

The Application of Social Media in Outreach of Academic Libraries' Resources and Services - A Case Study on WeChat

1. Introduction

WeChat, launched by Tencent™ in January 2011, is the most popular social media tool in China. It offers a free instant messaging application service for smartphones and enables voice, text, pictures, videos, and location information exchange via mobile phone (Jianhua Xu et al., 2015). It is mainly a personal social media app for instant information exchange between friends. As an update version for organizations' one-to-many information dissemination, the product of official WeChat account was released by Tencent™ in August 2012. It is like a service platform and its subscribers can receive different information and service for reading, storage, sharing, and re-tweeting. Government officials, companies, universities and other organizations across the country are resorting to the platform to promote their information and service.

Chinese academic libraries, which are sensitive to new IT, were enthusiastic about trying to use the official WeChat account to expand their collections and services to users. Jinan University, located in Guangzhou, China, is one of the oldest universities in China and one of the "211" key national universities in China (About JUN, 2016). Jinan University Library, which serves FTE of 37,045, had a positive view towards the idea of an official WeChat account and developed it as an outreach tool to promote library resources and services for faculty and students. This study described the process of official WeChat account implementation in Jinan University Library, including the users' needs analysis, integration of library applications and WeChat API (Application Program Interface), market official WeChat account and return from this implementation. This case study has implications for academic libraries to carry out social medial platform to promote their resources and service, which enable them to enhance the connection with users.

2. Literature Review

Online social media systems have created new ways for individuals to

communicate, share information and interact with a wide audience (Stuart Palmer, 2014). When social media, such as YouTube, Flickr, Twitter and Facebook emerged, their features attract libraries as they enable libraries to engage users, as well as to promote their information and services. Twitter and Facebook are the most popular social media tools among most of the libraries around the world. Numerous studies describe the implementation of Twitter in the context of libraries. Cuddy et al. introduced the application of Twitter at the NYU Health Sciences Libraries. They saw it as a new outreach tool marketed to students, faculty, and staff. They used Twitter to promote resources, events, and news. The overhead of using Twitter is so low that it merits consideration (Cuddy et al., 2010). Krabill described the use of Twitter in the West Palm Beach Public Library in Florida. They adopted the use of Twitter as a free advertising tool for library updates, serves as a data provider and provides links to library catalogs (Krabill, 2009). Del Bosque et al. presented an overview of the use of Twitter among libraries. The research analyzed the state of 296 Twitter accounts from a random sample of academic libraries. The finding was that only 34 percent of libraries had a Twitter account and characteristics varied widely among libraries. However, it is evident that it is possible to successfully communicate with patrons via Twitter (Del Bosque et al., 2012). Some researchers focus on followers' sharing behavior of information disseminated by libraries' Twitter accounts. Kim et al. evidenced that the primary groups disseminating the tweets of academic libraries are units within universities and students (Kim et al., 2012). Besides Twitter, Facebook is also widespread among libraries. It is common that both social media systems concurrently used for libraries, due to the features they provide work in related but different ways. Facebook is used for community building and for providing static links to static library resources while Twitter is used for communicating with individuals and for timely updates about new resources and current events (Palmer, 2014).

Substantial studies focus on popular social media network in libraries across China, like Renren, Q-zone, Sina Weibo and Tencent Weibo. Renren and Q-zone can be deemed as a Chinese equivalent of Facebook. Similarly, Sina Weibo and Tencent

Weibo are the Chinese equivalent of Twitter (Wang 2011; Saw et al., 2013; Tang et al., 2013; Deng 2015). WeChat evolved from QQ, a dominant instant message tool in China. It is becoming increasingly popular among people and organization as it was launched by Tencent™ in 2011. It has been used for libraries to promote their resources and services in China. (Wang et al, 2013; Chen, 2013; Li, 2014; Zhou and Chen, 2016; Zhou, 2016)

As of yet, there have been no studies that have elaborated on the implementation of WeChat in Chinese academic libraries by international academic journals, especially the experience and lessons from WeChat practice. This study has implications for academic libraries outside China to use WeChat to promote their resource and service to Chinese international students, as it is the most popular mobile application used by Chinese students. It also offers insight to the trouble and future of WeChat implementation in academic libraries setting.

3. Implementation of the Official WeChat account

3.1 Social media tool before WeChat

Jinan University Library began to use Sina Weibo, a popular Chinese social networking tool, to disseminate events and resources on March 4, 2011. The users who have subscribed to the Sina Weibo account for Jinan University Library are regarded as followers. The followers' mobile device with the Sina Weibo application will automatically obtain information pushed by the library Weibo account. They can make comments on Weibo's announcements publicly, as well as send their message like complaints, suggestions and queries to the Weibo account privately. Accordingly these comments and queries will be replied to by librarians in public or private way. Thus library Sina Weibo account, like Facebook, can be considered as communication tool. As of April 4, 2016, our account has 15,552 followers. It implies that our Sina Weibo account is accepted by relatively large population of our users. It has been an important approach for us to publicize library's events, resources and services. It is an effective way for us to bridge the gap between the users and the library.

Though Weibo account enhances relationships between the library and users, it has some deficiency due to its limited features that focus on information dissemination

and exchange. Users are unable to access library's resources and services directly from Weibo account. Furthermore, it is getting less attraction in recent years as WeChat was launched and welcomed by large population of people in China. About half a billion people are using WeChat. Most of them are Chinese at home and abroad. So libraries try to apply WeChat and use it to engage users when official WeChat account was released by Tencent™ in August 2012. Official WeChat account is a social media tool which typically caters to companies and organizations. It not only includes features, such as announcements and exchanges, but also has functions for its followers to use services and resources. In particular, these functions can be developed by organization independently according to their needs as well as the development is compliant with requirements and standards of Tencent™. Hence Jinan University Library began to conduct users' needs analysis and examine the features that enable library to fulfill users' needs.

3.2 Project group establishment

Librarians from User Service Department, IT department and General Office formed a project group oriented to WeChat development and user services. The assignment of the project group was as follows.

Table 1. Task, participant and related responsibilities

| Task | Participants | Responsibilities |
|------------------------------------|--------------------------------------|--|
| Account application and management | Librarian of General Office | <ol style="list-style-type: none"> (1) Apply for official WeChat account. (2) Setup of WeChat account. (3) Run official WeChat account. (4) Official WeChat account marketing |
| Users' needs analysis | Librarian of User Service Department | <ol style="list-style-type: none"> (1) Analyze users' needs on library services and resources. (2) Provide suggestion on WeChat secondary development in terms of usability testing. |
| WeChat Secondary development | Librarian of IT Department | <ol style="list-style-type: none"> (1) Study the development manual and requirements of WeChat. (2) Build the functions based on users' needs analysis. (3) Improve the functions until they approach the level for practice. |

- (4) Update functions and deal with technical issues on WeChat.
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3.3 Account application and management

General Office applied for an official WeChat account for Jinan University Library. The application requires official proof for Jinan University Library and communication with user services center of Tencent™. The process is online and feedback is fast. After the application, the account and password are kept by one librarian in the General Office and one librarian in the IT Department. Then the basic profile of the account was completed, such as avatar of account, title, feature introduction, service phone, and QR code. The General Office is in charge of it. All announcements from different departments have to be reviewed by the General Office librarian before they are issued through official WeChat account. The IT Department librarian just uses the account for secondary development.

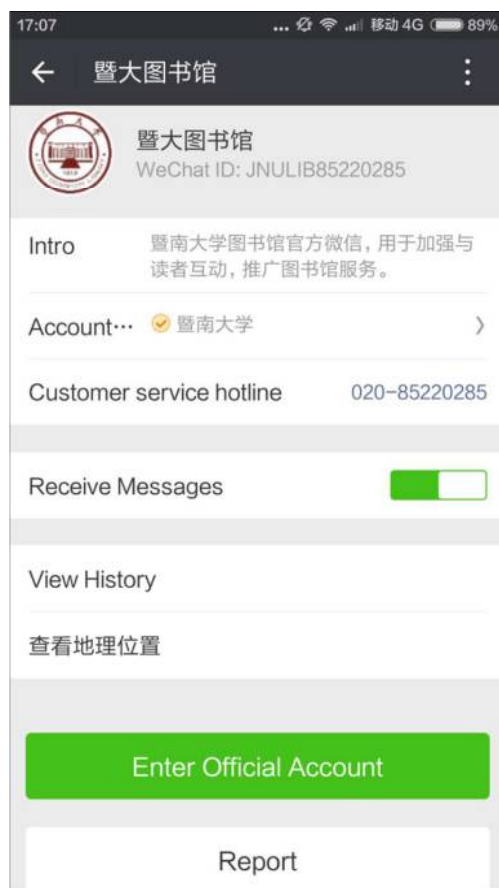


Figure 1. Introduction of official WeChat account of Jinan University Library

3.4 Users' needs analysis

The User Services Department librarian investigated current services and resources for users. Then he identified the common business related to the above services. He ranked these businesses and submitted them to the IT Department librarian. He was familiar with these businesses and knew the users' expectation of them. He was in charge of the usability testing when the IT Department librarian built the feature to conduct these businesses.

3.5 WeChat Secondary development

The WeChat account provided by Tencent™ just has simple features, like information distribution and sharing. It cannot fulfill the business requirements of library practice. Tencent™ provides a development manual online (WeChat, 2016), which is primarily the description of API and relevant uses for developers. Currently, there are two methods of implementing secondary development for extensible features

on WeChat. First, several special websites have offered development models and API for WeChat. Thus library can directly use these websites to enrich their WeChat accounts' function, like defining menu, automatic response to followers' type in words. The second is to choose a development platform to carry out diverse features on the WeChat account. It requires the developer to deploy the development environment and build a website for information processing and replying to WeChat account via the WeChat server of Tencent™. Obviously, it is more complicated than the former method. However, it is usually free and flexible for developers. Our library chose this approach and selected Jeewx (About Jeewx, 2016) as secondary development platform, which is an open source development platform oriented to WeChat.

3.6 Model of development with WeChat

There were three models for WeChat development during the whole implementation process in Jinan University Library.

Table 2. Three models for WeChat development in Jinan University Library

| Model | Explanation and details | Presentation position |
|--------------------------|--|---|
| Using of WeChat features | Account setup and information dissemination .For instance, configuration of the WeChat account, issue of news and events | Introduction of the official WeChat Account, News shown on subscribers' chat window |
| Library development | IT Department Librarian integrated library-own application with the WeChat platform through open source development platform. The work includes the following assignments. (1) Deployment of the development environment for Jeewx. (2) Build a special website based on Jeewx to manage and maintain the WeChat account. (3) Define WeChat menu through the special website (4) Adapt library-own application to WeChat's requirements and add it to WeChat menu. | Menu at the bottom of subscribers' chat window |

| | | |
|--|---|--|
| Third-party applications vendor assistance | Third-party applications vendor offers IT support for integration of third-party applications and WeChat. For example, vendor provides service or website compatible for WeChat platform and the librarian adds it to menu. | Menu at the bottom of subscribers' chat window |
|--|---|--|

3.6.1 WeChat includes feature. The IT Department Librarian just uses the features WeChat offers, such as setup of logo, words of welcome and release of news.

3.6.2 Library development. The IT Department Librarian deployed the development environment and built a special website for information processing and replying to the WeChat account via the WeChat server of Tencent™. Then the librarian selected frequently used applications and websites and adapted them to the WeChat. For example, the Lost and Found has been online for a long time and is popular with library users. So its code and design was developed to meet WeChat platform requirement and was added to our WeChat menu. Additionally its user authentication was integrated with the WeChat account, which would reduce users' activity of entering their account and password repeatedly.

3.6.3 Third-party applications vendor assistance. Vendors contain providers of resources and services in our library. Some resource vendors have already developed websites for their resources to be used on WeChat. They provide us with a link for the WeChat menu. As we add this link to menu, users who click this menu will access resources directly. We had a vendor who runs an eBooks website for our users to read eBooks on Internet. This vendor completed WeChat compatible development and gave us a link to the eBooks website. In this condition, vendors save librarians' time for secondary development and increase efficiency of user services. Another vendor who provides us with mobile library service via mobile devices had greatly enhanced our resources and services on WeChat as it holds abundant open courses, e-journals and self-service function. In particular, the self-service function was popular with users, which encompassed catalog search, check loans, renewals, campus ID binding, purchasing suggestion and so on. The self-service saved users time of visiting the library website or library facility. It is very convenient and easy for users to try and

use on WeChat, though without librarian guidance.

4. Return from implementation

4.1 Take an issue as an example

As of April 14, 2016, our official WeChat account has 3,892 subscribers. It means their private WeChat accounts will automatically receive messages from our official WeChat account. Below is an example of a message pushed out by the library on April 14, 2016.



Figure 2. Message published by official WeChat account of Jinan University Library on April 14, 2016

The usage of this issue was as follows. On April 14, subscribers who successfully acknowledge message were 3,827 people. This issue has a total of 1,415 views from 17:30 to 24:00 on that day. It is consisted of four piece of news in this issue. The number of views appears to be diverse among news. The most popular news titled "The friendship wrecks easily between users preferring to stay in library and their friends who not" is an introduction on library service and resource through comics. It

indicates that promotion of library resource should cater to subscribers' preferences. The news on "Saturday cinema: *Spotlight*" hold 180 clicks, which implies that entertainment activities appeal to library users. By contrast, the other two piece of news on Living Library and trial resources respectively obtain much less views from users. It deserves librarian to investigate the reason behind these usage report, which will benefit the future work on news design and promotion strategy.

Table 3. Subscribers' receipt and views of news pushed through official WeChat account of Jinan University Library on April 14, 2016

| Title in Chinese | Title in English | Number of receiver | Number of views |
|---|--|--------------------|-----------------|
| 在暨图, 爱泡馆的孩纸和 同学友谊的小船说翻就 翻... | The friendship wrecks easily between users preferring to stay in library and their friends who not. | 3827 | 1083 |
| [暨南书悦会]2016暨南书 香节系列活动之南校区 真人图书征集令 | Reading club: Book invitation for Living Library | 3827 | 74 |
| [资源动态]试用数据库推 介 | E-resource news: trial resources | 3827 | 78 |
| [周六影院]与您相约“聚 焦” | Saturday cinema: <i>Spotlight</i> | 3827 | 180 |

4.2 Self-service via menu of official WeChat account

Besides news pushed by the library, subscribers are able to actively click the menu at the bottom of official WeChat account of Jinan University Library to access resources and service, such as self-service of loan check out and renewal, OPAC search, current news and trail-resources. As the menu is provided by special website based on library secondary development, the usage statistics can gathered from it. As the deficiency of statistics function in the special website, we just obtained the total usage of the menu without date range on day or month. There are 33,809 subscribers'

clicks on menu of our WeChat account from September 10, 2015 to April 14, 2016. The average number of clicks is 155 per day. Despite the relatively limited clicks, these users' active clicks reflect the users' reliance on the library's resources and services that are accessible at the WeChat window.

5. Discussion

Our official WeChat account has 3,892 followers, which only accounts for roughly 10.5% of FTE of Jinan University. Compared with our Sina Weibo account that has more than 15,552 followers, it suggests a large population of faculty and students are not our WeChat users. They are unable to receive our promotions of resources and services in the way of WeChat. It requests us to make proper strategy to attract users to follow our WeChat account. The users have various educational backgrounds and diverse preferences. Librarians need to conduct a survey of their perceptions and expectations for the social media tool. Then they can categorize their users to several groups and develop marketing plans focused on each group. We argue that survey and users grouping will provide more evidence for libraries to run social media effectively.

No matter what effort we make to encourage users to follow our account, we believe there are users who are hesitant or reluctant to follow our account. They do not follow the account and do not automatically receive any messages pushed out by the official WeChat account. Nor can they use the self-service the account provides. Additionally, some users following our account disable the feature to receive messages from the official WeChat account. They may be disturbed and unwilling to read each message that the official WeChat account releases even though they subscribe to it. Thus, our WeChat account will not take charge of other marketing and service for our users, though it has become an approach for library outreach service. It is constantly important for library to promote resources on the website and library spaces, along with careful and professional human services.

Social media systems have been growing rapidly in recent years though they lack common standard or criteria for information exchange and secondary development. Take WeChat for example, it has its own requirements for code writing and

information exchange in the context of the WeChat platform. However, these codes cannot be ported to any other social medial tool. Our effort on WeChat secondary development is restricted with its platform. At present, Jinan University Library, like other academic libraries in China, has to run two social media tools, WeChat and Sina Weibo separately. A piece of news need to be published twice owing to lack of information exchange between WeChat and Sina Weibo. It is urgent and useful for these organizations including social media provider, application programmer, resource vendor and library to cooperate on common standard for information exchange between mobile social medial apps like WeChat, Sina Weibo, and Facebook. Each user could choose one or more social networking app according to their preference while information publishing should be free for publishers to transmit from one app to another under the common standard environment.

6. Conclusion

As approximately a half billion people are using WeChat, Chinese academic libraries cannot refuse to put it into library practice. WeChat, as a very popular social media tool among Chinese, has given us a chance to reach out to students, faculty and staff about our resources, as well as improve our impression among those user groups. Jinan University Library, a typical academic university library in China, has actively applied WeChat to approach our users. Currently, it has already engaged a population of followers and served them with our resource and service. We will continue to value the promotion of WeChat and strength the relationship between us and users.

The issues appear during the process of implementation and promotion. The promotion of social medial tool with library service primarily depends on library efforts, while standard of information exchange and secondary development for social medial tool deserve the cooperation of social media provider, application programmer, resource vendor and library. Their efforts will enrich the features and resources on social networking sites, along with enhancing the capability for the library to run and promote them.

7. Acknowledgement

I am grateful to Ziqi Wang and Yuntao Huang for their collection on usage of our

official WeChat account. I heartily thank our anonymous reviewers for their constructive comments and suggestions.

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