

Developing Digital Reference Service Around Civic Movements: A Case Study of the Sunflower Student Movement in Taiwan

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Abstract:

Libraries bear the responsibility to reflect the needs of the modern society, by which they increase their value. One of the current goals for modern libraries is to assist the development of the government and society by supporting the citizens in decision-making. Taiwan's Sunflower Student Movement in 2014 inspired its citizens to examine the contents of the Cross-Strait Service Trade Agreement (CSSTA) and the details therein. In this study, an online social reference service named "CSSTA Reference Service Desk" was established for answering questions related to CSSTA from the public with authoritative, first-hand information to fulfil the citizens' information needs.

Based on interviews with participants of the Sunflower Student Movement about their information needs, the "CSSTA Reference Service Desk" was established on a Facebook Page for online social reference services in this case study. To ensure service efficiency, a code of service ethics and standardized service procedure were established. A "CSSTA Reference Knowledge Base" was also created to record the question-answering progress.

During 42 days of service period, "CSSTA Reference Service Desk" received 144 reference questions from 88 users. The majority of the questions were about the CSSTA and the details of other related trade agreements. Other questions include those about Taiwan and other countries' regulations, updates on the Sunflower Student Movement, and the CSSTA Reference Service Desk itself. The Facebook Page Insights function was used to analyse the question-answering on the CSSTA Reference Service Desk.

In this study, traditional reference service was transitioned into a more public-friendly outreach service. The resulting service increased the visibility for libraries as well as reemphasized the librarian's value in improving civic engagements.

Keywords: Digital reference service, Civic movement, Sunflower Student Movement, Facebook, library outreach

1. Introduction

Citizen participation is a symbol of a mature civic consciousness in a democratic society. With the ability to link information needs to information sources, librarians are able to help citizens efficiently obtain authoritative information and support citizens in understanding current public issues and supporting decision-making. In the age of the Internet, librarians have more opportunities and bear more responsibilities to help citizens drive democratic development, which shows the values of modern librarians.

Taiwan's democracy is going through a rise of citizen participation. In the increasing number of citizen movements, citizens have taken action to gain their rightful decision-making power and representation. The most notable of such movements were the Sunflower Student Movements that started on March 18, 2014 in which a group of students surrounded and occupied the "Legislative Yuan", Taiwan's parliament, to protest against the government's intention to pass the CSSTA without close review. On March 21 the same year, activists attempted to enter the Executive Yuan and were evicted by police forces. Conflicts broke out between the protesters and the police, causing public concerns about the movement and the CSSTA. As the public searched for details about the movement and the CSSTA, many did not know where the authoritative information was available, making this an opportunity for librarians to realize their values.

The International Federation of Library Associations and Institutions (IFLA) released the Lyon Declaration on Access to Information and Development in their 2015 Development Agenda, in which it was stated that libraries played two major roles in access to information, which were "enabling governments and civil society to achieve development goals" and "supporting citizens to make informed decisions" (IFLA, 2014). The American Library Association (ALA) also listed "making libraries more responsive to current social needs" as one objective for libraries in the Social Responsibilities Round Table (SRRT) in 1970 (Litwin, 2003). In the wake of the Occupy Wall Street movement in 2011, many librarians devoted to promote citizen participation. Such efforts included building a public-founded the People's Library for movement participants (The People's Library at Liberty Plaza, 2011), providing annotated reference bibliographies of environmental research by Gervasio et al. (2013) to support the decision-making of movement participants, and collecting the living archive of the Occupy Wall Street movement by Rhodes (2013). Inspired by the Declaration and the devoted librarians during the Occupy Wall Street movement, this study aimed to experiment on providing outreach service by offering authoritative information to the citizens during the Sunflower Student Movement.

For this purpose, this study established an online social reference service named "CSSTA Reference Service Desk." This service utilized the propagative power of the social media platform Facebook to bring reference service of libraries to citizens who concerned about the CSSTA and the Sunflower Student Movement, so that they were able to directly raise questions about issues related to the CSSTA and the Sunflower Student Movement. To ensure the quality of the services provided by the CSSTA Reference Service Desk, a code of service ethics and a standardized service procedure were established. In addition, a CSSTA Reference Knowledge Base was created using Google Sheets to record question-answering progress. Facebook Page Insights was used to analyse user backgrounds and interaction history to understand the influence of the CSSTA Reference Service Desk and the focus of concern of users. Finally, based on the results of this service, improvement suggestions were offered for similar reference services in the future.

2. Methodology

2.1. Demand Survey of the Citizens' Information Needs in the Citizen Movement

To establish a reference service that meets the information needs of the public, street interviews were conducted with Sunflower Student Movement participants to understand their information needs and motives for participation, channels for information access, issues of concern in the movement, and their familiarity with library services.

Interview results showed that participants were eager to familiarize themselves with the terms and the signing process of the CSSTA and the potential impact on Taiwan, but they could not understand the entirety and the details of CSSTA issues at once. Yet, most of the interviewees did not know that reference service provided by libraries could meet their needs. Interviewees also expressed that they did not believe that libraries could instantly respond to current events such as the Sunflower Student Movement and therefore were not willing to use the reference service at libraries.

On the other hand, many interviewees stated that Facebook was their main source of information regarding the movement. This shows that Facebook was an important information exchange platform for the participants during the movement. Therefore, in this study, instead of providing face-to-face physical reference service, Facebook Page was used to establish an online social reference service to reach the participants in the movement more easily.

2.2. Establishing the Online Social Reference Service

Using Facebook Page, the service named "CSSTA Reference Service Desk" was established at <https://www.facebook.com/taiwan.reference.librarian>. Facebook Page allows multiple administrators to interact with users on behalf of the organization behind the page and publicly share information. For market research purposes, Facebook Page offers the Insights analysis function, which records user backgrounds and interaction with the page, providing insight into user preferences and the influence of a Facebook Page. In this study, administrators of the CSSTA Reference Service Desk called themselves "CSSTA Librarians," or "Librarians." The people who raised questions or participated in discussions on this service are referred to as "patrons" in the following. For a better impression on the patrons, a cat mascot was created for this service based on a pun of the Chinese phrase for the CSSTA, as shown in Fig. 1.



Fig. 1. CSSTA Reference Service Desk

To meet the public's information needs regarding CSSTA and the Sunflower Student Movement, the following four service objectives were designated for the CSSTA Reference Service Desk.

1. Establishing Reference services: Accept any inquiries from the public regarding the CSSTA and the Sunflower Movement.
2. Providing reliable information: Allow the citizens access to first-hand information from authoritative sources rather than unverifiable online opinions.
3. Sharing knowledge publicly: Publicly share questions and answers on the Facebook Page.
4. Supplementing of knowledge from the public: Allow public discussions to complete questions and answers, utilizing social efforts to supplement the Librarians' endeavours.

2.3. Establishment of Organizational Procedures

After the CSSTA Reference Service Desk page was launched, promotional activities were conducted at the site of the Sunflower Student Movement. Because of the high level of attention being paid to the movement by the public, the promotion was successful in attracting patrons to use the CSSTA Reference Service Desk. Library and Information Science majors and working librarians also expressed approval of this service and sought participation as staff members.

To accommodate the increasing number of questions and librarian newcomers, it became necessary for CSSTA Reference Service Desk to establish a more comprehensive operational model and a code of service ethics, so that librarians of CSSTA Reference Service Desk could be coordinated to offer consistent service.

Firstly, an online discussion platform for CSSTA Librarians was created using Facebook Group. Operational procedures and answers to the questions posted to CSSTA Reference Service Desk were discussed on the platform. Meanwhile, Google Sheets was used to create a CSSTA Reference Knowledge Base for the Librarians to document URLs which patrons asked questions, dates, questions, and answers by synchronized online editing. Questions were also categorized into answer-pending, answered, and declined questions based on their

progress in the process. The CSSTA Reference Knowledge Base enabled Librarians to quickly find questions that were waiting for answers and manage the progress of the questions. Completed questions and answers served as reference for similar questions. Based on declined questions, Librarians could also determine whether a posted question fell into the scope of the service and also formulate a suitable explanation for declination.

Furthermore, this study referenced the Librarian Ethics Guidelines stipulated by the Library Association of the Republic of China (Taiwan) and formulated a code of service ethics for CSSTA Reference Service Desk, as listed in the following:

1. On the principle of equality, the services shall not discriminate against any gender, age, skin colour, education level, occupation, religion, or political orientation.
2. On the principle of objectivity, the services shall collect and provide information based on diverse opinions with clearly documented sources. The services shall provide answers based on facts, reason, and objectivity.
3. The services shall respect intellectual property rights and adhere to relevant laws and regulations.
4. The services shall protect the privacy of the patrons and the Librarians, particularly in the search and collection of information and discussions.
5. Discussions shall be allowed on CSSTA Reference Service Desk regarding the questions and answers published thereon, on the condition that the principles above are observed. Upon discovering violations thereof, Librarians shall interfere with the discussions by taking actions including deleting user comments.
6. The purpose of the Librarians is to help users to find authoritative sources of information or refer them to experts of professional backgrounds. Librarians shall not offer generalized conclusions.

2.4. Service Process

With structured operational framework and a specified code of service ethics, the service process of CSSTA Reference Service Desk was unified as the following.

1. User questions must be submitted via messages to the CSSTA Reference Service Desk.
2. After receiving a question, the Librarians may hold preliminary discussions to attempt to clarify the question. The Librarians shall help patrons to modify their questions or shall decline questions outside of the scope of service if necessary. When a question is accepted, Librarians must reply to the patron in confirmation.
3. Librarians publish user questions in the Group and document the question in the CSSTA Reference Knowledge Base.
4. Answers to questions go through a peer review process. An answer drafted by a Librarian shall be reviewed by three fellow Librarians to ensure quality. If suggestions are offered by other Librarians, the drafted answer must be revised then peer-reviewed again.
5. When the answer passes peer review, it is used to reply to the patron's question. Distinct questions and answers shall be published on CSSTA Reference Service Desk for reference and discussion by patrons of the service.
6. If patron discussions violate the service ethics, Librarians shall delete the violating comments to persist with service objectives.

3. Results

The CSSTA Reference Service Desk was launched on March 21, 2014, three days after the start of the Sunflower Student Movement. As the movement subsided, CSSTA Reference Service Desk published the last question on May 2, concluding its 42 days of service.

The following is an analysis of the results of the services provided by CSSTA Reference Service Desk. Data sources include the CSSTA Reference Knowledge Base and Facebook Page Insights, which provided user backgrounds and interaction history for insight into issues that concerned users and the influence of the service.

3.1. Analysis of Influence of the CSSTA Reference Service Desk

Facebook Page Insights offered a daily log of user activities and backgrounds on the CSSTA Reference Service Desk. Insights offered 74 indexes based on user activities for page administrators to understand the influence of a page. The indexes of Daily New Likes and Daily Total Impressions were selected for analysis of the influence of CSSTA Reference Service Desk over its service period. Facebook Likes signified approval of the service and the intention to follow all questions and answers published by the service. This index clearly revealed user interaction with the service. Impressions represented the number of times the content posted by the service was read by Facebook users anywhere. This index revealed the number of times the service actually reached Facebook users.

The analysis of Likes and Impressions is shown in Fig. 2, where the number of Impressions significantly surpassed the number of Likes and also more clearly demonstrated the daily patron variations. Likes and Impressions were influenced by the development of the Sunflower Student Movement. The public attention to related issues as inspired by the forceful eviction of movement participants by police caused the usage of the service to peak on March 24 when 1,324 Facebook users “Liked” the service. The number of Impressions also peaked on the same day at 51,624. Subsequent Likes and Impressions numbers reflected the number of questions and answers published daily. A larger number of posts to the page generated more user views. On the last day of the service, the number of Likes came to 2,786. The Facebook page was still “Liked” after the service was discontinued.

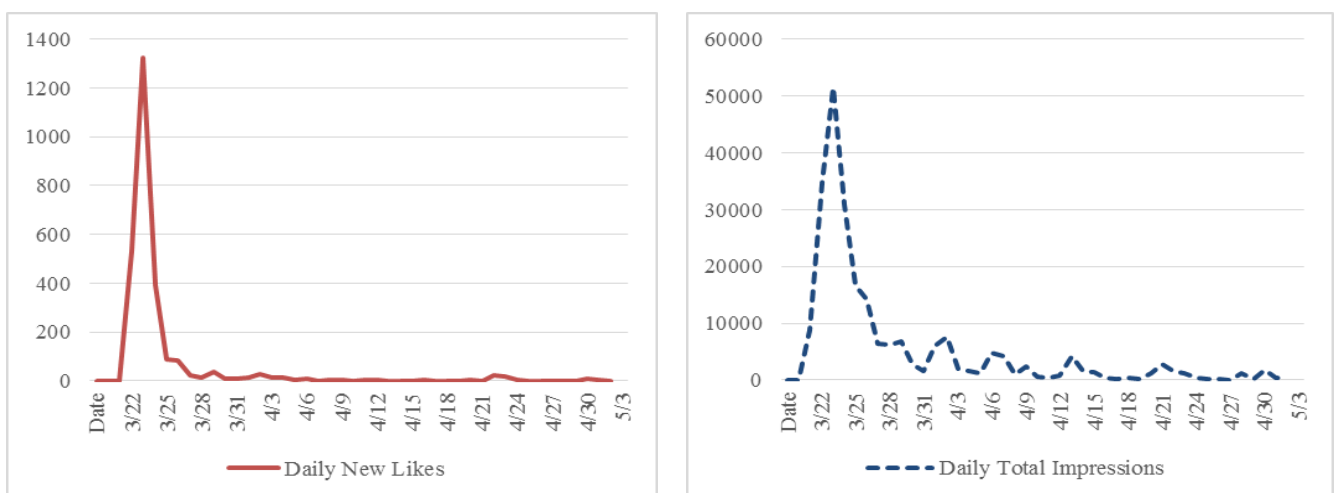


Fig. 2. Statistics of Likes and Impressions on the CSSTA Reference Service Desk.

3.2. User Analysis of the CSSTA Reference Service Desk

Facebook users who "Liked" the CSSTA Reference Service Desk were analysed in terms of age, gender, and nationality. The majority of the patrons of CSSTA Reference Service Desk were female, who accounted for 57%. The largest age group among the users were 18 to 24, who accounted for 43%. The age group of 25 to 34 accounted for 31% of users. Less than 3% of users were above 45 years old. Insights revealed users' location as specified in user account information. However, Facebook allows users to change their location multiple times, resulting in variations in the names of locations. Therefore, locations had to be coded for user location analysis to commence. For instance some users entered "Taipei" for both Taipei City and New Taipei City; therefore, the two regions were combined as "Taipei City" in this study. The analytical results are shown in Fig. 3, in which 47% of the users of CSSTA Reference Service Desk came from Taipei City, the capital of Taiwan and where the Sunflower Student Movement took place. Other major locations are two Taiwan's populous cities, Taichung City and Kaohsiung City, accounting for 13% and 9% respectively. It can be seen that more users of CSSTA Reference Service Desk were located near the epicentre of the movement.

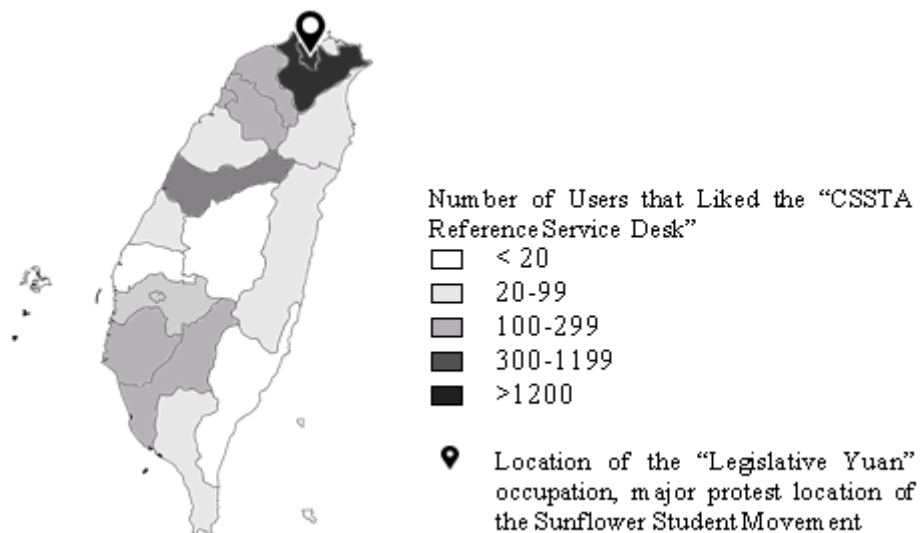


Fig 3. Locations of "Liked" patrons of the "CCSTA Reference Service Desk" in Taiwan

3.3. Social Analysis of Published Questions and Answers

During the service period, 144 questions from 88 patrons were received, which was 3.4 questions per day. Based on subject, the questions were divided into the following 7 categories in descending order based on number. (A) CSSTA and ECFA questions: questions about the CSSTA or its upper-level agreement, the Cross-Straits Economic Cooperation Framework Agreement, ECFA; (B) Questions that involved subjective judgment, which could not be specifically answered; (C) Questions about the CSSTA review process, including those concerning suspicion about a black-box review process; (D) Questions about trade agreements in other countries, which were requests for comparison with the CSSTA; (E) Questions about the CCSTA Reference Service Desk, including those about its operational regulations and its staff; (F) Questions about the Sunflower Student Movement, including those about the activities of the movement and the Regulations for Supervision of Cross-Straits Agreement proposed in the movement; and (G) Questions about Taiwanese laws and economics, which were other questions about Taiwanese politics, laws, and economics.

The content of the 59 sets of distinct questions and answers published on the CCSTA Reference Service Desk and the history of user views, comments, and shares provided by Facebook Page Insights were analysed to gain insight into the issues that concerned the users. The 59 questions and answers were categorized and ordered based on numbers of questions and answers published, as shown in Table 1. (A) Questions about CSSTA or ECFA having the highest percentage, while (G) Questions about Taiwanese law and economics had the lowest. The influence of the categories on the users was analysed based on Likes and Impressions, disregarding factors of number of posts and time of publication. The average influence index of each category was obtained with all the Likes and Impressions divided by the number of posts and days of being online. Results showed that the category of the highest average influence was (F) Questions about the Sunflower Student Movement. The second highest was (E) Questions about the CCSTA Reference Service Desk. Category (A) Questions about CSSTA or ECFA, although having the highest total of Likes and Impressions, did not yield a higher average than the two categories above.

Table 1. Categories of answered and published questions.

<i>Subject</i>	<i>Numbers of Posts</i>	<i>likes</i>	<i>comments</i>	<i>shares</i>	<i>Per Post & Per Posts Day</i>	
					<i>Likes</i>	<i>Impressions</i>
(A) Questions about CSSTA or ECFA	21	312	31	12	0.03	3.62
(B) Questions that involved subjective judgment	10	141	17	5	0.05	7.78
(C) Questions about the CSSTA review process	10	164	13	5	0.06	6.79
(D) Questions about trade agreements in other countries	6	149	8	1	0.13	13.04
(E) Questions about the CCSTA Reference Service Desk	5	227	35	6	0.24	26.02
(F) Questions about the Sunflower Student Movement	4	162	9	6	0.42	32.40
(G) Questions about Taiwanese law and economics	3	68	0	0	0.22	13.28

When ordering the sets of questions and answers based on the number of Likes, it can be seen that the most popular question was one questioning the neutrality of CSSTA Reference Service Desk, which received 71 Likes. The second most popular question was one about the source of the quote “If the students bleed, I will have you pay!” which received 70 likes. The question that received the third most Likes was one inquiring into the government's release of information regarding the CSSTA, but with only 48 Likes.

Based on the analysis above, because there was a larger number of questions about CSSTA and ECFA, and it was easier for the Librarians to find answers for those questions, the largest number of posts was in this category. Based on the influence index derived from Likes and Impressions, however, the subjects that concerned patrons more were questions about the Sunflower Student Movement and the CSSTA Reference Service Desk, instead of questions

about CSSTA and ECFA, which were greater in number. A number of users suggested that instead of only publishing government policy announcements and the content of the CSSTA, CSSTA Reference Service Desk should include opinions and viewpoints from authoritative experts and researchers. These results suggested that CSSTA Reference Service Desk should more actively offer a service that differentiated itself from government-issued materials, including more diverse sources of information and viewpoints, to further accommodate the information needs of the patrons.

4. Conclusion

The CSSTA Reference Service Desk was a Facebook Page created to fulfil the information needs of the citizens who sought information on issues relating to the Sunflower Student Movement and the CSSTA. CSSTA Reference Service Desk received 2,787 Likes in 42 days. By the end of its service period, 88 users sent 144 questions, 59 of which were answered were published on CSSTA Reference Service Desk. The CSSTA Reference Knowledge Base, which contained the records of questions and answers, and Facebook Page Insights, which offered user backgrounds and interaction history, were analysed for insight into the issues that concerned the users and their preferences. The results of this study would be valuable to libraries that plan to offer reference services in response to social events.

For planning similar services in the future, the recruitment and training of staff would be critical to the effectiveness of the service. In addition, an operational procedure and a code of service ethics, as were done in this study, would be necessary to ensure consistent service from each member of staff. In terms of choice of platform, the low-cost Facebook Page used in this study proved to be successful for establishing an online social reference service. Staff of such reference services in the future should further utilize the analytical functions of Facebook Page Insights to make timely adjustments to the focus and planning of the services, so that the services can reflect the needs of the users.

The establishment of the CSSTA Reference Desk and the services provided re-introduced many citizens to the values of libraries. Judging from the approval and support from the many users for the service, the CSSTA Reference Service Desk had increased the visibility of libraries to a meaningful extent. By integrating with a modern online social media platform, the service was able to serve the public beyond traditional means. In the history of outreach services provided by libraries, including notable services established in the wake of Occupy Wall Street, such as the People's Library, the annotated reference bibliographies of environmental research, and the Living Archives, as well as the CSSTA Reference Service Desk for the Sunflower Student Movement, the role of librarians has been evolving significantly. In addition to passive reference services offered in library buildings, librarians can now actively bring the services to the readers. By actively connecting information needs of the public to authoritative information sources, librarians are able to promote citizen participation and open government and help overcome the barrier for information access caused by information divide. Lastly, with the goal to "reflect the needs of modern society," libraries will continue to be a trusted source of information for the public.

Acknowledgement

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