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Full Length Research Paper

Attentiveness of Librarian 2.0: A survey of engineering educational librarians in Andhra Pradesh

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A survey was conducted among engineering institutional librarians of Andhra Pradesh, to observe their awareness on web 2.0 tools like blogs, Wikipedia, social networks, and photo sharing. The methodology for the proposed study is 'Survey Method' with the help of a structured questionnaire. It is observed from the study that greater proportion of the respondents have good knowledge about the Web 2.0 which provided innovative and interesting resources for librarians to serve their users as quickly and effectively as possible with new ways. The respondents having excellent skills in internet usage were more inclined towards adoption of Web 2.0 technologies in the library application. It is observed from the study that librarians are sentient of modern concepts of the web 2. 0, but they hardly execute it.

Key words: Web, Internet, Social Network, YouTube.

INTRODUCTION

Librarians for professional communication, research, and continuing education activities use web technologies every day. It is used to distribute scholarly publications and documents, to manage manuscripts, and to process abstracts for conference presentations. It is therefore imperative that librarians understand the general principles of creating and maintaining web content. Michael Casey (2006) coined the term “Library 2.0” on his blog Library Crunch as a direct spin-off of the terms Business 2.0 and Web 2.0 .Casey suggested that libraries, especially public libraries, are at a crossroads where many of the elements of web2. 0 and in non-technology based services. A survey was conducted among engineering college librarians of Andhra Pradesh in order to evaluate their knowledge on web 2.0 and its uses. It is observed from the study that librarians are aware of modern concepts of the web2. 0, but they hardly implement it.

Librarian 2.0

Web 2.0 + Librarian = Librarian 2.0

In the new era of information technology, the librarian (Gautam et al., 2010) calls them as Librarian 2.0 who strives to:

- Understand the power of the Web 2.0 opportunities.
- Learn major tools of Web 2.0 and Library 2.0.
- Is a device independent, uses and delivers on everything from laptop to iPod.
- Develop targeted federated search and adopts the Open URL standard.

- Embrace non-textual information and the power of pictures, moving images, sight and sound.
- Understand the “long tail” and leverages the power of old and new content.
- See the potential in using content sources like the open content Alliance, Google print, and Open World Cat.
- Connect with everyone using their communication mode of choice – telephone, Skype, IM, SMS, taxing, email, virtual reference, etc.

Review of Literature

Aharony (2009) explored that whether librarians working in school, public and academic libraries were familiar with the technologies of Web 2.0 as well as they used them in the libraries. According to the findings of the study, personality characteristics (resistance to change, cognitive appraisal, empowerment and extroversion or introversion), computer expertise, motivation, importance and capacity towards studying and integrating different applications of Web 2.0 in the future, influenced the librarians’ use of Web 2.0. The individual differences with respect to technology acceptance were existed. It was disclosed that library managers as compared to librarians were more inclined to incorporate Web 2.0 technologies to offer new services in the libraries.

Xu et al. (2009) surveyed on 81 academic libraries’ website in the New York State. They found that 34 (42 %) libraries incorporated one or more Web 2.0 applications for various purposes. The maximum use of the Web 2.0 technologies was blogging while the least adopted technology was podcasting in the libraries.

Madhusudhan (2012) presented the current state and use of the web by university libraries in India and examined the web-based library services offered by some university libraries in different sections via their websites with the help of web-based library automation software. The findings show that many of the surveyed university libraries are yet to exploit the full potential of the web forms, and are lagging behind in effective use of library websites. A few libraries offer innovative web-based library services in different sections. This study identified specific ways in which the web helps university libraries to improve and develop innovative and creative web-based library services.

Objectives

The main objective of the study is to conduct a usage analysis of Web 2.0 technologies by librarians of selected engineering institutional libraries of Andhra Pradesh. The other objectives are to:

- Find out the devices preferred by librarians for accessing web 2. 0.
- To examine the awareness of respondents on web 2. 0 related tools like web blogs, Wikipedia, photo sharing, YouTube & RSS reader.
- Make out most preferred search engine and social network employed by librarians.
- Know the purpose about using web 2. 0 related tools.
- Recognize the significance of web 2. 0 in day-today life of the respondent.
- Reveal the constraints faced by librarians in implementing web2. 0 in their library.
- To compare awareness of the web 2.0 between male and female respondents.

Scope and Limitation

- The study covers only 19 engineering educational institutions, although there are about selected 25 institutions in Andhra Pradesh.
- Institutions established before 2009 were included in the survey.
- Only Top 25 Selected JNTU (Jawaharlal Nehru Technological University) affiliated Institutions were chosen for the survey.

Methodology

The methodology for the proposed study is ‘Survey Method’ with the help of a structured questionnaire. The structured questionnaire is designed keeping in view of the stated objectives comprising of various types of questions like the total population of librarians in the engineering colleges, awareness on internet utilities, most preferred place to access web 2. 0 tools, about usage of web blogs and social network. Non probability sampling specifically accidental and purposive technique was applied in the collection of primary data through the administration of questionnaires. A total of 25 questionnaires were distributed (randomly) to the selected sample, 19 (76%) valid responses were received and analysed. See Table 1 and Figure 1

Data Analysis

A total number of 25 questionnaires were distributed to respondents out of which 19 librarians (76.00%) responded with the complete filled in questionnaires. The questionnaires were edited, tabulated, and analysed for deriving findings of the study. To make the data analysis statistically sound, necessary statistical techniques such as mean, standard deviation and coefficient of variation is calculated to ascertain the level of variation among the variables.

Coefficient of Variation

According to Professor Karl Pearson (Gupta and Kapoor,

Table 1. Distribution of questionnaires and response received.

S.No	Particulars	Questionnaire Distributed		Total	Questionnaire Received		Total
		Male	Female		Male	Female	
1	Engineering Institutions	15 (60.00)	10 (30.00)	**25 (100)**	11 (57.89)	8 (42.11)	**19 (100)**

Response Rate **76.00%**

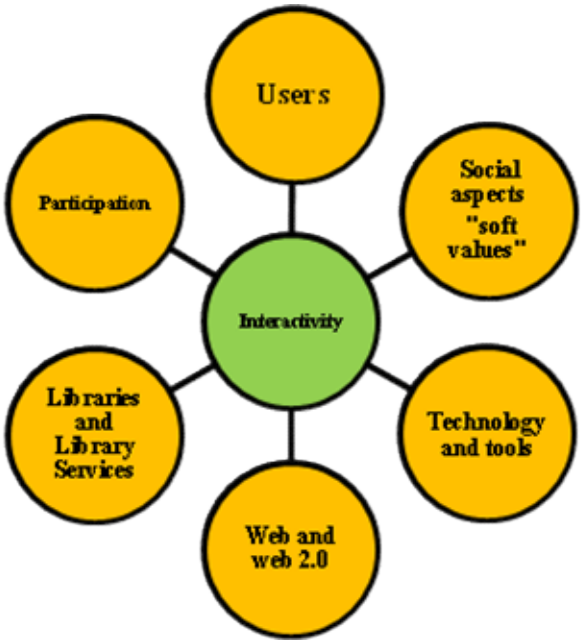

Figure 1. Flow cycle for web 2.0 technology

2001) who suggested this measure, coefficient is a Percentage variation in the Mean, Standard Deviation being considered as the variation in the mean. In comparing the variability of two series, the Coefficient of Variation for each series is calculated. The series having greater CV is said more variable than the other and the series having CV less than 15% is said more consistent (or Homogenous) than the others.

Mean $\overline{x} = \frac{\Sigma x}{n}$ Standard Deviation $\sigma = \sqrt{\frac{\Sigma(\overline{x} - x)^2}{n - 1}}$

Coefficient of Variation Percentage = $\frac{\sigma}{\overline{x}} \mathbf{X\ 100}$

Preferred Site for application of Web 2.0

The respondents were asked to inform the preferred place of Web 2.0 access and their responses are summarized in Table 2.

The table shows that most of the librarians' access web. 2.0 in the library (73.68%), while 63.15% access at home. From the above table it is observed that male respondents have more awareness on web 2.0 accessions than female respondents.

Devices used for Web 2.0 Access

Various devices are used for web 2.0 access; the data collected on this are shown in Table 3.

It is observed from the table that desktop (94.73%) is most popularly used device for web 2.0 access, and had obtained 1st position followed by notebook used by 36.84% respondents.

Mode of Internet Connection

The feedback on the mode of the internet connection used in their library is collected from the respondents and

Table 2. Preferred site for application of Web 2.0

S.No	Place	Male	Female	Total	Coefficient of Variation
1	Home	8 (66.67)	4 (33.33)	12 (63.15)	36.20
2	College	7 (70.00)	3 (30.00)	10 (52.63)	34.90
3	Internet Center	5 (71.00)	2 (28.57)	7 (36.84)	30.43
4	Library	10 (71.42)	4 (28.57)	14 (73.68)	35.87
5	Other	1 (50.00)	1 (50.00)	2 (10.52)	16.67

(Figures in Parentheses indicate percentage)

Table3. Response rate for various devices used for accessing web 2.0

S.No	Devices	Male	Female	Total	Coefficient of Variation
1	Desktop	10 (55.55)	8 (44.44)	18 (94.73)	21.81
2	Laptop	4 (66.67)	2 (50.00)	6 (31.57)	28.45
3	Notebook	6 (85.71)	1 (14.29)	7 (36.84)	30.43
4	Mobile	2 (66.67)	1 (50.00)	3 (15.78)	20.38
5	Other devices	3 (75.00)	1 (25.00)	4 (21.05)	23.41

(Figures in Parentheses indicate percentage)

Table 4. Mode of Internet Connection

S.No	Devices	Male	Female	Total	Coefficient of Variation
1	Dial-up	6 (66.67)	3 (33.33)	9 (47.36)	33.53
2	Cable	9 (69.23)	4 (30.77)	13 (68.42)	36.21
3	Broadband	15 (88.23)	2 (13.33)	17 (89.47)	28.38
4	Wireless	4 (80.00)	1 (11.76)	5 (26.31)	25.83
5	Data card	5 (62.5)	3 (37.5)	5 (42.1)	32.09

(Figures in Parentheses indicate percentage)

presented in Table 4.

It is evident from table 4 that broadband is the most preferred mode for internet connection, receiving a 89.47 % response, followed by cable connection with 68.42% response while only 42.10% use data card for acquiring internet connection.

Search Engine used by Librarians

Search engines are useful for searching recent documents posted on the internet. Librarians were questioned regarding most often used search engine, and their responses are tabulated in Table 5.

Table 5. Search engine used by librarians

S.No	Devices	Male	Female	Total	Coefficient of Variation
1	Google.com	10 (55.55)	8 (44.44)	18 (94.73)	21.81
2	Yahoo.com	5 (55.55)	4 (44.44)	9 (47.36)	33.53
3	AltaVista.com	4 (66.67)	2 (33.33)	6 (31.57)	28.45
4	Dogpile.com	3 (75.00)	1 (25.00)	4 (21.05)	23.41
5	Ask.com	2 (66.67)	1 (33.33)	3 (15.78)	20.38

(Figures in Parentheses indicate percentage)

Table 6. Purpose of using web 2.0 related tools

S.No	Purpose of Using	Male	Female	Total	Coefficient of Variation
1	Acquiring Information Search	11 (61.11)	7 (38.89)	18 (94.73)	21.81
2	Study Materials	14 (82.35)	3 (17.64)	17 (89.47)	28.38
3	Entertainment	3 (75.00)	1 (25.00)	4 (21.05)	23.41
4	Chatting	4 (57.14)	3 (42.85)	7 (36.84)	30.43
5	Online Community	11 (84.61)	2 (15.38)	13 (68.42)	36.21

(Figures in Parentheses indicate percentage)

Respondents have given a positive response for employing google.com (94.73%), 47.36% use yahoo.com while altavista.com used by 31.57% respondents.

The purpose of using the Internet

Librarians were questioned about the purpose of using the Internet in order to estimate their skills on usage of internet and their responses are provided in Table 6.
It is observed from the above table that the majority of librarians uses internet for acquiring information (94.73%) followed by 89.47% for obtaining study materials and merely 21.05% respondents' use them for entertainment purpose.

Significance of web 2.0

A question was asked of respondents in order to judge the extent of web 2.0 significance in day- today life of LIS professionals' and their responses are available in Table 7.

47.39% librarians agree the fact that web 2.0 is very essential in their life, 26.31% responded that web 2.0 is essential, while 5.26% librarians remained neutral to this question. The importance of web 2. 0 in librarians life is represented in Figure 2 through a bar diagram.

Knowledge about Web Blogs

A study was carried out to find the awareness regarding web blogs and the responses are depicted in Table 8.

It is vivid from the table that 47.36% librarians use web blogs for reading purposes only and 26.31% add posts to blogs while 5.26% do not have any knowledge about web blogs.

Awareness of Wikipedia

A question was asked of these librarians in order to sketch knowledge about Wikipedia. Analysis is revealed in Table 9.
It is obvious from the above table that 68.42% do readings from Wikipedia followed by 15.78% respondents add entries in Wikipedia, while 10.54% edit entries in Wikipedia.

Familiarity about Photo Sharing

Questions were asked of librarians regarding an

Table 7. Significance of web 2.0

S.No	Importance of Internet	Male	Female	Total
1	Very Essential	6 (66.67)	3 (33.33)	9 (47.39)
2	Essential	4 (80.00)	1 (20.00)	5 (26.31)
3	Less Essential	2 (66.67)	1 (33.33)	3 (15.78)
4	Lest Essential	1 (5.26)	0	1 (5.26)
5	Not Known	1 (5.26)	0	1 (5.26)
Total		**14 (73.86)**	**5 (26.14)**	**19 (100)**

(Figures in Parentheses indicate percentage)

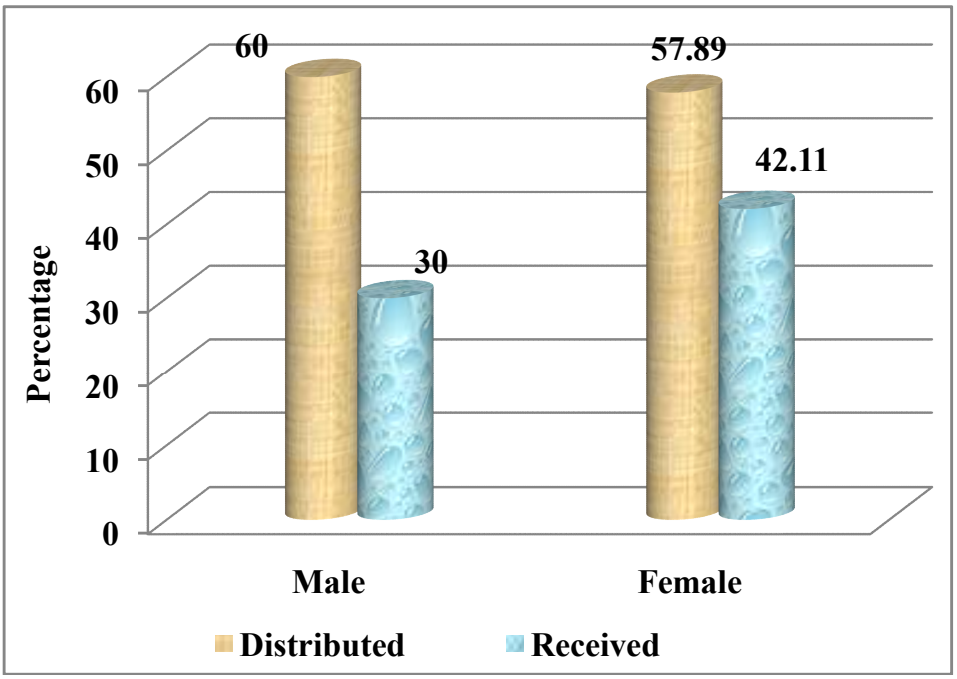

Figure 2. Sample Size

Table 8. Knowledge of Web Blogs.

S.No	Web Blogs	Male	Female	Total	Coefficient of Variation
1	Own Blogs	3 (75.00)	1 (25.00)	4 (21.07)	23.41
2	Reading only	6 (66.67)	3 (33.33)	9 (47.36)	33.53
3	Posting Information	4 (80.00)	1 (20.00)	5 (26.31)	25.98
4	I don't know	1 (5.26)	0	1 (5.26)	11.74
Total		**14 (73.86)**	**5 (26.14)**	**19 (100)**	

(Figures in Parentheses indicate percentage)

Table 9. Awareness of Wikipedia

S.No	Wikipedia	Male	Female	Total	Coefficient of Variation
1	Who read entries from Wikipedia	9 (69.23)	4 (30.77)	13 (68.42)	36.21
2	Who adds entries in Wikipedia	2 (66.67)	1 (33.33)	3 (15.78)	20.38
3	Who edits in Wikipedia	1 (50.00)	1 (50.00)	2 (10.54)	16.67
4	I don't know	1 (5.26)	0	1 (5.26)	11.74

(Figures in Parentheses indicate percentage)

Table10. Familiarity about Photo sharing websites.

S.No.	Photo sharing using	Male	Female	Total
1	Yes	10 (71.42)	4 (28.58)	14 (73.69)
2	No	4 (80.00)	1 (20.00)	5 (26.31)
Total		**14 (73.86)**	**5 (26.14)**	**19 (100)**

(Figures in Parentheses indicate percentage)

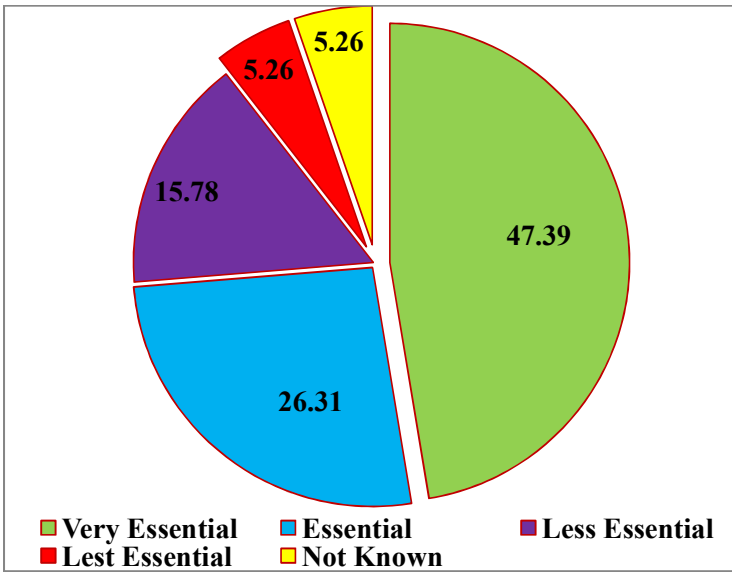

Figure 3. Importance of web 2.0

acquaintance about photo sharing websites and their response are provided in Table 10 and Figure 4

It is observed from the Table that 73.69% librarians had visited photo sharing websites while 26.31% did not have any idea about photo sharing websites. The analysis on response of the entire population under survey is depicted through a pie chart (Figure 3).

Social Networks Used by Librarians

In order to check out the awareness of librarians on social networks, a question was asked and their responses are tabulated in Table 11.

It is seen from the Table that 31.57% access Twitter, while 26.34% access Facebook and 5.26% respondents

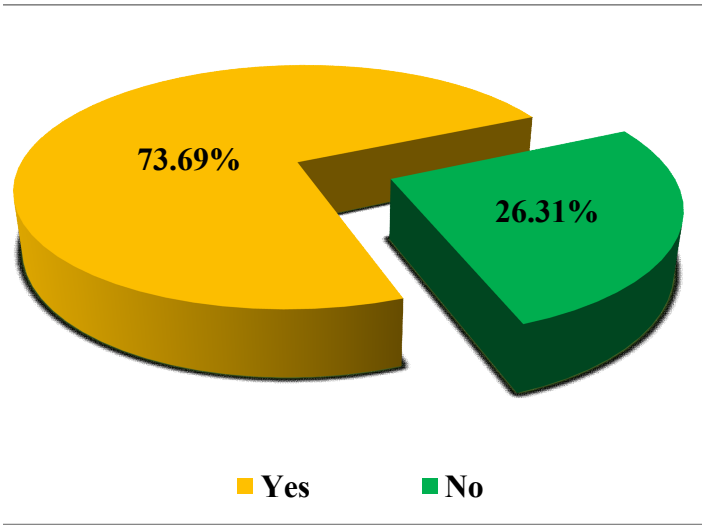

Figure 4. Pie Diagram of Photo Sharing.

Table 11. Social Networks Used by Librarians.

S.No	Social Networks	Male	Female	Total	Coefficient of Variation
1	Facebook	3 (60.00)	2 (40.00)	5 (26.34)	25.98
2	Twitter	5 (83.33)	1 (16.67)	6 (31.57)	28.45
3	Linked in.	2 (50.00)	2 (50.00)	4 (21.05)	23.41
4	Ning	2 (66.67)	1 (33.33)	3 (15.78)	20.38
5	I don't know	1 (5.26)	0	1 (5.26)	11.74

(Figures in Parentheses indicate percentage)

do not have knowledge about social networks.

Knowledge about YouTube

It is observed from Table 12 that 84.21% librarians use YouTube facility only for watching while 42.10% use it for uploading /sharing information.

RSS Reader Used by Librarians

Table 13 shows that 94.73% librarians use Google reader and my yahoo is used by 89.47% librarians.

Constraints on implementing Web 2.0

The respondents were asked questions with regard to constraints faced by them in implementing web 2. 0 related tools in their library and the responses are provided in the below table.

It is seen from the Table 14 that 68.42% respondents feel lack of concern for management is the major constraint for implementing web 2. 0 in the library followed by inadequate computer networking system (15.78%).

The Findings of the Study

- For accessing web2. 0, the majority of librarians (94.73%) prefers desktop followed by 36.84% respondents use notebook.
- In relation to mode of Internet connection used in libraries, it is found 89.47% employ broadband connection.
- Google.com (94.73%) is the most favoured search engine by respondents followed by yahoo.com (

Table 12. Knowledge about You Tube.

S.No.	YouTube	Male	Female	Total	Coefficient of Variation
1	Watching	12 (75.00)	4 (25.00)	16 (84.21)	32.33
2	Upload /Sharing	6 (75.00)	2 (25.00)	8 (42.10)	32.09

(Figures in Parentheses indicate percentage)

Table13. RSS Reader Used by Librarians

S.No.	RSS reader	Male	Female	Total	Coefficient of Variation
1	Google Reader	11 (61.11)	7 (38.89)	18 (94.73)	21.81
2	Rss Reader	4 (57.14)	3 (42.85)	7 (36.84)	30.43
3	Opera RSS Reader	3 (75.00)	1 (25.00)	4 (21.05)	23.41
4	My Yahoo	14 (82.35)	3 (17.64)	17 (89.47)	28.38
5	Thunderbird	11 (84.61)	2 (15.38)	13 (68.42)	36.21

Table 14. Constraints faced by librarians.

S.No.	Constraints	Male	Female	Total	Coefficient of Variation
1	Top management not interested	9 (69.23)	4 (30.77)	13 (68.42)	36.21
2	Inadequate computer networking framework	2 (66.67)	1 (33.33)	3 (15.78)	20.38
3	Unsatisfactory teamwork among Library employees	1 (50.00)	1 (50.00)	2 (10.54)	16.67
4	Lack of librarian's awareness on ICT skills.	1 (5.26)	0	1 (5.26)	11.74

47.36%).

- It is observed from the survey that 94.73% librarians use the Internet for acquiring information and 89.47% for chatting. 47.39% respondents agree the fact that web 2.0 is very essential for their life.
- From the survey, it is found that 47.36% respondents use web blogs for reading purpose while 26.31% add posts in the blog.
- It is known from data analysis that most of the respondents have knowledge on Wikipedia.
- The greater number of librarians (73.69%) had visited photo sharing websites.
- Twitter is found to be a most preferred social network of librarians (31.57%).
- The majority of respondents (84.21%) use your tube facility for watching while only 42.10% use it for uploading or sharing information.
- Lack of interest from management (68.2%) seems to be significant criteria faced by librarians in implementing web 2.0 related tools in the library.
- When an overall comparison made between male and female respondents in terms of knowledge of various concepts of web 2.0, it is observed that male respondents have more knowledge on web 2.0, than the female respondents; the above mentioned observation was concluded based on the high coefficient of variation (> 15%) existed between their responses.

CONCLUSION

It is concluded from the study that the engineering college librarians of Andhra Pradesh are attentive with

modern concepts of web 2.0. They use these concepts and had recognized its significance in their day-today life, but they hardly implement it as for rendering library service is concerned. Unlike European countries, where the women's community dominates men in the field of Library and Information science, in India population of female librarians are comparatively lower than male librarians, probably due to low pay scale and managerial issues of female librarian (Dasgupta, 1998) dealing with publishers and distributors. Nevertheless, it is found from the survey that male respondents have more knowledge on web 2.0 than female respondents. Adequate training and orientation program is crucial for librarians in order to get update with the latest and emerging technologies of web 2.0. However, in Andhra Pradesh, these kinds of activities are not being organized in a routine manner; therefore library personnel are not being trained with new technologies. Management of respective engineering educational institutions should take additional measures, thereby new concepts of web2. 0 can be executed in the library.

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