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Research Article

# Integration Of Web 2.0 Tools In Library Services: A Study Of Indian University Libraries

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## I N F O

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## A B S T R A C T

Web 2.0 technology has altered Indian academic libraries, especially university libraries. Blogs, wikis, RSS feeds, social media, and more have made libraries more accessible and increased communication, collaboration, and knowledge sharing. Web 2.0 encourages user participation, real-time changes, and two-way communication between libraries and their users, as opposed to the static, one-way communication that was common in earlier library systems. This study looks at how university libraries in India are using Web 2.0 tools to bring their services up to date, increase user engagement, and close the digital divide. This article explores the consequences on students, teachers, and researchers as well as the level of integration and the challenges that have been experienced. To survive in this age of information overload and changing user expectations, Indian universities must implement Web 2.0 strategies into their library programmes if they want to attract and retain students. The reason for this is that these establishments are completely embracing the digital revolution.

**Keywords:** Web 2.0, Library Services, Indian University Libraries, Digital Libraries, Library Modernizati

## Introduction

Academic libraries are essential to universities' educational, intellectual, and research goals. To serve tech-savvy kids and adults, library services have changed dramatically in the 21st century due to classroom usage of digital technology. The rise of Web 2.0, sometimes known as the "read-write" web, has given libraries more chances than ever before to focus on their patrons and encourage their participation and interaction. In contrast to the static Web 1.0, users of Web 2.0 technologies are able to interact in real time, personalise their information experience, and contribute content. Indian university libraries have a great opportunity to enhance their services by incorporating these technologies. This would allow for better accessibility, engagement, and communication with faculty, students, and researchers.[1]

There are many instances of Web 2.0 technologies, such as blogs, wikis, podcasts, social bookmarking applications like Delicious and Zotero, YouTube, RSS feeds, and social networking sites like Facebook, LinkedIn, and Twitter. With the aid of these tools that promote collaboration, information exchange, and user-generated content, libraries may connect with and engage digital natives. Indian university libraries serve students from a wide range of socioeconomic backgrounds; by using Web 2.0 tools, they may provide more welcoming and flexible study spaces for everyone. For example, libraries may use blogs to promote new books, have online discussions, and even suggest books to readers. As an example, wikis facilitate collaborative content creation, and RSS feeds allow users to stay abreast of new research and happenings without really going to the library.[2]

Web 2.0 has a bright future, but its adoption by Indian university libraries is in its infancy. Complete integration has not yet occurred due to problems such as inadequate librarian training, institutional resistance to change, and an inadequate IT infrastructure. In many university libraries, research into these technologies is only beginning, and what little there is is typically in the form of organised or experimental efforts. But some innovative businesses have shown that by incorporating Web 2.0 into their offerings, they can increase user engagement, streamline communication, and speed up information delivery.[3]

Online learning, universal access, and hybrid courses are all part of India's National Education Policy (NEP) 2020, which is consistent with other Web 2.0 initiatives. Academic libraries can't afford to do nothing and let information pile up anymore. They must evolve into dynamic hubs of information if they are to foster collaboration, fresh thinking, and lifelong learning. Web 2.0 technologies provide the way for libraries to be dynamic, current, and integrated with academic ecosystems, opening that door.[4]

The study's overarching goal is to learn how many Indian university libraries are using Web 2.0 tools, what problems they've run into, and how this development has changed library services and the satisfaction of library users. By providing context for this change and recommendations for the future, the report aims to assist university libraries in India with their digital transformation initiatives.[5]

## Review Of Literature

Asifa & Miss, et al., (2020) The Internet is and will be a worldwide media outlet. From its modest origins as a tool for CERN scientists to collaborate, the World Wide Web has grown into an information centre with over one billion users. Right now, it's more than just a read/write tool; it's a platform for extra social engagement. The ever- adapting to shifting fashions has brought in the release of Web 2.0, an upgraded version of the web. The truth is, it's just the next logical step from the web's original design. In the last ten years, Web 2.0 has grown at a tremendous rate. The concepts and technology behind Web 2.0 have helped spread media and information online, and their usage is growing among both people and companies. Finding out which Web 2.0 tools were employed by the top 100 schools in 2020 according to the "Ranking web of Universities" was the driving force behind this study.[6]

Verma, Manoj, et al. (2014) This article focuses on Web 2.0 and its tools for libraries and information centres. Website 2.0 resembles human behaviour. Web 2.0, a 2.0 pioneer, influenced library services. Web 2.0 may be an advancement like the industrial revolution. Technology will provide librarians greater options to aid customers and tailor the library experience. It improves on previous work by utilising HTML, URLs, HTTP, and the ubiquitous web browser. It undermines the idea that users are independent, autonomous, and advanced. Web 2.0 and similar technologies have improved library services in recent years.[7]

Chakravarty, Rupak, et al., (2013) Open access publishing and the Internet's rapid growth and widespread use, along with affordable Web 2.0 technologies, have democratised information access. The IIT and IIM libraries integrate Web 2.0 capabilities, including social networking, wikis, synchronous chat, and streaming video, to help people access their holdings.[8]

Baro, Emmanuel, et al. (2013) This study examines how aware and how frequently Nigerian university librarians are of and use Web 2.0 technology. Technique, strategy, and method A questionnaire was sent to 176 librarians at 49 Nigerian university libraries. Findings Librarians understood wikis, social networking, instant messaging, and media sharing services better. Librarians used Web 2.0 technologies mainly because of their popularity. Flickr, RSS feeds, podcasts, and social bookmarking were underutilised Web 2.0 technologies. The study found that librarians use Web 2.0 technology for online reference services, picture and video sharing, training resources, and library news and events. Nigerian university librarians struggle to employ Web 2.0 technologies due to a lack of resources, including internet-connected computers, training, and time. Impact on reality Library staff interested in Web 2.0 applications may explore these results. novelty and value This paper presents a thorough review of Web 2.0 apps in Nigerian university libraries to show how librarians in other countries are using them to enhance library services.[9]

## Research Methodology

It is quite probable that the new suite of programmes known as Web 2.0 will drastically alter the ways in which people interact socially, collaborate, and showcase their artistic abilities. Web 2.0 features on library websites are seldom utilised. This article discusses three academic fields: How popular are library Web 2.0 apps? Web 2.0 user behaviour in libraries Do Web 2.0 applications improve library websites? 122 Eastern was analysed in three phases., Western, and Central Asian library websites. The sample included equal amounts of academic and public libraries. Libraries generally utilise wikis, social tagging applications, instant messaging, social networking sites, blogs, and RSS. Libraries know that several Web 2.0 applications may improve patron involvement. Finally, library websites with Web 2.0 apps frequently provide better service, according to a study. Finally, this essay discusses many essential considerations for librarians and academics learning about Web 2.0 applications.[10]

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## Stages of the Study

First, we used information from the University Grants Commission's website to create a list of colleges and universities (UGC, 2015).[11]

Part two involves monitoring Indian state university libraries' Web 2.0 websites and pages and listing the institutions that use them.[12]

Third, submit a structured Google Docs questionnaire to libraries in web 2.0-using Indian governmental institutions.[13]

The fourth (IV) portion of the study analyses data, presents research, and compares state-by-state web 2.0 tool use.[14]

The final step includes ideas, proposals, and outcomes. The researchers used library databases to get their data. We explored how 348 Indian State University libraries may add Web 2.0 elements to their online catalogues. If library websites don't prominently show Web 2.0 links on the main page, patrons may utilised Google to discover them.[15]

## Questionnaire/Checklist Method

Table 1 presents the rubrics and forms conceived after reviewing previously published works. Although Web 2.0 encompasses a wide range of technologies, there are currently no universally accepted criteria for evaluating their implementation in libraries. Based on prior research, a structured online questionnaire/checklist was developed using Google Docs and distributed to 34 libraries at Web 2.0–savvy state institutions in India. The investigator collected data on the libraries' use of Web 2.0 technologies through 123 checkpoints organized into 12 categories. Each checkpoint was assigned a value of either 1 or 0, based on a Yes/No response.[16]

## Data analysis, interpretation, and conclusion tools

Online survey data was statistically analyzed using Checklist and Excel in Microsoft office. Checkpoints will be awarded 1 or 0 based on the response. Data entered as Excel solutions. The following technique calculates each library's "application index".[17]

Application index = Total of "Yes" answers/Total of checkpo

Statistics, tables, figures, and graphical charts are used to show and analyse data.

## Results And Discussions

### Indian state university library accessibility

Table 2 and figure 1 presents the state-wise adoption trends of Web 2.0 tools in university libraries across India. Out of a total of 348 universities, only 34 (9.77%) have adopted Web 2.0 applications in their libraries, indicating a relatively low level of technological integration. States such as Karnataka (5 universities, 1.44%), Assam, Gujarat, and Kerala (4 each, 1.15%), and Delhi (3, 0.86%) show comparatively higher adoption. In contrast, several states including Bihar, Haryana, Jammu & Kashmir, Jharkhand, Punjab, Telangana, Uttar Pradesh, Uttarakhand, and Tripura report no adoption at all. This pattern reveals that while a few states are taking steps toward digital modernization of their libraries, the overall adoption of Web 2.0 technologies in Indian university libraries remains limited and uneven across states.[18]

**Table 1.Analysis of Checkpoint Classifications**

| Categories | Web 2.0 tools | Number of Checkpoints |
|---|---|---|
| 1. | Web 2.0 Use | 4 |
| 2. | RSS | 12 |
| 3. | Blog | 23 |
| 4. | Podcast | 13 |
| 5. | Vodcast | 6 |
| 6. | OPAC 2.0 | 11 |
| 7. | Instant Messaging | 8 |
| 8. | Wikis | 16 |
| 9. | Social Networking Services | 12 |
| 10. | Google Docs. | 4 |
| 11. | Mashup | 7 |
| 12. | Social Media, Social Bookmarking, Tagging, You-tube and other | 7 |
| Total | | 123 |

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**Table 2.State-wise Adoption Trends of Web 2.0 in University Libraries**

| Sr. No | Name of State | No of Universities | Adoption of web 2.0 in the University library |
|---|---|---|---|
| 1. | Andhra Pradesh | 20 (5.7%) | 2 (0.57%) |
| 2. | Assam | 12 (3.4%) | 4(1.15%) |
| 3. | Bihar | 15 (4.3%) | 0(0.00%) |
| 4. | Chandigarh | 1 (0.3%) | 0(0.00%) |
| 5. | Chhattisgarh | 12 (3.4%) | 2(0.57%) |
| 6. | Delhi | 6 (1.7%) | 3(0.86%) |
| 7. | Goa | 1 (0.3%) | 1(0.29%) |
| 8. | Gujarat | 28 (8.0%) | 4(1.15%) |
| 9. | Haryana | 15 (4.3%) | 0(0.00%) |
| 10. | Himachal Pradesh | 4 (1.1%) | 1(0.29%) |
| 11. | Jammu and Kashmir | 6 (1.7%) | 0(0.00%) |
| 12. | Jharkhand | 7 (2.0%) | 0(0.00%) |
| 13. | Karnataka | 24 (6.9%) | 5(1.44%) |
| 14. | Kerala | 13 (3.7%) | 4(1.15%) |
| 15. | Madhya Pradesh | 20 (5.7%) | 1(0.29%) |
| 16. | Maharashtra | 21 (6.0%) | 2(0.57%) |
| 17. | Orissa | 13 (3.7%) | 1(0.29%) |
| 18. | Punjab | 9 (2.6%) | 0(0.00%) |
| 19. | Rajasthan | 22 (6.3%) | 1(0.29%) |
| 20. | Tamil Nadu | 22 (6.3%) | 1(0.29%) |
| 21. | Telangana | 16 (4.6%) | 0(0.00%) |
| 22. | Tripura | 1 (0.3%) | 0(0.00%) |
| 23. | Uttar Pradesh | 25 (7.2%) | 0(0.00%) |
| 24. | Uttarakhand | 10 (2.9%) | 0(0.00%) |
| 25. | West Bengal | 25 (7.2%) | 2(0.57%) |
| Total | | 348 (100%) | 34 (9.77%) |

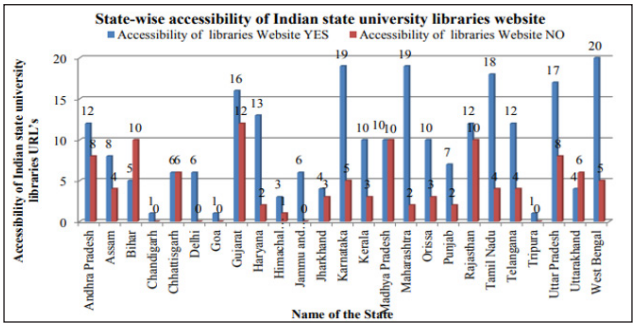


**Figure 1.Indian State University Library Websites Adopt Web 2.0 State-wise**

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## Internet 2.0 Resource Index for Indian Public University Libraries

Data was analysed using statistical methods and the checklist. Microsoft Excel spreadsheets were created using the checklist. Every checklist item was 1 or 0. Statistics were put directly into a spreadsheet. The "application index" for each university library was determined this way.[19]

Application index cannot exceed 100 for academic libraries. Company application indexes revealed Web 2.0.[20]

Web 2.0 apps may engage library users and change patron-library relationships. Libraries should leverage kids' Web 2.0 usage to encourage information literacy. Web 2.0 may promote patron-library collaboration and content creation. Indian public university libraries should use Web 2.0 and other cutting-edge technologies to better serve customers.[21]

None of the national libraries utilised podcasts for research. Fewer libraries use Google Docs, IM, and wikis. Library customers want information; thus, they utilise wikis, podcasts, instant messaging, etc.[22]

## Conclusion

Indian university libraries may convert from passive information suppliers to dynamic, user-driven knowledge centres by integrating Web 2.0 capabilities. Blogs, wikis, RSS feeds, social media, and content-sharing sites have changed how libraries connect with users, increasing collaboration, customisation, and information access. This research found that although Indian university libraries are currently adopting these technologies, the potential advantages are enormous, including increased communication, user engagement, and resource exposure. However, poor digital infrastructure, staff training, and change aversion continue to prevent wider deployment. Library strategy must incorporate policy support, professional development, and user awareness to maximise Web 2.0 power. These solutions help libraries stay relevant, inclusive, and successful in a quickly changing digital academic context, not merely modernise.

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