, which can be applied with the prevailing tools at the point of change to ensure timely and appropriate service delivery"

Rana, Reshma (2017) has published a research in Pearl- A Journal of Library and Information Science titled "**New Veneer of Libraries: Library 2.0**". study discuss importance of web 2.0 tools. Facebook, Flickr, Orkut, LinkedIn, blogs, Vodcast, Technorati, WhatsApp, Wikipedia, Rich Site Summary (RSS) feeds, Podcasts and many more have emerged as the strong medium for exchanging data/information. Study revealed that Blogs are widely used in libraries and are created to exchange/share information among people having common interest like sharing photographs, study material, videos and even vacancies. There are other tools for cataloguing where tagging is created by users as well. There are many mobile applications like Meebo, Datarow, softcat, in-Flow Free, Zotero, Libre Office, Goodreads and others. It has become a powerful tool in the libraries and librarians are serving the new clientele, particularly the young readers with many tools. Libraries blogs, tagging and

instant messaging (IM) are playing major role. Through with Librarian with service, the chat sessions are established which have further helped in establishing a sturdy and robust relationship between the librarian and the library users. The remotely located readers can get answers to their queries at the same time without being present in library which saves time, money and efforts. Owing so many qualities and advantages attached to Web 2.0, which is known as Library 2.0 in library context is turning into powerful tool. The present paper attempts the tracing of the role played by the social software in turning a traditional library into a library 2.0 Library.

Ayu & Abrizah, (2011) in their research paper **“Do you Facebook? Usage and applications of Facebook pages among academic libraries in Malaysia”** answered questions like (a) “What are the extent and nature of institutional Facebook use by Malaysian academic libraries? (b) What information do Malaysian academic libraries deliver through Facebook page?”. Total 25 university library were taken as sample in this study. Study was conducted with help of instrument developed which evaluate library’s facebook page application index and its status usage index. Total 29 check point was developed to check this. This study reveals that facebook page helps library to communicate with users in better way. Academic libraries that are using Facebook page must address the consistency and timeliness of the service. Users will anticipate timely responses to any enquiries sent through Facebook page.

Singh, Malkeet & Gill, KP (2013) have conducted bibliographic study on **“Web 2.0 technologies in libraries: a survey of periodical literature published by Emerald”**. This study was conducted with keywords as “Web 2.0”, “blogs”, “wikis”, “RSS”, “social networking sites”, “podcasts”, “Mashup”, and multimedia sharing tools, i.e. YouTube and Flickr in emerald’s 13 peer reviewed

journals. Total 206 research articles were found based on topic related to web 2.0 for period of 2007-2011. The appended bibliography will be very useful for research as all the articles are at one place. The authors hope it will also be useful for a publishing house in order to determine the prolific author on the topic and seek their expertise in reviewing the articles in the field.

Dhawan, SM, Guta, BM, Gupta & others (2016) in their bibliographic study **“Quantitative Assessment of Global Literature on ‘Web 2.0 and Libraries’ during 2006-15”**. This study was conducted on scopus database. Total 482 publications were found topic related to web 2.0 and libraries. The study was conducted with objectives to check patterns of world literature, its type, Contribution, global share, and citation impact, Publication productivity and check characteristics of highly cited papers. The study revealed that 3234 citations with an average of 6.71 citations per paper. The global contributions on ‘Web 2.0 and libraries’ originated from 77 countries, 179 organizations, and 159 authors. Further they found out that total 482 global publications on the subject, 351 appeared in 94 journals, with top 19 journals accounting for 39.21 % share. The top 30 highly cited papers registered 20 to 475 citations each, cumulated 1776 citations, averaging to 59.2 citations per paper.

Coyle, Karen (2007) in his research paper on **“Managing Technology ! The Library Catalog in a 2.0 World”** have described evolutions of library catalogue in web 2.0 world. From AACR to OPAC of ILMS, Library catalogue became more smart and user friendly. Author founds two topics most fascinating. Library catalog, in the sense of the finding list of the library’s holdings, is no longer the library’s primary user service and web 2.0 philosophy emphasizes the social aspects of information such as reviews, recommendations, and tagging. Basically library’s catalogue is one to one representation of library’s physical holdings. Web 2.0 enables new catalogue

with bookmarking and tagging and social reviews done by other users. This will help other users to find his/her queries with ease. This will help libraries to fulfill requirement of Dr. Ranganathan's *Fifth law save the time of reader*. Moreover libraries have tough competition from the search engines which provide information asked in no time. Catalogue 2.0 will help libraries to survive in this paradigm shift.

Punoose,AL(2018) has conducted an investigative study **“an investigation in to the use of web 2.0 tools in the university library Websites in india”**. This study has been conducted with objectives to identify university libraries with websites, its extent to use and attempted to rank university libraries' websites. Total 192 university libraries were selected based on stratified sampling technique out of 620 university libraries. Study reveals that in changing time libraries have to be updated and keep pace with time. Previously libraries were temple of knowledge and store house of books but in modern times global scenario of information exchange and web based services are inevitable in every field. Libraries being the most popular and feasible source of information, should make changes in the older model of operation and should go along with the modern applications to make them more user-friendly. Study also revealed that web based interaction is less and there is need of an hour to transform university libraries.

2.2.3 Content analysis and webometric studies

Trivedi, Mayank & Mehta, Jaydeep (2015) have conducted analytical study on **“Contents of University Library websites of Central Universities of India: An analysis”**. The present study has been completed with sample of 45 central university libraries. Researcher believed that website plays a key role in building library's image in users and considered it as pioneer to spread awareness. The study discusses a substantial approach of library information

available on the university website. Libraries in general, being a public service institution, it becomes essential that they have more and more information in the public access through websites. Findings of the study indicated that many of the central university libraries are yet to develop with full prospective of the web and constantly extend a valuable web-based information literacy programs to endow with a high grade of interactivity and flexibility to boost the use of web-based library services they put forward to the users.

Al-Daihani, SM & Abrahams, A (2016) in their research work published in The Journal of Academic Librarianship “**A Text Mining Analysis of Academic Libraries' Tweets**” have discussed Twitter as a tool for dissemination of library news. With objective of content analysis, Frequency, type and theme of academic libraries tweets. To fulfill their objectives they have taken 10 academic libraries as sample and done analysis of total 27265 tweets and their 74432 followers. The research shown that a text-analytics approach can be implemented in the analysis of academic libraries' social media data. This approach is key to information discovery and has the potential to enhance the libraries' resources and services. Academic libraries might consider investing in data- and text-mining applications to help them analyze their postings, benchmark against the postings of other libraries, and evaluate their users' satisfaction and level of engagement. The realtime data available from tweeter like SM offers a wealth of information that could be used towards enhancing and developing library and information resources and services.

Verma & Brahma (2017) have conducted “**A webometric analysis of National Libraries' websites in South Asia**”. They have analysed the number of web pages, link pages and calculates the Web Impact Factor i.e., Simple Web Impact Factor, Internal Link Web Impact Factor and External Link Web Impact Factor of National Libraries in South Asian countries and ranks the websites as per the

WIF. The study depicts about how content analysis can be done via Web Impact Factor. With sample of 8 national library website they found that Indian National library have highest Web Impact Factor. Sri Lanka's National Library website stood second followed by National Library of Bhutan.

Narayan, Rudra and Mahapatra, Rabindra Kumar (2019) have conducted study on **“Library Websites of Central Universities in India: A Webometric Analysis”**. The main objective of study were to To find the SWIF, SLWIF, ELWIF and RWIF of the library websites of central universities of India. Researcher have taken total 41 universities as sample. Study revealed that that regular updating of websites will attract more users to access the web resources. By adding, more number of hyperlinks will reflect the ranking of websites. In the study, it has been found that 17 library websites have less than 10 indexed web pages. In their concluding remarks they have noted that inspite of having higher number of web pages, central university library websites in India are falling behind in their overall analysis of WIFs because of having their link web pages are less in number and websites.

Rahoo, Liaquat Ali ; Baladi , Zameer Hussain; Arshad, Sadia & others (2018) Studied **“Use of Web 2.0 Tools for Marketing and Promotion of Library Services in Higher Education Institutes of Sindh.”** In their study they have explored about services and use of web 2.0 technology for marketing of various services and resources of various libraries of Higher Education institutions of Sindh district. The major objectives of study were to investigate potential roles and implications of the use of web 2.0 in marketing and promotional activities by libraries as well as to found out perceptions and use of Web 2.0 tools for marketing and promoting library services in university libraries in Sindh Province. Study conducted with 87 respondents of Sindh province. Study reveals that the basic purpose of web 2.0 in library is to market the library

resources and services and create awareness among users about new arrivals. The results also show that Facebook and e-mail groups are the most used Web 2.0 tools. Some respondents suggested that WhatsApp, wikis, blogs and Twitter are equally important Web 2.0 tools. The libraries should focus more on collaborative, interactive and web based library customer services to satisfy their customers. They further mention that libraries should initiate programs to use the Web 2.0 tools to find out how best to improve the quality of library services. As per their belief libraries require adequate Internet connection and technical support, which are two big challenges that the libraries should find ways to overcome for actual implementation of marketing and promotional activities through Web 2.0. A marketing program through Web 2.0 should also be able to anticipate and strategize for future developments in web technologies for libraries. There is a need that library professionals and managers be trained periodically to enable them keep pace with new web technologies and their specific uses for marketing library products and services. Professional library associations should also play an active role to develop a strategy to equip their members and other library professionals to handle with the challenges of using Web 2.0 effectively and efficiently.

2.3 Research Gap:

Literature Review concluded that Web 2.0 Technologies are leading Academic librarians towards effective Methods of library services & Students outreach programmes. The Management of library 2.0 Concept in today's academic fraternity resulted in Meaningful and substantive change in hybrid environment of today's era where students and teaching fraternity (Actual users of academic library) are extensively using online technologies for their academic need rather than spending time in library for research and reference work. It is need of an hour that if the final goal of libraries to provide effective services to its user,

then to promotion of these services must be needed and web 2.0 is helping libraries to promote its services to reach end users to fulfil user's needs. In the new era of change traditional users are much aware of possibilities of using google or other online services rather to user library, so expectations of users are to deliver effective, High quality, Comprehensive and user friendly new generation services that have grown tremendously in recent years.

Researcher have reviewed many literature on web 2.0 and its adoption in libraries. Majority studies have define how these technologies are useful to library and its application. In Indian context we can say after Dr. Jagdish Arora's presentation to Calibler 2009 many library researchers have published literature about which web 2.0 services are to useful to library and where it is applied. Only after publication of White paper by T& F in 2014 we have concept of looking of library services point of view and then find suitable web 2.0 technologies for it. The same way most of studies are on Content analysis of libraries web site and at point of view of library professionals.

There are hardly any studies on point of view of library users like what they want, whether they are aware of library services provided, their knowledge and their preferences of Web 2.0 tools used by libraries. Their acceptance and use of technology is never studies. The UTAUT Model of technology acceptance check users or patrons' acceptance and actual use of specific service or technologies. It's very much important for any service based entity to implement any policy or strategy or service to survive in this modern era. The end users will not make best use of any services in absence of proper knowledge of it. As library is service based entity and to fulfil Ranganathan's law of library science that every users its books / service and further fifth law that library is growing organism. Libraries have to be dynamic to fulfil its user's needs.

Now a days libraries are slowly changing and accepting new technologies in Gujarat state and university library are adopting new web based services in order to keep pace with new users. INFLIBNET centre Gandhinagar also helping University library to develop new and effective library service, library automation with SOUL, INFEED, Vidwan database, and many more programmes. On the other side users also becoming more and more aware about their needs. So Web 2.0 is useful to libraries to develop such services and promote to its end users. But to design and implement such services, Significance of such technologies and good knowledge users' needs are needed. Currently no such studies have been conducted based on Technology Acceptance and use of web 2.0 technology for Gujarat State University libraries. So present study aims to found out the concepts of web 2.0 technologies cubing with library services investigate present situation of all university libraries of Gujarat State and check significance of Web 2.0 technologies on point of view of its users.

2.4 References

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