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Interactions between English-Speaking and Chinese-Speaking Users and Librarians on Social Networking Sites

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ABSTRACT

Social networking sites (SNSs) can encourage interaction among users. Existing research mainly focuses on the ways in which SNSs are used in libraries and on librarians' or users' attitudes towards these SNSs. On librarians' or users' attitudes towards these SNSs, little research has been done on how SNSs can be used to interact with library users effectively. This study focused on the flow of information via SNS interactions between librarians and users on library Facebook, Twitter, and Chinese Weibo sites, and developed an SNS user interaction type model based on these information flows. A mixed-method approach was employed combining quantitative data generated from the analysis of 1,753 posts sampled from forty library SNSs and qualitative data from interviews with ten librarians. Through an analysis of the relevant literature and the content of posts/tweets and replies in library SNSs, four types of interactions were identified: information/knowledge sharing, information dissemination, communication, and information gathering. The study found that SNSs were used primarily as channels for disseminating news and announcements about things currently happening in the library. Communication allowed open-ended questions and produced more replies. Information/knowledge sharing (in a one-to-many fashion) did not prompt the reader for responses, but instead, generating more "likes" and retweets than replies. In Facebook posts, Chinese Facebook users generated less "likes" than English-speaking users. The comparison of data between Facebook-like and Twitter-like SNSs in different library settings suggested that libraries need to coordinate different types of SNSs, and take library

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settings and sociocultural environments into consideration in order to enhance and encourage user engagement and interaction.

Keywords: Libraries, Social Networking Sites, user engagement, interaction.

INTRODUCTION

An increasing number of libraries have adopted SNSs in recent years. In a 2009 survey, researchers found that only a few academic libraries had adopted SNSs (Xu, Ouyang, & Chu, 2009), while two years later, a literature review concluded that Facebook and Twitter had become popular Web 2.0 applications in libraries (Mahmood and Richardson, 2011). Despite this, users are unenthusiastic about the use of SNSs to enhance and encourage interaction for educational purposes (Coyle & Vaughn, 2008). Students tend to assume that SNSs are used mainly for communicating with friends and do not use Facebook to contact university personnel (Pempek, Yermolayeva, & Calvert, 2009). Thus, they do not expect to interact with faculty through SNSs (Chu, Meulemans, & Nalani, 2008; Joinson, 2008; Lampe, Ellison, & Steinfield, 2008). Jacobson (2011) observed in her study that there were only a few responses from users on numerous libraries' fan pages on Facebook, while Stuart's (2010) study found that library Twitter accounts had few followers. To address the challenge of limited user engagement on library SNSs and to provide well-informed suggestions, this study analyzed SNS posts and the interactions between librarians and users on SNSs.

Current research regarding libraries' use of social networking tools focuses mainly on the actual application of the tools and the attitudes of librarians or users (Chu & Du, 2012), and many

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studies are restricted to one tool, either Facebook or Twitter (Jacobson, 2011). Differences between academic and public libraries that use social networking tools have not been explored, and little research has been done on how social networking tools can be used to attract library users.

Furthermore, librarians in different types of library (e.g., public and academic) might use SNSs differently and have unique preferences for interaction types. In addition, SNS usage in libraries with lingual or cultural variances might also differ.

This study examined the interactions on libraries' SNSs by classifying the SNS posts according to different types of information exchanges. The study also explored these differences and provides insights into librarian and user preferences with regard to using SNSs based on a library type. In particular, the study used content analysis and analysis of the literature to categorize the library SNS posts based on interaction types, and further characterized the correspondent replies, "likes", and retweets in different library settings (e.g., public or academic), as well as in different regions (English-speaking countries and the Greater China region).

LITERATURE REVIEW

SNSs and their use in libraries

SNSs are useful marketing tools that enable users/institutions' profiles to be visible to wider audiences. SNSs offer flexible privileges and access controls for user accounts, which allow different layers of user connection and networking (Ellison & Boyd, 2013). SNSs are used not just for self-presentation, but also for social networking and content sharing (Ellison & Boyd, 2013). The definition of SNSs and their impact on the creation, distribution, and use of information and media have been extensively discussed in the literature (Boyd & Ellison, 2007; Ellison & Boyd,

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2013). Different users may prefer different SNSs, depending on the technical characteristics of the SNSs. For example, Facebook enables individuals or organizations to create profiles for self-promotion and online socializing, with post interactions from both users and their “friends” (Hughes, Bowe, Batey, & Lee, 2012). Twitter, on the other hand, is used more for short messages for quicker information sharing and dissemination (Kwak, Lee, Park, & Moon, 2010) rather than reciprocal social interaction (Huberman, Romero, & Wu, 2009).

SNSs allow librarians to connect with their users easily (O'Dell, 2010). Librarians make use of SNSs with the intention of “being part of their [users’] communities” (De Rosa et al., 2007, p17) or of promoting library services and events (Charnigo & Barnett-Ellis, 2007; Hendrix, Chiarella, Hasman, Murphy, & Zafron, 2009). Some libraries even use Twitter to connect patrons with important information sources (Milstein, 2009). Research has also shown that Facebook engages college students when applied in academic libraries (Mack, Behler, Roberts, & Rimland, 2007). Graham (2009) indicated that Facebook can be used to facilitate the development of professional relationships within and beyond libraries. However, despite the increasing use of SNSs by libraries, user engagement still appears to be low. Several factors may hinder interactions between SNS users and libraries. Researchers suggest that factors such as users’ privacy concerns (Chu et al., 2008; De Rosa et al., 2007) and the infrequency of information updates (Stuart, 2010) have a negative impact on the effectiveness of SNSs.

In measuring the effectiveness of library SNSs, it is important to consider the number of people who follow the SNS page or the number of replies to an SNS post. Ram’s study (2011) of one university showed that while students and faculty displayed a high level of awareness of Facebook and Twitter as SNSs, they had a low level of awareness of the presence of SNSs within

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the university library. The study suggested that low user engagement might be related to the inadequate promotion of library SNSs. Prior studies have used metrics such as counting the total number of followers, the number of individual responses or “likes” for a Facebook post, or the number of Twitter retweets to quantify and understand the community information sharing patterns via SNSs (Forkosh-Baruch & Hershkovitz, 2012; Hoffman and Fodor, 2010; Jacobson, 2011; Stuart, 2010). These metrics indicate the level of user engagement and user interest in certain SNS posts. For example, the number of subscribers or followers shows the level of user awareness, and the number of retweets indicates users’ willingness to communicate their support to others (Hoffman and Fodor, 2010).

SNS interaction type

SNS interaction type refers to the way in which information is exchanged between libraries and users. In online social networks, information flow can be n-ways (Xu et al., 2009), generating different types of interactions (Dalkir, 2011). Relevant research has been done on four types of interactions: one-to-many *information/knowledge sharing* (Harinarayana & Raju, 2010), one-to-many *information dissemination* (Ram et al., 2011), one-to-one *communication* (Romero, 2011), and many-to-one *information gathering* (O'Dell, 2010).

Information/Knowledge sharing: This type of interaction involves a one-to-many form of communication. Libraries can create knowledge and share it with communities by utilizing their information resources and professionals (MacAdam, 1998), for example, by directing users to references such as online resources, public resources, books, and so forth. To achieve a successful level of knowledge sharing, technical and systematic infrastructure is needed to make “knowledge available to others [who need it]” (Kim & Ju, 2008, p 282). Libraries provide organized resources

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through social networking platforms, thereby stimulating user participation and achieving the dynamic of effective information/knowledge sharing (Harinarayana & Raju, 2010). Facebook and Twitter are employed by libraries to build up academic networks and promote the exchange of knowledge (Ayu & Abrizah, 2011; Nicholas, Watkinson, Rowlands, & Jubb, 2011).

Information dissemination: This type of interaction involves a one-to-many relationship. The dissemination of information to users is a critical function of Web 2.0 technology. Most information disseminated through SNSs concerns events or programs in the library (Aharony, 2012; Ezeani and Igwesi 2012). A report by the Research Information Network (2010) indicated that social media usage could have an impact on the scholarly information dissemination advocated by the open research community. Kim and Abbas (2010) reported that Massachusetts Institute of Technology libraries made announcements on Twitter including descriptions of resources, workshops, courses, and so forth. Compared with other Web 2.0 technologies, Facebook and Twitter appear to be more capable of syndicating and disseminating information (Cahill, 2009). Concise text mitigates the impact of information overload, making SNSs effective means of information dissemination (Kim & Abbas, 2010).

Communication: This type of interaction involves a one-to-one relationship through dialogues and comments, and it is one of the most important areas in measuring the effectiveness of SNSs (Romero, 2011). SNSs function efficiently for communication purposes since the low level of required self-disclosure makes users feel more comfortable when launching conversations with acquaintances (McElvain & Smyth, 2006). Because of their concise format and informal tones, most SNSs are likely to induce interactions between users than other non-social networking Web 2.0 technologies such as blogs and wikis (Romero, 2011). It is generally believed that SNSs can

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promote a user's communication and may improve the quality of a conversation (Boyd & Ellison, 2007; Ito et al., 2008). However, it has been observed that eliciting responses from users within public forums is not as easy as in personal social circles (Burton & Soboleva, 2011; Chen, Maxwell, Chu, Li, & Tang, 2011).

Information gathering: This type of interaction usually involves a many-to-one relationship. SNSs are effective information-gathering tools that have been utilized in social science research to gather professional knowledge and responses from those who participate (Ahn, 2011; Poynter, 2010). With millions of users, SNSs offer opportunities for libraries to reach out to communities and foster understanding of SNS functions in libraries through characterizing the interaction between librarians and users in SNSs (O'Dell, 2010). Users can help develop new library services by contributing their knowledge through online networks (Casey & Savastinuk, 2006).

These identified interactions and the related information flow patterns can serve as a starting guide and a classification model for understanding user interaction activities in libraries' SNSs. The model and its possible subcategories can be further explored and revalidated using content analysis (Krippendorff, 1980; Hsieh & Shannon, 2005) to analyze the empirical data of harvested SNSs posts.

SNS interactions in local cultural and online communications

SNSs have emerged as a unique social platform for Internet users to post their profiles and manage their public identities (Chu and Choi, 2010). Cultural differences can affect how motivated individuals are to use SNSs (Madupu & Cooley, 2010), what information individuals contribute to the community (Karl, Peluchette, & Schlaegel, 2010), what knowledge is shared (Shu & Chuang, 2011), and the manner of communication (Chu & Choi, 2011). SNS culture often emphasizes self-

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presentation and social interaction by providing tools that encourage everyone to disclose personal information and engage in social interactions such as photo tagging and commenting (Boyd & Ellison, 2007). Self-presentation refers to a process by which individuals engage in self-expression profile management and online information control (Goffman, 1959; Schlenker & Pontari, 2000). Users who are technologically proficient may adjust their behavior depending on the information media, content, and user expectation, showing different expression and communication styles that reflect the influence of local cultures (Chu & Choi, 2010; Kim, Sohn & Choi, 2011; Vasalou, Joinson & Courvoisier, 2010). Extensive research has been conducted on these cultural differences, thus enabling a better understanding of the core behavioral issues in online communities (Chapman & Lahav, 2008; Li, 2010).

Culture affects typical social networking behaviors such as user goals, typical patterns of self-expression, and common interaction behaviors in online communities (Chapman & Lahav, 2008; Li, 2010). Recent studies have shown that SNS users in different environments exhibit diverse online practices. For example, Cho (2010) found that users of Korean-based SNSs (e.g., Cyworld) had fewer but more intimate friends, tended to keep their public profiles anonymous, and exhibited less but more personal self-disclosure, whereas users of American-based SNSs (e.g., Facebook) had more friends and exhibited more frequent self-disclosure. Chapman and Lahav (2008) found that users of American SNSs liked to disseminate information about themselves by writing blogs and sharing personal pictures, unlike users of Chinese SNSs, who liked to play computer games and share related resources with other users. These differences may further affect one's perception of, and willingness to participate in, a virtual community (Siau, Erickson, & Nah, 2010). Hall's (1977) research focused on language patterns in different cultures and found that cultures differ in

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the amount of contextual information necessary for information transactions. Communication in high-context cultures (such as China) tends to be implicit, indirect, and abstract, whereas users in low-context cultures (such as the US and Ireland) express information more explicitly and directly (Choi et al., 2011).

SNSs provide new means of connecting library users to libraries. If implemented properly, SNSs can be used to disseminate library information, facilitate information/knowledge sharing, and collect user feedback. In addition to taking users' needs and wants into consideration when choosing which social media platform to utilize, librarians should also create policies and guidelines to ensure security, privacy, and adherence to ethical considerations. What the user interaction types are and how these SNSs are being used in libraries is still unclear. Librarians might encounter technical and language/culture communication challenges when interacting with users via SNSs. Further research is needed to analyze user interaction types, the respective information flow, and how these interaction types are used in different library settings and sociocultural environments.

RESEARCH METHOD

Based on the research gaps identified in the above literature review, this study formulated the following research questions:

RQ1: What are the interaction types in library SNS posts? This question was investigated by analyzing the collected posts from Facebook, Twitter, and Sina Weibo, sampled from a number of libraries in English-speaking countries and Greater China regions.

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RQ2: What are the differences between Facebook, Twitter, and Weibo regarding user interactions in public and academic libraries? This question was investigated by comparing the user interaction types, the number of posted responses for each SNS, and the librarian interview scripts.

RQ3: What are the differences between English-speaking countries and the Greater China region concerning the types of libraries that use SNSs to interact with users? This question was investigated by comparing the interaction types, the number of responses for each SNS, and the librarian interview scripts within libraries in English-speaking countries and the Greater China region.

This study used a mixed-method approach combining both quantitative and qualitative data to answer the research questions (Creswell, 2003). The study sample consisted of forty academic and public libraries in English-speaking countries (Canada, the United Kingdom, and the United States) and the Greater China region (Mainland China, Hong Kong and Taiwan). In order to capture the diverse content and various user responses on SNSs, the participating libraries were only chosen if they had a substantial amount of existing resources and library users. Therefore, libraries in universities that had higher academic rankings and public libraries that served a significant number of patrons were selected. Academic libraries in English-speaking countries were selected based on the 2010 QS World University Rankings of the top 100 schools ("QS World University Rankings 2010," 2010). Academic libraries in Greater China were selected based on the 2010 QS Asian University Rankings of the top 100 schools ("Asian University Rankings 2010," 2010). Public libraries in English-speaking countries recognized as national, state, or municipal libraries were among those selected. With regard to public libraries in the Greater China region, all libraries

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sampled for the study in Taiwan were municipal, while those in Mainland China were selected based on the most recently published list of first-tier national libraries in the P.R.C. ("The list of first, second, and third-tier libraries by the Ministry of Culture," 2005). The sample distribution consisted of twenty-one libraries in English-speaking countries and nineteen in Greater China (Table 1).

The SNSs studied in this study were Facebook, Twitter, and Sina Weibo. Facebook had over 1.15 billion active users by 2013 (Facebook, 2013), Twitter recently stated that it has garnered 500 million active users (Coyne et al., 2013), while Sina Weibo is a leading SNS in China, surpassing all others and garnering over 300 million of China's microblog users in February, 2012 (Zhao et al., 2013). During sampling, Facebook library posts were only found in Taiwan, while Sina Weibo was commonly used among libraries in Mainland China. Table 1 summarizes the constitution of our sample. Posts were sampled from the SNSs of forty libraries, including content posted by libraries or users. The time of the sampled posts ranged from January 2011 to May 2011, which covered a little more than one full semester. This ensured that the posts would be harvested from a period of normal interactions between librarians and library users. Ten posts were sampled on the first of each month and every third day thereafter (e.g. the 1st, 4th, 7th, 10th, etc.), following the strategy of systematic sampling created by Weightman and Williamson (2005). The number of user responses to each sampled post was recorded in two parts: 1) the number of comments from users and 2) the number of shares (that is the number of 'likes' on Facebook, 'retweets' on Twitter, or 'forwards' on Weibo). Through this method, a total of 1,753 posts were harvested for further analysis.

Content analysis (Krippendorff, 1980) was used to mark the harvested SNS posts with a series of codes, which were extracted from the texts. The codes were grouped into similar concepts.

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These concepts were then merged and realigned with the four interaction types identified in the literature and discussed above (Krippendorff, 1980; Hsieh & Shannon, 2005): one-to-many information/knowledge sharing, one-to-many information dissemination, one-to-one communication, and many-to-one information gathering. The four interaction types were not exclusive to one another, which meant that one post could contain more than one type of interaction.

Data from the SNS posts were analyzed qualitatively, with one unit of analysis being an SNS post. Social metrics were measured by the number of overall responses, which included the number of replies, “likes,” and retweets. Two researchers coded the sampled posts independently. Before and during the coding, coders discussed the definitions and meanings of the terms in Table 2 in order to reconcile any differences in understanding. For good qualitative reliability, Miles and Huberman (1994) recommended that the consistency of the coding be in agreement at least 80% of the time. To establish inter-rater reliability, two researchers independently coded 50 randomly selected posts based on the scheme, which resulted in 90% inter-rater agreement. The categories and subcategories that emerged from the data are summarized and illustrated in Table 2.

Of the forty libraries, ten agreed to participate in interviews: three academic libraries and two public libraries in Greater China and two academic libraries and three public libraries in English-speaking countries. Librarians from the ten universities participated in semi-structured telephone interviews (see Appendix) in which they were asked to share their experience and perceptions of using SNSs. The interview instruments were designed and revised based on the one used in Chu and Du’s study (2012) to explore librarians’ perceptions of SNS usage. The interview

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dialogues were audio-recorded and transcribed. Following a member check procedure, the transcripts were sent to interviewees for confirmation.

After the sample posts had been coded into the four user interaction types, the results were summarized quantitatively, while the interviews with librarians were analyzed qualitatively. The combination of quantitative and qualitative analyses of sample posts and librarians' interview responses formed a wider perspective for answering the research questions. Qualitative analysis was done using NVivo 8.0, and quantitative analysis (e.g., Chi-Square test, Fisher's exact test) was done with the STATA program.

Table 1. Geographical region, library type, social network site type and number of subscribers/followers

Region	Library	Library type	SNS type	No. of Subscribers
English-speaking countries	Durham University Library (http://www.dur.ac.uk/library)	Academic	Facebook	1853 ^a
	Stanford University Library (http://library.stanford.edu)	Academic	Facebook	3026
	University of Texas at Austin Libraries (http://www.lib.utexas.edu)	Academic	Facebook	1113
	University of Warwick Library (http://www2.warwick.ac.uk/services/library)	Academic	Facebook	2851
	University of Washington Libraries (http://www.lib.washington.edu)	Academic	Facebook	2077
	Calgary Public Library (http://calgarypubliclibrary.com)	Public	Facebook	3169
	Columbus Metropolitan Library (http://www.columbuslibrary.org)	Public	Facebook	22036
	Toronto Public Library (http://www.torontopubliclibrary.ca)	Public	Facebook	10918
	New York Public Library (http://www.nypl.org)	Public	Facebook	42100
	British Library (http://www.bl.uk)	Public	Facebook	37435
	Cambridge University Library (http://www.lib.cam.ac.uk)	Academic	Twitter	3165
	Harvard University Library (http://lib.harvard.edu)	Academic	Twitter	3665
	MIT Libraries (http://libraries.mit.edu)	Academic	Twitter	3706
	University of British Columbia Library (http://www.library.ubc.ca)	Academic	Twitter	1482
	University of Texas at Austin Libraries (http://www.lib.utexas.edu)	Academic	Twitter	2234
	University of Washington Libraries (http://www.lib.washington.edu)	Academic	Twitter	1190
	Kansas City Library (http://www.kclibrary.org)	Public	Twitter	5890
	Los Angeles Public Library (http://www.lapl.org)	Public	Twitter	2448

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	Toronto Public Library (http://www.torontopubliclibrary.ca)	Public	Twitter	8395
	New York Public Library (http://www.nypl.org)	Public	Twitter	164427
The Greater China region	National Chung Hsing University Library (http://www.lib.nchu.edu.tw)	Academic	Facebook	1536
	Hong Kong Baptist University Library (http://library.hkbu.edu.hk)	Academic	Facebook	1096
	National Taiwan University Library (http://www.lib.ntu.edu.tw)	Academic	Facebook	9693
	National Tsing Hua University Library (http://www.lib.nthu.edu.tw)	Academic	Facebook	3384
	Shih Chien University Library (http://www.lib.usc.edu.tw)	Academic	Facebook	3617
	National Taichung Library (http://www.nlpi.edu.tw)	Public	Facebook	1589
	Tainan Public Library (http://www.tnml.tn.edu.tw)	Public	Facebook	3020
	Taipei Public Library (http://www.tpml.edu.tw)	Public	Facebook	3846
	Beijing Normal University Library (http://www.lib.bnu.edu.cn)	Academic	Weibo	1929
	Jinan University Library (http://lib.jnu.edu.cn)	Academic	Weibo	3826
	Nanjing University Library (http://lib.nju.edu.cn)	Academic	Weibo	2050
	Tsinghua University Library (http://www.lib.tsinghua.edu.cn)	Academic	Weibo	7925
	Xiamen University Library (http://library.xmu.edu.cn)	Academic	Weibo	4852
	Chongqing University Library (http://lib.cqu.edu.cn)	Academic	Weibo	3233
	Hangzhou Public Library (http://www.hzlib.net)	Public	Weibo	10938
	Shanghai Public Library (http://www.library.sh.cn)	Public	Weibo	3553
	City of Shenzhen Public Library (http://www.szlib.gov.cn)	Public	Weibo	2040
Capital Library of China (http://www.clcn.net.cn)	Public	Weibo	4200	
Shunde Public Library (http://www.sdlib.com.cn)	Public	Weibo	2770	

^aData collected in January, 15, 2011.

RESULTS

Table 1 shows the number of subscribers in each sampled library, ranging from 1,113 to 164,427 subscribers. A Mann-Whitney *U* test indicated a significant difference between the number of SNS subscribers for public libraries in English-speaking countries and that in the Greater China region ($n = 17$, $z = 2.21$, $p < 0.05$). The number of SNS subscribers in public libraries in English-speaking countries (M rank = 104, $n = 9$) was greater than that in the Greater China region (M rank = 49, $n = 8$). A Mann-Whitney *U* test also found that public libraries in English-speaking countries had significantly different numbers of subscribers of SNS tools ($n = 20$, $z = 3.23$, $p < 0.01$) from

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those in academic libraries: public libraries in English-speaking countries had more SNS user subscriptions (M rank =137, n =9) than academic libraries (M rank =73, n =11).

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Table 2. Interaction types, subcategories, information flow types, and examples

Interaction Type	Definition	Information Flow	Subcategories with definitions for each subcoding	Example	References
Information /knowledge sharing	Directing users to resources such as those online, public resources, books, etc.	one-to-many	<p><i>Individual experience:</i> Tacit knowledge sharing of personal experience</p> <p><i>Library in-house resources:</i> information (and/or explicit knowledge) sharing regarding library resources</p> <p><i>Library online resources (free and fee-based):</i> information (and/or explicit knowledge) sharing regarding library online resources</p>	<p>XXX's "XXX" is an elaborate pop-up book about global warming.</p> <p>Take an inside tour of how we preserve the records of life during the Civil War from the XXX.</p> <p>Link of the Day: The Museum of Online Museums, "covering a vast array of interests and obsessions"</p>	Ayu & Abrizah, 2011; Harinarayana & raju, 2010; MacAdam, 1998; Nicholas et al., 2011; Kim & Ju, 2008
Information dissemination	Up-to-date news and announcements from libraries	one-to-many	<p><i>Event:</i> information dissemination about event</p> <p><i>Facility:</i> information dissemination about facility</p> <p><i>Service:</i> information dissemination for library service</p>	<p>Conference and CPD www.xxx.xxx There has been a power cut this afternoon affecting the XXX library.</p> <p>The second period of Library disruption due to upgrade work will take place tomorrow.</p>	Aharony 2012; Cahill, 2009; Ezeani and Igwesi, 2012; Kim and Abbas, 2010; Ram et al., 2011; Research Information Network, 2010
Communication	Aimed at individuals, conversations that happen between librarians and users or among users	one-to-one	<p><i>Rapport building:</i> communications are related to greeting, thankful or other emotional expressions</p> <p><i>Exploratory:</i> communications initiate discussions among users by asking open-ended questions or stating critical ideas</p> <p><i>Informative:</i> communications provide or suggest information useful for particular users</p>	<p>Congratulations to all students for getting through the examination period!</p> <p>The New XX Exhibition Gallery is off to a fantastic start receiving its 1000th visitor on Saturday. Have you been yet? What do you think?</p> <p>Use internal search engine on our school home page, enter the advanced search interface.</p>	Boyd & Ellison, 2007; Burton & Soboleva, 2011; Chen et al., 2011; Ito et al., 2008; McElvain & Smyth, 2006; Romero, 2011
Information gathering	Harvesting information from individual users (e.g., for improving library services)	many-to-one	<p><i>Questionnaire:</i> collecting questionnaires</p> <p><i>Voting (Poll):</i> collecting votes</p>	<p>Tell us what you think about Library 24/7. University Library: Library 24/7 Feedback Questionnaire.</p> <p>It's here! New XX trial interface - We'd love to know what you think!</p>	Ahn, 2011; Casey & Savastinuk, 2006; O'Dell, 2010; Poynter, 2010

Note. Knowledge sharing refers to a process of knowledge exchange (Chu, 2008). Tacit knowledge refers to knowledge that cannot be easily shared and requires personal interaction (Alexander, Schallert, &Hare, 1991). Explicit knowledge: refers to knowledge that can be easily delivered to others in a codified media format (Alexander, Schallert, &Hare, 1991).

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The four interaction types and their subcategories for coding are listed in Table 2. In the coding process, information/knowledge sharing is mainly a one-to-many interaction. Further analysis of these SNS posts revealed three subcategories: individual experience, library in-house resources, and library online resources. Specifically, individual experience posts included those directing users to resources recommended by individual librarians (e.g., a book recommendation), library in-house resources are those physically located within the library, while library online resources are the ones available online. Like information/knowledge sharing, information dissemination represents a one-to-many interaction. SNS posts coded in this study as information dissemination suggested that librarians used SNSs to disseminate information about events, facilities, and library services so that users remained up-to-date on library activities, operations, and services. Communication refers to one-to-one interactions between librarians and users. SNS posts related to communication can be explorative or informative. Librarians also used SNSs as a communication tool for rapport building. Valuable conversations through posts can connect users with pertinent information about library digital collections and other services. Lastly, information gathering is a many-to-one interaction in the sense that a library may solicit ideas such as opinions on developing new services from its users through SNSs. These posts include questionnaires or polls collected from different users via SNSs. However, the four interaction types are not exclusive to one another, which means that one post could contain more than one type of interaction.

To determine how librarians interacted with users through SNSs, sample posts were counted and summarized in percentages based on their interaction types (see Table 3). Table 3 shows that more than half of the sampled posts fell into the category of information dissemination (53.4%), and another 28.2% belonged to the category of information/knowledge sharing. In contrast,

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communication interactions between librarians and users occurred less frequently (15.4%), while there were very few cases of information gathering (2.9%).

Number of posts/tweets

The contingency 2x2 tables were created and tested using Fisher's exact tests and Chi-Squared tests (Table 3). Fisher's exact test indicated that public libraries in English-speaking countries showed statistically significant ($p < 0.005$) differences in the number of information gathering posts between Twitter and Facebook within the sample (the cells highlighted in grey). In the case of academic libraries in English-speaking countries, significant differences ($p < 0.05$) were observed between Twitter and Facebook in the number of information/knowledge sharing posts. In the Greater China region, significant differences were found between Weibo and Facebook in the number of posts for information dissemination ($p < 0.0001$) and communication ($p < 0.0001$) in public libraries. Significant differences were also found between Weibo and Facebook in the number of posts for information/knowledge sharing ($p < 0.001$), information dissemination ($p < 0.0001$), and communication ($p < 0.0001$) in academic libraries.

A comparison of the number of posts in similar types of SNSs and libraries in the Greater China region and English-speaking countries found that there was a significant difference in the number of Facebook posts for information gathering between academic libraries in English-speaking countries and those in Greater China ($p < 0.005$). Significant differences ($p < 0.0001$) were also found between the use of Twitter (Weibo in the Greater China region) and Facebook in both public and academic libraries for information/knowledge sharing posts. Concerning information dissemination, Twitter and Weibo usage in both public and academic libraries was significantly

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different ($p < 0.0001$). However the difference in the number of Facebook posts between English-speaking countries and the Greater China region was only significantly different in academic libraries ($p < 0.0001$). As for communication related posts, only the numbers of Twitter and Weibo posts in public libraries ($p < 0.0001$) and in academic libraries ($p < 0.005$) were significantly different.

Table 3. Frequencies of interaction types on libraries' SNSs in two regions

Region	Library type	SNS	Information/knowledge sharing	Information dissemination	Communication	Information gathering	No. of posts
English-speaking countries	Public	Twitter	124 (49.8) ^a	187 (75.1) ^b	36 (14.5)	4 (1.6)	249
		Facebook	124 (58.8)	156 (73.9)	38 (18)	15 (7.1)	211
	Academic	Twitter	130 (45)	196 (67.8)	52 (18)	12 (4.2)	289
		Facebook	81 (35.4)	173 (75.6)	30 (13.1)	16 (7)	229
Greater China	Public	Weibo	80 (34.3)	110 (47.2)	86 (36.9)	4 (1.7)	233
		Facebook	28 (26.4)	74 (69.8)	14 (13.2)	4 (3.8)	106
	Academic	Weibo	51 (22)	126 (54.3)	75 (32.3)	5 (2.2)	232
		Facebook	19 (9.3)	185 (90.7)	18 (8.8)	3 (1.5)	204
Total			637 (28.2)	1207 (53.4)	349 (15.4)	65 (2.9)	1753

Note: ^a Percentage values are shown in parentheses (49.8%=124/249). ^b Percentages represent the proportion of posts that carry a specific functionality/category; the posts to each functionality/category are not mutually exclusive. The statistically significant ones are highlighted in grey.

Overall responses regarding libraries' SNSs

Kruskal Wallis tests were used to identify differences in overall post responses (number of responses from people who were commenting on posts or the number of "likes" and retweets). The tests compared the four interaction types of SNS posts grouped by region (Greater China and English-speaking countries), library type (public vs. academic), and SNS type (Facebook, Twitter,

and Weibo). Analysis revealed statistically significant differences among regions, library types and the SNS tools used.

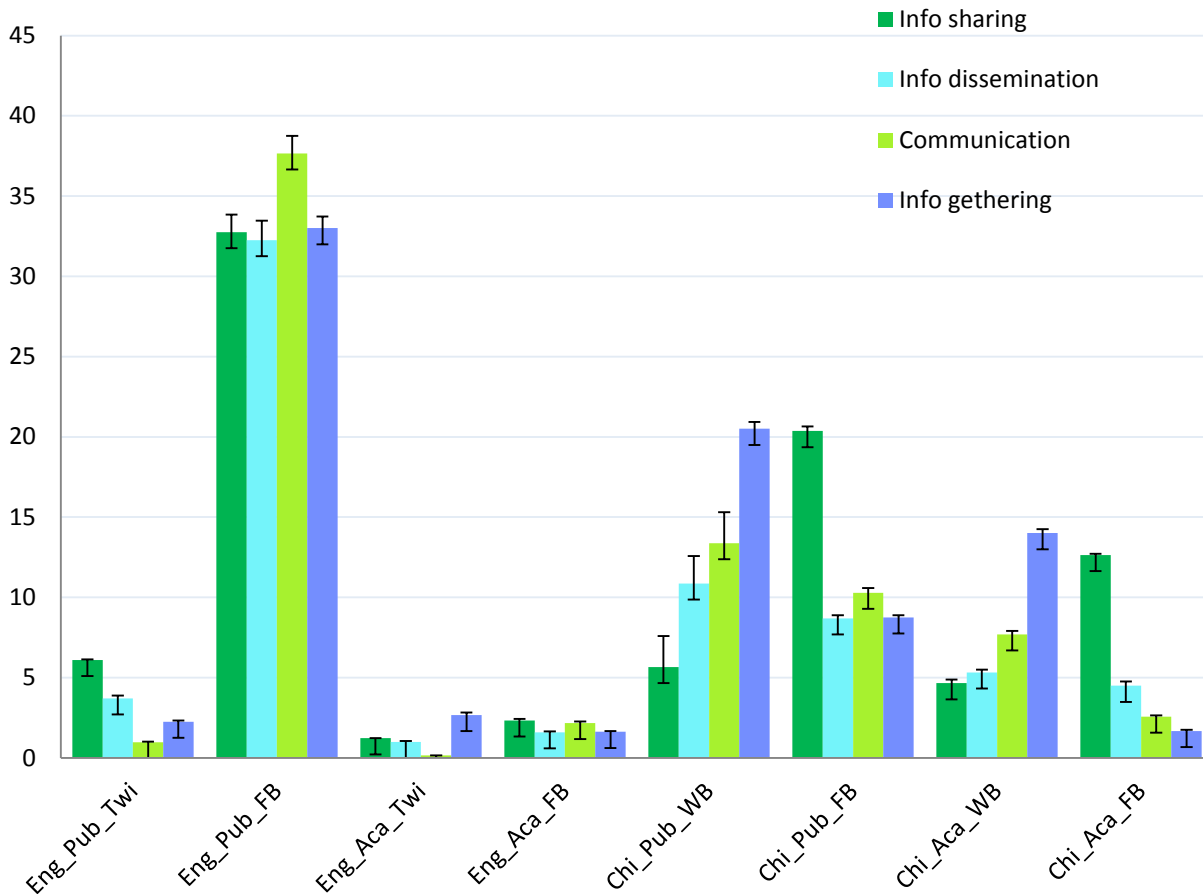


Figure 1. Mean overall responses for four interaction types grouped by region, library type, and SNS type. Abbreviation: Eng: English-speaking countries, Chi: Greater China, Pub: public libraries, Aca: academic libraries, FB: Facebook, Twi: Twitter, WB: Weibo.

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In Figure 1, the averages of overall responses were computed for the eight possible combinations of SNS groups by region, library type, and SNS type. Facebook usage in public libraries in English-speaking countries showed high post response rates for all four types of interactions. Mann-Whitney U tests were used to compare the mean of the number of responses for different interaction types in each of the *eight* combinations of a specific SNS tool in a type of library. In the case of the Twitter responses in public libraries in English-speaking countries, information/knowledge sharing showed a higher number of responses than other types. Specifically, significant differences were found between information/knowledge sharing and communication ($n=160$, $z=4.07$, $p<0.001$): information/knowledge sharing ($M_{rank}=10,871$, $n=124$) had a higher response rate than communication ($M_{rank}=1850$, $n=36$). However in general, for both public and academic libraries in Greater China, Weibo usage showed a lower response rate for information/knowledge sharing, but a higher rate for information gathering. For instance, significant differences between communication and information gathering ($n=90$, $z=2.12$, $p <0.05$) were observed in Chinese public libraries in the use of Twitter-like Weibo: information gathering showed a significantly higher number of responses ($M_{rank}=304$, $n=4$) than communication ($M_{rank}=3778$, $n=86$). Interestingly, Facebook in the Greater China region showed the opposite pattern, with a higher response rate for information/knowledge sharing and a lower response rate for information gathering. Significant differences were also found in Facebook between information/knowledge sharing and information dissemination ($n=102$, $z=4.53$, $p <0.001$) in public libraries in the Greater China region: information/knowledge sharing showed a significantly higher number of responses ($M_{rank}=3344$, $n=80$) than information dissemination ($M_{rank}=3094$, $n=74$).

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SNS “likes”, retweets and replies

There are two kinds of replies for SNSs. One occurs when an individual “likes” or retweets related replies, which requires minimal effort. The other is a reply in which a user keys in several words in response to the librarian’s post. In English-speaking countries, public libraries showed the highest average of the four interaction types via Facebook and Twitter among library types (Figure 2). However, information/knowledge sharing and dissemination on Facebook in public libraries yielded a higher number of “likes”, but a lower number of replies (Figure 2). In the Greater China region, public libraries’ Weibo pages had a higher number of replies categorized as information gathering than in academic libraries, but the number of retweets was about the same. Interestingly, tweeters in English-speaking library settings posted almost no replies at all, only retweets (Figure 3). As for Chinese academic library Twitter pages, communication and information/knowledge sharing showed the same number of both replies and retweets (Figure 3).

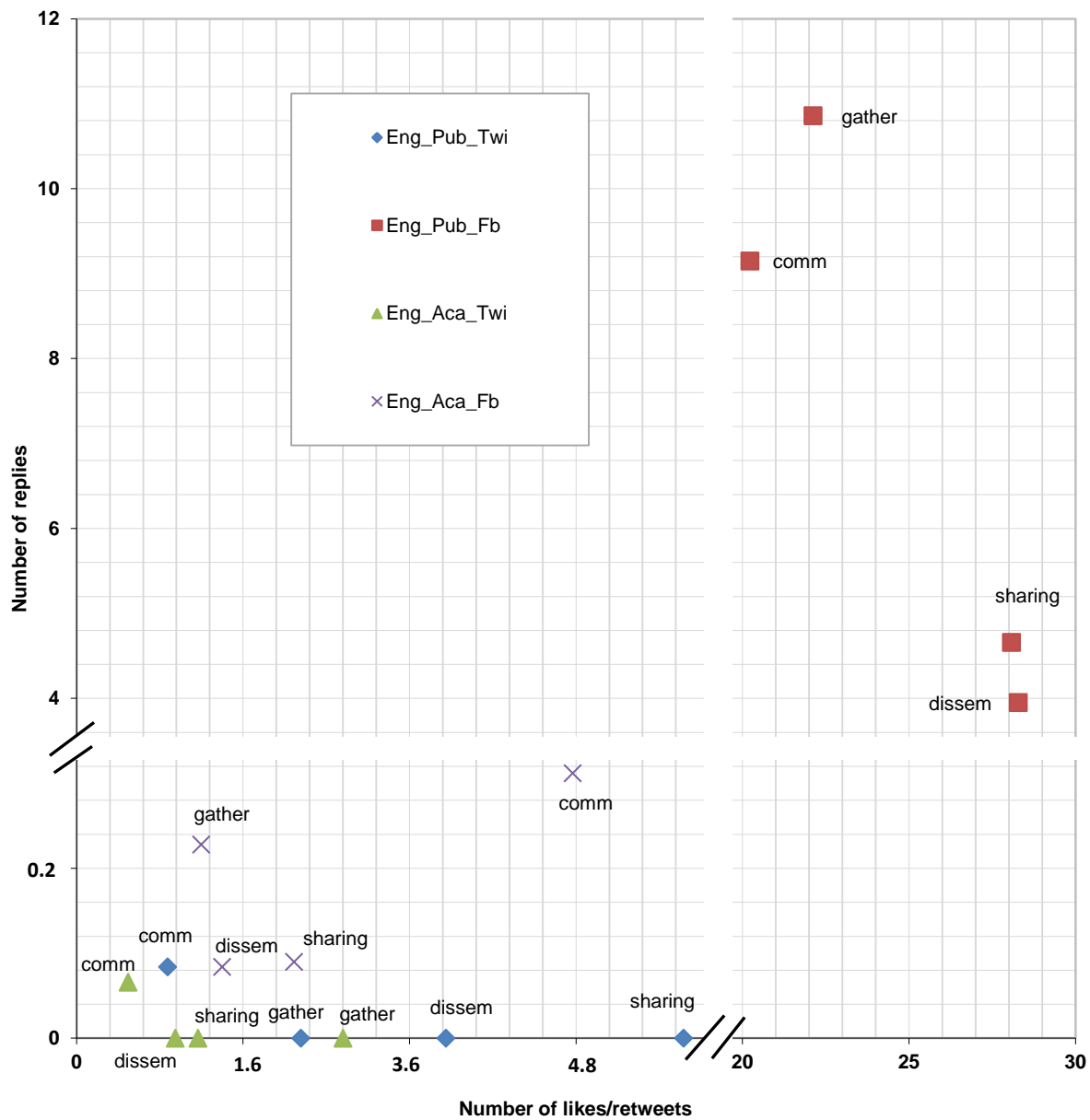


Figure 2. Scatter plot for the average number of “likes”/retweets and the average number of replies for Facebook and Twitter in English-speaking libraries. *Note.* “gath”: Information gathering, “shar”: information/knowledge sharing, “diss”: information dissemination, and “comm”: communication. “Broken” axis lines are used to help display the extremely small values.

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A comparison of Twitter/Weibo usage between English-speaking countries and the Greater China region showed that Sina Weibo in public libraries had a high number of replies and retweets for information gathering (Figure 3). Communication and information/knowledge sharing for Chinese public library Weibo usage yielded a high number of replies in addition to the retweets. Sina Weibo in academic libraries showed a higher number of replies for communication and information gathering than its counterpart in English-speaking countries. Most of the overall Twitter replies in academic libraries in English-speaking countries were retweets (Figure 3). With regards to Facebook, information gathering and communication in English-speaking public libraries and Chinese public libraries both showed a high average number of replies and likes. Interestingly, posts in English-speaking public libraries showed a higher number of “likes” than those in public libraries in Greater China in information dissemination and information/knowledge sharing (Figure 4). In academic libraries in Greater China, Facebook showed a high number of replies and “likes” in communication posts. As for the other interaction types, most of the overall responses were “likes”, and only a small proportion were replies (Figure 4).

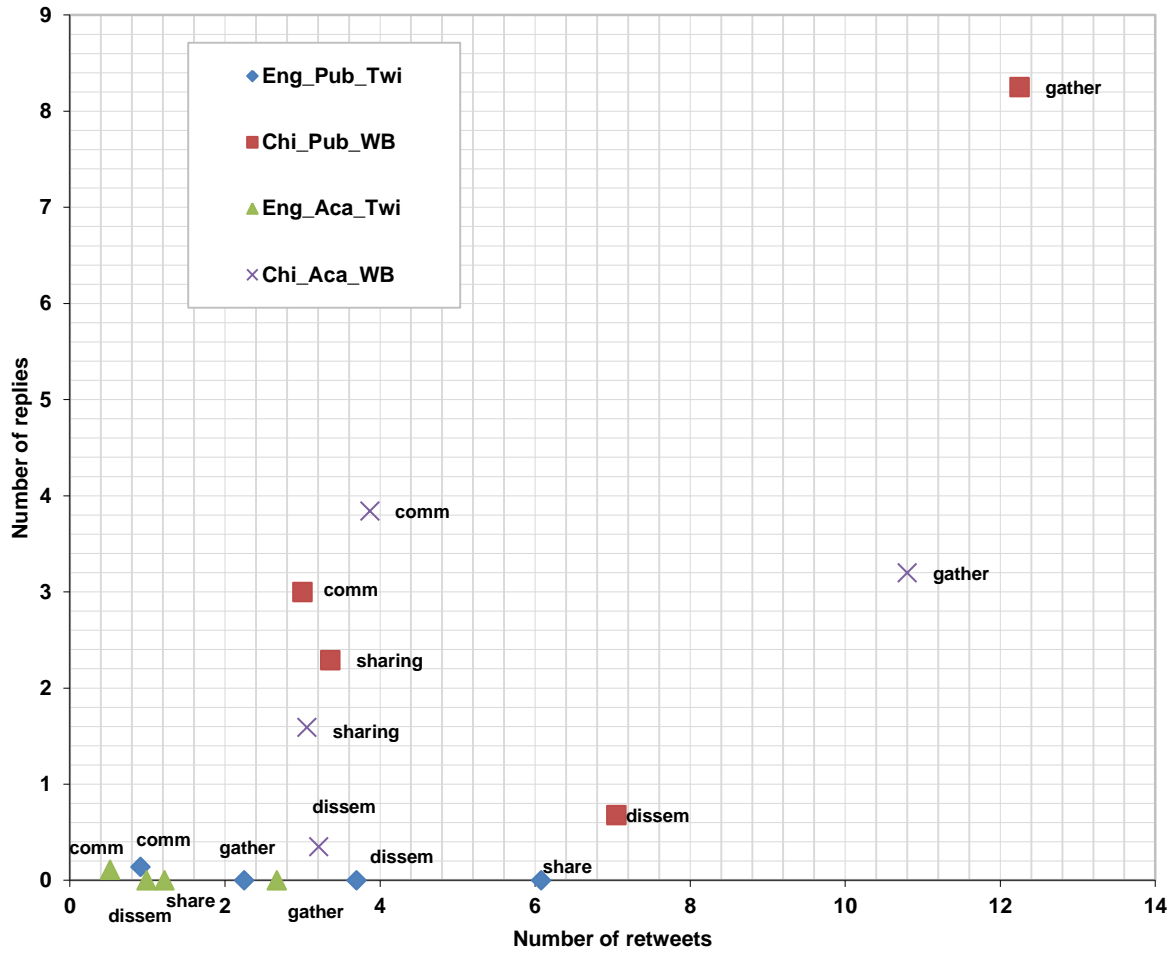


Figure 3. Scatter plot for the average number of retweets and the average number of replies in English-speaking libraries' Twitter and the Greater China libraries' Weibo.

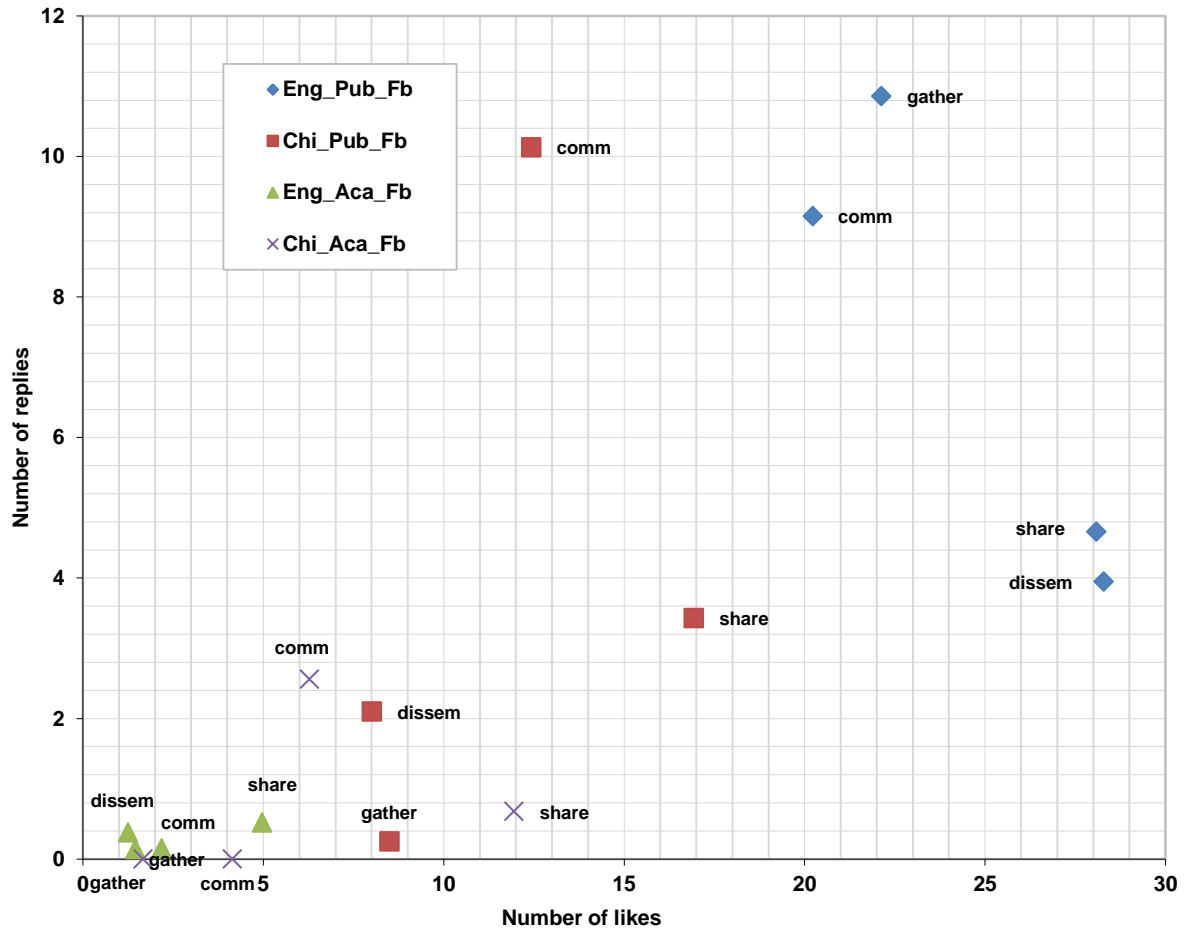


Figure 4. Scatter plot for the average number of “likes” and the average number of replies in English-speaking libraries’ Facebook and the Greater China libraries’ Facebook.

DISCUSSION

RQ1: What are the interaction types in library SNS posts?

The first research question concerned the types of interaction that took place in library SNS posts. The study investigated the interaction types of the posts/tweets, as well as the

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interactive mechanisms. Libraries in this study all employed SNSs to direct users to resources or to post news to many users simultaneously. Among the four types of interactions, disseminating information was the most frequently used interaction type in library SNSs. In this study, SNSs were used primarily as channels for disseminating news and announcements about things currently happening in the library. This concurs with SNS usage identified by other studies (e.g., Wilkinson & Thelwall, 2012), where news and announcements predominated. This trend is revealed in interviews as well.

“Readers are usually interested in top news...” CL1ⁱ

“(Readers) like the background information of the news...” CL1

“(Readers want) fashion, interesting, and new news...” CL2

This is because SNSs are more technically suited to news information and enable information to spread quickly and easily to the community. Facebook has a web interface and provides diverse web content including images and embedded videos, so users have more choices regarding how to share their information (Cormode and Krishnamurthy, 2008). Twitter users tend to prefer using their mobile devices to share items that can be accessed easily (Click and Petit, 2010). Unlike Facebook, with its diverse data formats, Twitter focuses on concise information and immediate posts/titles, allowing libraries to reach out quickly to their community, promoting conversation and response (Guadix, Almecija, & Guadix, 2010). The interview data also indicate these technical advantages of SNSs.

“Twitter because its format encourages people to respond and have a conversation quickly and with minimal effort. And it encourages the conversation in that way.” EL1

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“People like short things (Twitter). It is usually mobile.” EL1

“In Facebook, people tend to browse and watch videos, make comments, share experiences” EL4

The study found that the information/knowledge sharing interaction type was also commonly used between librarians and users in library SNSs. Librarians do not just organize or oversee information (i.e., work as gatekeepers), nor do they simply dispense information. In fact, librarians as professionals facilitate knowledge sharing in communities (Kim & Abbas, 2010). Libraries play an important role in knowledge communities (MacAdam, 1998), and SNSs allow libraries to fulfill such a role. As for the posts that generate user responses, information/knowledge sharing tends to generate responses from users by sharing both tacit and explicit knowledge.

Librarians also used SNSs for personal communication by conducting one-to-one conversations on various topics during their workday. They also obtained collective opinions from users on how to improve library services, although the proportion of communication related posts was less than that of information/knowledge sharing and information dissemination posts. Libraries are now using embedded library catalogs, subject guides using LibGuides, and Ask-a-Librarian features within Facebook (Dickson & Holley, 2010). This confirms the conversion from traditional face-to-face reference services to the application of information/knowledge sharing by means of innovative technology-based tools for communication and collaboration.

Information gathering constituted a small proportion of SNS posts from our data sets. In addition to gathering and collecting users’ opinions for library related services and activities,

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information gathering can be used wisely to draw users' attention to and stimulate a library user's interest in library related activities (Solomon, 2011). It is an alternative to promoting user engagements or familiarizing them with library services and resources (J. Riggins, personal communication, May 4, 2013).

With respect to the potential audience in each SNS type, Facebook was expected to have a younger demographic, and Twitter a broader demographic, which included professionals. Librarians could create selective SNS posts to reach out and recruit their users. SNSs could be used to attract more youth as library users. For example, academic libraries in particular used SNSs to recruit more student users (Ullrich et al., 2008). Interview results also supported these user engagements.

"Facebook, it is more oriented, not exclusively, but oriented to a certain sort of student users." EL1

"Twitter is more open ended for students, but we also have a lot of other people follow us on Twitter who are part of the library." EL1

"On Twitter, there are much broader audiences and much more community, both in and beyond." EL2

"The content provider on twitter is a pretty broad group." EL2

RQ2: What are the differences between Facebook, Twitter, and Weibo regarding user interactions in public and academic libraries?

The second research question investigated whether there were differences between Facebook, Twitter, and Weibo regarding interaction types in different library settings (e.g., public and academic). To identify SNS use patterns, the number of posts, replies, retweets, or

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“likes” for SNS posts from Facebook and Twitter in either English-speaking countries public libraries or academic libraries were compared.

For public libraries in English speaking countries, Facebook yielded a high number of responses in all four interaction types (Figure 2). This might have been due to Facebook’s large number of followers. In addition, public libraries are often regarded as community centers, and users tend to have time to reply to posts or engage in other leisure-like activities. Interestingly, Twitter provided more replies related to information/knowledge sharing in English-speaking public libraries, which indicated a diverse population that showed an interest in information/knowledge sharing via Twitter. However, in English-speaking academic libraries, user engagement in all four interaction types was limited in Facebook and Twitter. Students are composed of the younger generation, who widely use SNSs. They are generally busy with coursework, and faculty are tied up with matters of teaching, research, and service. Therefore they might allocate their time only to the SNS posts that are of great interest to them.

Interestingly, librarians in English-speaking public libraries tended to use Facebook more than Twitter to collect polls or votes (Table 3). The features of Facebook support the creation of connections among people in a community (Heiberger & Harper, 2008), whereas Twitter or Weibo acts as a news-feeding tool, disseminating information from one to another without the need for a pre-existing relationship, e.g., friends or acquaintances (Kwak, Lee, Park, & Moon, 2010). Thus, Facebook is likely to yield a good number of replies and serves as a good tool for collecting users’ opinions.

The study also found that the communication interaction type generated more replies than “likes”/retweets (Figure 2). As suggested by Kivran-Swaine and Naaman’s study (2011), one-to-

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one communication with its personal message enhances user engagement. However, when the number of replies and interactions becomes too large and the conversation between librarians and users deepens, it is costly for libraries to execute communication in this way. On the other hand, this implies that libraries providing services to small user groups should consider using SNSs to facilitate in-depth communications with individual users. Hence, libraries can adjust their deployment of resources in different interactions, according to the properties of their communities.

Additionally, in the case of English-speaking public libraries, the study found that, based on the number of replies, “likes”, or retweets (Figure 2), Twitter was not as effective as Facebook in producing engagement. Facebook’s web interface provides diverse information/knowledge sharing and dissemination opportunities for the general populace (in a public library environment). In Facebook, information/knowledge sharing and dissemination posts normally generate more “likes” than replies because these are one-to-many conversations, allowing people to express their emotional support without deep communication. Socialization is an important attribute of information/knowledge sharing (Holsthouse, 1998). By clicking “likes”, users show their social support and engagement with the community. Social media functions as a tool to help users adjust to their new environment (Ahn, 2012). Interview scripts also revealed similar findings:

“Clicking on the ‘like’ button doesn’t require much effort or much of their time, ... But I think that it’s valuable for them because they show their friends ‘I like this’, ‘I like that’ ... so they will like many things by looking at some of the students you can see how many things that they ‘like’.” EL1

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“We know that from Facebook, our users love photos and they love videos which can have a lot of effects.” EL1

RQ3: What are the differences between English-speaking countries and the Greater China region concerning the types of libraries that use SNSs to interact with users?

The third research question explored the library SNS interaction types in English-speaking countries and the Greater China region. The study looked at SNS user interactions in public libraries (Figure 3) and academic libraries (Figure 4). In mainland China, librarians are increasingly adopting an SNS tool called Weibo, a twitter-like SNS, to engage online library users. It is widely used on both the web interface and on mobile devices. Even though it has a text input limit of 140 words, due to the communication style of high-context cultures (such as Chinese), where messages tend to be abstract and short, a few words can be enough to communicate a complex message (Choi et al. 2011).

Using Weibo, the Chinese version of Twitter, information gathering generated good user responses. Interestingly, Weibo users showed fewer replies for information gathering in Chinese academic libraries than in public libraries (Figure 3). Users regarded public libraries more as community centers because they have social events and reading activities in a relaxed and enjoyable environment. The use of SNS polls and questionnaires to reach the diversity of users in Chinese public libraries might increase the likelihood of more replies. Librarians in Chinese academic libraries targeting a homogenous group of users (e.g., students and faculty) might need to develop new approaches to engage users' participation more effectively in SNS interactions.

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It has been reported that users of Chinese SNSs like to play computer games and share IT related solutions with other users (Chapman and Lahav, 2008). In the Greater China region most of the polls and votes from the harvested SNS posts were technology related (e.g., user interface, usability experiences) and targeted young people. The following are some examples:

“Great news! We just launched the Mobile apps to access the library online...Do you like it? And please share with your opinions with us...” An SNS post from CL4.

“XXX University Library Services Android system client test <http://xxx..> Please tell us how you feel about apps...” An SNS post from CL5.

Library users in the Greater China region showed an interest in playing an active role by participating in and experiencing new technology-related library services and engaging in the library interface usability designs and other activities. Young people are eager to adopt and experience new technology. Librarians could thus expect a good “buy-in” and engage more users by using tech-related polls.

Additionally, this study showed that users in the Greater China region use less “likes” in Facebook than their English-speaking counterparts (Figure 4). Studies have found that users of different SNSs display different online behaviors (Chapman & Lahav, 2008; Chu & Choi, 2010; Li, 2010). For cultural reasons, people in the Greater China region do not easily express their emotions explicitly (Tam et al., 2012). There are similar findings in other Asian countries. For example, Cho (2010) found that Korean users exhibited lesser personal self-disclosure when using Facebook-like SNSs (such as Cyworld) and used more non-verbal communication means (e.g., graphics or icons), whereas users of American-based SNSs (e.g., Facebook) showed more

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frequent self-disclosure and relied more on direct text-based communication. Research has also indicated that both Chinese and American college-aged young people employed different self-presentation strategies in SNSs. American youth reflect fundamental cultural orientations such as individualism— an individual’s life belongs to himself, whereas Chinese youth reflect collectivism— an individual’s life belongs not to himself but to the group or society (Chu and Choi, 2010). SNS cultural comparison studies revealed these differences in the use of SNS services and user motivation (Kim, Sohn & Choi, 2011; Vasalou, Joinson & Courvoisier, 2010).

This study identified the relationship between SNS users’ sociocultural backgrounds and their online communication patterns, and illustrated that SNS users in different social environments demonstrate differences in terms of social relationship management and self-expression strategies in library SNSs. An understanding of these cultural and behavioral differences among online users may help librarians to use appropriate strategies to develop SNS posts to target specific library user groups.

CONCLUSION

A social networking program provides a good way for librarians to market the libraries, engage users, and establish themselves as knowledgeable, helpful, and easily-accessible individuals providing information service. SNSs are beginning to be widely adopted in library settings; however, it is still unclear, how librarians can interact effectively with users? This study contributes to an understanding of the differences in how library users use and view the various social apps, particularly when librarians want to find better ways to connect with their patrons.

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The findings of this study also contribute to an understanding of how libraries can use SNSs to engage users by exploring different interactions on library SNSs.

The study identified four types of library-user interactions as well as their subcategories based on analyzing the relevant literature and harvesting SNS posts' contents and the flows of information. In addition to disseminating library related information, the librarians started using SNSs to facilitate tacit and explicit information/knowledge sharing with library users.

Information/knowledge sharing (one-to-many) generated more "like"/retweets than replies.

Communication (one-to-one) with open-ended questions and involving in-depth personal communication produced more replies. In this study, SNS tools were mostly limited to disseminating announcements of events and information about online resources. However, librarians could consider diverse ways to interact and engage users, thereby providing timely and effective information service.

The study also found cross-cultural differences in user online engagement in SNSs. For example, Chinese users in Facebook showed fewer "likes" than English-speaking users and more active participation in tech-related polls and votes. Consequently, librarians could select direct or indirect communication strategies to accommodate user engagement in different socio-cultural environments. In addition, careful planning and improved policies may be needed to ensure privacy, security, and adherence to ethical consideration, and maximize staff and technical support resources in order to alleviate and improve SNS service maintenance.

The study has some limitations, having examined user engagement based on a limited number of user responses given in a specific period of time. The study explored the SNS posts

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and their replies according to four interaction types, but the reasons underlying the differences in the use of SNS tools among various library types needs further exploration. Given the expansion of SNS usage for promoting library services and the diverse technical and cultural issues involved, SNS posts and responses are worth further investigation in terms of their usage patterns in order to improve user engagement in libraries. Also, while this study focused on the application of different SNSs on a general level, further studies could target in-depth analysis for a specific type of library SNS tool. Other research should be considered, such as the evaluation of user inputs to library SNSs through user opinion surveys and exploration of the cultural aspects of SNSs. Follow-up research could also examine the impact of cultural incongruence in usage on subsequent activity in the social network sites.

To conclude, library SNSs can be used as new means to expand the influence of libraries and attract more fans or "followers" to the libraries. Facebook and Twitter as well as other SNSs give libraries the opportunity to increase their visibility among users without geographical restrictions. SNSs can also establish networks of potential users and be widely used to disseminate information and offer interactive and timely information exchanges. In this way, they would be able to satisfy user needs via mobile devices or web services to share text, images, video, or other multimedia information quickly with interested online library users.

Notes

- i. CL1: Library 1 from the Greater China region
- ii. EL2: Library 2 from English-speaking countries.

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Appendix: Semi-structured telephone interview of SNSs in libraries instrument

Q1. Usefulness of Facebook, Twitter / Weibo

Q1a. Please underline your choice regarding the level of usefulness of Facebook, Twitter /

Weibo, based on the scale below:

Scale: 1 – Not useful; 2 – A little bit useful; 3 – Somewhat useful; 4 – Useful; 5 – Very useful

SNS	Enhance reference services	Help promote library services	Facilitate knowledge sharing
Face-book	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
Twitt-er	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
Weibo	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5

Q1b. For each response from the interviewee with a “4” or “5”, ask why. (e.g., Would you tell us why you think using Facebook for internal purposes is useful for facilitating information sharing?)

Q1c. Are there other kinds of benefits in using Facebook, Twitter / Weibo in your library?

Q2. Interactions (posts that attract lots of users’ replies / comments)

Q2a. Would you tell me why this post attracts more replies / comments than the others?

Q2b. Between Facebook, Twitter, or Weibo, in your opinion, which is more effective in promoting interaction between librarians and library users?

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Q3a. Does your library have any guideline(s) concerning what is appropriate for the library to post on Facebook or Twitter / Weibo?

Q3b. For libraries using both Facebook and Twitter / Weibo, ask: Does your library have different guidelines for the 2 tools?

Q3c. Does your library have any guideline(s) for responding to library users' questions / comments / complaints on Facebook, Twitter / Weibo? (In terms of how soon the library will respond; what to respond to; what not to respond to; etc.)

Q4. Audience

For libraries that have both Facebook & Twitter / Weibo profiles, ask:

Do you have different target audiences in mind?

Q5. Only Facebook, Twitter, or Weibo

For libraries that use only Facebook or Twitter / Weibo, ask:

Why does your library use only Facebook or Twitter / Weibo?

Q6. What are the challenges and difficulties in implementing Facebook or Twitter / Weibo in your library?

Q7. Do you have other comments about the use of Facebook, Twitter / Weibo in your library?