

CHARACTERISTICS OF INFORMATION SHARED ON FACEBOOK: AN EXPLORATORY STUDY

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Abstract

Social networking services, particularly Facebook, have become a dominant medium for social interaction and information sharing. It is important to obtain deeper insights into user information behavior on Facebook and the characteristics of information shared on it. This paper reports the results of a content analysis of 972 Facebook posts collected from 20 participants, mainly in the 30 to 50 years age group, over a two month period. The majority of the Facebook posts (62%) were found to be personal updates, mainly in the form of photos. There were few information requests and few instances of information provision (in response to information requests). Facebook posts mainly shared existing external content (website links, photos and YouTube videos), rather than user-generated content. Nearly half the posts contained photos. There were some opinion and recommendation posts, but many were endorsements of recommendations found on websites. Aside from personal updates, the topics of Facebook posts were, in decreasing order of frequency: entertainment (especially humorous and music content, often from YouTube), food (especially photos and links to food-related websites), life lessons and quotes, health (mainly wellness/lifestyle tips and advice on common health issues), pets and hobby, and news.

Keywords: Facebook; social networking sites; information sharing; content analysis

Introduction

With the pandemic adoption of social networking services (SNS), the substantial amount of time people devote to SNS, and the amount of information shared on SNS, social networking services have become a dominant medium for social interaction and information sharing, arguably on par with face-to-face interaction. It is thus important for LIS researchers to study information behavior on SNS and obtain deep insights into the characteristics, quality and impact of information shared and consumed on SNS.

According to the Statista.com (2015) website, Facebook is the most popular social networking service worldwide, with 1.44 billion monthly active users (who login at least once in the month) in early 2015. A survey in the United States by Pew Research Center's Internet & American Life Project in 2013 found that about 73% of adult Internet users used an SNS (Duggan & Smith, 2013). Most were Facebook users, but over half used multiple social networking sites. 63% of the Facebook users visited the site at least once a day. A survey of undergraduate and graduate students at Nanyang Technological University in 2013 found that 97% of the respondents had a Facebook account (Ramaswami, Murugathan, Narayanasamy & Khoo, 2014). 42% of the Facebook users were constantly logged on to Facebook throughout the day, and 78% accessed Facebook at least once a day.

There have been a few studies of information sharing on Facebook in the past few years, mainly using questionnaire surveys. Previous studies have consistently found that Facebook is used mainly for sharing

personal news and “status updates.” Facebook is perceived by users mainly as a means of keeping abreast of happenings in friends’ lives, for networking (to linkup with other people with common interests) and maintaining social ties (e.g., Lampe, Vitak, Gray & Ellison, 2012; Williamson, Qayyum, Hider & Liu, 2012). Though lots of information is inevitably shared on Facebook, information acquisition is not the primary motivation for using Facebook. Lampe et al. (2012) found that even though Facebook users were not likely to seek information on Facebook, they nevertheless perceived the site as providing useful information. Users engage in “opportunistic acquisition of information” (Williamson, 1998) and serendipitous information encountering (Erdelez, 2005). Information may even be absorbed unconsciously. The information that is encountered may have an impact on users’ perceptions, attitudes and behavior.

To our knowledge, previous investigations of the types of information shared on Facebook have used questionnaire surveys. The questionnaire survey has the advantage of reaching a relatively large number of Facebook users. However, the method has serious weaknesses:

1. the respondents are self-selected, especially if participants are solicited online, and it is not known how this biases the results;
2. the survey responses are based on participants’ perceptions and memory of their behavior, and it is not known how respondents’ memories are biased;
3. the survey responses do not yield information on the actual frequencies or proportions of Facebook posts of various types.

Questionnaire surveys generally ask whether the respondent has posted particular types of information in a particular time period (e.g., the past month or the past year), or with an estimated frequency. It is thus important to analyze actual Facebook postings to confirm questionnaire survey results and to identify possible biases. However, obtaining permission from Facebook users to harvest and analyze their Facebook postings is time-consuming. The sample size will be small. Harvesting Facebook posts also has to be done manually, as current apps for harvesting Facebook posts have constraints in the number of posts they will download. Many Facebook posts are links to websites, photos and videos that have to be manually accessed and analyzed.

This paper reports an exploratory study of information sharing on Facebook, through content analysis of Facebook posts by 20 participants recruited from among the authors’ friends, over a two-month period. The objectives of the study were:

1. To identify the types and forms of information shared, and their relative proportions. This includes confirming that most of the information shared is of the “frivolous” variety, but also to find out whether some “serious” or potentially useful information is nevertheless shared, such as on health, education, product information and national policies.
2. To confirm the low frequency of requests for information, and responses to information requests.
3. To identify the types and quantity of new information generated by users, as opposed to sharing or forwarding existing information from external sources.

The growth in Facebook usage and cross-boundaries propagation of information has prompted many organizations to make use of Facebook to reach out to existing and potential customers, and reap the benefits of greater efficiency of customer outreach at reduced costs (Hanna et al, 2011). This raises the question of what kinds of organizational, commercial, product and service information tend to be shared on Facebook.

Previous Studies of Types of Information on Facebook

Previous studies of information sharing on social networking sites (as well as online discussion forums) have been reviewed by Khoo (2014). Information shared on Facebook was generally found to be of the

“frivolous” variety. Other than personal updates, Facebook users tend to share everyday life information, rather than work-related or school-related information. Joinson (2008) identified “status updating,” including updating of one’s status, adding content on the news feed and seeing other users’ status updates, as one of the main gratifications that users derived from Facebook use. “Status updates” had a significant positive relationship with the frequency of users’ visits to Facebook.

Sin and Kim (2013) surveyed international students at an American public university and found that nearly 70% used SNS for everyday life information either “frequently” or “very frequently.” The top five everyday-life topics were finance, health, news of one’s home country, housing and entertainment.

Ramaswami, Murugathan, Narayanasamy, and Khoo (2014) surveyed undergraduate and graduate students at the Nanyang Technological University, Singapore. Entertainment-related information, food-related information and hobby-related information were selected by the highest number of respondents as the types of information they had shared on Facebook. There were significant age and gender differences: women, younger users, undergraduates, frequent Facebook users and users with more friends were more likely to share entertainment information. Women were also more likely to share shopping and fashion information, whereas men were more likely to share sports-related information and reviews of mobile devices.

In a follow-up survey in 2014 with more refined information categories, Khoo, Fang, Tian, Xu, and Wu (under preparation) found that the top two types of information shared on SNS were funny clips and jokes, and international and local news. This was followed by six information categories: social events, food and beverage products, travel destinations/itineraries, health tips, music recommendations and hobby related information.

Studies have also looked at the patterns and reasons why people use SNS and identified the profiles of users. It was found that age and gender contribute to differences in the use of SNS. Users who are younger use SNS more frequently and have more SNS friends as compared to older users (Joinson, 2008; Pfeil, Arjan, & Zaphiris, 2009; Sin & Kim, 2013; Lampe, Ellison, & Steinfield, 2006; Park, 2010; Ross et al., 2009). In terms of gender, female users are more likely to use SNS and they have more SNS friends as compared to male users (Sin & Kim, 2013; Madden & Zickuhr, 2011; Hampton et al., 2011; Moore & McElroy, 2012). The main reason for females to use SNS is to maintain relationships. On the other hand, males make use of SNS to create new contacts (Muscanell & Guadagno, 2012). Other research have also found that female users update their profile pages more frequently than males, have pictures of themselves with groups of people, and are less likely to post personal information. Male users were “more risky” in nature and task oriented, with less interpersonal interests (Raacke & Bonds-Raacke, 2008; Magnuson & Dundes, 2008; Peluchette & Karl, 2008; Forgel & Nehmad, 2009; Lin & Lu, 2011).

Research Method

Twenty Facebook users were recruited for the study from among the acquaintances of the authors, by sending invitations through SMS, Whatsapp, Facebook messaging and face-to-face communication. The participants were required to be active Facebook users with at least 10 posts on their Facebook walls in December 2014 and January 2015—the period selected for data analysis. Upon receiving the participants’ consent via email, we examined the participants’ Facebook posts for the two months and manually copied text postings (including URLs) to a Microsoft Excel spreadsheet, used as a coding sheet. Non-text postings, such as images and videos, were described in the coding sheet.

Table 1 summarizes the demographic profile of the 20 participants in the study. The participants were mainly in the 30 to 39 years age range. 60% of the participants were females.

Table 1

Profile of Participants

Variables	Values	Frequency	
		Count	Percentage
Sex	Male	8	40
	Female	12	60
Age	20-29	1	5
	30-39	13	65
	40-49		20
	50-59		10
Average number of Facebook connections	Male	666	
	Female	370	
Average number of postings	Male	17	
	Female	42	
Employment status	Working	17	85
	Not working	3	15

Table 2

Metadata recorded for each Facebook post

No.	Metadata element	Values	Description
1.	Author	Self or Others	Whether the content of post is user-generated (<i>self</i>) or shared from other sources (<i>others</i>)
2.	Form	Website link, Image, Text or Video.	The form of the content
3.	Source		Description of the source of the shared content, if the content is not user-generated.
4.	No. of hashtags #	[Integer]	Number of topic hashtags in the post
5.	No. of tagged friends	[Integer]	Number of other Facebook friends that are tagged in the post (i.e. links to other users' Facebook pages)
6.	No. of <i>Likes</i>	[Integer]	Number of users who clicked on <i>Like</i> for the post, indicating agreement or a favorable sentiment to the post (excluding the <i>Like</i> by the poster)
7.	No. of comments	[Integer]	Number of comments on the post (excluding the comments made by the poster)
	Content details		The text of the post and comments from other users, and description of non-text content

Table 3

Functional Categories

Functional Category	Definition	Boundary/Exclusion
1. Share content	Sharing unsolicited online content from other sources on various topics. Includes forwarding website links, online videos or pictures, and text content to other users (as determined by the user's privacy settings). The poster does not provide any additional input/comment. E.g., sharing a link to a YouTube video, or a link to a website outside Facebook.	Excludes content generated by the poster. Excludes posts that provide additional personal views or judgement, such as of products, services, news, research studies and personal status updates.
2. Seek information	Asking one or more questions, or requesting information. E.g., asking for recommendations on the best steak house in Hong Kong.	Excludes rhetorical questions and questions that do not require information or recommendations. E.g. "Why do things have to happen this way?"
3. Provide information	Making available either user-generated or externally sourced information to specific users by tagging the intended recipients. Includes providing information in response to requests for information.	Excludes the general sharing of content or posting an opinion without tagging specific users.
4. Provide opinion	Sharing personal or professional views, thoughts, judgement, remarks, comments, observations, criticisms, recommendations, feedback and reviews about product or services, news, non-personal events, etc. The opinions can be shared from other sources such as links, and offered as a guide for other users to take further actions. E.g., providing a website link on top five wholesale centres in Singapore, or posting a photo of food accompanied with user's comments relating to the food.	Excludes the sharing of personal issues, events or status. Excludes tagging of information to specific users.
5. Provide personal update	"Frivolous" updates of individual daily activities, moods and statuses, such as changing profile pictures.	Excludes forwarding of website links, or offering views or evaluations of product or services. Excludes non-personal news and events.

Table 4

Topical Categories

Topics	Definition / Scope
1. Entertainment	Funny video clips, music, dance, sports and movies, including videos of sports and other light-hearted topics
2. Family	Family matters, such as babies, marriages and family events
3. Fashion and Beauty	Products and services relating to fashion or beauty
4. Food	All food types and beverages, including recipes and restaurants
5. Health	Health wellness, disease, ailments and remedies
6. History	Past events relating to people, country, period or artefacts
7. Hobbies and Pets	Leisure activities and pets
8. Home and Décor	Household matters, such as furniture and furnishing/maintenance tips
9. Horoscope	Astrology description and readings
10. Life Lessons and Quotes	Matters relating to life, such as love, relationships or emotions, as well as quotes about life, including short phrases, excerpts from literature or well-known figures
11. Nature and Science	Matters relating to animals, plants, environment, physics and chemistry
12. News	Local and global events or stories
13. Technology	IT-related matters, such as hardware, software, devices, automation and technology products and services
14. Tests and Quizzes	Online surveys or questionnaires, e.g. personality tests
15. Travel	Information relating to overseas trips, such as travel experiences, places of interests in foreign countries, accommodation and airlines
16. Work and School	Activities or matters relating to education or employment matters
17. Frivolous	Content of a “frivolous” nature, e.g. personal status

Table 2 lists the metadata information recorded for each Facebook post. Only the author (*self* or *others*), form of the post, source of the post, and content details were analyzed in the study. Analysis of the number of topic hashtags, number of tagged friends and number of comments are left to a future study.

The Facebook posts were categorized using a 3-facet classification scheme developed by the authors:

1. 5 functional categories (i.e. the purpose of the post): share content, seek information (request for information), provide information (in response to an information request), provide opinion, and provide personal update. Details are given in Table 3.
2. 17 topical categories, reflecting the subject matter of the content. The categories are not exhaustive as they are derived from the collected data. The topical categories are described in Table 4.
3. Form of the content: website link, image, text, and video.

Results

General Results

Altogether, 972 posts were collected from the 20 participants for the two month period December 2014 and January 2015. The number of posts made by individual participants ranged from 20 to 125 posts. Sixty-five percent of the participants posted between 20 and 39 posts, averaging 13.5 posts a month. We refer to this group as the average frequency posters. Three participants were high-frequency posters, posting 40 to 89 posts. Another four were very-high-frequency posters, with over 90 posts.

Looking at the functional categories of the posts in Figure 1, the majority of posts were personal updates (62%). The next two biggest categories were posts sharing content (18%) and posts providing opinions (15%). Only 1% of the posts seek information, and 4% providing information to specific users. Looking at the form of the posts (Figure 2), photo content was shared nearly half the time (45%), followed by website links (23%) and text content (23%).

The personal updates contained mainly “frivolous” content, such as the posters’ feelings (e.g., “I am so tired” and “Missing my translator...”). As such, we analyzed the topical content only of the remaining 38% (N=370) of the posts to find out whether they carried “useful” information. Figure 3 provides a breakdown of the 370 posts according to the 17 topical categories. Entertainment-related content accounts for the highest number of posts (76 posts), and was shared by about 75% of the participants. This was followed by food-related content (49 posts, contributed by 65% of the participants), life lessons and quotes (47 posts, by about 50% of the participants), health-related topics (39 posts, by about 50% of the participants), pets and hobbies (26 posts, by about 50% of the participants), and travel (24 posts, by about 50% of the participants).

Self-generated Versus Externally-Sourced Content

Sixty-five percent of the posts carried self-generated content, while 35% carried purely shared or forwarded content from other online or offline sources. Comparing the content source with the functional categories (Figure 4), we find that most of the self-generated content was in the personal updates, and they were mainly in the form of photos. A small amount of the self-generated content was in the form of opinions. But even for opinions, somehow posters made use of external content 85% of the time—to endorse the recommendation or opinion from the external source.

Users made use of external content in creative ways. External content can be used as a form of personal update: 5 participants made use of photos from external sources to provide further elaboration on their personal activities. For example, a post on “Hubby’s favourite black forest cake, baking lesson from a marvelous baker” shared a photo uploaded by the poster’s friend. Participants also shared website links in their personal updates. For example, one post said “I should just declare Saturdays to be YouTube day...” and then shared a link to a YouTube video she was watching. Participants who made use of external content to “seek info” wanted to either clarify information on a website or sought opinions on a website content.

An examination of the source of content for the different topical categories found that the topics had a consistently high proportion of posts with external content. Topics with more than 15% self-generated content are Food (24%), Travel (22%), and Pets & Hobbies (15%).

One reason that external content is shared so often is because websites make it convenient for readers to share content on major social media platforms by clicking a button. It is easier to share an existing website, photo or video than to create new content. This raises the question of the quality of external information shared, and what kinds of information tend to be shared. Is misinformation and disinformation more likely to be propagated than authoritative or high-quality information. The participants in the study shared content from a variety of sources including websites that are not well known or not generally considered authoritative. For example, while we anticipated that most users would share news from national news platforms such as The Straits Times (the national newspaper) or Channel News Asia (TV news channel) websites and Facebook pages, study participants shared news from alternative news sources such as Kaki News Network, Mothership.SG and New Nation Singapore.

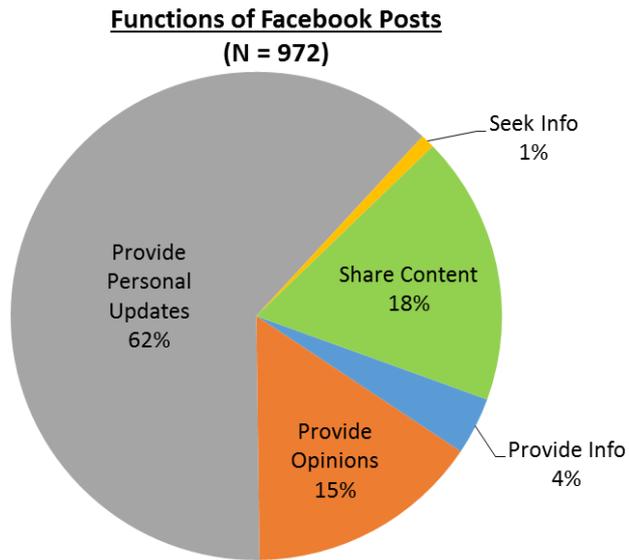


Figure 1. Functional categories of posts

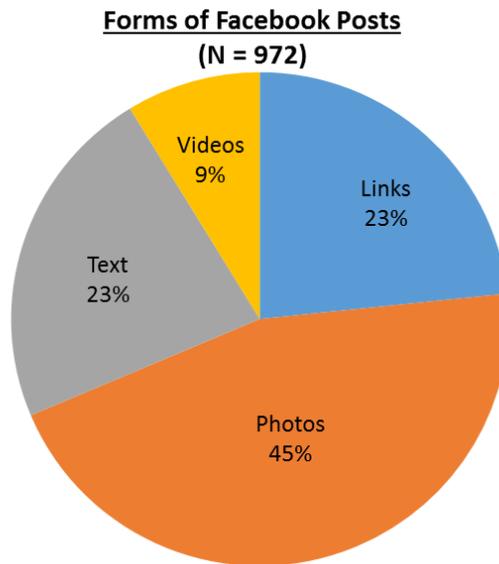


Figure 2. Form of the posts

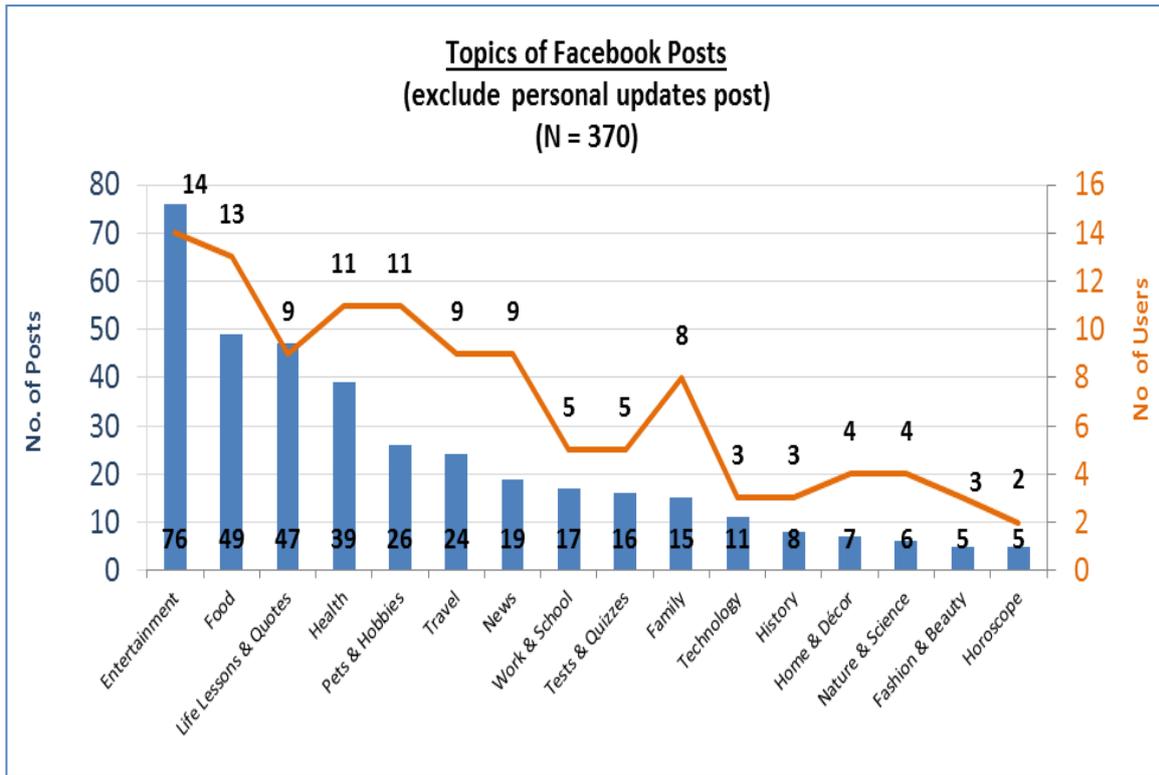


Figure 3. Topical categories of posts that are not personal updates

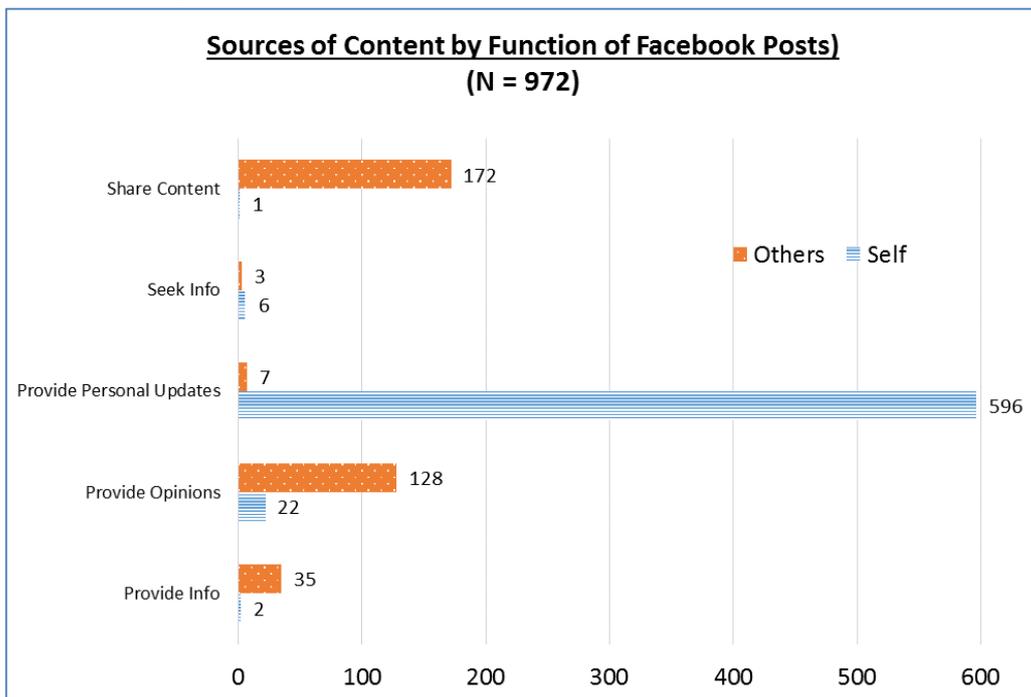


Figure 4. Relation between functional categories and source of content

Forms of Content

Comparing the form of Facebook posts with their function, we found that most of the personal updates were in the form of photos, followed by text content. Photos appeared to be users' preferred way of documenting their lives for sharing. This is a shift in behavior from online blogging where users record

their experiences and thoughts in an online diary. One reason for the prevalence of photo sharing is the ease of capturing and uploading images using smart phones, complemented with free third-party photography mobile apps. Many participants used Instagram to share photos in their Facebook accounts, and also created online photo albums and tagging their friends in the albums.

In contrast, for the functions of sharing external content, providing opinion and providing information, there is a much higher proportion of website links, compared to videos, photos and text. For the “share content” function, it is not surprising that videos, mainly from YouTube, were the second most popular form of shared content.

Topics of Facebook Posts

The top four topics of Facebook posts were entertainment, food, life lessons and quotes, and health, followed by pets and hobbies, and travel (see Figure 3). These topics can be classified as everyday life and leisure content, and are commonly shared in social networks as discussed by other researchers (Julien & Michels, 2000; Agosto & Hughes-Hassel, 2005).

Under the entertainment topic, humor-related content contributed to the highest number of posts, followed by music-related posts. The humorous content shared was mainly in the form of funny video clips. The music posts shared comprised links to songs that were new, remastered versions or new renditions. It was also observed that music videos from YouTube were the main form of shared music.

Food was the second most popular topic for Facebook posts. 92% of the food-related posts were in the form of either photos, or links to the websites of food establishments or food review websites. 67% (33) of the posts provided opinions on food.

Life lessons and quotes were the third most popular topic, with most of them shared in the form of photos and website links. Values and relationships were the dominant themes of the posts. The life lessons and quotes were mainly general life quotes, and only 28% relate to religious values and beliefs. An example of a life quote is “A burnt toast never hurts anyone but harsh words do.” Female participants contributed more than three times the number of such posts than male participants.

Health was the fourth most popular topic. Seventy-four percent of health-related posts were users providing opinions. Seventy-six percent of the posts were in the form of website links. There was no disease related post. Most of the posts gave wellness and lifestyle tips on exercise, nutrition, stress management and managing common health issues (such as insomnia and clogged arteries). Female participants posted two times more health-related posts than male participants.

Conclusion

We carried out a content analysis of 972 Facebook posts collected from 20 participants, mainly in the age group of 30 to 50 years. The participants are thus mostly working adults. This is in contrast to previous studies that are mainly questionnaire surveys of university students. We examined the relationships between type of information source (*self-generated* versus *external*) and form, function and topic of the posts, and derived five main insights:

1. There are few information requests and, consequently, few instances of information provision (in response to information requests). Users may be using one-to-one and small-group communication services, such as SMS and WhatsApp, to seek information in a more private environment. Information requests posted on Facebook tend to be generic in nature, and not sensitive, embarrassing or personal. An example of a question was: “Groupon promotion. Anyone wanna go? Need 2 pax next weekend!”

2. Facebook posts are predominantly in the form of content sharing of existing external content (websites, photos and YouTube videos), rather than user-generated content. With the availability of vast amounts of information online, users can Google for information, rather than make the effort to organize their thoughts into text. Websites and content-sharing sites also encourage the sharing of content by providing social sharing functionality on their sites.
3. Photos are used extensively in personal updates. Overall, photo content was shared nearly half the time. There is a trend of users capturing and sharing information about their daily lives and activities using photos, largely facilitated by smart mobile technology, cloud storage and free photography mobile apps. This represents a shift in trend from recording and sharing information in textual form, epitomized by blogs.
4. There are some opinion and recommendation posts, but many are endorsements of recommendations found on websites, rather than reviews by the Facebook user.
5. The topics of Facebook posts are confirmed to be mainly personal updates, “frivolous” information and general everyday life information. Aside from personal updates, the main topics of sharing are, in decreasing order of frequency: entertainment (especially humorous and music content, often from YouTube), food (mainly in the form of photos and links to food-related websites), life lessons and quotes, health (mainly wellness/lifestyle tips and advice on common health issues), pets and hobby, and news. The topics probably reflect the topics of face-to-face social interactions.

The observation that health information posted on Facebook are general health and wellness information is consistent with the result of the study by Zheng (2014), who found from in-depth interviews of 32 young adults that they were not motivated to seek health information on Facebook, and the health information they acquired from Facebook posts was limited and casual. What is surprising is the amount of philosophical musings on life and living, which has not been highlighted in previous studies. We had also expected more news-related posts that alert friends to local, national and international news. The high dependency on available information from external Web sources raises concerns about the quality of information shared, and users’ ability to assess the quality of information that they read and forward.

The main limitations of the study are the small sample size, and the limitation of the study participants to acquaintances of the authors. The analysis results are thus tentative and are hypotheses for confirmation and investigation in future studies.

Future studies can expand on the scope of this study by looking at the ways in which users respond to the information shared on Facebook. For example, the types of posts and topics that attract more *Likes*, forwarding, tagging of users, comments and interaction can be analyzed. This will shed light on user consumption of Facebook posts, and potential impact on users’ perceptions, attitude and behavior. Studies of the quality of information shared and the characteristics of external information/content that tend to be propagated are needed, as are studies of how users assess the information in the posts and decide to forward them. As photos are extensively shared on Facebook and other social networking services, there is a need to study what kinds of information photos capture and convey to users. It will also be useful to identify different categories of users with different information sharing profiles, for example high-frequency versus low-frequency posters, and Facebook users with few friends versus those with many friends.

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