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Libraries Atwitter: Trends in Academic Library Tweeting

Purpose: This paper presents an overview of how libraries are using Twitter in an academic setting.

Design/methodology/approach: This study analyzed the current state of 296 Twitter accounts from a random sample of academic libraries. Nineteen different criteria were explored, with an emphasis on the following three categories: layout and design, content and number of tweets, and account followers.

Findings: Only 34% of libraries in the study had a Twitter account and characteristics varied widely among libraries, however it is evident that it is possible to successfully communicate with patrons via Twitter.

Research limitations/implications: A primary limitation for this study is the frequency with which Twitter can change.

Practical implications: This paper provides a snapshot of how libraries are currently using Twitter, which can be of assistance to libraries seeking to implement a Twitter presence.

Originality/value: The paper presents an overview of trends in academic library Twitter accounts, which could be useful to librarians who are considering launching a Twitter account for their library.

Keywords: Twitter, reference, Web 2.0, social media, library patrons, academic libraries

Research Paper

Introduction

Twitter is a social networking platform that allows users to broadcast short messages of no more than 140 characters. This limitation creates the need for quick, to the point messages that must be poignant, as well as informative. Sometimes referred to as microblogging, Twitter is a platform where users can update their followers in short posts distributed by instant messages, mobile phones, e-mail, or the Web (Java et al. 2007). These short messages are called tweets, and often include shortened links for further information.

Although originally launched in 2006 as another tool for friends and family to stay in contact (Aharony 2010), Twitter quickly became a one-stop shop for updates from user's favorite businesses, news outlets, celebrities and more. Despite sometimes being criticized as a useless tool to inform the world what someone had for lunch, Twitter has become a popular resource for businesses and brands to connect with their customers. While some users update their Twitter feeds with information about what they wore today, many use the tool to share relevant information about the world around them and the things they are thinking of at the moment. Many academic libraries have noticed the popularity of the service and have begun to use Twitter to connect with their patrons.

Although often categorized with other social networking sites, Twitter has many unique characteristics. The ability to comment on tweets is similar to the ability to comment on blog posts, however, blogs tend to be more in-depth, since they do not have the 140-character limit of Twitter. Content on blogs also tends to be more long-lasting than on Twitter, where posts are rapidly created and then buried as new posts appear. Like Facebook or MySpace, it is possible to use Twitter to connect with

individuals; however, with Twitter, instead of “friending,” connections are created by “following” accounts. Often, no personal relationship exists between the account holder and the follower, meaning that un-following a Twitter account does not result in any type of conflict. At the same time, there is a need for Twitter feeds to connect with what the follower wants to know, since they will not remain loyal readers solely based on personal relationships.

There are many features of Twitter that make it a technology suitable for use by libraries. Twitter is free, removing any cost barriers for use. Since Twitter relies upon microblogging, it does not require a significant amount of staff time to create and maintain an account. In fact, there are numerous plug-ins that allow pre-scheduling of Tweets, meaning that librarians can establish a weekly or even monthly schedule, further reducing daily staff time needed. Furthermore, many patrons already use Twitter, making it an ideal place for a library to forge connections with them.

Twitter is a fast-paced social network and, depending on the number of accounts a person follows, feeds can move very quickly with old posts being pushed down as new posts come in. Consequently it is easy for libraries to get lost in the conversation. However, there are a number of tools that can be used to facilitate interactions and grab the followers' attention. One such tool is “direct messaging” where a message can be sent to one user and no one else can see the content. This is used much like e-mail and for library Twitter accounts it can ensure the privacy of conversations, while remaining in the informal Twitter milieu. Another feature is called the @reply, or “at reply,” which allows users to publicly reply to other users by prefacing the reply with “@username.” This keeps posts open for everyone to read, but directs the conversation to specific

individuals. In library tweeting, this can be used to welcome new followers or to answer specific questions. A third tool for interactions is called “hashtags,” or #’s. These symbols, followed by words unbroken by spaces, allow for the searching of tweets written about similar topics. For example, a library might tweet about banned book week, and end the tweet with the phrase “#bannedbookweek.” The phrase becomes a clickable link within Twitter that will search for all the tweets with that hashtag.

This article explores the use of Twitter in academic libraries and identifies underlying trends that exist. While it is understandably exciting to embrace new technology to reach patrons, it is imperative to have an understanding of how to utilize the technology to appropriately connect to library users.

Literature Review

With the advent of Web 2.0, the relationship between the academic library and users has dramatically changed. Tim O’Reilly (2005) coined the term Web 2.0, stating that it involves: “services, not packaged software, with cost-effective scalability; control over unique, hard-to-recreate data sources that get richer as more people use them; trusting users as co-developers; harnessing collective intelligence; leveraging the long tail through customer self-service; software above the level of a single device; [and] lightweight user interfaces, development models, and business models.” The capabilities of Web 2.0 enable users to engage the library in two-way communication and knowledge exchanges. Instead of users physically coming to the library, the library delivers services to users via various electronic mediums. Users are also participating in activities that were once the sole purview of the library, such as cataloging via folksonomy, or providing comments on books via blogging. The integration and the

utilization of Web 2.0 technology into library services is referred to as Library 2.0. (Casey & Savastinu 2006).

Twitter is among the technologies that libraries are embracing to better connect and communicate with their patrons in the Library 2.0 world. Thomas (2010) noted that libraries, as well as businesses, are already harnessing the momentum of Twitter by creating institutional accounts for marketing, customer service, and other external communications. As Twitter does not have restrictions on institutions or groups having their own user profile, an account is simple and viable for libraries to create and poses many possibilities for use as an outreach and communication tool (Steiner 2009).

Although Twitter and other social networks open up new opportunities for academic librarians to reach out to students directly and inform them about the amazing resources at their disposal, Bell (2009) cautions librarians to remember that social networking is not about raising the libraries' profile; it is about students and our commitment to apply technology sensibly to their academic success.

All types of libraries are currently using Twitter. For example, public libraries frequently point out highlights on their websites, changes in holiday hours, teen events, and upcoming programs, while university libraries may "tweet" about service issues, upcoming deadlines, library blog posts, and instruction workshops. Twitter gives special libraries a new venue to share information, not just with their internal clients, but also with people outside the institution who are interested in their topics and collections (Milstein 2009, Le Gac 2010, Ho & Hsiang 2010, Bachrach 2010, Dickson & Holley 2010).

With the popularity of Twitter, many authors have proposed ways in which educators, including academic librarians, can engage with their followers. Grosseseck & Holotescu (2008), Milstein (2007), and Mathews (2008) suggested that libraries could share short messages to their followers on Twitter about library events, instructional workshops, book sales, newly available resources, and changes to policies, in addition to providing responses to library user questions. While some users choose to subscribe to these feeds, Twitter updates can also be embedded into the library's homepage to provide instant communication to anyone who visits the site. Additionally, DeVoe (2009) stated that with Twitter, libraries can find out both what their users think about the library and what they do while using it.

Although Twitter is a relatively new social media platform, having recently celebrated its six-year anniversary in March 2012, many academic libraries are already using Twitter in innovative ways to reach their users. For example, the Yale University Science Libraries announce workshops on library resources, provide links to online archives, and give tips on sending text messages to a librarian. Massachusetts Institute of Technology Libraries also provide short announcements regarding workshops, classes, study group information, and other news via Twitter, in addition to interacting with patron posts on the feed (Kim & Abbas 2010).

The New York University NYU Health Sciences Libraries Communications Team created a Twitter account as an outreach tool for students, faculty, and staff to promote resources, events, and relevant news. The team discovered that Twitter can be an excellent way to gather feedback on library services, hours, classes, and so forth. By monitoring and listening to what followers are saying, libraries have the opportunity to fix

problems quickly, get user opinions, and essentially listen in on mini-focus groups without having to formally gather users. Although the authors indicated that it is difficult to measure the effectiveness of Twitter, the product is free, and the time and effort to sustain such a venture are minimal. (Cuddy, Graham & Morton-Owens 2010).

Fields (2010) provides an example of how Twitter is used among the reference staff at Koerner Library, the Humanities and Social Sciences (HSS) Library at the University of British Columbia (UBC). Rather than “tweeting” events and services, the purpose of their Twitter account, KoernerRef, is to “tweet” reference questions that will communicate the kind of research being performed by the HSS community at UBC. “Tweeting” the questions develops an archive that can be used for professional development within the department. The questions can be used to discuss how reference interactions were answered, the tools used to find the information, and alternative methods of information access.

Thus far, there have been a handful of research studies on how libraries are using Twitter. In his 2010 study, Stuart collected data from 433 library accounts, including academic, public, state, and national libraries. Although many individual librarians use Twitter, Stuart’s focus was on Twitter accounts at the institutional level. Stuart reports that on average 30% of the libraries made one post per day for the duration of their account’s life and that 59% of the libraries were following fewer than a hundred Twitter accounts.

Using a sample of 15 public and 15 academic libraries, Aharony (2010) explored the use of Twitter to understand microblogging patterns. The analysis indicated that both types of libraries understand the power of Twitter as a practical channel of

communication and attempt to produce a tweet at least once per day. He also noted that public libraries use more informal language in their tweets, compared to academic libraries, perhaps to reach and attract different potential patrons.

Mahmood and Richardson (2011) conducted a survey of the websites of 100 member academic libraries of the Association of Research Libraries and noted that all libraries were found to be using various tools of Web 2.0. Eighty-five libraries in the study were using Twitter for microblogging and were primarily using this technology to share news and announcements.

Cassidy, et al. (2011) surveyed over 6,200 (37%) student library users' utilization and preference of popular Internet and communication technologies at Sam Houston State University (SHSU). Results found that the Twitter microblogging platform has not been heavily adopted at SHSU; barely 21 percent of respondents reported usage and only 10 percent reported an interest in usage. Almost 69 percent of students surveyed had no interest in using Twitter, and nearly 75 percent of students surveyed had no interest in library services using Twitter. Fewer than 20 percent expressed a desire to ask the library questions via Twitter, and slightly over 20 percent wanted to follow Twitter updates on library news, events, and resources. Low respondent interest has reaffirmed the library's decision to use Twitter as a newsfeed tool rather than as a social network.

Mathews (2008) found that academic libraries used Twitter for many practical applications, including assessment, communications, and collaboration with its users. For example, he suggests that librarians can learn by looking at students' "tweets" not only about how they use the library, but also about their general perceptions and

expectations. Finally, Matthews notes that Twitter expands the reach of research assistance for librarians. With students using social networks to explain their informational needs, librarians can seek people who need help with resources and services, in addition to syndicating information about events, upcoming workshops, changes in policies, and more. With Web 2.0 applications, such as Twitter, librarians are able to better understand how students use and perceive the library and it adds a new channel for librarians to interact more directly with users.

Research Design

This study is an intentionally broad exploration of how academic libraries are currently using Twitter. Two hundred and ninety-six academic libraries were randomly selected to study from the 1,460 academic institutions listed in the Carnegie Foundation website^[1]. Institutions on this list include Doctoral/Research Universities (Extensive and Intensive), Master's Colleges and Universities (I & II), Baccalaureate Colleges (Liberal Arts & General), and Baccalaureate/Associate's Colleges, located in the 50 states, the District of Columbia, or outlying U.S. territories. A randomized list was generated using Random.Org^[2]. The first 296 institutions were chosen from the randomized list to be studied.

Specifically, the study was designed to examine how libraries are currently using Twitter, what their accounts look like, and how Twitter is being promoted on their library websites. Institutional characteristics were gathered from the 2008 Academic Library Survey^[3] and the Carnegie Foundation.

Data Collection and Analysis

To gather and compare data consistently, an online form was constructed using Google Forms^[4]. The form included 19 questions and an additional space to record any observations about the use of Twitter by the library. To improve accuracy of the results, all three researchers tested the matrix with a sample set of universities before the study began and then compared results. Inconsistencies were noted and minor changes were made to the matrix to make data collection consistent. As a further precaution, during the study two researchers were assigned to each institution and the results were compared at the end of the data collection period. Any inconsistencies were noted and corrected after additional review. This reduced researcher bias, since the information displayed on library websites and on Twitter can be complex and can be interpreted in more than one way.

Results

Nineteen different characteristics of academic library Twitter accounts were reviewed to obtain a broad overview of how libraries are using Twitter, including information about the layout and design of accounts, the number of library account followers, and the number of tweets and type of content they contain. These were compared to additional institutional characteristics of the academic libraries and their parent organizations. Taken as a whole, they provide a glimpse of how academic libraries are currently utilizing Twitter and provide insight into characteristics that make Twitter more successful.

The first question of the matrix asked whether the library had a Twitter account. Other departmental or branch library Twitter accounts were also documented if they were readily findable on the library home page or linked to the main library's Twitter

account. Of the 296 schools in the survey, 34% (101 libraries) had Twitter accounts for their main library. Very few libraries had Twitter accounts for individual library departments. In fact, only 10% of schools had other departmental Twitter accounts, for units such as special collections or reference. The researchers expected to find that only libraries who had main branch Twitter accounts would also have Twitter accounts for other departments. Surprisingly, this was not the case, as only 53% of the schools with departmental Twitter accounts also had one for the main library. Of the schools with library departmental Twitter accounts, most often the feeds were for other library branches (47%), reference departments (9%) and archives (9%). Having a branch library did not make a library more likely to have a Twitter account at the main library. Only 8% of libraries with over eleven branches had a Twitter account, while 34% those with 1-10 branches had an account and 34.5% of libraries with no branches had an account.

Regions of the country varied in their adoption of Twitter. In the Rocky Mountains region 66.66% of libraries were using Twitter, with the next highest region being New England at 45.45%. Twitter usage was lowest in the Southwest with only 16.66% of libraries using it, while outlying regions also had low usage with only 22.22% of libraries having Twitter accounts (See Table 1). In addition to regional differences, Twitter usage varied by location. Libraries at academic institutions in rural areas were the most likely to have Twitter accounts (40%), while the least likely to have them were in suburban areas (28.79%). In cities 36.36% of academic libraries had accounts, while 31.58% of academic libraries in towns were using Twitter.

Libraries that had Twitter accounts were more often associated with private academic institutions rather than public institutions. In fact, the only category of institution that had more libraries with Twitter accounts than without were private for-profit organizations. Sixty-two percent of libraries of this type had Twitter accounts, although this was the smallest group of libraries with only eight institutions fitting this category. At private non-profit academic institutions 37% of libraries had accounts, while at public academic institutions, only 27% of libraries had Twitter accounts.

Baccalaureate/Associate's Colleges were the most likely to have library Twitter accounts, with 75% having an account. This group was a small segment of the sample population at 2.73%, however when included with other types of Baccalaureate institutions (Baccalaureate Colleges--Arts & Sciences and Baccalaureate Colleges--Diverse Fields) this group still was the most likely to have a Twitter account with 39% of the libraries in the sample having one. Master's Colleges and Universities (large, medium, and small) had library Twitter accounts 34% of the time. Research Universities (doctoral/research, very high, and high) were the least likely to have a library Twitter account, with only 23.5% having one.

Libraries with larger numbers of staff did not necessarily have more Twitter accounts than those with low numbers of staff. Those schools with a full time equivalent (FTE) staff between 31 and 40 had the highest percentage of Twitter adoption at 53%, but the next highest percentage of account holders (40%) was among libraries with FTE staffs between just one and ten people. The lowest number of account holders was with libraries that had an FTE staff between 91 and 100, of which none had a Twitter account. There was a tie for the next lowest adoption rate of Twitter (14%) between

those with a FTE staff between 61-70 people and those with 71 to 80 people (See Table 2).

Most libraries in the sample offered reference service via e-mail or over the web, only 14 did not (22 libraries did not report on this characteristic). Not surprisingly, a higher percentage of libraries who offered electronic reference had library Twitter accounts (33.6%), versus those who did not offer electronic library reference (21%). No libraries in the study had exclusively electronic collections.

The majority of libraries in this study started their Twitter accounts in 2009, as determined by the first tweet listed in their account (see Table 3). As predicted, the longer a library had an account, the higher the average number of followers that account had. Accounts that were created prior to 2008 had an average of 1,031 followers, while accounts created in 2011 averaged 19 followers (see Table 4). The average number of other Twitter accounts libraries follow is 102, but 68% of the time they followed under 100 other accounts, and surprisingly 12% of libraries did not follow any other account at all.

Two layout and design features that were studied included whether or not libraries used the Twitter logo to link to their accounts and where that logo was placed on the library homepage. Twenty-eight percent of libraries had no logo or link available on their homepage. If they had a logo or link on the home page, it was most often placed at the bottom right (16%), middle right (15%) or bottom middle (11%) of the page. Those libraries that had a logo on the library website did tend to have a higher number of users that followed their account. Overall the average number of followers

was 229. Schools that included a logo somewhere on their library home page had an average of 251 followers, while schools that did not have a logo averaged 175 followers.

Customization of Twitter accounts was another design characteristic reviewed. The majority of libraries had at least some identifying information on their Twitter pages. For example, it was found that 90% of the accounts had the library name somewhere on their Twitter page, 78% had the university name, and 52% had photos of the school or library. It was less likely for libraries to have the school or library logo (44%), or to change the color of the page from the default Twitter background (42%).

The number of times a library tweeted in November varied widely (see Table 5). Most libraries (42%) posted between one and ten tweets, with the next largest percentage falling between 11 to 20 tweets (23%). Analyzing the high and low ends of the spectrum, ten percent of the sample accounts did not tweet once in November while 6% tweeted more than 50 times. There was an average of 23 days between the day the Twitter account was analyzed and the last day a tweet was posted; however, this number is skewed by eight libraries that had not tweeted at all this year. If the data is limited to libraries that have tweeted since Jan 1, 2011, the average becomes four days between analysis and most recent tweet, with 27% of libraries tweeting on the day the account was observed; 43% within one day of analysis, 53% within two days of analysis, 61% within three days of analysis, and 65% within four days.

Library Twitter accounts averaged 334 overall tweets from the time the account was created until the day the account was observed. Since the number of tweets varied widely the average or mean are misleading. The mode, or value that occurred most frequently in the data, of 14 tweets is a better indication of how often most libraries were

tweeting. It is similar to the average number of tweets per school in November, which was 19. Only six of the 101 libraries had Twitter accounts with more than 1,000 tweets.

Content of Twitter posts was analyzed to determine the primary type of material that was posted. Tweets were further analyzed to determine all secondary content types. The majority of tweeting libraries (55%) used their Twitter feeds to discuss resources. The next most popular primary use was for library events (24%), followed by hours (14%) (see Table 6). The most popular secondary uses for Twitter feeds were hours (24%), library events (19%) and resources and/or campus events (16% each).

The number of followers of library Twitter accounts varied widely. Of the 10 accounts with the most followers, five also ranked in the top 10 for largest number of tweets as well, and eight out of the 10 had an above average number of tweets. There was no direct relationship between the number of followers and how recently the latest tweet had been posted. The 10 accounts that had been in existence the longest had an average of 647 followers, which was more followers than the average account; and the five oldest had an even higher average of 908 followers. Libraries that had at least one tweet in February (the month the study was conducted) had an average number of 261 followers, while libraries that had last tweeted in January had an average of only 58 followers. Libraries that had not tweeted since 2010 had a lower average of 32 followers, while libraries that had not tweeted since 2009 had an average of only 30 followers.

Several features are available in Twitter that allow for interaction between followers and the library. When analyzed, it was found that over half (54%) of the libraries interacted with their followers in some manner. Methods used included,

responding directly to a question asked by a follower, by mentioning followers via a directed @ message, or by using a hashtag that clearly indicated their interaction with a follower. Twitter does not allow others to see direct messages between two accounts, so it was not possible for the researchers to measure this interaction. Mentioning, via an @ reply, was one of the least often used feature by followers of libraries. Most of the libraries were not being mentioned by their followers; in fact, only four library Twitter accounts had more than 10 mentions.

Hashtags, a group of words that is preceded by the symbol #, were also used infrequently by libraries. Surprisingly, 54% of the schools never used hashtags, and not a single school always used hashtags. Of the 46% who occasionally used hashtags, most often (91% of the time) the tags were generic in nature, not specific to the school or library. Four percent of libraries used exclusively school-specific hashtags, 18% used school specific hashtags along with other one other hashtag type (generic or library-specific), while 5% of schools used hashtags in all three categories.

Another feature of Twitter is the ability to create lists, which allow people to group other Twitter accounts together in a meaningful fashion. Lists can also be used by other tweeters to find multiple accounts that tweet about the same subject that they might want to follow. Ninety-one percent of libraries were on at least one list, while the average number of lists a library Twitter feed was on was 25. Twitter accounts that were listed at least once had an average of 251 followers, while schools that were not included on any lists had an average of only seven followers.

Limitations and Future Research

A primary limitation for this study is the frequency in which Twitter accounts change. Institutions can create or delete accounts at any time. Therefore, it is possible that the characteristics discovered in this study could have changed significantly at any time after the study was conducted. To deal with this limitation, this study focuses on a snapshot of Twitter accounts and library websites during the month of February 2011, noting how many libraries actually had Twitter accounts during that month and quantifying basic characteristics of those accounts, such as number of followers and total number of tweets. To review content of what libraries were tweeting, a different month was chosen for analysis. November 2010 was selected based on the academic calendar, since classes would have been in session at most institutions and it tends to be a busier time of year. These choices helped the researchers to deal with the fact that Twitter is evolving and changing constantly.

Another potential limitation of the study is that the library staff member assigned to manage the Twitter account can also change at any time. This could impact the type and frequency of content posted to the Twitter account. Since only one month of review was completed for content analysis, it is possible that the library may have been more or less active in posting to their account during a different time of year. It is also possible that the choice of month may skew what content was being posted. For instance, there may have been more tweets about hours posted in November due to the Thanksgiving holiday. Future studies could build upon this research by surveying libraries to obtain more comprehensive information about how academic libraries approach using Twitter as a library service or why they have chosen not to create account. Research might focus on the reasoning behind decisions made when posting tweets, including who is

chosen to write the tweets or what type of information is tweeted. Other areas for investigation might focus on the decisions behind how and why schools use Twitter, or could focus on students and their opinions on library Twitter accounts.

Discussion

Over a third of academic libraries studied actually had Twitter accounts, but the characteristics of the accounts varied widely. Many libraries were able to accumulate large numbers of followers, suggesting that Twitter could be valuable as a communication tool with patrons. However, other libraries had accounts that were rarely used and offered little value. Much less often, yet troubling, some Twitter accounts seemed antagonistic towards patrons, tweeting things such as, “Why do people insist on coming to the library to watch their online videos? I seriously just saw someone streaming Jersey Shore.”

Analysis uncovered interesting facts about the types of institutions that had a higher percentage of Twitter use. For instance, private institutions were more likely to tweet than public, perhaps because of fewer restrictions on Internet use. Additionally, those libraries at academic institutions classified as Baccalaureate/Associate's Colleges were far more likely to have Twitter accounts than Master's or Doctoral level institutions, sparking the question if student focus might be at the cause of this difference. Geographically, several areas seemed to be outliers, either having a far greater or fewer number of Twitter accounts than average, but this did not bleed over to contiguous areas. For instance, the Rocky Mountain region had the highest usage of Twitter at almost 67%, while the Far West had only a 35% adoption.

What to tweet is often a question for new account owners. Over 50% of academic libraries primarily tweeted about library resources. Other main uses of Twitter were for posting hours or for library events. Although some libraries only tweeted one type of content, most had a mixture and often included tweets about campus and community events. The study did not indicate a statistical correlation between content types and number of followers, but it can be noted that libraries tweeting more often had more followers. It may be that libraries posting frequently with content that is useful to patrons attracts and keeps more followers. While on the other hand, not having interesting content or posting too many tweets (and overwhelming a user's Twitter feed) might make it less likely that followers would be engaged in a library Twitter account.

Although many libraries were using Twitter to communicate different messages to patrons, very few were using the resource to carry on a two-way conversation, something for which it is well-suited. Less than 10% of libraries were using Twitter to answer reference questions, although that may in part be due to privacy concerns. Acknowledging comments posted by followers, thanking users for retweeting library messages, and greeting patrons as they sign up to follow the library Twitter account are all ways to make the library Twitter account a welcoming environment.

Some libraries were able to obtain more followers than others. The range of followers was 0-1,040. Schools that tweeted more had more followers, but that was not the only common characteristic for those accounts with high numbers of followers. Many other factors seem to contribute. For example, lists serve a vital function on Twitter, allowing the grouping of accounts that others can use as guide. Many of the libraries in this study were listed with other official institution Twitter accounts, providing a way for

students to quickly connect to accounts at their institution. Incredibly, schools that are listed at least once had an average number of followers 3,485% higher than schools that were not listed at all. In general, lists are created by entities outside of the control of libraries, and with the exception of a list created by a parent organization, it may be difficult for libraries to garner the attention needed to be added to Twitter lists.

Libraries with Twitter logos on the library home page also had more followers, with a 43% higher average number of followers than schools that did not have a logo. Another factor related to number of followers was how long the account had been open, with the oldest accounts generally having more followers. Lastly, the number of people the library followed also seemed to make a difference in number of followers of the library. The ratio of number of followers to number of feeds followed was 2.24.

The study revealed that not many libraries are making use of available Twitter tools to enhance their accounts and their interaction with followers. These tools, such as hashtags, direct messages, and @replies, can all be easily used to help make tweeting more effective. For example, despite the popularity of hashtags in the general Twitter public, most academic libraries are not using hashtags. Those that do use hashtags, only use general Twitter hashtags, as opposed to school or library specific ones. By including a library specific hashtag such as #libworkshop, students could quickly and easily find a list of all tweets about workshops in the library.

Conclusion

While Twitter has been part of the social media universe since 2006, this study of 296 Twitter accounts from a random sample of academic libraries indicates that libraries have adapted somewhat slowly to this tool. After reviewing the relevant literature on

how academic libraries are connecting with Twitter and other social media platforms, it seems that academic libraries are still in the early stages of assessing and evaluating the success of using Twitter and other social networks to connect and communicate with their users.

Only one-third of all academic libraries in this study were using Twitter and only a small number of them were making use of the various tools that would further enhance interactions with their followers. Review of academic libraries using Twitter suggests that that Twitter has the ability to reach and interact with library users effectively by sharing basic information and resources, conversing with patrons, and providing assistance in a quick, yet useful way. As Twitter becomes more widely implemented in academic libraries, future studies will be needed to evaluate how users interact with the libraries via the social networking platform and how libraries' tweets expand over the course of time.

Notes

¹ Available at: <http://www.carnegiefoundation.org> (accessed 9 February 2012).

² Available at: <http://www.random.org/lists/> (accessed 9 February 2012).

³ Available at: <http://nces.ed.gov/surveys/libraries/academic.asp> (accessed 9 February 2012).

⁴ Available at: <http://www.google.com/google-d-s/forms/> (accessed 9 February 2012).

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