Use of Community Building Web Technologies in Libraries: A Study of Twitter in American Libraries

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Abstract
Dissemination of knowledge at the speed of thought is the need of the hour. Hence the libraries and information centers should be the forerunners in utilizing the latest technologies, especially information communication technologies, to serve the indispensable information needs of the user community. They should also act as facilitators in knowledge sharing. It is the community building technologies of the Web 2.0 that need to be utilized to the optimum extent by the libraries to develop scholarly communities. The present study is aimed at exploring the state-of-the-art of the use of Twitter by the modern libraries to disseminate information/knowledge to their users. The objectives of the study are to find out whether Twitter is used for social networking in the libraries of the United States of America (U.S.)? Which way libraries in U.S. are using Twitter? What information is communicated through Twitter? Whether U.S. library Twitter accounts have any followers? The methodology applied for the study is a survey of the entire universe of Twitter accounts of U.S. libraries that are found in websites like Lindy Brown’s blog. The findings of the study are: U.S. libraries use Twitter to provide alert and current awareness services to their users. Library Twitter accounts are not followed by encouraging number of followers.

Keywords: Community Building, Twitter, Libraries, Web Technologies, Web 2.0

[Note: numbers in brackets refer to the list of access through Twitter listed at the end of the paper.]

Introduction
Dissemination of knowledge at the speed of thought is the need of the hour. Hence the libraries and information centers should be the forerunners in utilizing the latest technologies, especially information communication technologies, to serve the indispensable information needs of the user community. Libraries of the digital age should not be lagging behind in using the latest technologies. Libraries of the Internet age should not only disseminate knowledge that is gathered by them, they should also act as facilitators in knowledge sharing. Knowledge sharing is possible when knowledge sharing communities are developed. It is the community building technologies of the Web 2.0 that need to be utilized to the

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optimum extent by the libraries to develop scholarly communities. The present study is aimed at exploring the state-of-the-art of the use of Twitter by the modern libraries to disseminate information/knowledge to their users in United States of America (U.S.)

Twitter [1] (n.d.) was created in March 2006 by Jack Dorsey and launched in July of the same year. Twitter availability is multilingual, including Dutch, English, French, German, Indonesian, Italian, Japanese, Korean, Portuguese, Russian, Spanish, Turkish, Chinese, Hindi, Tagalog and Malay. It is felt that Twitter as communication and community building tool on the web is gaining immense popularity. Even the President of U.S., Barack Obama, uses Twitter [2]. Therefore it is felt that there is a need to find out whether the key stakeholders, in the knowledge societies, like library and information centres are also using these technologies to ensure effective communication amongst their users. Are they building scholarly communities, is a subject of greater interest and significance.

Being one of the advanced countries U.S. is known for its faster application of the latest technologies. Therefore a study is conducted to find out the use of Twitter in U.S. libraries. How many libraries are using, whether they have any followers and what services they provide?

Significance of the Study

Being a survey, the study deals with the situations that are prevailing in the contemporary period, in addition to reporting the present state of use of Twitter in the libraries in U.S., it would also have historical significance in future as a record for posterity. The study gives ideas on how libraries can use Twitter effectively in their library. Besides, the study, by reporting the state of the use of Twitter, would also impress libraries world over upon the use of social tools on the web to provide effective services to their users.

Objectives

The objectives of the study are to find out:

- Whether Twitter is used for social networking in U.S. libraries.
- What are the possible ways in which the U.S. libraries are using Twitter.
- What information is communicated through Twitter by the U.S. libraries.
- Whether U.S. library Twitter accounts have any followers.

Hypotheses

1. U.S. Libraries are active in using Twitter to develop their user community.
2. U.S. Libraries use Twitter to provide alert and current awareness services to their users.
3. Library Twitter accounts are not followed by encouraging number of followers.

Methodology

The methodology applied for the study is a survey method. It is a survey of the entire universe of Twitter accounts of U.S. libraries on the web that are found in website of Lindy Brown’s blog. A federated search is conducted using different sources such as Twellow [3], Twitterleague [4], David Lee King [5], Paul Stainthorp [6], and blog of Lindy Brown from these sources information about U.S. libraries’ Twitter accounts were retrieved. Twellow listed 4332 accounts from all countries, Twitterleague listed 629 accounts from all countries, David Lee King lists only nine
accounts, Paul Stainthorp in his blog lists exclusively about 100 UK libraries on Twitter and Lindy Brown 877 accounts are all U.S. libraries. Twellow’s listing includes libraries and librarians, as well as unrelated accounts like the one related to the ‘wine library’ which is the Internet’s leading discount wine retailer. Therefore it is found that Lindy Brown is more relevant and exhaustive listing of Twitter accounts of U.S. libraries. Necessary data is gathered from all these 877 accounts. However Lindy Brown’s listing is purely alphabetical, hence it does not present the order of Twitter accounts based on the number of followers. Therefore information from Twellow was also utilized to extract data relating to number of followers. Twitterleague is not taken into consideration for this study as it did not contain updated data of the Twitter accounts.

Scope

Study covers the Twitter accounts of U.S. libraries only and it confines itself to the number of followers and type of services that are provided by these libraries. Further the study does not include South America or Canada.

Analysis

The data collected from the web-sources about the Twitter accounts of U.S. libraries presents an encouraging picture that as many as 877 (as on 1/28/2012) U.S. libraries are using Twitter to build their user communities. It shows that the U.S. libraries have right perception of the need for utilizing community building technologies and tools that facilitate speedy communication.

However when it comes to the followers of these Twitter accounts the situation is encouraging only to certain extent. It is only the Library of Congress [8] that has 306,524 followers as on 28 November 2011 and it is quite interesting to note that the number of followers is increasing at a commendable rate. The twitter account of the same library on the very next day has increased by 309 at 306833 followers on 29 November 2011 and on 11 March 2012 it is up by 38260 at 344784 followers.

This clearly indicates that even Twitter accounts of libraries have hundreds of thousands of followers and there is marked increase in the number of followers.

The New York Public Library [9] has as many as 175,128 followers. This might be an indication that if a library renders useful services or provides significant and current information, it will certainly have large following. But these libraries happen to be world’s largest library and library of national level importance respectively.
Figure 1: The screenshot of Library of Congress on Twitter
(Source: http://Twitter.com/#!/librarycongress 29.11.2011 5:07 pm IST)
When it comes to libraries that rank next to these libraries, they have 9027 number of followers for United States Department of Agriculture's National Agriculture Library (USDA NAL) [10], and Houston Library [11] has 7,216 Followers as on 28.11.2011. It is surprising to note that the Internet Public Library (IPL) http://www.ipl.org/ has 1,102 followers only as on 28.11.2011 at 7:15pm IST and it is not listed under “Internet Public Library” or “IPL” on Twitter but is listed as “theipl” at https://Twitter.com/#!/theipl, which is not known to people at large. Further it is not listed in Lindy Brown’s blog may be as it is not a conventional library but a virtual library.

However about 50% of the libraries have less than 1000 followers. There is also incidence of some of the libraries having zero followers and few accounts are listed in a few websites but on checking have been found deleted.

**Use of Twitter in U.S. Libraries**

Twitter has become an integral communication tool along with other popular social networking technologies that are now used in libraries and displayed on their homepages. As mentioned above, libraries provide alert services, reference services, short newsletters and other services as presented below. The data also indicate that majority of the libraries are providing alert services.

Figure 2: The screenshot of New York Public Library on Twitter.  
(Source:http://Twitter.com/#!/nypl][29.11.2011 5:07 pm IST)
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A considerable number of libraries are rendering reference service. The following presents the ways in which some of the libraries are using Twitter:

1. **Twitter as another communication tool**: Librarians are using Twitter as another communication tool to communicate with their patrons. The following illustrates the same.

   ![Twitter](http://Twitter.com/#!/nypl)
   **nypl** NY Public Library
   @nchyphnosis if you can't reach us by phone contact us by chat or email nypl.org/ask-nypl for help with your account
   14 Nov
   
   (Source: New York Public Library at [http://Twitter.com/#!/nypl](http://Twitter.com/#!/nypl) 29.11.2011 5:47pm IST)

   ![Twitter](http://Twitter.com/#!/fpl_library)
   **FPL_Library** Fayetteville Library
   I posted 18 photos on Facebook in the album "An Evening With Geraldine Brooks Event" fb.me/14jQqiwB
   20 Nov
   
   (Source: Fayetteville Library at [http://Twitter.com/#!/fpl_library](http://Twitter.com/#!/fpl_library) 30.11.2011 5:47pm IST)

   ![Twitter](http://Twitter.com/#!/Harvard)
   **Harvard** Harvard University
   We invite you to keep up with Harvard happenings, on campus & around the world, by visiting our Facebook page. hvr.d.me/qWQZIR
   27 Nov
   

   ![Twitter](http://Twitter.com/#!/LibraryAmerica)
   **LibraryAmerica** Library of America
   @susanorlean Um, should we update your biographical note in our anthology?
   18 Nov
   
   (Source: Library of America [http://Twitter.com/#!/LibraryAmerica](http://Twitter.com/#!/LibraryAmerica) 30.11.2011 7:13pm IST)

2. **Library announcements**: Library related information is updated to patrons as well a special events to be held, exhibitions, new book arrivals, and author visits are posted so that patrons are aware of current or future events.

   ![Twitter](http://Twitter.com/#!/msulibraries)
   **msulibraries** MSU Libraries
   29 Nov
   

   ![Twitter](http://Twitter.com/#!/kstatelibraries)
   **kstatelibraries** K-State Libraries
   Interlibrary Services requests made after Nov. 22 will not be processed until Nov. 28.
   23 Nov
   
3. **Send alerts:** Patrons subscribing to Twitter account of the libraries receive notices regarding material requested which have arrived at library rather than existing technologies like email and mobile.

(Source: Oklahoma State University Libraries at [http://Twitter.com/#!/OkStateLibrary](http://Twitter.com/#!/OkStateLibrary) 30.11.2011 6:31pm IST)

(Source: National Agricultural Library at [http://Twitter.com/#!/National_Ag_Lib](http://Twitter.com/#!/National_Ag_Lib) 29.11.2011 6:20 pm IST)


4. **Reference Service:**

(Source: New York Public Library at [http://Twitter.com/#!/nypl](http://Twitter.com/#!/nypl) 29.11.2011 5:33pm IST)
5. **TwiReference**: Reference queries on Twitter posted by patrons that library staff can get back with information requested. Clickable shortened URLs are posted where information is accessed.

6. **Customer Service**: Librarians view Twitter as open lines of communication; another opportunity to extend customer service.

7. **Short newsletter**: Twitter gives a short, crisp and precise newsletter or it acts as a short 140 character write up with shortened URL to build patron interest to draw them into reading a bigger newsletter posted on their website or blog.

8. **Library Orientation Program**:
9. **TwiFeed gives Feedback:** Suggestions and opinions are generated or gathered regarding new services introduction or changes to existing policies quickly, and easily through Twitter.

   **FPL_Library** Fayetteville Library
   It's Survey Week at FPL. Please take the time to tell us how we're doing. You can choose from short to long... [fb.me/1IS5Dr0o](http://fb.me/1IS5Dr0o)
   7 Nov

   (Source: Fayetteville Library at [http://Twitter.com/#!/fpl_library](http://Twitter.com/#!/fpl_library) 30.11.2011 7:07pm IST)

10. **Polling**

    **FPL_Library** Fayetteville Library
    Vote for the best books of the year at the 2011 Goodreads Choice Awards! [fb.me/l2oRKCtz](http://fb.me/l2oRKCtz)
    5 Nov

   (Source: Fayetteville Library at [http://Twitter.com/#!/fpl_library](http://Twitter.com/#!/fpl_library) 30.11.2011 7:09pm IST)

11. **Provision of links to the library resources:**

    **nypl** NY Public Library
    Join 4,500 authors and play Find the Future: The Game [low.ly/TxNDT](http://low.ly/TxNDT)
    18 Nov

    Gaming apps for iphone & android. Finish your adventure online, where the Artifacts you found at the Library can help you write and publish your own world changing epic. [http://game.nypl.org/how_to_play/](http://game.nypl.org/how_to_play/)

12. **Community Information Services:** Some of the Libraries are providing Community Information Services.

[librarycongress](http://Twitter.com/#!/librarycongress) Library of Congress

Swann Foundation Accepting Fellowship Applications: The Caroline and Erwin Swann Foundation for Caricature and C...

[1.usa.govimWdEyH](http://1.usa.govimWdEyH)

19 Oct


[dekalblibrary](http://Twitter.com/#!/fhulibrary) DeKalb Co Library

Bring your sensitive documents to 3720 Leroy Scott Drive, Decatur for free on-site shredding & recycling this Saturday. [bit.ly/s8rpnC](http://bit.ly/s8rpnC)

17 Nov

(Source: DeKalb Co Library at [http://Twitter.com/#!/fhulibrary](http://Twitter.com/#!/fhulibrary) 29.11.2011 5:51pm IST)

[Harvard](http://Twitter.com/#!/Harvard) Harvard University

On this weekend of football rivalries, two @Harvard videos from alums who played football: [hvrd.me/uBftZs](http://hvrd.me/uBftZs)

27 Nov


[ohiou](http://Twitter.com/#!/ohiou) Ohio University

Stay up to date on what's happening @OhioU with #Compass!

[htl.li/7y1VY](http://htl.li/7y1VY)

16 hours ago

(Source: Ohio University at [http://Twitter.com/#!/ohiou](http://Twitter.com/#!/ohiou) 30.11.2011 6:40 pm IST)

13. **Short messages can tell people about events such as readings, podcast, webcast, and lectures:** Typing a brief message about a special reading or lecture can help get the word out. You can even send updates of the day to let people know how many are attending.

[librarycongress](http://Twitter.com/#!/librarycongress) Library of Congress

One of several new webcasts: How Washington D.C. got through Prohibition. (Actually quite well, thanks.) [1.usa.gov/rArURa](http://1.usa.gov/rArURa)

23 Nov

14. **Cataloging and tagging:** Links to library WebPACs are provided to the users. This would eliminate the process of visiting library website. The users can directly access WebPACs. And also it facilitates the users to tag the resources. # hash tags help create groupings

[NLM_SIS](http://Twitter.com/#!/nlm_sis) NLM SIS

RT @nlm_osp: The National Library of Medicine® (NLM®) adopted the 2012 MeSH vocab for cataloging on Nov 21, 2011 [ow.ly/7C5Hd](http://ow.ly/7C5Hd)

23 Nov
15. **Conference information:** Twitter feeds provide information on conferences, registration, deadlines, speakers, webinars, and accommodations without having to visit the hosting website. Librarians can also connect with librarians locally who are going to the same conference, so that they get better discounts in accommodation.

16. **Job**

17. **Crisis or emergency communication tool**

18. **Education Tool**
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19. Personalized one to one Communication:

librarycongress Library of Congress
@DawsonCityYukon Aw, thanks! :)
15 Nov

librarycongress Library of Congress
@DeliaCabe :) 15 Nov


20. Marketing/Public Relations role: Twitter was mostly used for business applications but is now adopted by librarians as it is an excellent way for libraries to grow their online presence and profile.

ohiou Ohio University
RT @lolebek @AlderLibrary serves COFFEE and things over break at the CAFE Biblio - come on in, get a cup, borrow a movie, check out a book 20 hours ago


21. RSS Feeds:

National_Ag_Lib USDA NAL
Animal Welfare Info Center RSS Feeds – Sign Up Today! go.usa.gov/XZQ 24 Nov


22. Send computer alerts: Whether someone’s allotted time on the computer is about to end or if several computers have suddenly become available, let users who are waiting know. Using Twitter to broadcast messages to each public computer such as, “You have 5 minutes left on this computer. Please save your work and log off now” or “The library will be closing in 15 minutes.” http://www.techsoupforlibraries.org/?q=node/85 (29.11.2011 6:21 pm IST)

librarycongress Library of Congress
The Library’s Jefferson Building will close at 3 p.m. next Tuesday, Nov. 22. loc.gov/today/pr/2011/... 18 Nov
Rick Reo [12], Web Source entitled *100 Ways to Use Twitter In Your Library* [13], and Brian Mathews [14] are of the opinion that libraries can use Twitter in various ways. The following are the extracts from the above sources:

- **Use of Twitter as an assessment tool:** For example, subscribe to a handful of patrons or students, in return they should follow you also. By tweeting, you can learn about such things as what services are being used the most in the library.

- **TwiInsPad:** Twitter Instant Notepad: Great ideas can be jotted down on the move as most of mobiles/smartphones have this Twitter feature.

- **Patrons can ask questions about specific materials.** Let your patrons know if you have a certain book or article they are looking for or let them know where they can find it. This also will keep up the community feeling that your library is looking for.

- **Search Twitter for references to the ALA (American Library Association):** If it’s something there you can respond to then go ahead. If it’s not something in your area, then pass along the information.

- **Networking:** Twitter is most useful to network with other librarians, libraries, library-affiliated organizations, and publishers. Since all librarians and libraries are not on Twitter, it has a limited reach.

- **Promote the library:** Using Twitter can help promote your library and the programs offered. Tweet your friends and family about what’s happening.

- **Suggestion box.** Cynthia Johnson, Head of Reference, University of California, Irvine. Additionally, Johnson explained how her expectations of user’s needs were far different than the reality. After setting up the library’s Twitter account, Johnson watched as it evolved into a virtual suggestion box. Johnson welcomed this unforeseen use of Twitter. Despite the suggestion box that had lived at the library for years, user feedback flooded the library’s Twitter account.

- **Create alerts for specific groups:** Announce news and events for specific groups like children, book clubs, and teens

- **Q &A Twitter sessions:** Instruction sessions or clarifications regarding new membership for public libraries are conducted on Twitter.

- **Use Twitter to point out highlights on library websites:** Point out specific topics of interest on the Library website. Everything from special links to holiday hours.

- **Appointing new Library Staff:** When interviewing someone for a library job, librarian can check to see if they tweet. One can know more about the person by checking their Twitter feed similar to Googling them to check their web presence or check their blog.

- **Chronicle extended library visits:** This is being used by a number of university libraries when a student might arrive at the library at 4 p.m. and might not leave until 10 a.m. the next day he updates his/her followers periodically on the progress of his assignment.

- **Connect and Keep in touch:** Librarians get in touch with other librarians on a local, state, national, regional, and international level. Twitter makes it easy to network, collaborate, share information, find out what others are doing and update the world on self status.
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- **Find contacts working on similar projects.** Stumped about a presentation or project you are working on? Twitter is a great way to find others that have had a similar problem and get a swift response.

- **Find out what other schools and libraries are doing around the world:** Get ideas on how other libraries all over the globe are using Twitter effectively in their library.

- **Get to know colleagues:** Most of us are so busy in our lives and networking with far off personal and professional friends that we tend to ignore those working with us. Reading posting on Twitter about his/her life, likes and dislikes. Librarians may get to know or realize that they may have more in common with their colleagues than earlier thought.

- **Identify experts in a specific area:** Twitter can be an additional tool to find out who’s talking about subjects that interest your patrons.

- **Internal updates:** To some extent Twitter can be used for internal updates if it is for closed group. **Or sending private message to only one specific person. Use “d” to send a direct message to someone** [for example: “d sarahlib great to see you on Twitter!”]

- **Overactive account:** Following the thought processes of emerging tech trend thinkers. Ex – Robert Scobleat [http://scobleizer.com/] has a Twitter account and over 1000 friends. He’s been asking his friends questions – and getting 1000 replies. Think of how blog posts and comments and trackbacks work – but on steroids. Instead of waiting a day or so for other thoughts, with Twitter you get them within the hour, tops. Setup correctly, that could prove to be an amazing “collective brain current awareness” database that you could tap at any time.

- **Posts can link to interesting news stories about literacy or about libraries.** When appropriate, the posts can link to a library’s own website and blog for more in-depth information.

- **Read latest News:** Twitter makes it easy to quickly check, read, and update news and latest information. Many major news sites like CNN, BBC have Twitter feeds.

- **Share a tip on finding or accessing information online or in the building:** Spread the knowledge of your learning with others. If you’ve found a website that has specific resources or data, send a tweet and let everyone know.

- **Use latest technologies & Tool:** Libraries were always open to implement new technologies. Knowing technological innovations will always give a added advantage, even if it is not apparent at the moment. Knowing and using the technology will be easier to adapt in long run.

- **Book an Appointment with Library Staff**

**Findings**

Twitter is gaining popularity as an efficient communication tool in U.S. libraries. The objectives of the study are realized and the hypotheses are verified. The final results of the study are:

1. **Hypothesis 1:** U.S. Libraries are active in using Twitter to develop their user community.

2. The above hypothesis is proved because in less than 5 years time as many as more than 800 U.S. libraries have their Twitter accounts.
3. **Hypothesis 2:** U.S. libraries use Twitter to provide alert and current awareness services to their users. The above hypothesis is proved. Twitter is mostly used for current awareness or alert services in U.S libraries.

4. **Hypothesis 3:** Library Twitter accounts are not followed by encouraging number of followers.

   In fact this hypothesis is proved to be correct, as compared to number of followers of celebrity Twitter accounts the followers of library Twitter accounts are very few. For example, as on November 29, 2011, Lady Gaga [15] has 16,454,037 followers and Library of Congress that has 306,524. Justin Bieber [16] has 14,962,839, Katy Perry [17] has 12,513,454, Kim Kardashian [18] has 11,568,198 and Barack Obama [19] has 11,346,842. Whereas, Library Twitter accounts, even in knowledge society, have few hundred thousand followers only.

### Discussion

In the present information society and emerging knowledge societies the library and information centers prove to be essential in social and individual activities. Further, in the digital era the library and information centers are without any walls. That means their user group may extend to the world over. Under such circumstances ideally there should be phenomenal increase in the size of library user group. Consequently the number of followers for a libraries Twitter account also should be large. But on the contrary the size of the library Twitter groups is in few thousands for the majority of the libraries. Majority of the libraries with Twitter accounts have less than 1000 followers. This shows that even in information society and knowledge societies, the information and knowledge centers do not have considerable following. However, the number of followers for library Twitter accounts is relatively encouraging if library Twitter accounts are not compared with the celebrity accounts.

There are many interesting services that can be extended to the scholars throughout the world by utilizing the modern Information Communication Technologies. For instance, The Library of Congress webcasts can be witnessed by anybody from any nook and corner of the world. The information about such programs can be provided through Twitter, e-groups and other social networks and networking tools. Thus the social networking tools like Twitter will be useful for disseminating current information to the library users and also others. In using the latest technologies U.S. libraries prove to be in the forefront, the study proves the same. The ways in which the U.S. libraries are using Twitter would give useful ideas for optimum utilization of the web tools like Twitter to the rest of the libraries in the world who are not utilizing such technologies, in spite of having the required infrastructure and access to the latest technologies.

### Conclusion

Library and information centers as one of the key stakeholders in the development of human society should be proactive to serve the user community in anticipation of their information needs. Libraries have undergone total transformation from a mere storehouse of documents to a service library, online library, and virtual library. They are re-designated as technical information centers, learning resource centers, knowledge parks and so on. This means that libraries are gaining their due importance in the human society by utilizing community building technologies like Twitter. Libraries will be in a position to build their user communities and act as effective facilitator for knowledge sharing if they use the community building technologies.
Twitters

10. USDA NAL. http://Twitter.com/#!/National_Ag_Lib (28.11.2011 at 7:15pm IST)
13. 100 Ways to Use Twitter In Your Library. http://acceleratedbachelordegree.org/100-ways-to-use-Twitter-in-your-library/ (29 Nov 2011 3:19pm IST)
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