

Micro-blogging practices in Canadian public libraries: A national snapshot

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Abstract

This paper reports the first phase of a study examining Canada's public library sector's micro-blogging practices. Results of a national survey of public library ($n=71$) Twitter practices and an analysis of Twitter followers from one library are presented. Five themes are proposed as a future research agenda: community size and population density; managing the public library's Twitter voice; the potential for controversy; the library as the community's daily digest; and the network effects of community building. As the first national study, a contribution is made to advancing research on micro-blogging from the public library's distinct institutional perspective.

Keywords

Micro-blogging, participation, public libraries, social media, survey, Twitter

Introduction

As one species in a vast ecology of content and information networks, the public library engages with its clients and communities in the knowledge society through several new participation platforms. Among the latest of these innovative and disruptive 'sociomaterial' (Leonardi, 2012) technologies, objects and spaces are the social catalogue, the web portal with embedded social media channels, and 'maker' spaces. Beyond continued access to traditional collections and services, these social technologies also enable and mediate new forms of online user participation, engagement, access and interactivity. They enact new forms of sociality and offer library users global access to the Internet of commercial and user-generated content.

Twitter is one such participation space structuring these public library–client interactions (Efron, 2011) whose benefits have been well documented and promoted by library practitioners (Cahill, 2009, 2011; Solomon, 2009; Tarulli, 2010). Micro-blogging research, however, from the societal, institutional and transactional perspectives is still emerging, also with implications for public libraries (Rogers, 2014). Extending well beyond 'platform studies', Twitter's rapid adoption has given rise to 'personal publics' as a 'new publicness' (Schmidt, 2014: 11). 'Twitter's role in society and its relationship with society' is part of a larger agenda 'to study society through the Internet' (Weller et al., 2014: xxxvii); the public library's contribution to that agenda is the primary impetus for this study.

As a first phase of a larger project, this paper reports the results of a recent survey of Canada's public libraries' use of Twitter and introduces a preliminary classification scheme of one public library's Twitter followers. The goal of the larger project is to understand why and how Canadian public libraries locally, and as a government service sector, are engaging with their clients through micro-blogging and what effects these interactions may be having on the broader library–community information relationships and learning opportunities (André et al., 2012; Gruzd et al., 2011). Canada's public libraries are agencies of government to the extent that they are legislated and funded through provincial, territorial and municipal taxes. However, with the exception of the territorial public libraries, public libraries in Canada are independently administered through citizen-majority library boards. All levels of government rely on public libraries as community level agents to deliver or make accessible selected government information, programs and services. This national snapshot of Canadian public libraries' micro-blogging organizing decisions, their management policies and practices and their insights into the benefits and challenges of this

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micro-blogging practice within the larger public library program in combination with a preliminary follower analysis of a random sample of followers in one large Canadian urban public library together lay a firm foundation for this future work.

Framing social media and public library participation

A study of public libraries' social media practices draws on concepts and previous studies from many related disciplines including public relations and marketing, e-government, social networking, social media and public participation, public administration and library and information science. Participation through discursive sharing is a core information value and practice native to our networked society (Wittel, 2011). It underlies how individuals, networks and organizations increasingly interact in today's global e-society. A systematic review of literature on online participation reveals five dominant sub-discourses including politics, business, education, health and culture (Lutz et al., 2014) and conceptually differentiates participation from information or communication. The primary agency of e-society participation and online sharing, and arguably the focus of the majority of recent social science research, has been the networked individual (Bruns, 2008; Masum and Tovey, 2011; Rainie and Wellman, 2012). Features of Web 2.0 that enable individual agency are those 'network effects' whereby 'some things are more valuable when more people participate' and the technology 'platforms' structuring these capabilities (Blank and Reisdorf, 2012: 538).

As tools and spaces for networking and organizing, social media have also been predominantly associated with crisis events (e.g. the Haiti earthquake in 2010) (Huberman et al., 2009; Hughes and Palen, 2009; Naaman et al., 2011) and large-scale, geographically dispersed, social-political movements (e.g. the Arab Spring in 2010/2011) (Lotan et al., 2011; Segerburg and Bennett, 2012). Although Twitter's success in advancing social and political action has been widely claimed in the online commons, one of the important 'analytical fallacies' justifying more 'nuanced theory and analysis' has been the tendency to 'abstract new social media out of more complex contexts' (Segerburg and Bennett, 2012: 199). In addition to differences between rural and urban Internet life (Stern and Wellman, 2010), physical proximity (e.g. local-global) and demographics (e.g. aging populations) also influence how social media are used in networks and communities and with what outcomes (Erickson, 2010; Gilbert et al., 2010; Goldberg, 2010; Yardi and Boyd, 2010). How Twitter functions to construct 'an imagined community' (Gruzd et al., 2011: 1294) or an 'imagined audience' (Crawford, 2009; Litt, 2012: 330) holds significance for organizations such as libraries. Who do libraries think they are talking to, what are they saying, and with what kinds of effects?

While a coherent body of research on social media and public participation from the individual citizen or user perspective is clearly emerging, the same cannot be said about the networked organization and more specifically about networked government agencies such as the public library in interaction with its citizen-publics (Andersen et al., 2012; Butsch, 2008; Chun and Reyes, 2012; Sandoval-Almazan and Gil-Garcia, 2012). Challenges with overly complex social media policies, bureaucratic control processes (Marlin-Bennett and Thornton, 2012), and legislative protections of user privacy (Fyfe and Crookall, 2010; Klang and Nolin, 2011) dog many government and NGO efforts to accelerate citizen participation based on principles of openness, transparency, collaboration and participation (Bertot et al., 2012; Kanter and Fine, 2010; Lathrop and Ruma, 2010; Mergel, 2013; Nam, 2012). Linders' (2012: 446) typology for citizen participation proposes three forms of participation shifting the emphasis from 'egovernment to we-government'. A special issue of *Government Information Quarterly* (December 2012) on social media calls for further research on six broad themes including appropriate regulatory, policy and evaluation frameworks; best practices to determine trends and assess impacts; implementation strategies; changes in citizen and organization attitudes and behaviours; and meaningful decision making while reflecting citizens' 'voices' (Chun and Reyes, 2012: 443; Medaglia, 2012).

As an accessible public relations and marketing tool, Twitter has been more effective for non-profit organizations as a means of engaging with clients, than have their traditional websites (Kanter and Paine, 2012; Lovejoy et al., 2012; Waters and Jamal, 2010). Various Twitter typologies across different settings have been developed based on large data sets (Dann, 2010; Lovejoy and Saxton, 2012). That Twitter offers an effective platform for information sharing and conversation has also been widely acknowledged (Elsweiler and Harvey, 2014; Smith and Rainie, 2014).

In the LIS domain, social media and micro-blogging studies cluster according to the type of library being studied – academic, special or public libraries. A comparative content analysis of selected American public and academic library Twitter feeds during a three-month period revealed few institutional differences and concluded that broadcasting and sharing information were the primary activities associated with this practice for both types of library organizations (Aharony, 2009: 347). Trends in academic library tweeting (Del Bosque et al., 2012) again confirm the informational and instructional value of Twitter, in this case for students and faculty (Collins and Quan-Haase, 2014). A study of 433 library Twitter accounts from various countries worldwide (Stuart, 2010) suggests that although Web 2.0 readily affords new opportunities to construct 'social libraries' (Stuart, 2010: 47), the library organizations being studied exhibited a

'lackluster presence of institutional accounts' (p. 46) and little evidence of online conversation that was explained by the widely recognized 'institutional nature of libraries' (p. 45). A study involving surveys and interviews of UK academic library and information services identifies the value of Twitter as a 'business tool' for information services delivery (Loudon and Hall, 2010: 236).

Several Twitter or social media studies with particular contributions for public libraries focus on: micro-blogging as a knowledge organization system (e.g. Shiri and Rath, 2013); as a social media as conversation and social space (e.g. Smeaton and David, 2014); as a knowledge management opportunity (e.g. Forcier et al., 2014); as a search interface (Elsweiler and Harvey, 2014); or as an interaction platform (Chen et al., 2012); and on public library use of social media as an ongoing series of information activities bridging information behaviours and practice (Cahill, 2011; Kronquist-Berg, 2014). How a library's social media interactions on platforms such as Facebook and Twitter meet similar or different objectives or complement the social interactions in a 2.0 library catalogue in any of these knowledge and information activities, also requires further study (Tarulli, 2013).

Conceptual framework

As the preceding review illustrates, micro-blogging and other social media are the subjects of research across many disciplines and from various conceptual perspectives. Various frameworks for studying these social information practices in organizations are circulating across this larger field from media and cultural studies, communication, social theory, organization studies, marketing and public relations, and public administrations. Calls for further theoretical study (Lutz et al., 2014).

Participation mediated through technology objects is now the common design feature, marketing strategy and outcome of the social and informational networks that dominate the Internet (Knorr-Cetina, 1997; Latour, 1994). Rainie and Wellman (2012) assert that the 'networked individual' characterized also as a 'new operating system' and enabled through social media should be the primary agency and unit of analysis. Differentiation between our online and offline behaviours has been made redundant by this new 'operating system'. From an institutional standpoint, a growing ecology of participation with fewer fixed organizational boundaries or rules has also been observed (Fish et al., 2011). Traditional distinctions between organizations and their member publics are increasingly flexible. As 'formally structured enterprises' libraries increasingly interact with and are changed by interactions with a heterogeneous field of established and emerging 'organizing publics' such as those that can be observed through, in this case, public libraries' Twitter followers (Fish et al., 2011: 161).

A practice-based theoretical approach (Huizing and Cavanagh 2011; Mansour 2013) bridges the micro and macro organizational perspectives, bringing together and accounting for all of the unique dimensions of a public library's field of interaction in contrast with other theoretical frameworks that take too broad or too narrow a lens. The values, beliefs, history, actions, objects, technologies, rules and routines and agencies constituting the contemporary public library, including its Twitter participation, can be observed and interpreted through attention to the information objects and technologies, knowledge sharing discourse, and organizational structures and agencies across time and space, both online and in the physical world. The public library's field of practice incorporates both the library's institutional identity and its day-to-day interactions as a larger field of interaction, relationship and participation and more broadly as society's mediating cultural technology or 'social transcript' (Osburn, 2009) for knowledge and information sharing. The research questions this study addresses are these: Why and how are Canadian public libraries adding micro-blogging to their suite of sociomaterial technologies, platforms and spaces? What differences are social media platforms making to public libraries' programs of interaction and engagement?

The primary research contribution coming from this survey and follower analysis is a set of baseline data to inform larger longitudinal studies and micro-practice studies of social media participation along government-community boundaries in a variety of socio-cultural, economic and demographic, national and international settings. The results of this first public library survey provide a snapshot and foundation for future work and for understanding more about the possible directions for the public library's long-term evolution.

National survey methodology

Social-biblio.ca¹ is a curated archive and Twitter feed developed and maintained by the author and research team. As of November 2014, 188 public library Twitter accounts representing approximately 29% of all Canadian public library systems are being tracked. Libraries are added to the archive as they identify themselves or through regular promotion of the site in a wide range of national and regional library authorities and networks.

An online survey of Canadian public libraries with Twitter accounts was conducted between 20 October and 1 December 2013. The survey was made publicly available and hosted at <http://fluidsurveys.com>. Links to the survey were tweeted individually to each library with a Twitter account identified through Social-biblio.ca ($n=173$). Invitations to complete the survey were posted on three national and provincial library association discussion lists and newsletters. Information was also posted on the Social-biblio.ca site. Finally, requests to distribute links were

tweeted to six Canadian librarian bloggers with the largest number of followers. Two reminders to complete the survey were re-tweeted and re-posted during the survey period. The survey consisted of 10 open and closed questions. No incentives were provided to complete the survey and the survey was approved by the host university's ethics review board.

Survey responses were downloaded into a spreadsheet for analysis. A qualitative content analysis was conducted on the open questions; closed questions were tabulated in frequency tables. The first cycle of inductive coding used descriptive, InVivo and processing methods; a second coding cycle involved summarizing, clustering and refining preliminary concepts into several core themes and categories (Miles et al., 2014). Preliminary results of the study were introduced to a group of 60 public librarians from across Canada at a library symposium in April 2013, for discussion and confirmation.

Follower analysis methodology

To explore the types of individuals, organizations and communities constituting a public library's Twitter audience as followers, a qualitative analysis was conducted of 1000 followers, representing 9.2 % of the total number of followers ($n=10,850$) of one large Canadian urban public library. A systematic sampling technique was employed whereby 100 followers were selected in 10 regular intervals beginning with the first follower. Because followers appear in chronological order according to when they first follow the library's Twitter account, this sampling method is slightly biased towards those followers of longest duration. A larger sample was selected for two reasons: because this was the researcher's first efforts with this inductive, qualitative approach to follower analysis; and as an intensive research activity for two student researchers. This analysis provides a test sample for study, complements results from the institutional survey and provides a library followers' classification scheme for reference for practitioners and researchers. This follower dataset was created in January 2013 and was coded between January and March 2013. Two research assistants manually coded 500 library followers' Twitter accounts each and established the final follower classification scheme following several team discussion of a sample of individual coding decisions.

Results

This section reports results from both the survey and follower analyses whereas interpretation of these results follows in a separate section. Seventy-one surveys from public libraries were completed, representing approximately 12% of the public library authorities in Canada, and 41% of the libraries identified as having Twitter accounts on Social-biblio.ca during this period. A small number of surveys were

Table 1. Profile of public library respondents.

Population	Type of library governance ($n=70$)			
	Served	Provincial	Municipal	Regional
< 5000	1	5	0	6
5000–24,999	0	8	2	10
25,000–49,999	0	6	0	6
50,000–99,999	1	7	2	10
> 100,000	3	26	9	38
Total	5	52	13	70

completed by educational institutions and these responses are not included in the data set on which the following results are based. Although the survey was available in English only, 69 surveys were completed in English and two surveys were completed in French. Results are organized broadly according to question order and clusters. To appreciate the types of libraries responding to this survey Table 1 categorizes responses according to type of library governance and size of community served.

Perhaps unsurprisingly, the majority of respondents are from larger municipal libraries serving populations greater than 100,000 people (54.3%). A slight bi-modal distribution where smaller municipal, though not regional, libraries serving fewer than 25,000 people constitute an 24% of the respondents suggests that density of population may influence public libraries' decision to take up Twitter use in their library.

Many respondents ($n=69$) gave more than one reason why their library began using Twitter ($n=94$). Table 2 clusters these responses around several themes listed in order of frequency mentioned. Reasons for establishing a Twitter profile were diverse although some type of social pressure that the library be seen to be current with participatory information technologies was clearly in evidence. In support of the importance the library attaches to its role as a community enabler and organizer, 56% of these responses explicitly reference community engagement in some form or other as their reason for taking up micro-blogging. Individual staff experiences with social media, a more general appreciation of social media as important technologies and following examples set by other libraries represent 50% of the reasons cited.

Responsibility for managing these libraries' Twitter accounts is distributed across several types of positions. Library team members (28.2%), adult department staff member (18.3%), marketing and communications staff (18.3%) and a library manager (16.9%) together represent more than 80% of the staff roles performing this work. Because all libraries do not have dedicated marketing and communications staff, we cannot know if this role responsibility would be a larger percentage from a different sample of libraries. Further study is needed to understand if and how differences in tweets occur due to differences

Table 2. Reasons libraries join Twitter.

Reason	% of total
Internal staff initiative or management directive	20.2
Join social media or extend existing presence	17.0
Reach out to community and new clients	16.0
Follow lead of other libraries	12.8
Spread the word and extend conversations	12.8
Get more involved in community	6.4
Stay current in information technology	5.3
Use as professional information source	5.3
Don't know	4.2

among individuals' formal roles within the organization. For example, do tweets assume a more explicit marketing and promotional tone in libraries where communications staff are responsible for the Twitter account?

The majority of libraries tweet daily in these frequency ranges: one to five times daily (58%); six to 10 times daily (9%); more than 10 times daily (9%). A smaller set of libraries (22%) tweet between one and 10 times weekly; one library tweets monthly. No publicly available source indicating the most efficient and effective frequency or schedule for library tweets could be identified. No standards are yet available to prescribe ideal frequencies for greatest response between organizations and their clients or customers.

A slight majority of respondents (54%) have an institutional policy regarding use of their corporate account. One library reported that they did not know if they had a policy and the remaining respondents (45%) indicated they had no official policy. The presence of a specific social media policy among only slightly more than half of the respondents suggests that Twitter is still a new platform for libraries. In general terms, many libraries appear to be still experimenting with this platform and therefore cannot yet specify how it fits or indeed should fit into their larger suite of services.

To begin to get a sense of the effectiveness, form and discursive style of public library micro-blogging, several questions probed on a library's awareness of the types of tweets that received the greatest public response and on respondents' awareness of perceived challenges and benefits of micro-blogging generally. Many libraries (66%) reported they were aware which types of tweets garnered the largest response from their followers while the remainder either did not know (13%) or stated that no particular style of tweet was more effective than another (21%). A strong majority of respondents (83%) perceived benefits to their library's use of Twitter while only slightly more than half (56%) of respondents perceived challenges to their use of Twitter.

When asked what these libraries tweeted *about* respondents offered lengthy, itemized lists presented in Table 3

according to three broad content themes and one theme related to the form or media type of the tweet. The content themes are arts and culture; community; and library, presented in respondents' own words. The goal in this reporting was to be as inclusive as possible.

The topics listed in Table 3 may appear obvious and unremarkable because they so clearly mimic the well-established information interactions (e.g. readers advisory and reference questions), content areas (e.g. history, popular culture, recipes, technology tips and trends), and information forms and formats (e.g. articles, YouTube, links, quotations) embedded in existing public library services. However within the structure and character limitations of the Twitter platform, the range and diversity of content being distributed also appears rich and slightly astonishing. The opportunity for a smaller or larger collective of public libraries to refresh and extend their traditional reference and readers' information services via the Twitter platform is immediate and inviting.

Open-ended questions on the challenges and benefits of library Twitter use brought the largest number and longest responses of all survey questions. To analyze these responses, the first approach to inductive coding entailed descriptive, thematic and relational analyses of each response to identify the full list of topics and key words, with particular attention to nouns, as they were noted by respondents. Perceived benefits and challenges are reported in Table 4 and Table 5. Each library response was broken down into separate textual phrases or statements in order to differentiate each single instance of a challenge or benefit statement. For example, when asked to elaborate on a library's challenges with Twitter use, one respondent provided this textual response: 'keeping up with changes to Twitter's interface, policies, etc.; dealing with negative feedback; workflows (incl. monitoring Twitterverse, account)'. These statements were then recoded into three separate challenge statements. Therefore, although there were $n=59$ responses to the question on benefits and $n=53$ responses to the question on challenges, the total number of benefits and challenges articulated were $n=123$ and $n=74$ respectively. These responses were then coded thematically according to the specific words and phrases used without imposing further meaning or interpretation. Themes are reported with examples in order of greatest frequency. Although the emerging categories for both benefits and challenges are closely related to each other, as much as possible, responses were coded based on key words and the emphasis given by the respondents.

In identifying themes of perceived benefits of their library's use of Twitter as presented in Table 4, respondents used relational words such as 'engagement', 'interaction', and 'connection' in 37.4% of responses. Relative changes in the library's perceptions of overall engagement or connection were suggested by terms related to measurement such as 'more' or 'greater'. In 25.2% of responses,

Table 3. What do libraries tweet about?.

Arts and culture	Community	Format	Library
Arts	Community events	Bookmobile changes	Blog post
Audiobooks and ebooks	Community news	Branch hours and closures	Book lists
Author information and interviews	Community programs	Collections	Book reviews
Books and book news	Community services	Conference reports	Catalogue entries
Early literacy research	Regional, provincial announcements	Contests	Contest
National culture and related news		Events	FAQ
Celebrity news birthdays		Library culture – jokes, photos, articles	Instagram
Culture		Library statistics	Links
Fun stuff		Partnerships	Photos
Historical facts		Photo caption campaign	Professional articles
Just about everything except politics		Programs	Questions
Local history		Questions we answer	Quotations
Media articles		Questions we ask	Reminders
Movie releases and books		Readers' advisory	RT, MTs
Music		Reference questions	Vine
Popular culture		Reminders	YouTube
Odd facts		Resources	
Popular culture		Technology problems and resolutions	
Recipes		Theme days and months	
RTs from social web influencers, partners, clients			
Technology tips, trends, and news			
Trivia			

benefits identified under 'communication and promotion' reference the library's Twitter 'voice' and the library's ability to 'get the word out'. Of the respondents 19.4% indicated that their library's active Twitter presence also had the effect of expanding the library's overall audience and participation in programs and services. Words such as 'more' 'increase' and 'grow' in reference to audience, followers, and users cluster around 'expand service and audience' theme. The informational value of Twitter was explicitly noted (e.g. 'let people opt-in to get more information conveniently', 'provide customer with more information' or 'be better informed') even though this benefit was referenced in only 11.4% of responses. Using Twitter to resolve client questions or concerns and to actively demonstrate that the library was 'with it', being perceived as both 'modern' and 'responsive', represented 5.7% of the total benefits noted.

Not unexpectedly, the four most frequently noted challenges as indicated in Table 5 representing 90% of the concerns, broadly address management issues but from distinct perspectives according as follows: organization and management (31.1%); time constraints (17.6%); effectiveness and efficiency (16.2%); and audience management (12.2%). Under organization and management, a variety of issues were identified including the 24/7 Twitter clock and scheduling staff resources, workflow and priority-setting, monitoring the feed for 'appropriate' content,

identifying fresh and still relevant content for library followers, whereas under time constraints, the word 'time' was often noted without further elaboration. Effectiveness and efficiency challenges were clustered according to the use of terms such as 'more' 'cost-benefit' 'greater' or 'responsive'. A number of respondents also expressed their institutional concern with Twitter as a source of controversy, complaint or 'inappropriate' use. Audience management refers to the respondents' challenges regarding attracting followers and specifically 'local' followers who may already be library users or have the potential to become library users.

These challenges can be summarized under the themes of management and resource allocation. In aggregate, they suggest ways in which the development of evaluation frameworks and opportunities for sector-wide knowledge sharing could potentially alleviate these concerns.

Follower analysis

To understand more about the types of relationships and conversations public libraries are engaged in on Twitter, an analysis of a sample of one large urban library's followers was conducted and reported in Table 6. Each library follower account was checked first to establish that it was still active. Blocked accounts were removed from the sample and additional follower accounts added. The research team

Table 4. Perceived benefits of library Twitter use.

Perceived benefit by theme (n=123)	Sample responses	# of total responses	% of total responses
Relationship & connection	Connecting with local customers and libraries across the world Connect with politicians Network with local organizations Linkage to other communities Twibates great way to engage with customers Building great relationships with online users	46	37.4
Communication & promotion	Able to monitor conversations about library and respond with official voice Quick and easy access to users Messages can spread very quickly Effective tool to promote programs and services Allowed us to develop a voice in the community Getting the word out about the library	31	25.2
Expanding service and audience	Increase conversations with online community RT like word of mouth Wider audience for YouTube channel More results Increased service and access Reach new people	24	19.5
Information & action	Market research More widely disseminated information For information staff Let people opt-in to get more information conveniently Provide customer with product information Better informed	14	11.4
Problem solving	Able to respond to complaints Resolve issues Opportunity to address problems	4	3.3
Being 'with it'	It can definitely change minds and makes the library seem like a modern, responsive organization.	3	2.4
Don't know		1	0.8

then discussed and agreed upon several broad guidelines for preliminary categorization. Individual, community groups, local businesses, government agencies and another group were the first categories established. Where profile information was provided for individual, business, and community group accounts, two broad location categories were also identified – local and non-local. Local designations included any identification with the specific municipality and its neighbouring metropolitan region. Where no indication of place was provided tweets were examined and where provided, accompanying websites were checked, and/or searches were performed using each @LibraryFollower ID. If no location could still be determined, the location default was set as local.

Following the first round, the team discussed the results. Decisions were made to add categories including librarian, library, media and book industry in a second round of coding. Each coder then coded a sample of 20 accounts from the other dataset to compare reliability and discuss differences with the research team. Accounts falling into the book industry category included any book or book-related

individual, corporate or community account such as @49thshelf or @RandomHouseCA that was not strictly a media-based account. Media accounts included both established and alternative news sources regardless of location. Spam accounts included automated bots and marketing accounts with no discernible relationship to the library.

Slightly more than three-quarters of the accounts (78.3%) were identified as local individuals, businesses or community agencies. The book industry followers represented a significant distinct cluster of accounts, and were the next most frequent type of follower identified. The remaining accounts with the exception of non-local individuals could be broadly described as library-related supporters or sponsors including the media, other libraries, librarians, and government agencies. In terms of expanding their participation and community engagement, these results confirm the predominance of local individuals and businesses as constituting this library's largest Twitter audience.

Public library membership has traditionally been defined according to the number of library cardholders

Table 5. Perceived challenges of library Twitter use.

Perceived challenge by theme (<i>n</i> =74)	Sample responses	# of total responses	% of total responses
Organization and management	Scheduling can be a concern, and with our working group of 15 it can be tricky for non-Twitter staff to figure out who to contact if they want something posted to the feed. Occasional issues with double-posting, with more than one person involved A few occasions where there has been a need to retract a post because it was sent out too soon (for time-sensitive announcements, etc.) It's available 24/7 but we're not, so patron mentions/criticisms/questions don't get answered right away. We get around it as best we can by monitoring all day with Hootsuite and having a staff member dedicated who starts work a bit early. Finding time to tweet when other duties arise (publication deadlines, hosting large events, etc.) Few people do it so if someone leaves, maybe no one can replace it. Trying to keep up with new tweets, responding to questions, etc. does not get done in the responsive manner Twitter-users are used to.	23	31.1
Time constraints	Find the time to grow our account Training, time Staff time constraints Finding the time to interact on Twitter regularly Just time!	13	17.6
Effectiveness and efficiency	Our main concern: continue to feed the network more efficiently and creatively as human/financial resources are limited Response time to customers Not sure of cost benefit Responding to questions in timely fashion Ensure better engagement with users Developing and maintaining a consistent voice	12	16.2
Controversy	Make sure nothing embarrasses the library Challenging interactions (not complaints) Controversial issues and challenges on Twitter Potential embarrassment of library Ensure contributors follow guidelines and tweet appropriately	10	13.5
Audience management	Increased followers not from community Are we reaching the right people? Engaging rural communities with less Twitter presence Little interest from the public Residents not using social media	9	12.2
Content	People using it to make complaints, getting hacked, tweeting boring, stupid things and turning people off To consistently create original content	6	8.1
No challenges	No major concerns. We have a clear set of guidelines to determine what we can and can't do. Our editorial calendar helps us determine content to share.	1	1.4

registered in a given period of time. This follower analysis suggests a broader perspective on the structures and classes of membership may be required in the current 2.0 library environment.

Meaning and discussion

Five themes that suggest public library micro-blogging constitutes an online gathering place and community service and which would benefit from in-depth study or comparison nationally and internationally with other public libraries and their communities can be drawn from the

preceding results. While no cause and effect relationships can be ascribed to their micro-blogging practices based on these results, several issues and dimensions of use warrant further exploration and are highlighted as follows.

Community size and population density

The size of a library's community coupled with its population density (i.e. rural or urban) may influence both the growth in number of followers and the perception of effectiveness in the micro-blogging practices of a given small or rural library, although more libraries in larger

Table 6. Public library follower analysis.

Category	# of followers n=1000	% of total followers
Individual – local	373	37.3
Business – local	274	27.4
Community group	136	13.6
Book industry	71	7.1
Individual – non-local	45	4.5
Spam	36	3.6
Librarian	30	3
Media	22	2.2
Other libraries	10	1
Government	3	0.3

municipalities responded to the survey. Several respondents noted this small and rural library phenomenon explaining that ‘it’s a challenge engaging our primarily rural communities/patrons, as many of them are not present on Twitter’. As a communication tool in a rural library system with multiple geographically dispersed branches, however, Twitter can function as an effective communications tool for library staff. One respondent explained how the motivation for their library to begin using Twitter was to ‘provide branch updates in rural libraries’. Many other factors such as quality of Internet access, or types of occupations among rural residents and organizational presence could also explain a lower participation level in rural and small communities.

Developing and managing the library’s Twitter voice

Management issues are by far the most pressing challenges cited by survey respondents. Although more than half of respondents have social media policies, it is not clear how these policies may or may not be useful in alleviating concerns related to controversial tweets or timely response to inquiries, for example. Although many public library services such as the online catalogue and access to e-resources are typically available 24/7, services that require human mediation such as virtual reference or in this case, micro-blogging cannot be as easily automated. Many respondents characterize the library’s Twitter feed as an ongoing conversation that supports engagement and connection with library patrons. However, respondents also indicate that staff cannot always be immediately available to respond to a follower tweet that may answer a question, address a concern, or simply convey presence and attention. In this way, the micro-blogging channel lacks equivalent physical cues as those available in face-to-face interactions in library buildings and service points or through voice via telephone or Internet. The converse is also true. Whereas physical and virtual reference libraries have historically been designed

to create user expectations of staff presence by, for example, desk placement, the library’s Twitter platform, arguably, does not have the same instrumental design for recognizing human presence.

What followers need, expect or value from their library’s Twitter interaction remains to a large extent, an unanswered question. Are library follower expectations broadly similar across local communities and their local public libraries? How should followers be ‘managed’ given the distribution of follower clusters identified by one library in this study? These questions are suggested by challenges in documenting the library’s micro-blogging platform’s efficiency and effectiveness to the organization. Although more than 80% of responding libraries perceived benefits using Twitter, libraries cannot as clearly connect their reasons for introducing this service with these benefits.

The potential for controversy

A number of respondents made reference to either the potential for or prior experience with public conflict and controversy while micro-blogging with their follower communities. Two responses illustrate this tension in both a real situation and in concerns over the potential for controversy:

Controversial issues can be challenging to handle on twitter. Right now we have a lot of people angry over a group who rented a room from us. We are responding to a lot of comments, explaining our commitment to freedom of expression and trying to get a group with an alternate opinion on the issue to come present their views as well. (L56)

The only concern I’d say is not about our content but about the possible perceptions of some tweets I may WANT to tweet or retweet that are about the future of libraries or something possibly controversial. I do fear giving some local council folks any fodder they may not have considered. (For example, if I tweeted up a storm from a conference, that does not always go over well in terms of \$\$ to some councillors/citizens.) As a result I do tend to vet my own tweets! Sad but true. (L13)

Unlike the conversations one might hear in any local library, social media platforms widen the reach and then document these conversations in ways they can then be repeatedly accessed and diffused. This capability for virality has been judged positively and negatively in many other settings (Goel et al., 2012). While libraries may well want to avoid such controversy, perhaps what is more problematic is Twitter’s intentional design as an open, accessible and relatively uncensored broadcasting platform enabled by retweets and mentions and the enduring textual record itself. To date, there is little evidence suggesting that the existence of a library’s social media policy in fact mitigates such concerns or incidents of public controversy.

The community's daily digest

Public libraries have long been acknowledged by their communities as cultural documentation and resource centres. The over-arching mission of any public library is to provide 'access to knowledge, information, lifelong learning, and works of the imagination through a range of resources and services' (*IFLA Public Library Service Guidelines*, 2010: 1). It is evident by responses compiled in Table 2 that as an aggregate, these public library Twitter feeds have the look of a daily community arts and culture 'digest' pointing to an eclectic collection of online content including library-owned and -created resources and professional selections from the vast spectrum of freely available content on the open Internet. Both library and other community events and programs are frequently reported as a topic of these public libraries' tweets. Local community members were their primary audience as suggested by the follower analysis and the types of tweets libraries are creating. Respondents indicated they were constantly looking for content that would be 'something of interest' (L26) such as 'local events, book news, culture' to stimulate connection and conversation. Libraries also identified various discursive strategies they used to provoke connection, relationship and conversation with their community of followers. Questions for the community (e.g. 'what do you want to read?') or photo caption contests, local news, 'local author' reviews, all with repeated reference to 'local' were cited as examples of creating community content for engagement and conversation.

In a preliminary presentation of survey results to a group of more than 60 professional practitioners, discussion focused on why programs and events dominated their Twitter feeds. Several of these practitioners confirmed that these are among the easiest tweets to create on a routine basis, given that most libraries regularly offer, directly or indirectly through partnerships, other community programs. Second, as a platform, Twitter works best for soliciting immediate (i.e. daily) responses. At the level of the individual library, however, some recurring but unevenly distributed themes are reported. These could be explained by differences in staff knowledge and expertise of resources or by inexperience with techniques for effective micro-blogging. Finally, these differences may also be explained by inevitable local differences among communities and their informational and cultural habits and practices.

The list of formats included in Table 3 reflects the librarian's professional familiarity with information containers as well as their contents. Clearly the micro-blog also functions in many ways as an alternative web catalogue of information links that exceed what might normally be considered for inclusion under traditional public library cataloguing practices. Again, little data exist to explain how library followers interact with, consume, or use (or not) these informational bytes. The public libraries'

sector-level expertise as a single coordinated knowledge and information centre mediating not only local community information but also the vast scope of machine-driven Google inquiries is implied by these results. Even with its structural limitations, the Twitter platform is capable of enabling a multiple public library information service coordination and cooperation.

Network effects of local community building

That a library's micro-blogging practice actively contributes to community-building is suggested in several ways. Survey respondents made frequent reference to 'community' and 'local' to describe the ways their Twitter interactions are both 'of' and 'for' their people (Lankes, 2011: 66). The follower analysis, albeit of only one library system, clearly corroborates the fact that municipal and regional public libraries are first and foremost, local institutions, regardless of their population size or geographical spread. Where a library's micro-blogging may play a new role in this local action, is in bringing together local business, community groups and individual library followers into a single conversation space. The network effects of these social, informational interactions are also widened in new arrangements with other types of non-local library followers, such as, in this case, book industry representatives, other libraries, media and librarians who also participate if only through their presence in the same 'local' micro-blogging conversations. What importance or attention, if any, should a public library give its non-local micro-blogging community of followers and conversation participants? What role do these participants play in the day-to-day life of the library and their local library followers?

Public libraries' micro-blogging practices as reported through this survey also suggest further questions about library membership, belonging and connection. Although a library's Twitter follower rate still represents only a small proportion of their total number of active public library active users,² ambient discursive and other network effects of these Twitter conversations and information interactions may become larger because of the platform's social design and use. This is another area where rigorous, mixed methods studies and analysis over long periods of time are required before definitive conclusions can be drawn.

Limitations and implications

The results of this national survey and follower analysis of public library Twitter use provide only a snapshot limited to one particular period of time and one cluster of libraries. Because the discursive style, informational practices and impacts associated with public library micro-blogging are continuously changing or are not yet well established, and because social media research more broadly, specifically research problems, conceptual

frameworks and methodologies, are also rapidly evolving, this research will be (and should be) interpreted and referenced only in this larger historical context. The follower analysis references only one library and therefore no generalizations can be made. It is equally important to note that the survey results represent only the *libraries' perspectives* of their micro-blogging goals and institutional practices and therefore they tell only one side of the relationship story. Still absent and outside the scope of this study are the perspectives of these libraries' Twitter followers about their interactions with their libraries through this online platform.

Notwithstanding these limitations, however, contributions for both practitioners and relevant researchers can be noted. First, these results provide evidence of the public library's unique cultural and informational community voice and the role that voice plays in its hyperlocal (geographic and virtual) community (Williams et al., 2014). While many studies previously noted have emphasized Twitter's large-scale effects in political contexts, little research addresses the value of such hyperlocal news, information and social interactions such as those enacted specifically through a public library's Twitter presence and voice. Moreover, we could speculate that libraries' contributions as multi-level government information access and service centres are more likely embedded and therefore slightly hidden, within these community information and news sharing practices. Practitioners may find these results confirming regardless of their size and geographical location across the widest Canadian network; they may identify policy and administrative needs such as, for example, clear guidelines around dealing with controversial topics and conversations.

Conclusion

This study provides the first national overview of public library micro-blogging practices in Canada. Results suggest that social media platforms such as Twitter are making a difference by enabling libraries to create new relationships or strengthen existing connections to their client communities. Although Twitter is only one among many social media platforms, its most appealing design features that make it a quick, easy means of sharing information and connecting with other Twitter users, also seem well suited to the patterns and routines of public library practices. Studies of micro-blogging from this government agency perspective can also reveal more about how individuals and communities are clustering and connecting around information and conversation within and beyond strict geographic or political boundaries. Public library user interactions as they can be observed through social media platforms such as Twitter, offer another rich context for understanding the changing behaviours of society's information ecology.

Acknowledgements

The author acknowledges the on-going support and collaboration of Max Neuvians, MIS (max@neuvians.net) who provides systems support for the Social-biblio.ca website and archive.

The author also acknowledges and appreciates the detailed comments of two anonymous reviewers and the ongoing support of colleagues in the University's Centre for Academic Leadership writing workshops.

Funding

This research received partial funding support from GRAND NCE (Graphics, Animation and New Media / Graphisme, animation et nouveaux médias NCE Inc.) and Network Centre of Excellence.

Notes

1. This archive is maintained by one member of the research team at <http://social-biblio.ca>
2. A comparison of the five Canadian public libraries with the largest number of library Twitter followers as tracked through Social-biblio.ca (as of 5 July 2014) with the same libraries' number of active borrowers as reported in their most recent annual statistics (Canadian Urban Libraries Council, 2012) suggests that Twitter followers represent only 1–5% of that figure. For a variety of reasons this comparison is limited and therefore is only useful in very broad terms.

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