

From Facebook to Instagram:

Exploring user engagement in an academic library

Abstract

It is trendy for university libraries to offer services on social media (SM) platforms. As many millennials prefer to use apps of photo-snapping, libraries unavoidably start to use Instagram to connect with users. This study examines the effectiveness of the use of Facebook and Instagram in The University of Hong Kong Libraries (HKUL), by a mixed-method approach to analyze the posts on the two SM sites of HKUL and user feedback collected from interviews on campus. The content analysis surprisingly revealed that both Facebook and Instagram received very low user engagement, and the most frequently posted contents were library operational news and library events. The interviewees opined that they welcomed HKUL's use of Facebook and Instagram, but they urged HKUL to change its uninteresting style on the SM sites and make better use of the SM features to attract users' attention. This study provides insights for librarians for their effective management and adoption of SM, especially for content design and management.

Keywords: social media; user engagement; library promotion; academic libraries; mixed methodology

INTRODUCTION

Social media (SM) such as Facebook and Instagram have been widely used not only in personal lives, but more organizations and businesses are also keen or forced to connect with potential clients on SM for marketing and communication purposes (Lam, Au, & Chiu, 2019; Fong et al., 2020). The ubiquitous use of SM also attracts university libraries to appear on SM to communicate with their users, particularly the millennials, who regard SM as their primary communicative tools (Fong et al., 2020; Cheng et al., 2020).

However, user engagement on many libraries' SM sites was found unenthusiastic (Al-Daihani & Abrahams, 2018; Jones & Harvey, 2016; Kong, Chiu, & Ho, 2016; Lam et al., 2019; Palmer, 2014; Winn, Rivosecchi, Bjerke, & Groenendyk, 2017), which calls for thorough researches on the users' perception and preferences about the use of SM by the libraries. While many studies focused on libraries in the West, it is worth to conduct similar research in the Asian regions such as Hong Kong, where SM usage in libraries might be at variance because of the language and cultural differences, among other factors.

In Hong Kong, the use of SM is widespread and growing rapidly. According to the survey of the Census and Statistics Department (2016) on regular Internet users who had used SM in the past 12 months, 99.4% of them had used SM at least once a day, 99.6% aged 15 to 24, and 99.3% had attained post-secondary education. Although this survey was not to directly investigate the SM usage of university students, the results indicated that most university students, who are usually 18 to 22 years old, have a keen interest in using SM. A survey report released in January 2019 revealed that Facebook was the most popular SM platform used in Hong Kong, in which 85% of the Internet users reported using it (Hootsuite & We Are Social, 2019). However, researchers found that on the contrary, the user engagement level on the university libraries' Facebook pages was quite low (Kong et al., 2016; Lam et al., 2019; Fong et al., 2020; Cheng et al., 2020). On the other hand, being aware of the increasing use of Instagram by millennials (Salomon, 2013; Alhabash & Ma, 2017), one of the three most popular SM platforms in Hong Kong (Hootsuite & We Are Social, 2019), university libraries rode on the trend to create Instagram accounts as well, but there are unexpectedly scant studies in this aspect.

To fill the literature gap, we chose The University of Hong Kong Libraries (HKUL) as the case of this study, as HKUL has recently started its Instagram account. According to the response of HKUL's Ask a Librarian service, HKUL's Facebook and Instagram have been created as library communication channels and promotional tools because of their popularity among the user groups, including students, staff, and the general community (Deng, Gao, & Chen, 2019). Three library staff from the Public Relations and Development team, who are a manager, a graphic designer, and a student helper, respectively, are responsible for handling the matters of both Facebook and Instagram channels,

such as content management, reporting, and publicity creation. Posts on both Facebook and Instagram have been created depending on the necessity of information related to HKUL and the sharing of important announcements. Messages (mainly on Facebook), comments under specific posts, emails, and phone calls are students' channels ways to HKUL. Thus, by analyzing the posts and usage on the two SM sites and collecting students' feedback from interviews on campus, this study evaluates the effectiveness of using Facebook and Instagram in HKUL for engaging with users. Our research questions are, therefore:

RQ1: How does HKUL use Facebook and Instagram?

RQ2: How effective is HKUL's use of Facebook and Instagram for engaging with users?

RQ3: What are HKUL users' perspectives and preferences about connecting with HKUL on Facebook and Instagram?

The research results would hopefully be useful for librarians to evaluate their efforts in engaging with users on Facebook and Instagram, and understand the users' expectations. Insights gained from this study would also aim to facilitate other libraries in formulating suitable policies on the use and management of SM.

LITERATURE REVIEW

Social media

As the name suggests, SM is the media we use to be social (Safko, 2012). It refers to the online technological tools and services created for social interaction, connection, and communication (Trautschold, Mazo, & Karch, 2011). Users share, collaborate, publish, and manage contents online, facilitating instant and constant information sharing, dissemination, and gathering (Huang et al., 2015; Mao, 2014).

Facebook, founded in 2004, with multiple functions such as status updating, photos, and video uploading, as well as commenting on and reacting to posts, has soon become the largest SM site (Hootsuite & We Are Social, 2019). Instagram, joined the market in 2010 and was acquired by Facebook in 2012, is another highly popular SM (Hootsuite & We Are Social, 2019). It is a photo- and video-sharing site with special-effect filters provided for users to transform their photos and videos and share them online.

Using SM for online communication has intrinsically become a significantly prevalent norm in our lives personally and professionally (Bradley, 2015; Harrison, Burrell, Velasquez, & Schreiner, 2017). More organizations regard SM as a low-cost promotional tool for branding and marketing (Taeuja and Toombs, 2014) and to establish two-way conversations with their customers (Clark and Melancon, 2013).

The use of social media in academic libraries

In the mid-2000s, many library professionals did not see a need to be involved in social networking, and some even had never heard of the then already very exciting platform called Facebook (Charnigo & Barnett-Ellis, 2007). Social networking was traditionally thought to be unsuitable for academic uses and the emphasis of libraries on learning, until some libraries later thought out of the box and found Facebook a possible means to communicate with users and deliver library services, such as reference assistance, library tours, and library collections promotion (Charnigo & Barnett-Ellis, 2007). Studies conducted in the 2010s reported wide adoption of SM, particularly Facebook and Twitter, by academic libraries in North America, Europe, and Asia, and some libraries even posted on SM every day (McCallum, 2015; Cheng et al., 2020).

While Instagram soon passed Twitter in the number of active users (Fiegerman, 2012), more academic library professionals wrote to share their experiences of using Instagram to connect with users (Abbott, Donaghey, Hare, & Hopkins, 2013; Hagman & Carlton, 2014; Hopkins, Hare, Donaghey, & Abbott, 2015; Ramsey & Vecchione, 2014; Salomon, 2013). Some academic libraries would interact with students through liking and reposting their photos about the libraries and holding quizzes (Salomon, 2013), and attract students to view the posts by creating eye-catching hashtags and photos about different aspects of the libraries (Hild, 2014; Salomon, 2013; Cheng et al., 2020). For innovative activities, there are many novel ways (Wójcik, 2019), and some libraries organized a novel scavenger hunt on Instagram (Hild, 2014).

Researchers observed that academic libraries used SM for information dissemination, marketing, publicity, and inquiry-related services (McCallum, 2015; Cheng et al., 2020), while Young and Rossmann (2015) stressed that the major and most successful function was marketing. However, not all libraries gained great marketing success from Instagram. For example, Rachman, Mutiarani, and Putri (2018) revealed that some academic libraries did not properly utilize the commenting feature of Instagram to interact with students, which would adversely affect the marketing effects.

The advantages of SM are commonly discussed in the literature from the librarians' perspective, and some best-practice guides are available for librarians' reference (Garofalo, 2013). Ironically, scholars consistently noticed that user engagement on many SM sites of academic libraries was not as positive as expected or even disappointing (Al-Daihani & Abrahams, 2018; Jones & Harvey, 2016; Kong et al., 2016; Lam et al., 2019; Palmer, 2014; Winn et al., 2017; Fong et al., 2020; Cheng et al., 2020). Yet, some scholars wishfully believe that the ubiquitous use of SM by the youth would undoubtedly result in an enthusiastic engagement on the libraries' SM sites (Garofalo, 2013; Jones & Harvey, 2016). They have been criticized for being overconfidence in the attractiveness of the libraries' SM sites and having an unrealistic assumption that library users are willing to connect with libraries

via SM as if following their friends and other business' SM sites (Crump & Freund, 2012; Jones & Harvey, 2016). The librarians' inadequate knowledge and lack of training about the use of SM, and limited support and resources from the institutions were some of the major obstacles to the success of libraries' SM (Jones & Harvey, 2016; Fong et al., 2020; Cheng et al., 2020).

Literature gap

As discussed above, scant scholars empirically explore library users' views on the emerging Instagram platform, which is gaining popularity of the younger generation. Pantry (2009) stresses that libraries should first understand the needs and expectations of the users to integrate into the users' communities effectively. Furthermore, an overwhelming majority of the studies about libraries' use of SM gave attention to libraries in the West. Clearly, similar investigations in Asian libraries are needed, as researchers observed that social networking behaviors vary in different socio-cultural environments (Huang et al., 2015; Huang, Chu, Liu, & Zheng, 2017). For example, there are scant relevant studies in Hong Kong, an international metropolis with mixed culture from the West and the East. Chan (2011; 2012) conducted two studies about using Facebook advertisements to promote Hong Kong Baptist University Library. Kong et al. (2016) tracked the user engagement statistics on the Facebook page, Twitter, and YouTube channel of Pao Yue-Kong Library in The Hong Kong Polytechnic University. Lam et al. (2019) analyzed the Facebook usage of seven local university libraries. Only recently have Fong et al. (2020) and Cheng et al. (2020) studied Facebook perceptions from user perspectives of the HKUL. However, these studies did not include the increasingly popular Instagram in the research.

METHODOLOGY

This study used a mixed-methods approach with two research phases, combining quantitative and qualitative data collections and analyses to provide a comprehensive understanding of the research problem and to inclusively answer the three correlational research questions (Creswell, 2014). A content analysis (Krippendorff, 2004) of the posts on the Facebook page and Instagram account of HKUL was conducted to address RQ1 and provide indications to RQ2. Given that the "users" on the two SM sites might not necessarily be HKUL's intended or actual users, but perhaps any random netizens instead, interviews with HKU students on campus were required to obtain qualitative data for answering RQ2 and RQ3. The quantitative research was necessary for tracing trends and relationship (Punch, 2014), while the qualitative research captured peoples' language and imagery to explain and supplement the quantitative results (Greenfield & Greener, 2016). This mixed-method approach allowed a comparison of quantitative and qualitative data and formed a triangulation of them to increase the validity and reliability of the findings (Connaway & Radford, 2017; Creswell, 2014).

Phase 1: Content analysis of HKUL's Facebook and Instagram

The research harvested the posts on HKUL's Facebook and Instagram sites from the period of January 2019 to May 2019, which covered the full spring semester, revealing a comprehensive picture of the usage in a complete cycle of a semester. The researchers then examined all the 32 posts published on Facebook and Instagram. These sample posts were categorized by subjects according to a coding scheme for content analysis (Glaser & Strauss, 1967; Krippendorff, 2004). The coding results of these non-numerical text content data were transferred into statistically manipulated figures for quantitative analysis (Hider & Pymm, 2008). The research also recorded the total number of followers, media types of the posts, and the number of user responses, including reactions (i.e., *like*, *love*, *haha*, *wow*, *sad*, and *angry*), comments, and shares. These figures were the key indications of user engagement on SM (Glazer, 2012). Data on Facebook posts were collected and extracted by using Netvizz, an online application developed to provide veritable outputs of different Facebook sections in standard formats (Rieder, 2013), and data on Instagram posts were extracted and exported to Excel manually by the researchers.

Phase 2: Interviews with HKUL users on campus

To explore the actual library users' opinions, ten students were interviewed on the HKU campus for around 30 minutes each. Interviews were essential to the exploration and discovery of people's underlying viewpoints and subjective experience which were beyond the scope of quantitative research approaches (Connaway & Radford, 2017), and useful to verify and validate the information collected from other sources (Lindlof, 2011). The interviewees were: three postgraduates from the Master of Science in Library and Information Management (MLIM) program, three local undergraduates, two undergraduates from mainland China, and two foreign undergraduates. This sampling design was based on the HKU student profiles that more than half of the students on campus were undergraduates, and international students were about 40% (The University of Hong Kong, 2019a). Given their postgraduate study in library science, MLIM students were expected to have a deeper understanding and to provide critical opinions about the use of Facebook and Instagram by HKUL. All the individual in-person interviews were semi-structured based on an interview guide, and most questions were open-ended (Bailey, 2018; Maxwell, 2013). Both the interviewer and interviewees shared the control of the flow in the interviews. A smartphone with an Internet connection was provided as a visual aid for interviewees to instantly browse Facebook and Instagram (Connaway & Radford, 2017). The interviewees' opinions were extracted and quoted for explaining the data obtained from the content analysis in phrase one.

CONTENT ANALYSIS OF HKUL'S FACEBOOK AND INSTAGRAM

Table 1. General information on HKUL's Facebook page and Instagram account

Social media site	Date of the first post	Total followers (as on May 31, 2019)	Total likes (for Facebook page only, as of May 31, 2019)	No. of posts (from January 1 to May 31, 2019)
Facebook (https://www.facebook.com/hkulib/)	16 February 2012	1,342	1,109	32
Instagram (@hkulibrary)	3 August 2018	461	N.A.	32

Table 1 shows that HKUL's Facebook has a much longer history of about 7 years and 881 more followers than their Instagram as on May 31, 2019. Adopting the coding scheme used in the research of Lam et al. (2019), the 64 sample posts published on Facebook and Instagram from January 1 to May 31, 2019, were classified into four main categories and nine sub-categories (Table 2). Table 3 shows that "Library news dissemination" (C1) (44%) and "Marketing" (C2) (44%) were both the most frequent topics on Facebook. Notably, "General library operation" (S1) (38%) occupied Facebook most, followed by "Library events" (S3) (28%). The most used categories on Instagram were also "Library news dissemination" (C1) (38%) and "Marketing" (C2) (56%), but the latter accounted for over half of the Instagram posts. "General library operation" (S1) (34%) and "Library events" (S3) (25%) were also the top two frequent sub-categories on Instagram. However, it should be noted that 28 posts (44%) were the same on Facebook and Instagram. For example, HKUL posted about the library facility "Ingenium" on both Facebook¹ and Instagram² with the same content and photo on May 14, 2019.

Table 2. Categories of the post contents on Facebook and Instagram

Codes for categories and sub-categories	Purpose	Explanation/Example
C1	Library news dissemination	"Updating the announcement about library news, opening hours, maintenance or suspension schedule of library services and job posting."
S1	General library operation	"Library Opening Hours during the Labour Day and the day following Buddha's Birthday More Details: https://lib.hku.hk/newsblog/?p=1174 "
S2	Recruitment	"Join Our Team! Library Assistant I (Music Library) in the University Libraries (Ref.: 493938) IT Officer in the University Libraries (Ref.: 493904) https://lib.hku.hk/employment/index.html "

¹ <https://www.facebook.com/hkulib/posts/2242677805853061>

² <https://www.instagram.com/p/BxbNj0znZ00/>

C2	Marketing	Promotion of library events, facilities, collections, other services and publications.
S3	Library events	“In partnership with the U.S. Consulate General Hong Kong and Macau and co-organized with the HKU Journalism and Media Studies Center the Libraries is pleased to present the book talk Last Boat out of Shanghai by Helen Zia. For details and to register: https://lib.hku.hk/friends/reading_club/bt2019_03.html ”
S4	Library facilities	“Check out the new Ingenium webpage and learn more about the learning spaces technology and services available. https://lib.hku.hk/ingenium . #hkul #hkulingenium #hkullic #hkultech@ingenium #hkulibrary #hkulmpa #hkullearningspaces #hku #library”
S5	Library in-house collections	“Notable Acquisition: Verdi, Giuseppe, Antonio Ghislanzoni, and Franco Faccio. Aida: Opera in Quattro Atti. Milano: Ricordi, 1872. [...]”
S6	Other services	“Jasper at the HKU Spring Media Reception #hkul @hkuniversity #hkulibrary #hkulstressrelief #hkultherapydog” (Remark: Jasper is the resident therapy dog in HKUL under its Therapy Dog Programme which aims to help reduce stress and anxiety of HKU students and staff by holding meeting sessions between Jasper and them.)
S7	Publications	“Now Available https://lib.hku.hk/annualreport/AR2018.pdf ” (Remark: This is a post about the release of HKUL Annual Report 2018.)
C3	Information or knowledge sharing	Sharing of external events.
S8	Other events	“The month of May is Exercise is Medicine on Campus Month. Join the various activities around campus and at the Main Library”
C4	Information acquisition	Requesting for suggestions from patrons to improve library services and facilities.
S9	Suggestions	“A CHANCE TO WIN A \$6000 APPLE VOUCHER! DEADLINE EXTENDED TO 30 APRIL 2019! Current HKU students are invited to design a creative new display space for the Main Library’s Recent Additions. https://lib.hku.hk/newsblog/?p=1129 #hkul #hkulibrary #hkuldisplaycompetition @hkuniversity”

Table 3. Categorization of the posts on Facebook and Instagram

Category	Sub-category	No. of Facebook posts	Percentage of Facebook posts	No. of Instagram posts	Percentage of Instagram posts
C1 Library news dissemination		14	44%	12	38%
	S1 General library operation	12	38%	11	34%
	S2 Recruitment	2	6%	1	3%
C2 Marketing		14	44%	18	56%
	S3 Library events	8	25%	8	25%
	S4 Library facilities	3	9%	4	13%
	S5 Library in-house collections	0	0%	2	6%
	S6 Other services	2	6%	4	13%
	S7 Publications	1	3%	0	0%
C3 Information/knowledge sharing	S8 Other events	3	9%	1	3%

C4 Information acquisition	S9 Suggestions	1	3%	1	3%
----------------------------	----------------	---	----	---	----

Table 4 shows the number of engagement activities of HKUL on Facebook and Instagram. Engagement activities included reactions, comments, and shares. Reactions referred to *like* on Facebook and Instagram, as well as *love*, *haha*, *wow*, *sad*, and *angry* on Facebook. Only the number of shares on Facebook was counted in this research, as no such information was available on Instagram. Although Facebook offered more engagement options to users, Instagram received about five times more of engagements per post on average. None of the sample Instagram posts received zero response. Of the total 64 sample posts on Facebook and Instagram, only one comment was left, but the content was hidden due to the privacy setting on Facebook.

Table 4. Number of engagements of the posts on Facebook and Instagram

Social media site	Facebook	Instagram
Total no. of reactions	67	393
Average no. of reactions per post	2.09	12.28
Total no. of comments	1	0
Average no. of comments per post	0.03	0
Total no. of shares	13	N.A.
Average no. of shares per post	0.41	N.A.
Total no. of engagements (= total number of reactions, comments, and shares)	81	393
Average no. of engagements per post	2.53	12.28
No. of posts with no engagement	8	0

Examples of the most popular Facebook posts include one in the category “Marketing” (C2) – “Library events” (S3) about a book talk “Underground Front: The Chinese Communist Party in Hong Kong”³ received 11 engagement activities including 6 *likes* and 5 shares. Another post⁴ in the category “Marketing” (C2) – “Other services” (S6) received 9 *likes* and 2 *haha*, in which the Old English sheepdog Jasper, the resident therapy dog, in HKUL providing therapeutic services to library users (HKU, 2019b), was the main focus. So, this post was not classified into “Library events” (S3), though the text in the post introduced a library exhibition. Further, Jasper, the dog, attracted the most attention on both Facebook and Instagram. It was featured in 4 Instagram posts, and 3 of them were also the top posts with the highest number of engagements. Jasper’s Instagram photos⁵ celebrating the Chinese New Year gained 44 likes and was the highest among all. The popular therapy dog explained the

³ <https://www.facebook.com/hkulib/posts/2173731246081051>

⁴ <https://www.facebook.com/hkulib/posts/2169308559856653>

⁵ <https://www.instagram.com/p/Bt5FR7LnYHr/>

significantly high average number of engagements that the sub-category “Other services” (S6) gained in Table 5.

Table 5. Average number of engagements and content categories of posts on Facebook and Instagram

Social media site	C1				C2				C3		C4	
	S1	S2	S3	S4	S5	S6	S7	S8	S9			
Facebook	1.5	0.9	5	3.7	3.9	1	N.A.	8	2	2	2	
Instagram	7.1	7.5	3	16.4	8.6	17	16.5	31.5	N.A.	7	5	

Table 6. Number of engagements and media types of posts on Facebook and Instagram.

Social media site	Media type	Total no. of posts	Total no. of reactions	Total no. of comments	Total no. of shares	Total no. of engagements	Average no. of engagements per post	No. of posts with no engagement
Facebook	Photo	21	53	1	12	66	3.1	6
	External link	10	14	0	1	15	1.5	1
	Video	1	0	0	0	0	0	1
Instagram	Photo	31	375	0	N.A.	375	12.1	0
	Video	1	18	0	N.A.	18	18	0

Table 6 shows that HKUL posted mainly photos on Facebook (67%) and Instagram (97%), and there was only one video post, respectively, on the two SM sites. HKUL also shared ten external links or posts from other Facebook accounts on its Facebook page. Except for the only video posted on Facebook, most of the posts on both Facebook and Instagram attracted some engagements. No specific usage pattern was observed in terms of the media types of posts.

INTERVIEWS WITH HKUL USERS ON CAMPUS

Table 7. Profile of interviewees.

Code of Interviewee	Birthplace	Level of study	Field of study	Year of study	Age	Facebook user	Instagram user	Most frequently used social media
HP1	Hong Kong	Postgraduate	MLIM	2	34	✓	×	Facebook
HP2	Hong Kong	Postgraduate	MLIM	1	31	✓	✓	Facebook
HP3	Hong Kong	Postgraduate	MLIM	1	26	✓	✓	Facebook
HU4	Hong Kong	Undergraduate	Chinese History & Culture	1	17	✓	✓	Instagram
HU5	Hong Kong	Undergraduate	Civil Engineering	2	19	✓	✓	Instagram
HU6	Hong Kong	Undergraduate	Civil Engineering	4	21	✓	✓	Instagram
CU7	Mainland China	Undergraduate	English studies	2	19	×	×	WeChat
CU8	Mainland China	Undergraduate	Science	1	18	×	×	WeChat
FU9	Korea	Undergraduate	Accounting & Finance	3	21	✓	✓	Twitter
FU10	US	Undergraduate	Logistics	3	20	✓	✓	Twitter

Ten individual face-to-face interviews were conducted in this research. Table 7 shows the profiles of the interviewees and their use of SM types. Codes were given to the interviewees to represent their

birthplace and level of study. For example, HP1 was a Hong Kong postgraduate, while FU9 was an international undergraduate student.

Instagram was found to be commonly used by the interviewees, especially those at younger ages. All the six Hong Kong interviewees opined that they found post-2000s locals preferred Instagram, but the post-80s and 90s may like to read Facebook more. Not surprisingly, the two Mainland students (CU7 and CU8) did not use Facebook or Instagram as these SM sites were blocked in mainland China. Both FU9 and FU10 had Facebook and Instagram accounts, but they relied on Twitter more. However, only the three postgraduate interviewees (HP1, HP2, and HP3) were aware of HKUL's use of Facebook and Instagram as their learning in the MLIM program touched on the libraries' use of SM.

Content of HKUL's Facebook and Instagram

During the interviews, all students found the HKUL's posts boring and uninteresting on both Facebook and Instagram, and they noticed a large number of posts were the same on both SM sites. They observed that a majority of posts were about the information of library general operation and library events, which were useful. However, they felt that an SM site full of these uninteresting posts would be very dull and unattractive. More than half of the interviewees (HP2, HP3, HU4, HU5, HU6, CU8, and FU10) found posts featuring the therapy dog Jasper were comparatively more attractive or would be more likely to attract other users.

HU5: Very boring. They are like a virtual information notice board: one on Facebook and another one on Instagram. I would check the opening hours and library event schedules on the HKUL website if I want to. I would not waste time reading these posts if you did not ask me.

HU6: I would press like for the dog [Jasper, the therapy dog]. It makes the SM sites not that boring and dull. Photos of Jasper create a relaxing, friendly, and positive atmosphere and style on HKUL's Facebook and Instagram. Putting Jasper as the Facebook cover photo is a good choice. Many people like to see photos of cats, dogs, pets, and animals on SM.

HP2: HKUL should post more about Jasper. It should make good use of Jasper for the branding of the library image. His photos seem to gain more likes and reactions. For example, if the photos introducing library facilities could feature Jasper also, they would be more eye-catching.

Many interviewees (HP1, HP3, HU4, HU5, HU6, FU9, and FU10) expected to see a greater variety of post contents on HKUL's Facebook and Instagram. They expressed interest in posts introducing library facilities, library collections and resources, and external resources such as articles about reading and book recommendations, and guides and tips of Google Scholar and EndNote.

HU5: HKUL posted the monthly schedule of multi-purpose zone closures on Facebook and Instagram, but I do not know what services multi-purpose zone actually provide. Why doesn't it tell more?

HP1: As a university library, HKUL should post more inspiring content but not only such library news and facts.

Notably, most interviewees (HP2, HP3, HU4, HU5, HU6, FU9, and FU10) pointed out that HKUL's Facebook and Instagram should be more entertaining in the post contents and also in the tone and style.

HU4: HKUL limits the use of the SM sites to one-way information dissemination only, but not trying to get into the new trend and culture on SM to encourage or attract interaction and discussion with the users. Nowadays, even some government departments' Facebook and Instagram also use memes or jokes in their posts, such as imitating the poster of a blockbuster Korean movie to promote environmental-friendly activities as "Big Waster."⁶

FU9: Both Facebook and Instagram should be less formal but more entertaining or humanized. Sometimes a greeting and good humor could be a lot better than just directly informing you of the library news.

HP3: Perhaps writing also in Chinese or even Cantonese could help increase the relaxing and casual atmosphere on the SM sites.

Media types of posts on HKUL's Facebook and Instagram

All the interviewees except the two from mainland China agreed that the most used media types on Facebook and Instagram should be photos and videos, but they did not think the photos and videos on HKUL's Facebook and Instagram were attractive enough. They also suggested HKUL should make use of special features such as live videos, stories, and hashtags to gain more viewers.

HU6: I think people could tolerate reading some text posts on Facebook. But photos and videos are definitely the mainstream.

HP2: Photos on HKUL's Facebook and Instagram are more like posters. There are full of small words. Especially on Instagram, the grid-view is so unattractive. Putting QR code in the photos is not making sense. How could the user find another phone to scan the QR code when he or she is using the phone to read the post? (Note: a user may first save the photo and use a QRcode scanner app to scan the saved file.)

FU9: I found a 5-seconds Instagram video capturing only a projector screen⁷. It is nonsense. Who would think this useful or attractive? HKUL should put more effort into preparing and taking the video even it is a quick video-snapshot.

HP3: HKUL could be more creative in making up hashtags. Hashtags such as #hku, #hkul, #hkulibrary are not useful or attractive for Instagram users to explore further. Creative

⁶ <https://www.facebook.com/bigwaster.hk/>

⁷ <https://www.instagram.com/p/BxG4BbCnDkE/>

hashtags are particularly common for Hong Kong Instagram users to create a casual and relaxing atmosphere. HKUL is not able to fit in with the trend of how the younger generation uses SM. I think the Hong Kong Baptist University Library (HKBUL)'s Instagram⁸ did better.

Potential benefits and drawbacks of HKUL's use of Facebook and Instagram

Table 8. Potential benefits of HKUL's use of Facebook and Instagram.

Benefits	Count
Enhancing the visibility of the library, making the library more appealing and modern, useful for branding the library and marketing the library services.	10
Keeping up to date with the latest library news.	9
Knowing more about the library collections, services, and facilities.	8
Improving communication, more convenient to contact librarians, allowing instant communication if the librarians respond quickly.	8
Connecting with other users and share information.	7
Promotion of library events.	5
Getting reading tips and book recommendations.	3

Although interviewees' comments on HKUL's posts were generally not very positive, all of them recognized certain potential benefits for HKUL to use Facebook and Instagram. The suggested benefits were organized by themes and enumerated in Table 8. On the other hand, most interviewees considered that HKUL's use of Facebook and Instagram would bring certain negative impacts to HKUL staff rather than the library users (Table 9). All the interviewees expressed concerns about the increasing workload of HKUL staff to manage the SM sites, as they believed lots of efforts, time, and skills should be needed. However, when the interviewees were asked if they would start following HKUL's Facebook and Instagram, only HP2, HP3 and HU4 took action immediately. Some interviewees (HU3, FU9, and FU10) said they would wait and see if the two SM sites could improve their attractiveness.

Table 9. Possible negative aspects of HKUL's use of Facebook and Instagram.

Negative aspect	Count
Increase the workload of HKUL staff. Librarians have to spend extra time on learning and managing the SM sites.	10
No negative aspect for library users.	9
Information or posts might be too much or annoying.	1

Other SM sites or other means for promoting HKUL's services

⁸ <https://www.instagram.com/hkbulibrary/>

All interviewees agreed that promoting library services on SM sites should be more useful than using other comparatively traditional means, such as emails, library official websites, posters, leaflets, and newsletters, because many patrons use SM sites every day. They also agreed that the official library website is still important, but users would usually only visit the website for further information. It is interesting to note that all interviewees said they did not read mass emails.

All Hong Kong interviewees opined that using Facebook and Instagram should be sufficient for HKUL to engage with local students, but they suggested HKUL should also adopt other SM sites that are popular and convenient to Mainland and international students. CU7 and CU8 recommended Sina Weibo and WeChat, while FU9 and FU10 suggested Twitter. But the international interviewees (CU7, CU8, FU9, and FU10) suggested HKUL to focus on Facebook and Instagram first, as they were not confident in the librarians' abilities to manage several SM sites effectively at the same time. Besides, some interviewees (HP1, HP3, and FU9) added that running a successful YouTube channel would be too difficult and demanding for HKUL staff, as it would require basically video-editing skills and a lot of time.

DISCUSSION

Use of Facebook and Instagram (RQ1)

The findings in the phase one content analysis support previous findings (Harrison et al., 2017; Jones & Harvey, 2016; Lam et al., 2019; Winn et al., 2017; Fong et al., 2020; Cheng et al., 2020), which suggested SM is a marketing tool of academic libraries. Besides, the frequent use of library news dissemination on HKUL's Facebook and Instagram also echoes with the research results of Chen, Chu, & Xu (2012). The most frequently used media type of posts was photos, as SM has evolved from text-intensive services to image-based services (Stuart, Stuart, & Thelwall, 2017), and images are undoubtedly and profoundly more engaging than text alone (Abbott et al., 2013; Lam et al., 2020; Cheng et al., 2020).

Effectiveness of Facebook and Instagram for engaging users (RQ2)

Although earlier research found HKUL's Facebook gained the highest average engagement rate among seven Facebook pages of other local university libraries (Lam et al., 2019), the user engagement level on both HKUL's Facebook and Instagram was still low, especially on Facebook (Fong et al., 2020; Cheng et al., 2020). HKUL's Facebook and Instagram were also facing the same vital challenge that many other academic library SM sites had – unenthusiastic user engagement (Al-Daihani & Abrahams, 2018; Jones & Harvey, 2016; Kong et al., 2016; Lam et al., 2019; Palmer, 2014; Winn et al., 2017).

The interviews in phrase two further confirmed HKUL users' lack of interest in HKUL's posts on Facebook and Instagram in common. HKUL seemed to use the two SM sites largely as electronic

notice boards on the Internet and gradually failed to communicate, interact, and socialize with the users. Bradley (2015) stresses that SM has changed the one-way information dissemination and retrieval dynamic, and has become a curation tool instead. Apart from useful external resources as suggested by Witte (2014), the users also expected more entertaining and interesting contents on HKUL's Facebook and Instagram, such as humor, greetings, and memes, which aligned closely with the findings of Al-Daihani and Abrahams (2018), Brookbank (2015), Lam et al. (2019), and Cheng et al. (2020).

Further, Levesque (2016) points out that librarians fail to observe the importance of being witty and friendly when posting on SM. Scholars further explain that academic libraries should have a formal policy that defines the marketing strategy and communication tone on SM sites, and designate a team to manage the SM sites (Glazer, 2012; Levesque, 2016; Peacemaker, Robinson, & Hurst, 2016; Lo, Chiu, Cho, & Allard, 2018). Similar to many other librarians, as reported in earlier studies (Jones & Harvey, 2016), HKUL staff was behind the trend and unskilful in adapting to the communication style that many younger SM users prefer. In order to gain competency, librarians are encouraged to use more personal language and post more emotionally positive messages (Lam et al., 2019; Phillips, 2011). They should also make use of special features such as live video, stories, and hashtags to engage users (Lam et al., 2019; Cheng et al., 2020).

User preferences of library connection on Facebook and Instagram (RQ3)

Despite the unenthusiastic engagement, the interviewees unanimously supported the use of Facebook and Instagram by HKUL and recognized certain potential benefits if HKUL could manage the SM sites adequately well. Their positive attitude contradicted to some earlier studies which found students prefer not to use SM for academic purpose but only for socializing with friends (Lupien & Oldham, 2012). More surprisingly, interviewees saw very little or even no negative impact for library users to connect with HKUL on Facebook and Instagram. This differs from the survey of Jones and Harvey (2016) that discovered more than ten negative aspects. Most importantly, the interviewees agreed with the importance of using Facebook and Instagram for branding the library image and marketing the library services, and they considered the librarians' insufficient skills and time were the obstacles to the proliferation and effective use of SM sites.

CONCLUSION

Using a mixed-method research approach consisting of content analysis of HKUL's Facebook and Instagram sites as well as interviews with HKUL users on campus, this study found that the two SM sites were not adequately effective in engaging users. Despite this insufficiency, users actually

welcomed the use of Facebook and Instagram by HKUL, and they gave several constructive suggestions to improve the effectiveness and attractiveness of the two SM sites.

As evident from the research, HKUL is recommended not to use the two SM sites as just electronic notice boards, but should instead adapt to the rather entertaining and interactive communication style on SM, and make use of the SM features to engage with users. Further, HKUL may post and repost attractive photos related to the library news, events, services, and collections. For example, posting on the newly renovated main library building, with eye-catching titles or hashtags on the two SM sites, can disseminate information and promote entertainingly. In addition to WhatsApp-A-Librarian, HKUL can encourage students to comment and question under the corresponding posts on the two SM sites for efficient responses. HKUL can also organize interactive photo contests for more students to engage with the library.

Limitation and further studies

There are some limitations to this study. Only the library users were consulted about the use of Facebook and Instagram by HKUL. The qualitative interviews were valuable to understand the library users' thoughts in detail, but a large-scale survey with questionnaires would also be useful to obtain more data and generalize findings to a greater population. HKUL's Instagram was still in the first year of use at the time of this research. The engagement level and users' perspective might have been improved after timely development and valuable experience accumulated. Expanding the research to other types of SM sites and other local university libraries would be useful for comparison and ascertainment of the representativeness of research results. We are also interested in the research of virtual communities for learning and knowledge exchange on SM (Young, & Rossmann, 2015; Deng et al., 2019), as well as privacy issues on SM (Hung et al., 2007).

REFERENCES

- Abbott, W., Donaghey, J., Hare, J., & Hopkins, P. (2013). An Instagram is worth a thousand words: An industry panel and audience Q&A. *Library Hi Tech News*, 30(7), 1-6.
- Al-Daihani, & Abrahams. (2018). Analysis of academic libraries' Facebook posts: Text and data analytics. *The Journal of Academic Librarianship*, 44(2), 216-225.
- Alhabash, S., & Ma, M. (2017). A tale of four platforms: Motivations and uses of Facebook, Twitter, Instagram, and Snapchat among college students? *Social Media+ Society*, 3(1), 2056305117691544
- Bailey, C. A. (2018). *A guide to qualitative field research* (3rd ed.). Los Angeles, CA: Sage.
- Bradley, P. (2015). *Social media for creative libraries*. London: Facet.
- Brookbank, E. (2015). So much social media, so little time: Using student feedback to guide academic library social media strategy. *Journal of Electronic Resources Librarianship*, 27(4), 232-247.
- Census and Statistics Department. (2016). Thematic household survey report no. 61. Retrieved from <http://www.statistics.gov.hk/pub/B11302612016XXXXB0100.pdf>
- Chan, C. (2011). Using online advertising to increase the impact of a library Facebook page. *Library Management*, 32(4/5), 361-370.
- Chan, C. (2012). Marketing the academic library with online social network advertising. *Library Management*, 33(8/9), 479-489
- Charnigo, L., & Barnett-Ellis, P. (2007). Checking out Facebook.com: The impact of a digital trend on academic libraries. *Information Technology and Libraries*, 26(1), 23-34.
- Chen, D. Y. T., Chu, S. K. W., & Xu, S. Q. (2012). How do libraries use social networking sites to interact with users. *Proceedings of the American Society for Information Science and Technology*, 49(1), 1-10.
- Cheng, W. W. H., Lam, E. T. H., & Chiu, D. K. W. (2020). Social media as a platform in academic library marketing: A comparative study. *The Journal of Academic Librarianship*, 46(5), 102188.
- Clark, M., & Melancon, J. (2013). The influence of social media investment on relational outcomes: A relationship marketing perspective. *International Journal of Marketing Studies*, 5(4), 132-142.
- Connaway, L. S., & Radford, M. L. (2017). *Research Methods in Library and Information Science* (6th ed.). Santa Barbara, CA: Libraries Unlimited.
- Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches* (4th ed.). Thousand Oaks, CA: Sage.
- Crump, M. J., & Freund, L. S. (2012). *Meeting the needs of student users in academic libraries: Reaching across the great divide*. London: Chandos.
- Deng, X., Gao, B., & Chen, L. (2019). Support while control: the influence of embeddedness on virtual community participation. *Library Hi Tech*, 37(2), 155-167
- Fong, K. C. H., Au, C. H., Lam, E. T. H., & Chiu, D. K. W. (2020). Social network services for academic libraries: A study based on social capital and social proof. *The Journal of Academic Librarianship*, 46(1), 102091.

- Fiegerman, S. (2012, September 27). Instagram now has more daily active users on mobile than Twitter [report]. Retrieved from <https://mashable.com/2012/09/27/instagram-passes-twitter-users/>
- Garofalo, D. (2013). *Building communities: Social networking for academic libraries* (1st ed.). Oxford: Chandos.
- Glaser, B. G., & Strauss, A. L. (1968). *The discovery of grounded theory; Strategies for qualitative research*. London, UK: Wiedenfeld and Nicholson.
- Glazer, H. (2012). "Likes" are lovely, but do they lead to more logins?: Developing metrics for academic libraries' Facebook pages. *College and Research Libraries News*, 73(1), 18-21.
- Greenfield, T., & Greener, S. (2016). *Research methods for postgraduates*. New York, NY: John Wiley & Sons.
- Hagman, J., & Carleton, J. (2014). Better together: Collaborating with students on library social media. *Public Services Quarterly*, 10(3), 238-244.
- Harrison, A., Burrell, R., Velasquez, S., & Schreiner, L. (2017). Social media use in academic libraries: A phenomenological study. *The Journal of Academic Librarianship*, 43(3), 248-256.
- Hider, P., & Pymm, B. (2008). Empirical research methods reported in high-profile LIS journal literature. *Library and Information Science Research*, 30(2), 108-114.
- Hootsuite & We Are Social. (2019, January 31). Digital 2019: Hong Kong. Retrieved from <https://datareportal.com/reports/digital-2019-hong-kong>
- Hopkins, P., Hare, J., Donaghey, J., & Abbott, W. (2015). Geo, audio, video, photo: How digital convergence in mobile devices facilitates participatory culture in libraries. *The Australian Library Journal*, 64(1), 11-22.
- Huang, H., Chu, S. K. W., & Chen, D. Y. T. (2015). Interactions between English-speaking and Chinese-speaking users and librarians on social networking sites. *Journal of the Association for Information Science and Technology*, 66(6), 1150-1166.
- Huang, H., Chu, S. K. W., Liu, L. Y., & Zheng, P. Y. K. (2017). Understanding user-librarian interaction types in academic library microblogging: A comparison study in Twitter and Weibo. *The Journal of Academic Librarianship*, 43(4), 329-336.
- Hung, P. C., Chiu, D. K., Fung, W. W., Cheung, W. K., Wong, R., Choi, S. P., Kafeza, E., Kwok, J., Pun, J.C., & Cheng, V. S. (2007). End-to-end privacy control in service outsourcing of human intensive processes: A multi-layered Web service integration approach. *Information Systems Frontiers*, 9(1), 85-101.
- Jones, M. J., & Harvey, M. (2016). Library 2.0: The effectiveness of social media as a marketing tool for libraries in educational institutions. *Journal of Librarianship and Information Science*, 51(1), 3-19.
- Kong, E. W. S., Chiu, D. K. W., & Ho, K. K. W. (2016). Applications of social media in academic library services: A case of the Hong Kong Polytechnic University Library. *International Journal of Systems and Service-Oriented Engineering*, 6(2), 53-65.
- Krippendorff, K. (2004). *Content analysis: An introduction to its methodology* (2nd ed.). Thousand Oaks, CA: Sage.
- Lam, E. T. H., Au, C. H., & Chiu, D. K. W. (2019). Analyzing the use of Facebook among university libraries in Hong Kong. *The Journal of Academic Librarianship*, 45(3), 175-183.

- Lo, P., Chiu, D., Cho, A., & Allard, B. (2018). *Conversations with Leading Academic and Research Library Directors: International Perspectives on Library Management*. Chandos Publishing.
- Levesque, L. (2016). Social media in academic libraries: Engaging in 140 characters or less. *Public Services Quarterly*, 12(1), 71-76.
- Lindlof, T. R. (2011). *Qualitative communication research methods* (3rd ed.). Thousand Oaks, CA: Sage.
- Lupien, P. & Oldham, R. (2012). *Millennials and technology: Putting suppositions to the test in an academic library*. London: Chandos.
- Maxwell, J. (2013). *Qualitative research design: An interactive approach* (2nd ed.). Thousand Oaks, CA: Sage.
- Mccallum, I. (2015). Use of social media by the library: Current practices and future opportunities. A white paper from Taylor & Francis. *The Australian Library Journal*, 64(2), 161-162.
- Palmer, S. (2014). Characterizing university library use of social media: A case study of Twitter and Facebook from Australia. *The Journal of Academic Librarianship*, 40(6), 611-619.
- Pantry, S. (2009). *How to give your users the LIS services they want*. London: Facet.
- Peacemaker, B., Robinson, S., & Hurst, E. (2016). Connecting best practices in public relations to social media strategies for academic libraries. *College & Undergraduate Libraries*, 23(1), 101-108.
- Phillips, N. K. (2011). Academic library use of Facebook: Building relationships with students. *The Journal of Academic Librarianship*, 37(6), 512-522.
- Punch, K. (2014). *Introduction to social research: Quantitative & qualitative approaches* (3rd ed.). Los Angeles, CA: Sage.
- Ramsey, E. & Vecchonie, A. (2014). Engaging library users through a social media strategy. *Journal of Library Innovations*, 5(2), 71.
- Rieder, B. (2013). Studying Facebook via data extraction: The Netvizz application. *Paper presented at the proceedings of the 5th annual ACM web science conference*.
- Safko, L. (2012). *The social media bible: Tactics, tools & strategies for business success* (3rd ed.). Hoboken, NJ: John Wiley & Sons.
- Salomon, D. (2013). Moving on from Facebook: Using Instagram to connect with undergraduates and engage in teaching and learning. *College & Research Libraries News*, 74(8), 408-412.
- Stuart, E., Stuart, D., & Thelwall, M. (2017). An investigation of the online presence of UK universities on Instagram. *Online Information Review*, 41(5), 582-597.
- Taueja, S., & Toombs, L. (2014). Putting a face on small businesses: Visibility, viability, and sustainability the impact of social media on small business marketing. *Academy of Marketing Studies Journal*, 18(1), 249-260.
- The University of Hong Kong [HKU]. (2019a). Student profiles 2017 / 2018 (in headcounts). Retrieved from <https://www.cpao.hku.hk/qstats/student-profiles>
- The University of Hong Kong [HKU]. (2019b). HKU Libraries to extend Therapy Dog Programme. Retrieved from https://www.hku.hk/press/news_detail_17576.html

- Trautschold, M., Mazo, G., & Karch, M. (2011). *Droids made simple: For the droid, droid x, droid 2, and droid 2 global* Berkeley, CA: Apress.
- Winn, Rivosecchi, Bjerke, & Groenendyk. (2017). MTL 2.0: A report on the social media usage and user engagement of the “Big Four” academic libraries in Montréal. *The Journal of Academic Librarianship*, 43(4), 297-304.
- Witte, G. (2014). Content generation and social network interaction within academic library Facebook pages. *Journal of Electronic Resources Librarianship*, 26(2), 89-100.
- Young, S. W. H., & Rossmann, D. (2015). Building library community through social media. *Information Technology and Libraries*, 34(1), 20-37.
- Wójcik, M. (2019). How to design innovative information services at the library?. *Library Hi Tech*, 37(2), 138-154.