

**Using Facebook for Public Engagement: An Analysis of the
Public Facebook Pages of the Local Government Units of Metro
Manila**

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Table of Contents

List of Tables and Figure	v
Abstract	vi
Chapter 1 Introduction	1
Background of the Study	1
The Research Problem	2
Significance of the Study	3
Scope of the Study	6
Framework of the Study	7
Re-statement of the Problem	7
Conceptual and Theoretical Framework	8
Definition of Terms	12
Hypotheses	13
Methodology	14
Research Design	14
Sample	16
Variables and Indicators	19
Data Collection Procedures	22
Instruments	23
Analytical Techniques	24
Chapter 2 Review of Related Literature	27
Previous Research on the Topic	27
Unanswered Questions or Gaps in the Literature	41
Chapter 3 How Do Local Governments Use Their Facebook Page?	43
Activity	43
Interactivity	44
Themes	46
Interactivity by Theme	51

Theme by Page Type	52
Direction.....	54
Direction by Page Type	56
Chapter Summary.....	57
Chapter 4 Factors that Influence Government Social Media Use.....	59
Page Type.....	59
Subchapter Summary.....	61
Organizational Factors	61
Follow our New Page: Origins of the Facebook pages	61
Leadership	64
Who Manages the Page?.....	65
Subchapter Summary.....	66
Institutional Factors.....	67
Goal and Objective of Social Media Use	67
Benefits and Challenges	69
Strategies for Content Creation and Management.....	71
Internal Mechanisms for Disaster Risk Communication.....	75
Working with Other Offices	77
Subchapter Summary.....	78
Chapter 5 How Does the Public Engage with Government Content?	81
Engagement Metrics.....	81
Levels of Public Engagement.....	82
Insight on Comments.....	85
Active Pages, Selective Users	85
Engagement by Theme and Page Type	87
Chapter Summary.....	90
Chapter 6 Conclusion.....	92
Key Findings	92
Using Facebook Pages for Informational Goals.....	93
Persuasive Communication Through Facebook	94

Constrained Human Resources Limit Usage and Responsiveness.....	98
Role of the Mayor in Content Creation	99
Institutional Preference for Disseminating Information	100
Engagement Limited to Public Communication	102
Suspended na ba? Facebook for Disaster Risk Communication	104
How do local governments use social media for public engagement?.....	106
Implications and Recommendations	108
Limitations	110
Future Research.....	112
References.....	114
Annexes.....	123
Annex A. Social Media Use for Local Government Survey Questionnaire	123
Annex B. Interview Guide	127
Annex C. Word frequency of replies from the local government to public comments	128
Annex D. Structured data, usage metrics and engagement metrics by LGU.....	129
Annex E. Descriptive statistics of engagement metrics by theme	130
Annex F. Percentage of Themes by LGU	131
Annex G. Subthemes under Providing information on services and facilities.....	132
Annex H. Descriptive statistics of subtypes under Providing information on services and facilities	134
Annex I. Percentage of Direction by LGU.....	135
Annex J. Metrics of stakeholder engagement index	136
Annex K. Word frequency of user comments and word cloud.....	137
Annex L. Summary of Survey Responses.....	138

List of Tables and Figure

Table 1. Facebook Pages of Metro Manila Local Government Units	17
Table 2. Survey and interview respondents	19
Table 3. Variables of the study	19
Table 4. Stakeholder Engagement Index	20
Table 5. Frequency distribution of activity	44
Table 6. Frequency distribution of interactivity	45
Table 7. Themes of Facebook posts.....	46
Table 8. Interactivity of theme	51
Table 9. Percentage of themes by page type.....	53
Table 10. Interactivity of theme by page type	54
Table 11. Percentage of direction by page type	56
Table 12. Years of active pages	62
Table 13. Percentage of engagement metrics by page type	81
Table 14. Engagement Metrics by LGU	83
Figure 1. Public communication and public participation matrix.....	84
Table 15. Relationship between usage metrics and public engagement (Pearson's r)	86
Table 16. Relationship between percentage of theme and engagement metrics (Pearson's r)	86
Table 17. Percentage of total engagement by theme and page type	87
Table 18. Descriptive statistics of engagement by page type	88
Table 19. Percentage of reaction types by theme	89
Table 20. Percentage of reactions by page type.....	89
Table 21. Frequency of the word "mayor" in Facebook Pages	96

Abstract

This study describes how the 17 local government units of Metro Manila use Facebook for public engagement. Government social media use was analyzed by summarizing the usage metrics of activity and interactivity on the Facebook pages and classifying the themes and direction of government posts through content analysis. Engagement metrics, the number of reactions, comments and shares, were the basis of three measures of public engagement. Insights on how organizational and institutional factors influence social media use were gathered through survey questionnaires and interviews. Results showed that the local governments of Metro Manila use social media for the unidirectional dissemination of information, which is in line with the local government's primary goal of using the platform for public outreach. Most content featured information on public services and promoted activities attended by local officials, particularly the mayor. All pages, whether institutional or mayor pages, post a variety of content that supports informational, persuasive and other goals. The content of the posts rather than activity and interactivity is related to engagement. While Facebook pages bring the government closer to the public, achieving the full potential of the platform to enable deliberative engagement towards empowered participatory governance may require more resources and targeted strategies.

Chapter 1

Introduction

Background of the Study

Social media brings the government closer to the public. Constituents can directly receive the latest updates on public programs and join activities broadcasted live through platforms that only require a mobile phone. Life-saving information can be shared with thousands of people instantly. Residents can save time by inquiring about government transactions and services through a mobile application rather than going to the city hall.

Social media is one tool that can be used for e-Governance, which is defined as the use of information and communication technologies (ICT) to encourage collaboration with citizens and businesses, achieve good governance outcomes and improve the delivery of public services (Backus 2001; Boughzala et al. 2015). Integrating technology into government processes and transactions has been linked to reduced corruption (Anderson 2009) and increased trust (Song & Lee 2015). Technology-based solutions can be used to increase access to information, encourage broader citizen participation and improve public services (Iglesias 2010). In particular, technology can enhance government-led initiatives to deepen public engagement, promote community action and open governance (Patel et al. 2013).

Social media can serve as an enabling mechanism for open, transparent and user-centered ICT-enabled government services through its strengths of “collaboration, participation, empowerment, and time” (Bertot et al. 2010:266). As the most popular tool used for e-participation, social media has already altered interaction between governments and the public, but citizens appear to be exchanging information with each other rather than public agencies (United Nations 2018).

The Philippine Government has recognized the value of e-governance. A significant percentage of the Philippine Government has established an online presence through official websites, and national and local agencies have created social media accounts. Plans and policies have been developed to help government agencies use technology to foster transparency and dialogue with the public. Further examination is needed to determine whether

the content and interaction on these social media platforms are aligned with the government's objectives of using technology to support public engagement.

The Research Problem

Facebook is considered as a promising tool for Philippine government units to reach out to its constituents because of its popularity and potential reach. Facebook is the most popular social media platform in the Philippines, with about 75 million active users, or 97% of all internet users, who spend around 4 hours and 12 minutes on social media per day (We are Social & Hootsuite 2019). Social media has become the second most important source of news for Filipinos, after television (SWS 2019).

The Philippine Government through the Department of Information and Communications (DICT) released a draft Administrative Order (AO) on Social Media Use for Government. The proposed AO envisions social media channels as technology-enabled platforms for “new opportunities for the government to communicate to, interact with and engage the public in matters of public interest” (DICT 2017:1). Local governments can greatly benefit from these channels because keeping constituents informed and updated is one of the public services that have been devolved to municipalities and cities (Republic Act No. 7160 1991). Also, the increased autonomy and access to resources can allow local governments to take a more active role in identifying and responding to the needs of its communities through engagement mechanisms (Legaspi 2001).

However, previous studies found low levels of engagement on the social media platforms of local governments across different countries and regions. Facebook pages of Philippine national and social service agencies (Olaño 2014; David 2016) and selected local government units (LGUs) (Roengtam et al. 2017; Congjuico 2014) are also used for one-way information dissemination rather than two-way interaction.

The study aims to answer the research question: how do the local government units of Metro Manila use Facebook for public engagement? The following sub-questions related to the main research question include: (1) how does the government use its Facebook page? and (2) how does the public engage with government content?

Significance of the Study

Facebook can be considered a promising platform for e-governance and communicating with constituents for many Philippine government agencies because of the platform's large network of 75 million or 97% of all internet users in the country. (We are Social & Hootsuite 2019). More importantly, major mobile networks provide free access to Facebook that allows the increasing number of smartphone phone users (Reyes 2018) to use the platform without data charges, further expanding the platform's wide reach in the country (David 2016).

Government communication is defined as managed publicly directed communication implemented by executive politicians and officials of public institutions in the pursuit of both political and civic purposes (Canel & Sanders 2012). Government communication has multiple goals that include disseminating information, changing behaviors and attitudes through persuasion and encouraging compliance with regulations. Within the literature of government communication, studies have debated the relationship between informational and persuasive goals of government communication (Canel & Sanders 2012).

In addition to information dissemination, reputation-based government communication can be used to manipulate the portrayal of decisions and policies positively and to craft narratives that aim to strengthen public support, which can then be mobilized as political capital for future elections (Canel & Sanders 2011). Symbolic elements that are carefully crafted to appeal to the public's positive associations and emotions can shape their attitude towards the government (Alon-Barkat & Gilad 2017). Candidates can benefit from increased electoral support by using social media to maintain a relatable personal image that encourages feelings of closeness among voters (McGregor 2017).

Different offices within a government agency are responsible for carrying out informational and persuasive goals (Canel & Sanders 2012); however, this distinction is blurred when day to day operations of executive governments are posted on the mayor's page rather than a separate institutional page. Politicians and other political actors communicate to achieve specific objectives (McNair 2011), which may or may not be aligned with the goals of transparent and accountable government communication (Canel & Sanders 2011).

The government is the authoritative source of certain information such as its programs and services, policies and official declarations. However, posts on the pages of LGUs frequently include other content, which can be a deliberate result of strategies that aim to

achieve objectives that can range from sharing information as part of open governance to reputation management of elected officials. The study contributes to this debate by describing whether the 17 LGUs of NCR are more likely to use Facebook for information dissemination to promote transparency and accountability or persuasion related to strategic management and strengthening public support (Canel & Sanders 2011).

Facebook also has the potential to expand the role of citizens from passive consumers of public services to active contributors in the co-production of public services (Linders 2012). The platform's features allow bidirectional communication between governments and their constituents and allow members of the public to create and add value to content (Mergel 2013a). Understanding how local governments use social media to expand, strengthen, and sustain the public's involvement in government-led initiatives is particularly important in the Philippine context.

A closer examination of the level of engagement on Facebook pages contributes to understanding whether the platform's participation-enabling features lead to any shift in the relationship and power dynamics between the government and the public. The study assumes that constituents engage with government posts because they want to be involved in the affairs of their LGU, the study's adapted definition of public engagement (Rowe & Frewer 2005). The extent of the public's observable involvement on the Facebook pages can be described based on the flow and nature of information. Ultimately, engagement redistributes power from governments to its citizens as the public gains increasing influence, authority and accountability in the political decision-making processes (Arnstein 1969).

The introduction of new media has changed institutional and social structures that influence how meaning through symbolic exchange is created, disseminated and applied within the political system. Gatekeeping mass media entities and elites have less control over the information broadcasted to a large audience as everyone can create content on free and wide-reaching social media platforms. The distinction between authoritative information source and audience is blurred as users have increasing control over access to content. In this era of new media, power can be claimed, lost, or shared through communicative activities (Kenski & Jamieson 2017). Social media, by design, encourages more opportunities to balance the power dynamics between those who govern and those who are governed (Hand & Ching 2011).

However, the role of social media in achieving these normative positive objectives of government communication remains unclear (Alon-Barkat & Gilad 2017). Increasing participation and collaboration in decision-making solely through the adoption of technology are common unrealistic and unmet expectations of many e-government initiatives (Gastil & Broghammer 2020). Creating opportunities for discussion and deliberation is often considered a secondary reason for government social media use (Kingsley, 2010 in Hand & Ching).

This study also contributes to the limited number of comparative studies of government communication (Canel & Sanders 2012) by examining different LGU pages that appear to have two distinct page types: institutional and mayor. Previous studies on Philippine government social media use have focused on comparing national agencies (David 2016, Olaño 2014), describing a specific LGU (Roengtam et al. 2017; Congjuico 2014) or particular function of several LGUs (Alampay et al. 2018). This study adds to the literature by providing a comprehensive examination of how Philippine local governments in the National Capital Region (NCR) use their Facebook pages to engage with the public. It complements previous research primarily focused on the government or the supply side of social media for engagement (Medaglia & Zheng 2017).

This study adopts some features of David's (2016) multi-method case study approach used to compare the social media use of three national frontline agencies through data collected through interviews, documentary review of institutional policies and usage and engagement metrics. Similarly, case studies can form the foundation for establishing baseline data on how cultural and institutional factors influence government communication (Canel & Sanders 2012).

Most studies have examined local government social media use by either describing metrics and content on the platform or gathering perceptions of users through interviews. This study puts forward that government social media use can be better understood by exploring both actual use, through usage and engagement metrics extracted from the page, as well as idealized use, based on the goals and strategies described by page managers.

This study applied previously established frameworks that examine local government social media use and engagement to the Philippine context. It also aims to understand whether common themes observed in other settings are also present in the Facebook pages of the local governments of Metro Manila.

Another intended outcome of this study is to identify good practices that can help Philippine local governments post engaging content towards good governance objectives, which are common goals of existing government policies. Moreover, these findings can help LGUs develop more targeted social media strategies that are more likely to encourage higher levels of public consultation and discussion. With the expanding access to social media, increased dialogue between the government and the public can enable more opportunities to promote positive attitudes toward democratic values through online socialization and information exchange (Chang 2017).

Scope of the Study

This study focuses on the public Facebook pages of local governments of Metro Manila. Facebook is the most popular social media platform in the Philippines (We are Social & Hootsuite 2019; SWS 2019). Among social media platforms, Facebook offers “the clearest possibilities for sustained, detailed interaction between local people and ‘their’ local authority” (Ellison & Hardey 2014:30) because governments can engage with individuals who are using their actual profiles. However, Facebook and other platforms are experiencing increased incidences of trolling, which is a technique of social media manipulation by using real, fake or automated accounts to harass other users on the platforms (Bradshaw and Howard 2017).

Government agencies are aware of the changing information consumption behavior of its citizens who prefer to directly receive information on their Facebook newsfeed rather than access official websites. Aside from direct delivery, Facebook allows citizens to add their comments as well as share posts with the rest of their network (Mergel 2013a). In the Philippines, organizations can reach a wider audience on Facebook because there are more monthly active users at 75 million compared to 11 million on Instagram users and 5.08 million on Twitter (We are Social & Hootsuite 2019).

City and municipal governments are more likely to use social media because these units operate and interact the closest to their constituents (Agostino & Arnaboldi 2016). These pages are also more likely to have more engagement in the Philippine context. Young Filipinos, who comprise a significant percentage of Facebook users (We are Social & Hootsuite 2019), are more likely to follow the Facebook pages of politicians and agencies at the local level with whom they feel a closer connection with compared to their national counterparts (David 2013).

This study concentrates on the public Facebook pages of Philippine LGUs in the National Capital Region. Urbanization is related to social media adoption as local governments of urban communities have the highest social media adoption rates compared to suburban, large towns and rural communities (Graham & Avery 2013). In the Philippines, social media use is also related to urbanization and population density. SWS (2019) estimates that 64% of adult Filipinos in NCR have a Facebook account. Legara (2015) mapped geotagged Twitter posts and found that there is more social media activity in highly populated urban areas of the Philippines. This trend may be related to a digital divide in Internet access as Filipino Internet users are more likely to reside in Metro Manila or other urban areas; have higher income and higher educational attainment (Schumacher & Kent 2020). Similarly, around 73.61 percent of 145 Philippine cities have web presence either through an official website or social media page (DICT & NIGS 2016).

Framework of the Study

Re-statement of the Problem

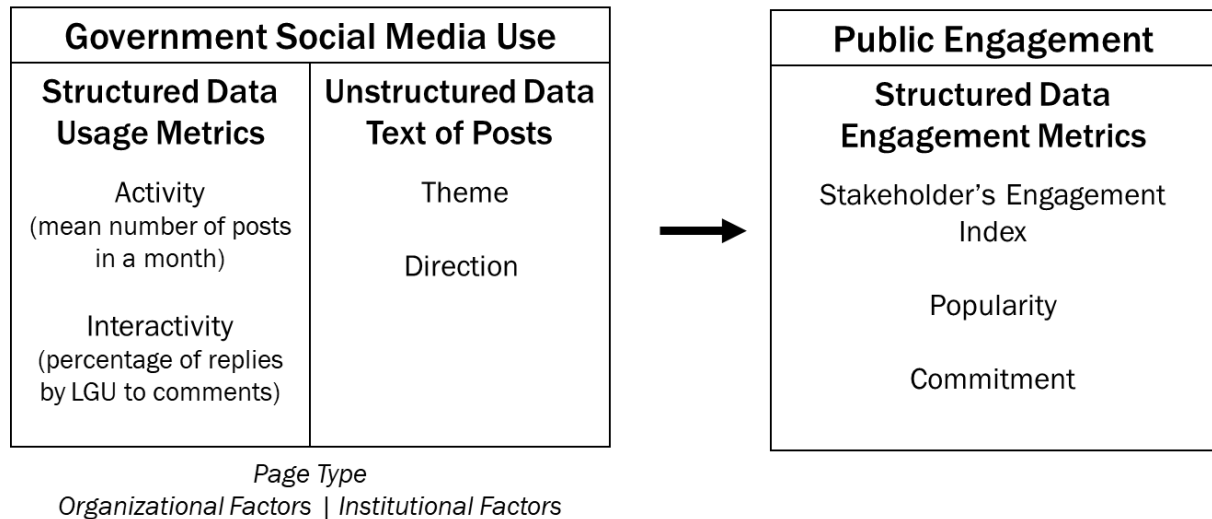
The previous sections emphasized that governments from around the world recognize the potential of social media for achieving good governance goals and established their presence on these platforms. The Philippine government has been increasing its presence on social media platforms aiming to use the free, popular and collaborative platform to connect with a majority of its constituents that are already active users. However, the literature on government social media use remains unclear whether communication and interaction on these platforms conclusively contribute to increasing public participation.

The aim of this study is to understand how the LGUs of Metro Manila use Facebook for public engagement. This first entailed describing government social media use that includes actions undertaken by the LGU as well as the contents of its posts. The study then described how members of the public engage with the government content on the Facebook pages. The study also examined how government social media use, represented by usage metrics and text of posts, is related to public engagement that is based on engagement metrics. The findings are then contextualized within the organizational and institutional arrangements of LGU, which exist outside of Facebook yet influences governments' use of the platform.

Conceptual and Theoretical Framework

The study’s conceptual framework in Figure 1 shows how the study’s variables of interest are related.

Figure 1. Conceptual Framework



The study was guided by the frameworks of previous studies that have analyzed government social media use.

Applying the social media analytics framework that explores social-media based communication between political institutions and citizens (Stieglitz & Dang-Xuan 2013), the units of analysis of government social media use, the study’s independent variable of interest, are structured and unstructured data.

Structured data or usage metrics includes activity, which is measured by the average number of posts in a month (Barbera & Zeitzoff 2017), and interactivity, which is measured as the percentage of replies by local government to comments (Haro-de-Rosario et al. 2016; Bonsón et al. 2014).

The theme and direction of unstructured data, or texts in posts, is another subvariable of social media use. Waters and Williams (2011) used the four models of public relations (Grunig & Hunt 1984) to understand the direction and purpose of government tweets. Under the press agency model, information flows from the government to the public with the purpose of promotion and publicity by attracting attention and evoking emotion, which contributes to the persuasive goals of government communication. Public information is another

unidirectional model when the government disseminates accurate and factual information to inform or educate the public, which is aligned with the informational goals of government communication. With the two-way asymmetrical model, the organization gathers feedback from the public through surveys, interviews and focus group discussions to create messages that will better persuade the public to support to organization's goals. In contrast to the first three models that seek to persuade the public in line with an organization's objectives, the two-way symmetrical model aims to achieve mutual understanding and balance between the interests of both the organization and public.

As part of understanding how local governments use social media, the study explored how contextual variables, specifically the page type, organizational factors and institutional factors, influence the activity, interactivity and posted content on the Facebook pages.

As an individual using Facebook, an elected official can set-up either a personal profile where they can limit the visibility of posts to a network of contacts or a public page where all updates are publicly visible. These public pages are usually set-up and used for political campaigns, and often for the rest of their political careers (Stoeckel 2018). As an organization, LGUs can only set up a public page.

Ignacio Criado et al. (2017) applied the Enacting Electronic Government Success (EEGS) framework (Gil-Garcia 2012) to identify success factors for social media use of local governments, focusing on the organizational, institutional and contextual factors. Under the EEGS model, success is defined as realizing the benefits, outputs and outcomes of an e-government initiative.

This study adopts the definitions of organizational and institutional factors used by Ignacio Criado et al. (2017). Organizational factors are the structures and processes involving human resources, leadership, skills and capabilities behind a local government's social media use. Studies of local governments in Southeast Asia emphasized the importance of the mayor's support in the success of using Facebook for public engagement (Roengtam et al. 2017; Congjuico 2014).

Institutional factors are normalized behaviors and processes as well as formal commitments, through policies, regulations, strategies and similar documents, on transparency, participation and e-government.

The main dependent variable of interest in this study is public engagement on Facebook pages of local governments. The study adopts the definition of public engagement as the “practice of involving members of the public in the agenda setting, decision-making, and policy-forming activities of organizations/institutions responsible for policy development” (Rowe & Frewer, 2005: 253). Rowe and Frewer (2005) further refined this broad definition into three concepts differentiated based on the flow and nature of information between the public and sponsors of engagement initiatives or, in this study, local governments.

The objective of public communication, the lowest level of public engagement, is to inform citizens as local governments disseminate information to their constituents. Under this unidirectional flow of information, there is no direct involvement of the public as their feedback is not expected or explicitly requested. Input may be recorded by the engagement mechanism or, in this study, the Facebook page, but there is no additional process for the government to act on the feedback.

Under public participation, governments and their constituents exchange information through dialogue and negotiation to arrive at a collaborative shared understanding. This higher level of public engagement expands the role and involvement of citizens from passive consumers of public services to active contributors in the co-production of public services (Linders 2012).

Public consultation or the unidirectional flow from the public to the local governments in response to a specific engagement exercise focused on a topic will not be considered in this study.

The basis of measuring the broader concept of public engagement and its specific levels of public communication and public participation are engagement metrics, or the number of reactions, comments and shares (David 2016) extracted from the Facebook pages. These counts are the tangible indicators of social media engagement (McCay-Peet & Quan-Haase 2016) that can measure the extent of the public’s involvement in the Facebook pages.

Engagement metrics measure the frequency of three different activities that allow users to interact with a post: leaving a reaction, posting a comment and sharing it with others. These actions can also represent varying degrees of engagement, as each feature requires different levels of involvement (McCay-Peet & Quan-Haase 2016).

Leaving a reaction requires the least amount of personal resource commitment, which includes time, effort, analysis and feedback among the three interactions (Reddick et al. 2017a; Bonsón et al. 2014). Among the different types of reactions, leaving a like requires the least effort because it requires only one click on desktop or one tap on mobile. Users must hover then click or long-press then select the other reactions.

Sharing a post can be considered a higher level of involvement because it requires more time and effort from the user compared to a leaving a reaction, as demonstrated by the increased number of clicks it requires; however it requires less personal resource commitment than leaving a comment.

Reddick et al. (2017a) consider posting a comment as the highest level of engagement as it requires the most amount of personal resource commitment from users to formulate then type their feedback. However, some comments can be attempts to share the post by users tagging or typing the name of another user as a comment.

The study will use the Stakeholder Engagement Index (SEI) (Bonsón et al. 2015) as the measure of overall public engagement. The SEI is a set of metrics to measure the dimensions of engagement on social media platforms using publicly available data such as the number of fans, posts, reactions, comments and shares. Under this index, popularity, commitment and virality can measure the quantity of stakeholder feedback, which are tangible indicators of the audience's reactivity and dialogic communication. Agostino and Arnaboldi (2016) explored the first two metrics in the context of differentiating levels of engagement on social media. Popularity is the capability of the page to broadcast content to a large receptive audience. Commitment is the capability of the page to enable discussion and interaction between the local government and the public. Bonsón and Ratkai (2013) defined virality as the capability of the page in creating viral content, which is content that is shared rapidly and widely. Engagement is measured as the sum of popularity, commitment and virality. SEI has been used to assess and compare the engagement on social media platforms of local governments in Western Europe (Agostino & Arnaboldi 2015; Bonsón et al. 2019; Bonsón et al. 2015; Bonsón et al. 2014).

Agostino and Arnaboldi (2016) applied the Rowe and Frewer (2005) concepts of public communication and public participation, which are the lowest and highest levels of public engagement respectively, in measuring engagement on social media. Two metrics under SEI

popularity or the reach of posts and commitment or the extent of dialogue and interaction was adapted to measures public communication and public participation respectively.

Definition of Terms

Government social media use include actions and decisions undertaken by page managers on the social media pages representing a government official or government entity.

Structured data is a system-generated quantitative discrete count of actions undertaken by users, which includes the page owner and other users, on social media platforms (Stieglitz & Dang-Xuan 2013).

Unstructured data is user-generated textual content posted on social media platforms (Stieglitz & Dang-Xuan 2013).

Usage metrics measure the frequency of actions, which are uploading a post and replying to comments, taken by the page owner.

Activity measures how actively the page posts content by the average number of posts in a month (Barbera & Zeitzoff 2017).

Interactivity measures the local government's responsiveness to user comments by the percentage of replies from page owner representing the local government to comments from citizens (Haro-de-Rosario et al. 2016; Bonsón et al. 2014).

Engagement metrics measure the frequency of three different actions of users on a post: leaving a reaction, posting a comment and sharing the post with others (David 2016).

Public engagement is the “practice of involving members of the public in the agenda-setting, decision-making, and policy-forming activities of organizations/institutions responsible for policy development” (Rowe & Frewer, 2005: 253). This broad definition can be differentiated into three levels based on the flow and nature of information between the public and sponsors of engagement initiatives or, in this study, local governments.

Public communication is the unidirectional flow of information from governments conveying information to the public. There is no direct involvement of the public as their feedback is not

expected or explicitly requested. It is also the lowest level of public engagement (Rowe and Frewer, 2005).

Public participation is when information is exchanged between members of the public and the government through dialogue and negotiation to transform the opinions of both parties. This is a higher level of public engagement (Rowe & Frewer, 2005).

Popularity is the capability of the page to broadcast content to a large receptive audience (Agostino & Arnaboldi 2016).

Commitment is the capability of the page to enable discussion and interaction between the local government and the public (Agostino & Arnaboldi 2016).

The **Stakeholder Engagement Index (SEI)** is the measure of overall public engagement, which is the sum of the average number of likes, comments and shares per post per 1,000 fans (Bonsón et al. 2015). Under this index, stakeholder engagement comprises of three components: popularity, commitment and virality.

Hypotheses

This study posited the following hypotheses to answer how do the local government units of Metro Manila use Facebook for public engagement.

- Sub-question 1 – How do local governments use their Facebook pages?
 - The theme of most posts is likely to be about government services.
 - The direction of most posts is likely to be unidirectional and aim to disseminate information to constituents.
 - Institutional pages are likely to have more informational posts.
 - Mayor pages are likely to have more persuasive posts.
 - Organizational factors are likely to influence usage metrics.
 - Institutional factors are likely to influence the text of government posts.
- Sub-question 2 - How does the public engage with government content?
 - Between the levels of public engagement, public communication is likely to be higher than public participation.
 - Activity is likely to be related to public engagement.

- Interactivity is likely to be related to public engagement.
- Posts with themes relevant to public interest are likely to have higher public engagement.
- Mayor pages are likely to have higher engagement.

Methodology

Research Design

This study followed a multi-method research approach in data gathering and analysis similar to previous studies that have examined government social media use.

The first phase was to extract the content of the Facebook pages, which would be the basis for understanding how local governments use the platform. Usage metrics, posted text and engagement metrics are easily monitored and measured on Facebook pages because of the accessible and visible nature of these platforms (Healy 2017). The primary data in this study is the usage metrics (number of posts and comments from the local government), text of government posts and engagement metrics (number of reactions, comments and shares) of the selected Facebook pages. The scope of the study did not include the textual and visual elements of posted photos, videos, link and attachments to the posts.

The second step was to examine the extracted text of government posts using content analysis. Content analysis is a research technique that aims to “analyze relatively unstructured data in view of the meanings, symbolic qualities, and expressive contents they have and of the communicative role they play in the lives of the data’s sources” (Krippendorff 2004:44). This study was guided by the hermeneutic content analysis framework, which was proposed by Bergman (2015) as a mixed-methods approach that integrates qualitative and quantitative methods to analyze non-numerical data. This framework stresses the importance of understanding content and meanings within data in relation to its context and research focus, recognizing that the same data can have multiple interpretations.

The third phase was to summarize the usage and engagement metrics. These statistics contributed to describing the frequency of themes and directions of government posts and its relationship to public engagement. Word frequency queries were used to analyze the content

of comments, which are beyond the study's scope but contextualized the nature of these interactions.

After examining the Facebook pages of the 17 local governments, the next step was to gather data on the intention and perception of how local governments use social media through a survey. Previous studies have similarly used survey questionnaires to explore how local governments value the use of social media in the United States (Graham & Avery 2013; Gao & Lee 2017) and Southeast Asia (Roengtam 2017).

The fifth step of the study was to conduct qualitative semi-structured interviews with the page administrators. The study interviewed administrators of Facebook pages who were willing to participate in the study. Qualitative methods can reveal an insider's perspective that can build a better understanding of public engagement compared to most studies that are macro theoretical or based on Web site features or forum interactions, or based on surveys of citizen attributes (Chadwick 2011). Studies have used semi-structured interviews to understand challenges to open data (Barry and Bannister 2014), public engagement initiatives (Chadwick 2011) and social media adoption (Roengtam et al. 2017). While previous studies have identified organizational and institutional factors that influence e-government activities in other settings, a series of open-ended followed by probing questions can uncover nuances that may be unique to the Philippine local government context (Morse 2014).

The results of the study are limited to the 17 local government units of Metro Manila. With the selected date range of analyzed posts and limitations of the Facebook Application Programming Interface (API) in extracting past posts and restriction to the top 200 comments (Antunes 2017), the findings only represent a sample of local government social media use. The study can offer a partial explanation of how Philippine local governments use social media and cannot be used to generalize the social media behavior of other Philippine cities and municipalities. The study does not account for engagement through direct messages. In addition, the study recognizes that Facebook posts are a biased sample as users of these platforms and the Internet do not represent the overall population of Metro Manila (Schumacher & Kent 2020; Schwartz & Ungar 2015).

Sample

The target sample of the study was the Facebook pages of 17 local government units in Metro Manila or the National Capital Region, specifically the cities of Caloocan, Las Piñas, Makati, Malabon, Mandaluyong, Manila, Marikina, Muntinlupa, Navotas, Parañaque, Pasay, Pasig, Quezon, San Juan, Taguig, and Valenzuela and the municipality of Pateros (Office of the President 1975).

Previous studies have established that high levels of social media use are related to urbanization, population density (Levara 2015) and population size (Bonsón et al. 2014; Harode-Rosario et al. 2016). NCR has 16 highly urbanized cities (HUC), which are defined as urban areas that have at least 200,000 inhabitants and an annual income of at least P50,000,000.00 (PSA [no date]). The total population of NCR is 12,877,253 based on the 2015 Census of Population, accounting for about 12.8 percent of the Philippine population (PSA 2016b). The populations of these 16 cities range from 122 thousand in San Juan to 2.94 million in Quezon City (PSA 2016b). NCR is also the most densely populated region in the Philippines, with a population density of 20,785 persons per square kilometer more than 60 times higher than the national average population density of 337 persons per square kilometer (PSA 2016a).

All 16 sixteen cities and one municipality had official websites and related Facebook pages based on an initial assessment conducted in 2018. Fifteen of the local governments had operational websites while two (Navotas and Pateros) were unavailable. Eleven out of the seventeen official websites featured links to a Facebook page.

The study initially identified two types of Facebook Page: institutional pages and mayor pages.

The websites of eleven LGUs included a link to their respective Facebook pages. This included eight institutional pages (Las Piñas, Makati, Malabon, Marikina, Pasay, Taguig, Quezon City and Valenzuela), and three mayor pages (Mandaluyong, Parañaque and Pasig).

A search on Facebook was conducted to identify the related pages of the six cities that did not have links on their websites or had inactive websites. The institutional pages of Muntinlupa, Navotas, Pateros and San Juan were identified. City government activities in Caloocan and Manila were regularly posted on the Facebook pages of their local chief executives instead of an institutional page.

This study considered pages linked to the official websites as well as unlinked pages that actively promote the activities of the incumbent local government administration as the Facebook page of the 17 local governments.

Table 1 lists the Facebook Pages of the 17 local governments.

Table 1. Facebook Pages of Metro Manila Local Government Units

LGU	Page Name	User Name	Facebook Page Link	Linked on Website	Facebook Page Type	No. of Page Likes*
Caloocan	Mayor Oscar "OCA" Malapitan	@MayorOscarocaMalapitan	https://web.facebook.com/MayorOscarocaMalapitan	No	Mayor	197,900
Las Piñas	City of Las Piñas	none	https://web.facebook.com/City-of-Las-Piñas-301544403277576/	Yes	Institutional	121,403
Makati	My Makati	@MyMakatiVerified	https://web.facebook.com/My-Makati-286639851458148/	Yes	Institutional	120,969
Malabon	100% Pusong Malabon	@100PusongMalabon	https://web.facebook.com/100PusongMalabon/	Yes	Institutional	61,228
Mandaluyong	Menchie Abalos	@MenchieAbalosOfficial	https://web.facebook.com/MenchieAbalosOfficial/	Yes	Mayor	56,534
Manila	Joseph Ejercito Estrada	@PresidentErap	https://web.facebook.com/PresidentErap/	No	Mayor	675,186
Marikina	Marikina PIO	@MarikinaPIO	https://web.facebook.com/MarikinaPIO/	Yes	Institutional	142,112
Muntinlupa	City Government of Muntinlupa - OFFICIAL	@officialMuntinlupacity	https://web.facebook.com/officialMuntinlupacity/	No	Institutional	109,691
Navotas	Navoteño AKO!	@navotenoako	https://web.facebook.com/navotenoako/	No	Institutional	61,822
Parañaque	Mayor Edwin Olivarez	@mayoredwinolivarezofficial	https://web.facebook.com/mayoredwinolivarezofficial/	Yes	Institutional	102,614
Pasay	Pasay City Public Information Office	@lgupasaypio	https://web.facebook.com/pasaypublicinformationoffice/	Yes	Institutional	24,141
Pasig	Bobby Eusebio	none	https://web.facebook.com/Bobby-Eusebio-250077511157/	Yes	Institutional	58,325
Pateros	IsangPateros	@isangPateros	https://web.facebook.com/MUNICIPAL-GOVERNMENT-OF-PATEROS-128138590542666/	No	Institutional	10,762

LGU	Page Name	User Name	Facebook Page Link	Linked on Website	Facebook Page Type	No. of Page Likes*
Quezon	Quezon City Local Government	@qclocalgovernment	https://web.facebook.com/qclocalgovernment/	Yes	Institutional	214,414
San Juan	San Juan City, Philippines	@CityofSanJuanNCRPhilippines	https://web.facebook.com/CityofSanJuanNCRPhilippines/	No	Institutional	23,087
Taguig	I Love Taguig	@taguigcity	https://web.facebook.com/taguigcity/	Yes	Institutional	219,323
Valenzuela	Valenzuela City	@valenzuelacitygov	https://web.facebook.com/valenzuelacitygov/	Yes (broken link)	Institutional	352,393

*As of January 6, 2018

This study analyzed the usage metrics, text of government posts and engagement metrics of the Facebook pages within six months. Previous studies investigated the content posted on local government Facebook pages within one day (Congjuico 2014), one month (Haro-de-Rosario et al. 2017; Magnusson 2016; Agostino & Arnaboldi 2016), two months (Bellström et al. 2016), four months (Gao & Lee 2017) and six months (Olaño 2014; Waters & Williams 2011). Given the limitations and number of cases, the study collected and analyzed the content generated within six months as data-driven content analysis requires a larger sample size to identify more patterns and reflect the actual content rather than the categories (Schwartz & Ungar 2015).

The sampling method utilized for the surveys and interviews was convenience sampling, as the study gathered insights from page managers who agreed to respond to the survey and be interviewed. Survey subjects were identified by examining the selected Facebook pages to determine the offices that maintain the pages.

The Public Information Office and Office of the City Mayor were assumed to be responsible for managing institutional and mayor's pages types respectively. The author contacted these offices either through a phone call or through their Facebook page.

Formal invitations were sent through email or in-person to the respective offices that were responsible for managing the Facebook pages from June to July 2018. Individual follow-up reminders were sent at least once to non-responsive respondents.

Table 2 summarizes the position and office of the survey and interview respondents.

Table 2. Survey and interview respondents

City Name	Page Name	Facebook Page Type	Participation	Position	Office
Caloocan	Mayor Oscar "OCA" Malapitan	Mayor	Survey	(1) Communication Officer	Public Information Office
Makati	My Makati	Institutional	Survey Interview	(1) Information Officer III	Public Information Office
Malabon	100% Pusong Malabon	Institutional	Survey Interview	(1) Officer-in-charge (OIC)	Information and Community Relations Department (ICRD)
Marikina	Marikina PIO	Institutional	Survey Interview	(1) Content Writer (1) Admin Aide VI	Public Information Office
Muntinlupa	City Government of Muntinlupa - OFFICIAL	Institutional	Survey	(1) Information Officer II/Officer-in-Charge (1) ICT Staff	Public Information Office
Quezon	Quezon City Local Government	Institutional	Survey Interview	(1) IT Consultant	Communications Coordination Center
Valenzuela	Valenzuela City	Institutional	Survey Interview	(1) Social Media Officer	Public Information Office

Variables and Indicators

Table 3 lists the study's variables of interest. The main independent variable is government social media use that consists of structured data or usage metrics and unstructured data or text of posts. Usage metrics include activity (average number of posts in a month) and interactivity (percentage of replies by local government to comments). The themes emerged after the content of government posts were analyzed. The study adopted the four models of public relations (Waters & Williams 2011; Grunig & Hunt 1984) to determine the direction of the themes.

Table 3. Variables of the study

Variable	Unit of Measurement	Source
Independent Variable – Government Social Media Use		
Structured Data - Usage Metrics		
Activity	Average number of posts in a month (Barbera & Zeitzoff 2017)	Usage metrics extracted from Facebook pages

Variable	Unit of Measurement	Source
Interactivity	Percentage of replies by local government to comments by citizens (Haro-de-Rosario et al. 2016; Bonsón et al. 2014)	Usage metrics extracted from Facebook pages
Unstructured Data – Text of Posts		
Theme	Count of posts categorized under themes to be identified through content analysis	Text of government posts extracted from Facebook pages
Direction	Count of posts categorized under four models of public relations (Waters & Williams 2011; Grunig & Hunt 1984)	Text of government posts extracted from Facebook pages
Dependent Variable – Public Engagement		
Structured Data - Engagement Metrics		
Stakeholder's Engagement Index	Average number of reacts per post per 1,000 fans + Average number of comments per post per 1,000 fans + Average number of shares per post per 1,000 fans (Bonsón & Ratkai 2013; Bonsón et al. 2015)	Engagement metrics extracted from Facebook pages
Public Interaction	[(Total number of 'Reacts'/Total number of posts)/number of fans]x1,000 (Agostino & Arnaboldi 2016)	Engagement metrics extracted from Facebook pages
Public Participation	[(Total comments/Total number of posts)/number of fans]x1,000. (Agostino & Arnaboldi 2016)	Engagement metrics extracted from Facebook pages

Public engagement, the main dependent variable, is measured by the Stakeholder Engagement Index (SEI) (Bonsón et al. 2015), which was updated to reference reactions instead of only likes. SEI is the sum of the average number of reacts (P3), comments (C3) and shares (V3) per post per 1,000 fans. Table 4 shows how engagement metrics are used to measure the SEI of a page.

Table 4. Stakeholder Engagement Index

Popularity	P1	Number of posts reacted to/total posts	Percentage of posts that have been reacted to
	P2	Total reacts/total number of posts	Average number of reacts per post
	P3	$(P2/\text{number of fans}) \times 1,000$	Average number of reacts per post per 1,000 fans
Commitment	C1	Number of posts commented/total posts	Percentage of posts that have been commented
	C2	Total comments/total number of posts	Average number of comments per post

	C3	$(C2/\text{number of fans}) \times 1,000$	Average number of comments per post per 1,000 fans
Virality	V1	Number of posts shared/ =total posts	Percentage of posts that have been shared
	V2	Total shares/total number of posts	Average number of shares per post
	V3	$(V2/\text{number of fans}) \times 1,000$	Average number of shares per post per 1,000 fans
	E	$P3 + C3 + V3$	Stakeholder engagement index

Source. Adopted from Bonsón & Ratkai (2013) & Bonsón et al. (2015)

In contrast to scales that measure engagement through the perception of users, Bonsón and Ratkai (2013) proposed a set of metrics to measure the dimensions of engagement on social media platforms using publicly available data such as the number of fans, posts, reactions, comments and shares. Under this index, popularity, commitment and virality can measure the quantity of feedback from stakeholders, which are tangible indicators of the audience's reactivity and dialogic communication.

Popularity is the capability of the page to broadcast content to a large receptive audience. Commitment is the capability of the page to enable discussion and interaction between the local government and the public. These first two metrics have been explored in the context of differentiating levels of engagement on social media (Agostino and Arnaboldi 2016). Bonsón and Ratkai (2013) defined virality as the capability of the page in creating viral content, which is content that is shared rapidly and widely.

The percentage of posts with likes (P1), comments (C1), and shares (V1), and average numbers of likes, comments, and shares per post (P2, C2, and V2, respectively) are approximate indicators of interaction between local governments and citizens. Facebook pages that yield high values of these indicators can be considered as a highly interactive platform that encourages participation. Low values can be considered indicators of low interaction and that the page is more likely to be used as an information-sharing platform (Bonsón et al. 2014).

The popularity of the Facebook page (P3) was measured by the ratio of 1,000 fans to the average number of likes per post. Commitment was determined by the ratio of 1,000 fans to the average number of comments per post. The ratio of 1,000 fans to the average number of shares per post measured the virality of the Facebook page. The indicators of popularity, commitment and virality are divided by the number of fans for the aggregated index of engagement (E) because it minimizes the impact of the audience size when comparing values.

Pages with a disproportionately higher number of fans are likely to have higher total engagement metrics.

The study differentiates public engagement into lower-level unidirectional public communication and higher-level bidirectional public participation. Agostino and Arnaboldi (2016) posit that the SEI components of popularity (P3) and commitment (C3) are measures of public communication and public participation respectively. This measurement framework has been applied to evaluate engagement on Facebook pages of Italian city governments. Their study determined four typologies based on the levels of engagement. Ghosts are characterized as having low levels of public communication or popularity and public participation or commitment, while Chatterboxes have a high level of popularity but a low level of commitment. Engagers have a high level of popularity but a low level of commitment. Leaders, pages that have a high level of both popularity and commitment, have the highest level of engagement that demonstrates high levels of public communication and public participation.

SEI and its metrics of popularity and commitment have been used to assess and compare the engagement on social media platforms of local governments in Western Europe (Agostino & Arnaboldi 2015; Bonsón et al. 2019; Bonsón et al. 2015; Bonsón et al. 2014).

Data Collection Procedures

The first dataset was the structured data and unstructured textual data from the content of the Facebook page of the 17 local government units of Metro Manila posted from July 1, 2017 to December 31, 2017. Adapting the approach of similar studies that analyzed the content of government social media pages (Barbera & Zeitzoff 2017; Bellström et al. 2016; Magnusson 2016), the study used the Netvizz application to extract the statistics and content (number of likes, reactions, shares and comments) of the posts and comments on the public Facebook pages of the selected cities. Rieder (2013) developed Netvizz for non-commercial academic purposes to extract data from Facebook groups and pages. The application accesses data using Facebook's Application Programming Interface (API), which is the primary method of retrieving data on Facebook's platform. However, users reported that Facebook's API is unable to extract a complete record of historical posts (Antunes 2017).

Data collection began with identifying the Facebook ID of the selected pages. The web addresses of 17 Facebook pages were entered into the “Find your Facebook ID” website (<https://findmyfbid.com/>) to identify their corresponding page IDs.

On January 6, 2018, each page ID of the 17 Facebook pages was then entered into the page data module of Netvizz version 1.44 to retrieve the full data of the page, which includes full network and comment files, from July 1, 2017 to December 31, 2017. Netvizz generated several tabular files that contain the usage and engagement metrics (number of posts, reactions, comments and shares) for each post, daily statistics for the date range, page fan numbers per country and text of anonymized user comments. These generated tabular files were the source of structured data and unstructured textual data of both social media use and public engagement.

To describe the contextual factors that influence government social media use, the second dataset was collected by gathering and summarizing data on the intention and perception of how local governments use social media through a survey questionnaire. The third dataset was the responses from the semi-structured interview.

Instruments

The study adopted the instrument design and some questions from the survey developed by Roengtam et al. (2017) to examine internal organizational changes related to social media use in selected local governments of Indonesia, Thailand and the Philippines. In particular, the questions that measure variables related to processes involved in social media use, communication and information and policy-making were adapted for the instrument of this study. Similarly, the objective of this survey was to understand how the page managers perceived the different aspects of using social media. To address the gaps of the Roengtam et al. (2017) instrument, this study added questions that aim to measure how the local government representatives perceive Facebook as a platform for disseminating information to and receiving feedback from the public, based on the categories of posted content developed by Bellström et al. (2016).

The participants were given printed copies of the survey (see Annex A) before the interview, except for the respondent representing Caloocan, who received and returned the

completed survey by email. The instrument started by asking respondents to identify their position and how long they have been involved in maintaining the local government's social media account. The next set of questions asked respondents to rank social media platforms based on the preference of local government usage, with "1" being the most important. The respondents were then asked to rank their objectives in using social media, with "1" being the most important.

Following the instrument design of Roengtam et al. (2017), the next section of the questionnaire asked respondents to rate the extent of their agreement with a statement following a five-point Likert scale (from Strongly Disagree "1", Disagree "2", Neither Agree Not Disagree "3", Agree "4" to Strongly Agree "5"). The questions were clustered by the following themes: processes involved in social media use (Roengtam et al. 2017), disseminating information (Bellström et al. 2016), public interaction (Bellström et al. 2016), and policy-making (Roengtam et al. 2017).

The study adopted the interview questions used by Gil-Garcia (2012) to understand the factors that contribute to e-government success (see Annex B). The semi-structured interviews also referenced the results of the content analysis of Facebook pages. The objective of these discussions was to reveal how organizational and institutional factors of a local government unit influence its social media use. Barry and Bannister (2014) uncovered twenty categories of barriers to open data release through a combination of semi-structured interviews with senior managers in Irish central and local government and a study of internal documents. Chadwick (2011) used in-depth interviews and group discussions with involved staff to explore the complex matrix of internal institutional variables linked to the premature closure of an online citizen engagement initiative.

Analytical Techniques

For the first dataset, the data analysis process started by summarizing the usage metrics, the number of posts and comments from the local government, and engagement metrics, the number of reactions, comments and shares. The data was the basis of the measures of the variables that include activity, interactivity, SEI, popularity and commitment. The study replicated the approach of Bonsón et al. (2015) and Agostino and Arnaboldi (2016) to compare

the SEI, popularity and commitment scores of local governments within their respective samples to interpret the data in the absence of standardized classification of these measures.

The values of activity and interactivity were ordered and grouped into frequency distribution tables with three classes to describe the scores as low, average and high relative to its position in the frequency distribution within the sample. The class intervals were determined by dividing the range of variable scores by three (3) to represent low, average and high. In addition to this, the study used correlational analysis, using Pearson's correlation coefficient, to understand the relationship between variables of usage metrics and frequency of themes to engagement metrics, similar to the approach of Bonsón et al. (2014) in examining the direction and strength of the relationship of engagement, measured by SEI, to activity.

A content analysis of the text in collected Facebook posts using the NVivo qualitative data analysis software was conducted to identify dominant patterns within the content. The NVivo software has been used in analyzing large volumes of unstructured textual data (Bellström et al. 2016; Cochrane 2015). The level of analysis was per post and each post had a single code.

The automated coding feature of NVivo could not be used because the posts were in English, Filipino or a combination of both. The study used an open and manual coding approach to discover themes by reading each post to understand its meaning based on keywords and context.

The study started with a preliminary list of concepts or themes based on previous literature. Main and subcategories were then developed in the course of coding. Finalizing the list of themes was an iterative process. Some initial themes were combined or subcategorized under main themes. The four models of public relations (Waters & Williams 2011; Grunig & Hunt 1984) were used to determine the direction of the themes. The frequency count of themes and direction was also determined. To better understand the nature of user comments, the study applied a word frequency query using NVivo to the extracted comments.

For the second dataset, the study used descriptive statistics to analyze the data from the questionnaires of the participating respondents (n=9). For the third dataset, the study also used qualitative content analysis to describe how organizational and institutional arrangements influence social media activity. Due to the statistically insignificant number and low variability

of responses, findings from the survey and interview were used to contextualized observable government social media use rather than attempt to establish a link between the variables.

Chapter 2

Review of Related Literature

Previous Research on the Topic

E-Governance

Citizen-centric e-governance is “the use of IT for enhancing the ability of citizens to democratically engage with political discourse and decision-making and hence influence meaningful change in public policy” (Reddick et al. 2017a:2845). The Internet plays a crucial role in e-governance as web-based platforms can link citizens with government services and information (Iglesias 2010). As one of the more common web-based tools used by the public sector, government websites are the main online communication channels for information services that include downloadable forms, classified advertisements and potential benefits (Gao & Lee 2017). The flow of information from traditional static websites is unidirectional as the government broadcasts information to the general public (Agostino et al. 2017).

The Philippine Government has a significant web presence with around 65.83 percent, or 1,466 out of 2,227 government entities have websites (DICT & NIGS 2016). The e-government development in the Philippines ranks 75th out of 193 countries based on the availability of its online service, telecommunication infrastructure and human capital in the 2018 United Nation’s eGovernment Survey. In the same survey, the country’s E-Participation Index (EPI) was ranked higher at 19th out of 193. The EPI is based on a review of the quality and usefulness of e-government programs that aim to engage citizens in public policy-making and implementation (United Nations 2018).

Despite these positive trends, many Filipinos are not aware and do not access government websites (Urbina & Abe 2017). Around 71 percent (We are Social and Hootsuite 2019) of the Philippine population has access to the Internet (PSAb 2017). Filipinos with higher educational attainment, skills in using the Internet, access to a personal computer and positive perception of the value of e-government are more likely to be aware and access government websites (Urbina & Abe 2017).

The Executive Order No. 265 of 2000 or Approving and Adopting the Government Information Systems Plan (GISP) and the Republic Act 8792 or Electronic Commerce or E-

Commerce Act of 2000 are considered to be the important pieces of legislation that encouraged the computerization of government procedures, particularly establishing an online presence (Iglesias 2010; Siar 2005). Approved and adopted in July 2000, the GISP served as a framework and guide for efforts to streamline and automate the services and operations of the government (Iglesias 2010). Three years after the implementation of the E-Commerce Act, nearly all local governments established an online presence (Siar 2005).

The most common content on Philippine city government websites includes information on the city's history, physical resources, sites and attraction and names of elected officials, which primarily promote the city's characteristics (Siar 2005). Other valuable information on a Philippine local government website includes the location of city government offices, forms and processes for government transactions, local government officials and their availability, tourism information and local ordinances (Iglesias 2010).

Ilago (2001) found that Philippine local government websites with participatory features have limited engagement. In a provincial government's website, citizens were encouraged to share complaints on corruption or abuse by public officials on a Governor's Corner page. These concerns would be both submitted to the Governor's email and posted on the publicly accessible page. The study found that only citizens who had access to the Internet were aware and participated on this page. Their complaints were mostly on the quality of service delivery, particularly infrastructure services. While the purpose of this page was to encourage the reporting complaints that would be directly communicated to the governor, the citizens also posted messages like requests for information, allegations of corruption and poor behavior or public servants and expression of support. Citizens who left messages on the complaint page felt that they were ignored as the government did not respond to or acknowledge their concerns. Other examples of available participatory features include public online polls to rank government priorities and specific investment areas.

Potential of Social Media

In contrast to government websites that serve as static information portals, social media can facilitate real-time exchange of information and feedback. Social media is defined as "computer-mediated technologies that facilitate the creation and sharing of information, ideas and other forms of expressions, and content via social media platforms and virtual networks"

(DICT 2017:2). These platforms “enable a distinctive field of public conversation, exchange and engagement” (Healy 2017: 771).

Social media supports real-time social interaction through user-generated content and online collaboration (Mergel 2013a). It is considered to be participatory and personalized because it enables bidirectional communication between governments and citizens and allows citizens to create and add value to content. The user-generated dynamic content, in turn, attracts other users who also generate content themselves (Boughzala et al. 2015).

When a local government posts content on their Facebook pages, citizens who follow these pages receive them on their personal feeds in real-time. The immediate interaction on social media platforms allows citizens to express approval, share and post comments on the post. Enabling interactivity has changed the roles in the exchange of information as “government is the main actor in the information process but allows citizens to interact with the content—potentially creating additional value as they discuss issues and provide innovative insights for government” (Mergel 2013a:30).

Public engagement using social media enables a partnership between the government and the public “throughout the decision-making process, from the identification of the problem to the development of alternatives and the identification of preferred solutions (Mergel 2013a:151).” In addition to using the platform to build awareness of organizational goals, advocacy groups in the United States use social media to engage with the public (Obar et al. 2012). As a result, the increased speed of two-way community-building conversations through social media facilitates collective action.

Social media platforms are the most popular tools used for e-participation (United Nations 2016). In particular, Facebook provides governments with an opportunity to engage with “actual” residents. Facebook is a Social Networking Site that requires users to set up profiles that contain information about themselves as the starting point for networking with others. Citizens who participate in Facebook pages of the government are most probably using their actual Facebook profiles that reflect their real identity, in contrast to anonymous e-government platforms.

Also, social media can serve as a platform where actors representing varying political interests are vying for influence and power. In particular, marginalized groups can use social media to gain more visibility and voice their agenda. While minorities can benefit from the

many-to-many direction of information on the platform, autocratic regimes have used social media to constrain the voices of the opposition. These tactics include censorship to deter or limit online activism, delay or suppress information and distract with propaganda (Tucker et al. 2017).

Current Government Use of Social Media

While social media can be used to share information (push), gather public opinion (pull) and respond to public feedback (networking) (Mergel 2013a), governments primarily use the platform to disseminate messages (Mergel 2013b). Previous studies found that the objectives of government social media use include fostering open and participatory governance and implementing laws and regulations (Khan 2015). Bennet and Manoharan (2016) found that the social media usage of US cities is in the initial information and communication stage of the Lee and Kwak Open Government Maturity Model. In the first out of five stages, communication is characterized as one way with the government using social media to disseminate information on its services. Only a few US cities had social media policies, with most of them addressing internal communication instead of external communication.

Bellström et al. (2016) identified eleven categories of local government posts, which include educating citizens, promoting events in and outside the municipality, promoting the municipality, promoting and providing information on public services and requesting assistance and information from the public. The most frequent content posted on government pages is information and announcements on internal activities such as meetings and events (Bellström et al. 2016) or public services (Reddick et al. 2017b). A significant amount of posts of American municipalities were one-way announcements that promoted special events and activities, contained images or videos, policy information and police and crime alerts (Graham & Avery 2013). Roengtam et al. (2017) found that the city governments of Bandung, Indonesia, Iligan, Philippines and Phuket, Thailand use social media primarily for disseminating information to the public and collecting feedback and information from citizens rather than involving them in the policy-making process.

Waters and William (2011) used content analysis to determine the direction and purpose of 1,800 tweets from 60 government agencies in the United States. They found that these organizations mainly used one-way rather than two-way symmetrical communication. In particular, their study confirmed that government agencies are more likely to follow the public

information public relations model to disseminate factual messages. The two-way symmetrical model, characterized by direct and bi-directional communication between the government agencies and the public, was the second most common approach.

The public sector is frequently encouraged to adopt a more engaging and conversational approach in their public relations because this strategy fosters long-term relationships with stakeholders. Waters and Williams (2011) argued that while two-way symmetry is essential to building and strengthening relationships with the public, using all four models of public relations is recommended to achieve an organization's objectives. Certain information such as advisories, alerts and warnings are better conveyed through the public information model, wherein truthful messages are delivered through a one-way model of public relations (Heath 2006 in Waters & Williams 2011).

In the Philippine context, an analysis of the websites and social media sites of the Department of Foreign Affairs, National Statistics Office and Bureau of Internal Revenue found that these platforms are used to disseminate information rather than promote public participation (Olaño 2014). The content of Facebook pages of the Department of Health (DOH), Department of Education (DepEd) and Home Development Mutual Fund (or Pag-ibig Fund) are mostly press releases and news items about the agency, which is the likely reason for low engagement on the platforms (David 2016). This self-promotion turns social media pages into "mini government websites" or "mini government newspapers" (Zheng & Zheng 2014). Roengtam et al. (2017) found that the Iligan City Government used its Facebook page to promote posts on public opinions, complains and emergency information and create content for public engagement.

Alampay et al. (2018) explored how eight LGUs, Makati, Malabon, Mandaluyong, Marikina, Muntinlupa, Parañaque, Quezon City and Valenzuela, and two national agencies, Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA) and the Metro-Manila Development Authority (MMDA), use of social media for disaster risk mitigation services. The two agencies were included in the study because PAGASA and MMDA conduct a significant amount of information dissemination and communication activities as part of implementing its mandate. The round table discussion revealed that social media had become the LGU's main communication channel for disaster risk management because it is considered to be the fastest and most efficient platform to disseminate

announcements. Another key finding was the national agencies had more human resources that allow it to monitor and respond to posts and comments regularly.

During times of crisis and disaster, local governments share real-time updates on risks and the availability of government services, utilities and relief efforts on social media (Magnusson 2016). Agencies also use the platform to collect information on the actual situation from its citizens (Congjuico 2014; David et al. 2016; Soriano et al. 2016). Becodo (2015) observed that communication activities related to disaster risk reduction and management improve after disasters occur. In two municipalities in the Iloilo Province, the Office of the Mayor provided communication services related to disaster risk reduction rather than designated public information and communication sub-units under its disaster risk reduction and management councils.

PAGASA monitors Twitter and Facebook to validate the on the ground situation during natural disasters. While LGUs do not have the same dedicated resources nor supporting mandate to continually monitor social media, they respond to posts on an ad-hoc basis. This happens when an issue becomes popular, such as many stranded residents demanding free rides from the Valenzuela City Mayor, or viral (Alampay et al. 2018).

Based on these previous studies, government social media use appears to be in the Information Socialization stage, wherein the platform is mainly used as an informational and participatory channel that regularly delivers information to citizens that will allow them to observe and participate in government activities (Khan 2015).

Using social media as an additional channel to broadcast information does not fully maximize the platform's potential. Social media gives governments direct access to citizens' sentiments and feedback (Mergel 2013b). In addition to serving as a platform that facilitates collaboration, social media usage can extend to the transaction of online services (Khan 2015). For example, smaller American local governments use Facebook to support the delivery of transactional e-governmental services (Gao & Lee 2017).

Engagement on Social Media

Arnstein (1969) introduced a typology of eight levels of participation, which is defined as “the redistribution of power that enables the have-not citizens, presently excluded from the political and economic processes, to be deliberately included in the future” (p. 216). The first

two levels, manipulation and therapy, are considered nonparticipation as these activities aim to adjust the behavior of the public. The next three levels are defined as degrees of tokenism because citizens involved in the government processes, through one-way communication for informing, inviting representatives for consultation and allowing recommendations that will be vetted for placation, but remain powerless to enact any change. The last three levels, partnership, delegated power and citizen control, are considered degrees of citizen power because the public has increasing influence, authority and accountability in the decision-making processes.

Before engaging with the online public, government agencies must first encourage the public to use their electronic platforms. Citizens are more likely to use e-government platforms that are convenient (Wang 2014), relevant (Cegarra-Navarro et al. 2014) and free (Grossman et al. 2014). The public is also more likely to be satisfied with e-government services that are user-friendly, responsive, factual and secure (Kumar et al. 2017). These trends push government agencies to create their official pages on social media platforms that their target audience already uses and by extension are familiar with (Mergel 2013a).

These trends have been observed on social media platforms as users are more likely to continue to engage with government Facebook pages when they are satisfied with the quality of the information on the platform. Specifically, users are more likely to follow a page when they consider its information to be reliable, complete, relevant, timely and understandable, which are the dimensions of information quality (Valaei & Baroto 2017).

Government agencies recognize the importance of adapting to the changing information consumption behavior of its citizens who prefer directly receiving information through social media rather than accessing official websites. In the Philippines, the most common activities of internet users are accessing social media platforms, followed by sharing content and obtaining information on current events or politics (Urbina & Abe 2017). Young Filipinos are more likely to receive political news and information from social networking sites (David 2013).

Local governments obtain higher levels of public engagement on Facebook compared to Twitter because its features support community-building efforts and dialogue (Haro de-Rosario et al. 2016) and more constituents are Facebook users (Gao & Lee 2017). With its 280-character limit per tweet, Twitter is not suited for supporting argument-based discussion,

especially with the presence of online trolls that aim to harass rather than engage towards participatory goals (Tucker et al. 2017). Roengtam et al. (2017) explained that among social media platforms, “Facebook, in particular, affords users a high degree of social presence, making it the best tool for creating and nurturing small online communities managed by Local Government Units. (p.352)” Advocacy groups in the United States primarily used Facebook to educate the public on relevant issues, inform citizens on updates and events and giving citizens a platform to share their opinions, mobilize citizens and collect petition signatures (Obar et al. 2012).

Reddick et al. (2017b) determined that the features of Facebook support the three levels of e-participation. Managerial e-participation focuses on providing content to the public. Consultative e-participation emphasizes the importance of receiving feedback from the public. Citizens play an active role in the participatory level of e-participation as active social media enables the two-way and multi-directional flow of information. Facebook allows citizens to engage by adding their comments (two-way) to posts as well as share posts with the rest of their network (multi-directional).

Public Feedback on Social Media

Social media provides the opportunity to enhance and widen participation in the policy process as the vast array of feedback and alternatives from the public is available to the government through this platform (Roengtam et al. 2017). Facebook has the potential to expand the role of citizens from passive consumers of public services to active contributors in the co-production of public services (Linders 2012). The internet has the potential to encourage engagement through democratic socialization by making information gathering easier and more convenient. People who frequently use the Internet to search for and obtain news and information are more likely to have positive attitudes towards public participation and other similar democratic values (Chang 2017).

On government social media platforms, citizens are more likely to request for information (Bellström et al. 2016; Magnusson 2016; Reddick et al. 2017b), engage in topics that directly affect their daily affairs such as posts on public services and news reports (Hao et al. 2016) as well as information on public transport, housing and public works and town planning (Bonsón et al. 2015). Citizens are also more likely to react to the content posted by the government unit managing the page rather than content published by the citizens on the

same page (Lev-On & Steinfeld 2015). Also, access to technology, particularly mobile phones, sharply increased the probability of reporting police abuse and burglary but not complaining about the government in general (Botero et al. 2013).

Previous studies have found limited levels of public engagement on local government Facebook pages. On Facebook pages, reacting to a post is the most popular form of interaction, followed by sharing and lastly commenting on a post (Bonsón et al. 2015; Haro-de-Rosario 2016.) Users are more likely to use the react function because it is the fastest and easier way to engage with a post. They are less likely to share and comment because these features require more effort (Bonsón et al. 2014). In contrast, Hao et al. (2016) observed citizens are more likely to share or forward government posts rather than give their feedback through likes and comments.

Higher volumes of posts are not necessarily an indicator of high levels of activity. Lower levels of engagement have been observed on pages where the government agency posts information without replying to comments (Gao & Lee 2017; Haro-de-Rosario et al. 2016). Agostino and Arnaboldi (2016) found that users tend to ignore posts from pages that post frequently. Local governments that maintain more interaction on their Facebook pages are more likely to have higher levels of public engagement (Haro-de-Rosario et al. 2016).

Information dissemination and public operations drive the demand for transparency. There is a higher demand for fiscal transparency when citizens have more contact with their local governments (Piotrowski & Van Ryzin 2007). There is an increasing trend of citizen-led initiatives to improve access to government information. Social media can facilitate citizen monitoring and reporting when the public becomes a source of information that can contribute to the direction and outcomes of the government. Citizens can immediately and publicly share knowledge with the government through their feedback on public services and officials through Facebook pages (Linders 2012). Government officials can use comments and feedback provided by citizens to gauge public sentiments and potential conflicts on specific issues and policies. Using Facebook as a two-way communication channel can enhance institutional effectiveness and strengthen citizens' 'buy-in' of future policies. This feedback loop is publicly visible through updates and comments posted by both ministers and citizens on Facebook (Soon & Soh 2014).

In addition to feedback, social media can serve as a mechanism for complaints as the platforms links citizens directly to government agencies. The level of public engagement is more likely to increase when comments are more negative because citizens who have more dissatisfied with the government are more likely to more active on social media (Haro-de-Rosario et al. 2016). The process of citizens complaining against official misconduct can improve government because these complaints increase the risk of misbehaving government officials to be investigated and disciplined (Botero et al. 2013).

Social Media and Transparency

Access to information plays a crucial role in enabling government transparency. Disseminating information through social media has the potential to enable open and user-centered governance (Bertot et al. 2010) and dialogue to support public decision making (Patel et al. 2013). Public organizations disclose information as “a means to promote transparency, specifically in what concerns the use of public resources” (Lourenço et al. 2013:280).

Transparency is defined as “the ability to find out what is going on inside government” (Piotrowski & Van Ryzin 2007:307). In detail, transparency is a “function of oversight of and insight into government processes “clearly observable and communicated decision-making processes and outcomes” (Mergel 2013a:211). Conceptualizing transparency “as a set of events or activities rather than a linear stream of processes” (Grimmelikhuijsen & Welch 2012:569) can more appropriately capture how institutional factors affect these initiatives and its intended impact. In this study, disclosing information through social media is an activity that supports transparency.

In contrast, Bannister and Connolly (2011) argued that the expectations of transparency facilitated by ICT may be unfeasible. For some government units, the unidirectional flow of information on these social media pages may be in line with achieving their objectives of using the platform as a dissemination channel rather than participatory. While ICT empowers citizens to mine for government data, these opportunities for transparency and openness also pose challenges for and threats to governments. Social media “can have disruptive effects on the existing organizational norms and procedural elements of government organizations (Mergel 2013a:60).” Multiple barriers cause resistance to the adoption and full realization of the participatory features of social media.

While social media can enable transparency, this does not necessarily foster accountability. Defining transparency as “the availability of information about an actor that allows other actors to monitor the workings or performance of the first actor” (p.430), Meijer (2013) emphasized the active role of both the government and citizens towards achieving transparency. Dissemination of and access to information is a crucial institutional capacity that serves as the link between transparency and accountability (Fox 2007).

Institutional capacity to support social media

Government adoption of social media may represent how the public sector is conforming to stakeholders’ expectations on transparency, engagement and trust building (Bonsón et al. 2015). States that have strong political institutions (Jho & Song 2015) and effective governance (Gulati et al. 2014) are more likely to meet these expectations as they offer more online government services as well as greater opportunities for e-participation. Local governments that are more open with access to information are more likely to have higher levels of citizen engagement on their social media platforms (Haro-de-Rosario et al. 2016).

Graham and Avery (2013) found that American municipal governments are more likely to adopt the use of Facebook as a result of internal pressure and citizen demand. Municipal officials who value the importance of social media are more likely to use the platform. In contrast, citizen expectations did not significantly impact the use of social media. By providing information and responding to inquiries, municipal governments use social media to make government activities and initiatives more open and accessible.

The characteristics of a city or municipality also impact the level of engagement on government Facebook pages. Social media pages of cities with larger populations, a higher number of households with ICT equipment and better financial performance are more likely to have higher levels of engagement (Ignacio Criado et al. 2017). For example, Italian regional capital cities with larger populations are more likely to have higher levels of public engagement, with the general public replying to the government’s posts (Agostino & Arnaboldi 2016). Governments with larger populations, possibly facing more pressure for transparency, are more likely to use social media to share information (Barbera & Zeitzoff 2017; Guillamon et al. 2016).

Technology has been used to enrich or expand the scope and depth of existing face-to-face discussions as interpersonal interaction remains essential to the success of public

engagement initiatives (Lukensmeyer 2017). Ilago (2001) recommended increased online local government presence must be complemented with face-to-face participatory activities such as dedicated public spaces and information kiosks to harness the potential of the Internet to both improve public service delivery and democratic participation. The level of public engagement on social media is higher when government initiatives use these platforms to complement traditional websites. Comparing the spending review initiatives of the national governments of the United Kingdom, Italy and France, Agostino et al. (2017) found that frequent, real-time and responsive exchange of information and interaction on the social media platforms facilitated increased transparency and higher public involvement. Combining traditional and online participation platforms, supported by extensive promotion, can enable broader public participation (Cochrane 2015).

While ICT empowers citizens to “mine” government data, these opportunities for transparency and openness also pose challenges for and threats to governments (Bannister & Connolly 2011). Social media “can have disruptive effects on the existing organizational norms and procedural elements of government organizations (Mergel 2013a:60).” Systemic barriers to realizing the full potential of social media for citizen participation include unclear responsibility and authority among government units (Mergel 2013b), mismatch between citizen expectation and government structure and capacity on instant feedback (Mergel 2013a), constrained financial resources (Chadwick 2011; Barry & Bannister 2014), and difficulty in attracting users (Chadwick 2011). In the Philippines, the minimal adoption of e-governance, observed by the content and features on these websites, is likely to reflect the hesitance of local governments to disseminate information, weak ICT capacities and limited budget (Siar 2005). For example, Caloocan City was able to provide more e-government services and applications because the local government had specific budget allocations for system design and maintenance (Iglesias 2010).

Local governments that have more institutional capacity to use social media such as the skills, resources and political support are more likely to overcome barriers to the full adoption of the participatory features of social media. Agencies that already have existing e-government services are more likely to adopt social media platforms (Gao & Lee 2017) because the public servants have the required capabilities to launch and maintain technology-based solutions (Ignacio Criado et al. 2017). Some of the good practices from Philippine national agencies include assigning dedicated personnel on social media, forming a social media team housed

within the organization, allowing autonomy on content creation, providing access to a multimedia team, and ensuring good rapport with other offices (David 2016).

Another challenge to online public engagement is the conflict between the policy goals of an agency and perceive threats from increased openness (Chadwick 2011). Federal executive agencies in the United States have tailored open government efforts that generate transparency, participation, and collaboration to the extent that is in line with their organizational goals (Evans & Campos 2012). The draft Philippine AO on social media emphasized that social media use must support the fulfillment of the agency's mandates, goals and purposes (DICT 2017). Open government initiatives must be aligned to support an institution's strategic and operational goals to maximize the potential of Web 2.0 technologies to meet open government goals (Meijer & Thaens 2010). As a result, specific agencies may encounter unique challenges in fulfilling open government directives.

Social media and government officials

The support of local officials is a critical factor in adopting social media for public engagement, particularly in contexts wherein civil society organizations traditionally initiate and lead these activities. The presence of an internal leader who champions the use of social media also contributes to the success of these initiatives (Ignacio Criado et al. 2017). In the Municipality of Cainta, Facebook was successfully integrated into the local disaster risk management and emergency response activities because the mayor valued social media as a platform to connect with his constituents (Congjuico 2014).

In Bandung City, the mayor mandated all city government agencies to use social media and established a citizen reporting system in 2014. With these enabling policies in place, the government officials recognized the value of social media as a platform "where citizens can interact with the city government regarding information dissemination, dialogue, managing inputs from the community and in prioritizing city programs" (Roengtam et al. 2017: p. 357). In contrast, officials of Phuket City, which did not have similar policies, considered social media as a channel for public relations rather than receiving complaints.

In the Philippines, mayors play a central role in many local government activities. Similar to the pangulo regime on the national level (Agpalo 1999), local chief executives dominate the local government. Machado (1974) argued that socio-economic changes impacted the pattern of local politics in rural areas in the Philippines, moving local power from

leading clans to individuals. Specialized political machines are comprised of a network of followers held together by a system of patronage toward supporting a single leader. Aspinall et al. (2016) described this common pattern of local electoral politics in the Philippines as a mayor-centered local political machine, wherein the mayor is at the top of a pyramidal network of well-connected local leaders who campaign for the local chief executive. This face to face promotion is the cause of the prominence of mayors as local patrons. This individual-centered promotion was also observed in the websites of Philippine political parties that highlight political personalities rather than broader policy concerns (Teehankee 2010).

Institutional local government Facebook pages can be used as another platform to cultivate their positive image of public officials for the goal of re-election (Friedrich-Ebert-Stiftung 2012). When these Facebook pages disseminate information on the government's services and event in a city or municipality, the content may also highlight the role of the mayor in implementing these activities. To support this positive image, these Facebook pages can feature how mayors demonstrate their sympathy for their electorate, emphasizing the value of *pagdamay* (Agpalo 1999). Promoting the more personal aspect of politicians can increase the chances of electoral success as David and Atun (2012) found that voters who watch more television are more likely to vote for celebrities, with possible explanations ranging from an increased feeling of closeness through exposure to media and association with positive emotions.

Social media can be considered as a tool for political marketing to promote and increase the personal visibility of politicians (Enli & Skogerbo 2013). Increasingly, political candidates use social media rather than traditional news for self-presentation, or e-presentation, to influence public perception (Waters & Williams 2011). Barbera and Zeitzoff (2017) found that political leaders initially start using social media to secure their position of power by promoting their activities in response to political pressure from elections, social unrest and protests.

Social media can continue to serve as a crucial political marketing platform after elections by promoting how the incumbent administration can successfully provide public goods and services to its residents. Kawanaka (2002) found that the lower-income majority of the electorate in Naga City was interested in information om how they can directly benefit from the government. In addition to the state resources coursed through institutions specifically established to obtain the support of the urban poor, marketing the effectiveness of the local

government in meeting the demands of its people can convince electorates to stay loyal to the current administration.

Unanswered Questions or Gaps in the Literature

Most of the literature on how governments use social media for public engagement has focused on the impact of the government's use of social media such as an increased perception of transparency (Song & Lee 2015) and trust (Warren et al. 2014). Studies that have examined how governments use social media focused on micro-blogs by government agencies in China (Hao et al. 2016; Zheng & Zheng. 2014), central ministries in South Korea and the federal departments in the United States (Khan et al. 2014) and Youtube in Indonesia (Reddick et al. 2017b). Studies on citizen engagement on Facebook have examined the page of members of the Parliament in Singapore (Soon & Soh 2014), local officials and governments in Western Europe (Agostino et al. 2017; Agostino & Arnaboldi 2015; Bellström et al. 2016; Bonsón et al. 2019; Bonsón et al. 2015; Bonsón et al. 2014; Haro-de-Rosario et al. 2016; Hofmann et al. 2013; Ignacio Criado et al. 2017), United States (Bennet & Manoharan 2016; DePaula et al. 2018; Gao & Lee 2017; Mahajan-Cusack 2016; Reddick et al. 2017b; Stoeckel 2018), Australia, Canada (Magnusson 2016), Israel (Lev-On & Steinfeld 2015), Turkey (Sobaci & Karkin 2013; Yildiz et al. 2016), South Korea (Eom et al. 2018) and Southeast Asia (Roengtam et al. 2017).

Studies in the Philippine setting have examined the content of local government websites (Siar 2005; Iglesias 2010) and Facebook pages of national government departments (Olaño 2014) and social service agencies (David 2016). Other studies have focused on social media use during disasters (Alampay et al. 2018; David et al. 2016; Syliongka et al. 2016; Soriano et al. 2016; Congjuico 2014).

Congjuico (2014) examined how the Municipality of Cainta used Facebook as part of its disaster management and emergency response. The content analysis found that the posts of the mayor and local disaster risk reduction and management office were mostly about disaster response updates, weather and road advisories and alerts for disaster workers, while comments to the posts were mostly citizen flood reports and emergency calls.

Within the literature of government communication, studies have debated the relationship between informational and persuasive goals of government communication (Canel & Sanders 2012). This study aims to contribute to this debate by determining whether the 17 LGUs of NCR are more likely to use Facebook for information dissemination as transparency and accountability or strategic management towards strengthening public support (Canel & Sanders 2011). This study also contributes to the limited number of comparative studies of government communication (Canel & Sanders 2012) by examining different LGU pages that appear to have two distinct page types: institutional and mayor.

This study built on the analyses of website and social media content established by previous studies in the international and Philippine context. It addresses the gaps in the literature by presenting a comprehensive exploration of how government social media use, represented by the activity, interactivity and posted content on the Facebook pages of the 17 local government units of Metro Manila, for public engagement within the context of informational and persuasive communication goals.

Chapter 3

How Do Local Governments Use Their Facebook Page?

This section presents the findings of how the 17 local governments of Metro Manila use their Facebook pages by first describing how frequently page owners post content and reply to comments from members of the public. The identified frequent themes are explored then classified under the four models of public relations (Waters & Williams 201; Grunig & Hunt 1984). Differences in the percentage of frequent themes and direction by page type are also discussed throughout the subsections.

Activity

Activity is defined as the average number of posts in a month (Barbera & Zeitsoff 2017). Table 5 presents the frequency distribution of activity into three intervals representing low, average and high activity within the sample of 17 LGUs. Most (9) LGUs can be described as having high activity, relative to the sample. Three (3) have average activity while the other five (5) pages have low activity. Quezon City has the highest activity, with an average of 80.83 posts in a month, while Pasay has the lowest activity, with an average of 4.83 posts in a month. Both of which are institutional pages.

Among mayor pages, two (2) (Manila and Pasig) have low activity, one (1) (Caloocan) has average activity while two (2) others (Mandaluyong and Parañaque) have high activity. Institutional pages appear to be more active as the five (5) most active pages are institutional pages.

The study assumes that governments created public Facebook pages to interact with constituents on the platform, which includes public posts. The pages that have lower activity may have constraints that limit their ability to create content.

Table 5. Frequency distribution of activity

	Low	Average	High
Class interval	4.33 - 29.83	29.83 - 55.33	55.33 - 80.83
Frequency	5	3	9
LGUs (listed in ascending order)	Pasay 4.33	Pateros 42	Marikina 56.16
	Las Piñas 12.66	Caloocan 48.33	Mandaluyong 62.33
	Manila 22.5	Malabon 52.5	Taguig 68.16
	San Juan 24.5		Parañaque 70.16
	Pasig 28		Valenzuela 70.66
			Muntinlupa 73.33
			Makati 74
			Navotas 75.5
			Quezon 80.83

Interactivity

Interactivity is defined as the percentage of replies by local government to comments by citizens (Haro-de-Rosario et al. 2016; Bonsón et al. 2014).

Table 6 presents the frequency distribution of interactivity into three intervals representing low, average and high interactivity within the sample of 17 LGUs. Most (15) LGUs can be described as having low interactivity relative to the sample. Only Taguig has average interactivity while Makati has high interactivity. Makati has the highest interactivity, with 0.08147% of replies to total comments by citizens while San Juan has the lowest interactivity with zero replies.

Most of the total 6,860 replies were from Makati (61%) and Taguig (31%). Institutional pages seemed to be more interactive as 96% of the total 6,860 replies were from the 12 pages. Among the mayor pages, Manila is the most interactive with 164 replies or 2.39% of total replies while Caloocan had the least replies at three (3).

Maintaining a social media presence creates an expectation of responsiveness (David 2016). The findings show that most of the LGUs are generally unresponsive on their Facebook page; however, more interaction may be present in the direct messages, which is beyond the scope of the study.

Table 6. Frequency distribution of interactivity

	Low	Average	High
Class interval	0 - 0.029	0.029 - 0.058	0.058 - 0.087
Frequency		15	1
LGUs (listed in descending order)	Caloocan 0.00005	Taguig 0.04332	Makati 0.08147
	Las Piñas 0.00007		
	Malabon 0.00169		
	Marikina 0.00176		
	Parañaque 0.00196		
	Muntinlupa 0.00198		
	Mandaluyong 0.00217		
	Pasig 0.00223		
	Quezon 0.00307		
	Navotas 0.0034		
	Valenzuela 0.0035		
	Pasay 0.00605		
	Pateros 0.00797		
	Manila 0.00848		

The study examined the replies posted by the LGU page by conducting a word frequency query with a minimum word length of five (5) and enabled word grouping. An initial scan of the comments showed that most of the replies from the LGU end in “thanks” or “salamat,” explaining the high frequency of the word (see Annex C). The results of the word frequency count and initial scan of comments showed that replies by LGU redirect the user to a telephone number or page with more information. For example, many of the replies from the Makati City page link to a website within the official website (www.makati.gov.ph).

Many of the replies from the local government also appeared to be templated, confirming the responses of the interviewees who indicated that their teams are guided by templated responses for frequently asked questions that are mostly inquiring about government services or posts under “Providing information on basic services and facilities.” The Quezon City interviewee noted that frequently asked questions received through comments and direct messages are about forms and processes for government transactions, similar to what is considered valuable information on government websites (Iglesias 2010).

The cities that demonstrated high levels of interactivity have templated answers that redirect to call a telephone number. For example, Makati uses “For concerns or complaints,

you may call...” or “Para po sa inyong katanungan, maaari po kayong tumawag sa...” while Taguig replies, “Good Morning/Afternoon, for your inquiry, you can contact...” NVivo cannot generate the word frequency of grouped Filipino words. Combining the frequency count of the word “tawag” and its conjugations “tawagan” and “tumawag,” this would be the 7th most frequent word at 0.73% of all words. These templated responses that simply refer to the telephone number of the involved LGU office can be considered the least responsive form of interactivity. In contrast, highly responsive client-servicing replies provide direct answers to the users’ specific questions and provide a web link for more information (David 2016).

Interviewees noted that commonly received complaints were about government services, similar to the survey responses that indicated Facebook pages are the most appropriate platform to publicly address comments on feedback on public services (M: 4.63, SD: 0.52). Ilago (2001) also found that complaints on the quality of service delivery, particularly infrastructure services, are the most common feedback.

Themes

The study identified a total of eight (8) main themes. Table 7 shows the percentage of each theme in all 17 Facebook pages. It also shows the ten (10) most frequent words, which was generated through a word frequency query of all posts under each theme on NVivo.

Table 7. Themes of Facebook posts

Themes	Percentage (all pages)	10 most frequent words (arranged in decreasing frequency)
Providing information on services and facilities	34.26%	mayors, barangay, office, ating, school, programs, centers, #makatizens, lungsod, services
Marketing activities in the city	15.98%	mayors, ating, office, barangays, lungsod, Christmas, Valenzuela, Muntinlupa, government, lahat
Social media sharing	15.28%	shared, Marikina, photos, added, Salvador, feeling, Muntinlupa, government, isangpateros, philippines
Symbolic presentation	14.87%	mayor, school, ating, #kayanaten, lahat, #malabonian, lungsod, maraming, inyong, salamat
Disaster risk communication	7.04%	levels, inches, classes, public, #walangpasok, private, weather, schools, update, mayor
Marketing the city	6.79%	awards, navotas, government, mayor, quezon, ating, facebook, Malabon, #kayanaten, philippines
Non-disaster advisories	4.51%	advisory, traffic, avenue, along, Maynilad, November, vehicles, affected, water, interruption
Requesting action from citizens	1.29%	ating, Malabon, lungsod, malabonian, navotas, inyong, #kayanaten, tanong, Philippines, millennial

The most frequent theme is **“Providing information on services and facilities”** with 1,756 posts or 34.3% of all coded posts. These include posts that provide information on the local government’s programs, projects and activities related to the basic services and functions of cities under the Local Government Code. Posts about social welfare services (14% of Providing information on services and facilities), health (12%) and education (10%) are the most frequent subthemes (see Annex D). Others include livelihood training, employment opportunities, environment management, mobile services, housing projects, information campaigns, infrastructure, transportation and veterinary services. It also includes a subtheme for posts that feature information about legislative activities such as videos of city council meetings on the Makati page.

The frequency of this theme reflects the survey responses that Facebook pages are the best channel to share information on activities and program organized by the local government (M: 5, SD:0); employment opportunities within the city or municipality (M: 5, SD: 0); public services provided by the local government (M: 5, SD: 0) and benefits of residents (M: 4.89, SD: 0.33).

This content type is similar to what is considered valuable information on a Philippine local government website such as the location of city government offices, forms and processes for government transactions, and local ordinances (Iglesias 2010). The frequency of this content type is expected because most public communication activities are likely to be focused on supporting the delivery of public services to serve citizen’s needs, which is one of the government’s main concerns (Liu and Horsley 2007). Also, users expect Facebook pages of the municipalities to contain general information about the municipalities such as addresses, information about the mayor, contact information, link to the official website (Yildiz et al. 2016).

This result also confirms findings from previous literature. The most frequent type of communication from the Facebook page of 52 randomly selected U.S. local government department pages are “Operations & events” (51.30%), which is defined as providing information on the operations, programs and/or policy of an agency as well as event information (De Paula et al. 2017). Announcements of upcoming government-organized activities were also the most frequent posts of the 25 largest German cities (Hofmann et al.

2013). The most frequent content (23.25%) posted on the Facebook page of the City of San Antonio Solid Waste Management Department (SWMD) are categorized as “Information” that educate citizens on recycling practices (Reddick et al. 2017b).

The second most frequent theme is “**Marketing activities in the city**” with 819 posts or 16.0% of all coded posts. These include content that promotes activities within the city that are either organized by an external party or city government but not related to the basic services and facilities in LGC. Examples include holiday activities, contests and gift-giving for residents, flag ceremonies and other internal activities for city government offices and employees, entertainment and cultural events such as fiestas, and sports events such as games of the Maharlika Pilipinas Basketball League.

Similarly, the most frequent content posted by the Municipality of Karlstad, Sweden are “Marketing Events in the Municipality” at 43.30% (Bellström et al. 2016). In Andalusia, Spain, the most common content on the official Twitter account of 29 local governments was “Cultural and Marketing” with examples that include cultural activities and events, traditional holidays, city promotion, and tourism. Another content type from the same study, “Sport,” is also under this category (Bonsón et al. 2019). The most frequent type of communication from the Facebook page of 52 randomly selected U.S. local government department pages are “Operations & events” which is defined as providing information on the operations, programs and/or policy of an agency as well as event information, time or link to more information (De Paula et al. 2018).

Another theme is “**Social media sharing**” with 783 posts or 15.3% of all coded posts. These posts do not contain text that can be coded with any degree of certainty. Examples include uploaded photos with captions with insufficient information or system-generated text such as “(page name) added (#) new photos,” “(page name) is with (username),” “(page name) shared (page name or username)’s post.” It also includes system-generated posts that are created when the page updates its cover photo and profile details.

Other studies do not include similar posts that only contain a link and lack a message or description in their analysis (Hofmann et al. 2013) or were included in catch-all codes like “Others” (Bonsón et al. 2019). Bellström et al. (2016) coded system-generated posts as “Automatic Facebook Posting.”

The fourth theme is “**Symbolic presentation**” with 762 posts or 14.9% of all coded posts. The study adopts the concept of symbolic and presentational exchanges (DePaula et al. 2018) to describe content that does not seek to provide factual information but instead evokes emotion (Water and Williams 2011).

Posts under this category contain personal content such as expressions of gratitude, greetings for birthdays, holidays and congratulations, and recognition activities to specific constituents in events not organized by the city. It includes personal messages, quotes or official statements from mayors as well as videos of the mayor or other city officials participating in events that are not explicitly related to the basic services and facilities of the LGC. These include participation in the opening or ribbon-cutting ceremonies of local businesses. Quotes and inspirational messages not related to public services or attributed to any specific official are categorized under this content type.

These examples are also similar to the three subtypes of Symbolic and Presentational Exchange identified by DePaula et al. (2018). “Favorable presentation” posts feature positive imagery or self-referential language of gratitude to induce likability, competence or worthiness. “Symbolic acts” are expressions of congratulations, gratitude, condolence and celebration of holidays.

Other studies have also identified comparable content types. Multiple categories of the SWMD’s posts such as “Congratulatory,” “Greetings” and “Quotes” collectively comprise 11.68% of analyzed posts (Reddick et al. 2017b). Similar posts, categorized as identified posts that “Express, or appeal to emotion” and comprising 12% of all posts, were also observed during flooding incidence (Magnusson 2016)

The fifth theme is “**Disaster risk communication**” with 361 posts or 7.0% of all coded posts. These posts are announcements of class suspensions and any advisories and updates related to natural disasters such as typhoons and flooding. Under this theme, the pages disseminate more posts declaring class suspension (56%) compared to disaster advisories (44%), which include updates on the weather disturbance and its impact. This contrasts with Congjuico’s (2014) findings that “Disaster Response Update” was the most frequent subtheme (40.54%) while “Class/Office Suspension was the least frequent” (5.41%). Both subthemes are considered “Information” tweets that provide information about the disaster, its impact and relief activities are the most common category (David et al. 2016). Magnusson (2016) also

found that the most frequent posts during flooding incidences in Bundaberg, Sweden and Calgary, Canada were “Share real-time operational information and situational updates.”

Survey respondents also noted that Facebook pages are the best channels to share information on real-time advisories and updates during disasters and emergencies (M: 4.89, SD: 0.67).

The sixth theme is “**Marketing the city**” with 348 posts or 6.8% of all coded posts. These posts market the city as an attractive place to live or invest by featuring the city’s awards and accolades as well as positive news articles and press releases. It also includes content that promotes business establishments and attractions in the city. While this type was relatively infrequent, survey respondents indicated that positive stories from the city/municipality (M: 5, SD: 0) are suitable content for Facebook pages.

This is similar to most common content on Philippine city government websites in the early 2000s, which primarily promotes the city’s characteristics such as information on the city’s history, physical resources, sites (Siar 2005). Tourism attractions were also prominently featured in local government websites (Iglesias 2010). Similarly, “Marketing the Municipality” is the second most frequent category in the Municipality of Karlstad, Sweden at 14.17% of all coded posts (Bellström et al. 2016).

The seventh theme is “**Non-disaster advisories**” with 231 posts or 4.5% of all coded posts. These posts are announcements and advisories on traffic updates, business hours of city government offices, fake accounts, postponed elections, water or power utility interruptions, strikes and missing persons. Users expect local governments to actively post news to inform citizens of the localized updates in the city, such as impassable roads (Yildiz et al. 2016). Bellström et al. (2016) also identified “Service Maintenance Information” as the third most frequent category at 8.66%.

The eighth and least frequent theme is “**Requesting action from citizens**” with 66 posts or 1.3% of all coded posts. These posts include a call to action such as requests to like and share a specific post as part of voting in online contests. It also includes posts that invite citizens to send an email, call a hotline, visit the office or tag the page in posts to file complaints and concerns. It also includes trivia questions. Only one (1) post from Valenzuela City attempts to pull information from citizens:

“Muli naming hinihingi ang inyong opinyon para sa Tinig Ng Mamamayan! Valenzuelanos sang-ayon ba kayo sa Jeepney Modernization Program? Ang mga mapipiling tugon ay ilalathala sa susunod na edisyon ng Valenzuela Ngayon Magasin at magkakamit ng libreng Experience Valenzuela Journal. #TinigNgMamamayan #ValenzuelaNgayon.

While this post is explicitly soliciting public opinions, the overt objective of this feedback gathering exercise is content creation for the Valenzuela Ngayon Magasin as selected submissions will be featured in a publication, which can be an incentive in itself in addition to receiving a free copy of the Experience Valenzuela Journal. However, the gathered feedback is unlikely to be used for any decision-making for the Jeepney Modernization Program that is implemented by the national government.

This content type is similar to the “Citizen information (Input seeking)” category that request for input from citizens, which was only 1.48% of all examined posts and second to the least frequent subtype of communication (DePaula et al. 2018). Bellström et al. (2016) also found similar posts categorized as “Requesting Assistance from Citizens” and “Requesting Information from Citizens” that collectively comprised of 13.38% of posts.

Interactivity by Theme

After identifying the frequency of the themes, the study examined the theme of posts where governments were responsive and replied to comments. Table 8 shows that the 17 pages replied to comments on 72 out of 360 posts (19.94% of content type) coded as “Disaster risk communication” and 342 out of 1756 posts (19.48% of content type) coded as “Providing information basic services and facilities.”

Table 8. Interactivity of theme

Content type	Number of Posts with Replies from LGU	Total Replies from LGU	Percentage
Providing information on basic services and facilities	342 (19.48%)	4,867	70.95%
Disaster Risk Communication	72 (19.94%)	671	9.78%
Non-disaster advisories	30 (12.99%)	385	5.61%
Marketing activities in the city	96 (11.72%)	441	6.43%

Content type	Number of Posts with Replies from LGU	Total Replies from LGU	Percentage
Marketing the city	37 (10.63%)	94	1.37%
Social media sharing	28 (3.57%)	118	1.72%
Symbolic presentation	48 (6.31%)	238	3.47%
Requesting action from citizens	8 (12.12%)	46	0.67%
Total		6,860	100%

The high interactivity observed with posts coded as “Providing information on basic services and facilities” is likely to be the LGU responding to inquiries and requests for more information on the promoted service or activity, which confirms the findings of previous literature (Bonsón et al. 2015; Bellström et al. 2016; Magnusson 2016; Reddick et al. 2017b).

“Disaster risk communication” posts have the highest interactivity, consistent with the observation that municipal elected officials in Florida, USA are more responsive on posts that users consider to be specific and intended for their needs (Stoeckel 2018).

In contrast to Stoeckel’s (2018) findings that citizens may feel that impersonal posts, such as shared posts, picture, or link with no caption or context, do not appear inviting for comments and result in limited engagement, “Social media sharing” posts that mostly lack any customized text or message had relatively average engagement.

Theme by Page Type

The frequency of themes differs for institutional and mayor pages. Table 9 shows that most posts on institutional pages are “Providing information on basic services and facilities.” Mayor pages have a higher percentage of content on “Symbolic presentation” compared to institutional pages.

Another informational theme, “Non-disaster advisories” is more frequent on institutional pages compared to mayor pages. “Marketing the city” may also be more common for institutional pages that use the page to promote the city as a brand. The frequency “Social media sharing” may be skewed because a significant percentage of posts of Marikina are shared

content from a user “Ryan Salvador.” A cursory review of his posts shows that Mr. Salvador is a city government staff who frequently posts photos and videos of government-organized activities where the mayor is present.

“Marketing activities in the city” is more popular on mayor pages because it includes posts of activities attended by the mayor. These include inaugurations, similar ceremonies and other events organized by local organizations, most notably homeowner associations.

Table 9. Percentage of themes by page type

Content type	Percentage (all pages)	Percentage (institutional pages)	Percentage (mayor pages)
Providing information on services and facilities	34.26%	33.10%	37.47%
Disaster risk communication	7.04%	6.68%	8.06%
Non-disaster advisories	4.51%	5.43%	1.92%
Marketing activities in the city	15.98%	15.40%	17.59%
Marketing the city	6.79%	8.24%	2.73%
Social media sharing	15.29%	18.50%	6.36%
Symbolic presentation	14.85%	11.21%	24.98%
Requesting action from citizens	1.29%	1.43%	0.89%
Total	100%	100%	100%

The frequency of content on “Symbolic presentation” on mayor pages is consistent with the observations of the page managers of Malabon and Valenzuela that these pages have more personal content compared to the institutional page. Expressions of gratitude, birthday, holiday and congratulatory greetings and personal messages can be considered content that demonstrates the mayor’s sympathy for their electorate, emphasizing the value of *pagdamay* (Agpalo 1999). Also, frequent posts of city officials participating in events such as the opening or ribbon-cutting of local businesses reiterate the individual-centered promotion that highlights political personalities rather than broader policy concerns (Teehankee 2010).

These persuasive nature are frequent in the personal pages of mayors because social media can also be used as a tool for political marketing to increase their visibility (Enli & Skogerbo 2013) or self-presentation, or e-presentation, to influence public perception (Waters & Williams 2011). Likewise, this confirms the findings of previous studies that have found that the social media accounts of mayors are more likely to post personal messages and share news (Sobaci and Karkin 2013) or promote their own activities (Eom et al. 2018) rather than engage

with citizens on improving public services. Similarly, Stoeckel (2018) found that personal content is the most frequently posted material on the personal Facebook pages of elected officials, while informative content is more common on their political pages.

Similarly, institutional and mayor pages appear to be more responsive to different themes, which is consistent with the difference in posted content. Table 10 shows that a higher percentage of replies from institutional pages were to comments on posts coded as “Providing information on basic services and facilities.” In comparison, a higher percentage of replies from mayor pages were to comments on more posts coded “Symbolic presentation.”

Table 10. Interactivity of theme by page type

Content type	Percentage (all pages)	Percentage (institutional pages)	Percentage (mayor pages)
Providing information on services and facilities	71%	73%	24%
Disaster risk communication	10%	9%	27%
Non-disaster advisories	6%	6%	5%
Marketing activities in the city	6%	6%	12%
Marketing the city	1%	1%	2%
Social media sharing	2%	2%	1%
Symbolic presentation	3%	3%	29%
Requesting action from citizens	1%	1%	2%
Total	100%	100%	100%

Direction

Posts with the theme “Symbolic presentation,” and “Marketing the city” with 1,109 posts or 21.63% of total coded posts of 17 LGUs can be considered to fall under the Press agency model because the primary objective is to evoke emotions rather than provide information. In contrast to “Symbolic presentation” that can easily be considered presentational exchanges by nature of symbolic expressions, personal messages and ceremonial participation, there was ambiguity with the “Marketing the city” theme. While posts about the city’s awards, positive news articles, business establishments and attractions are accurate and factual, the objective of this theme is to market the city as an attractive place to live or invest, which is more aligned with persuasive goals rather than informational.

The 3,232 posts (63.05% of total coded posts) categorized under the four (4) themes of “Providing information on services and facilities,” “Disaster risk communication,” “Marketing

activities in the city,” and “Non-disaster advisories” can be considered as examples of public information because the unidirectional content seek to provide factual information on government operations to deliver public services and facilities and other activities in the city. Similarly, there was uncertainty in determining the direction and purpose of “Marketing activities in the city” because it did not concern government programs and activities. Posts that highlight the participation of city officials in various events and activities can be interpreted as attempts to persuade constituents that their elected politicians are carrying out their roles and responsibilities. However, these posts seek to inform citizens about activities and events in the city, which were not solely organized by the LGU or related to the delivery of public services and facilities, rather than overtly changing their attitude or beliefs.

The frequency of the public information model confirms earlier literature that local governments use social media to disseminate messages (Mergel 2013b) through one-way communication. The social media usage of these 17 local governments of Metro Manila is similar to that of Philippine national agencies that disseminate information rather than promote public participation (Olaño 2014).

These results are consistent with findings that most US cities are at the initial information and communication stage, where communication is characterized as one way with government agencies using social media to disseminate information on its services (Bennet and Manoharan 2016). Most posts of American municipalities were one-way announcements that promoted special events and activities, contained images or videos, policy information and police and crime alerts (Graham & Avery 2013). Waters and William (2011) also found that 60 government agencies in the United States use Twitter primarily for one-way communication rather than two-way symmetrical communication. In particular, their study confirmed that government agencies are more likely to disseminate factual messages, following the public information model to

Specific information such as advisories, alerts and warnings are better conveyed through the public information model, wherein truthful messages are delivered through a one-way model of public relations (Heath 2006 in Waters & Williams 2011). Heaselgrave and Simmons (2015) found that councils in South Australia use social media predominantly to broadcast information and promotion rather than engaging its citizens in dialogue.

Only one post under “Requesting action from citizens” from Valenzuela City can be considered as two-way asymmetrical communication because it seeks to gather feedback on a national program.

Two-way symmetry communication was absent in the posts. Similarly, there was a similar lack of two-way communication posts on the SASWM Facebook page (Reddick et al. 2017b). Twitter may be more conducive for two-way symmetry communication, which was the most frequently posted category in the Twitter profile of US government agencies (Waters & Williams 2011) and the Utrecht, the Netherlands (Ignacio Criado et al. 2019).

Posts coded as Social media sharing (783 posts or 15.29%) cannot be categorized under any of the models. These posts are examples of one-way communication from government to the public, but there is no text to determine whether the content supports informational or persuasive goals.

Direction by Page Type

Page type also determines the frequency of the content direction, as shown in Table 11. A higher percentage of posts in mayor pages are considered as examples of the press agency that have persuasive goals compared to the percentage this model in institutional pages. Mayors pages also have a slightly higher percentage of public information posts because institutional pages, particularly the page of Marikina, has a significantly larger percentage of “Social media sharing” posts that cannot be categorized under any model with a reasonable degree of certainty.

Table 11. Percentage of direction by page type

Direction	All page	Institutional	Mayor
Press agency	21.63%	19.45%	27.72%
Public information	63.05%	62.02%	65.93%
Two-way asymmetrical communication	0.02%	0.03%	0.00%
No direction	15.29%	18.50%	6.36%
Total	100%	100%	100%

Chapter Summary

Most Facebook pages demonstrated high levels of activity, relative to the frequency distribution of the sample. Conversely, nearly all pages had low interactivity and only two LGUs, Makati and Taguig, seemed to be consistently responsive to comments from members of the public. A closer examination showed that most replies are templated responses for frequently asked questions that are mostly inquiring about government services or posts under “Providing information on basic services and facilities.”

The study identified a total of eight (8) content types or themes. The most frequent theme is “Providing information on services and facilities” with 1,756 posts or 34.3% of all coded posts. The following themes are listed in descending frequency: “Marketing activities in the city”; “Social media sharing”; “Symbolic presentation”; “Disaster risk communication”; “Marketing the city”; “Non-disaster advisories”; and “Requesting action from citizens.”

Most of the posts (63.05%) can be considered as examples of the public information model because the four (4) themes of “Providing information on services and facilities,” “Disaster risk communication,” “Marketing activities in the city,” and “Non-disaster advisories” seek to provide factual information on government operations to deliver public services and facilities and other activities in the city.

Only 21.63% of the total posts that are categorized as “Symbolic presentation” and “Marketing the city” can be considered categorized under the Press agency model because the primary objective is to evoke emotions for persuasive goals rather than provide information. Only one post categorized as “Requesting action from citizens” from Valenzuela City can be considered as an example of the two-way asymmetrical communication and consultative e-participation model while posts under “Social media sharing” (783 posts or 15.29% total posts) could not be categorized under any of the models. These posts are examples of one-way communication but there is no text to determine whether the content supports informational or persuasive goals.

Institutional pages have a higher percentage of themes related to the informational goals of government communications, while content that achieves the persuasive goals have a higher percentage on mayor pages. The frequency of content on “Symbolic presentation” on mayor pages is consistent with the observations of the page managers of Malabon and Valenzuela that these pages have more personal content compared to the institutional page. Similarly, the

percentage of replies from institutional and mayor pages also differ, with a higher percentage of replies from institutional pages were to comments on posts coded as “Providing information on basic services and facilities” while a higher percentage of replies mayor pages were to comments on more posts coded “Symbolic presentation.”

These findings confirm the results of previous literature that most of the government’s posts can be characterized as the one-way communication model with the purpose of providing information on services, facilities and activities. In contrast, posts that engage citizens are the least frequent.

Chapter 4

Factors that Influence Government Social Media Use

This chapter discusses how the contextual factors of page type, organization and institutional arrangements influence government social media use. It begins by exploring the differences observed on institutional and mayor pages. Organizational factors such as years of social media use, decision to start the page, access to resources and role of leadership are described followed by content creation and management strategies and other internal processes that comprise institutional factors.

Page Type

Institutional pages are more common in the sample of 17 LGUs in Metro Manila. Only five (5) LGUs, Caloocan, Mandaluyong, Manila, Parañaque and Pasig lack an institutional page and post updates about the LGU's delivery of public services and facilities exclusively on their respective mayor's page. In some cases, the mayor's page is linked on the LGU's official website. Some of the local chief executives of the 12 LGUs that use institutional pages have their own mayor pages. Others, which include but are not limited to the mayors of Makati, Marikina and Quezon City, do not have their own public page but may maintain a private profile.

As discussed in the previous chapter, the page type is related to the frequency of themes and directions on a page. Institutional pages have a higher percentage of informational themes while mayor pages have a higher proportion of persuasive content. The frequency of content on "Symbolic presentation" on mayor pages is consistent with the observations of the page managers of Marikina and Valenzuela. They indicated that their respective chief executives maintained a social media page separate from the institutional pages.

In Valenzuela City, the mayor's page was created with the intention that he could continue using the page after his term as city mayor. The Social Media Officer of Valenzuela City cited the experience of the former mayor who continued to use his Facebook page, which

gathered a sizable number of page followers during his three terms, when he ran for a seat in the Senate. The Malabon City mayor already had a Facebook page before he took office.

Both teams were involved in the creation and maintenance of their mayor's page but noted that their respective mayors were personally creating content and managing their page. The interviewees representing Malabon explained that the key difference between the content of the city and mayor's page is that the mayor's page had more posts about personal projects and hobbies, blogs, selfies and activities with family. Similarly, the Social Media Officer of Valenzuela City observed that the mayor's tweets are more personalized and only feature LGU activities where he is present. Both teams noted that the mayor's page shares some of the city's page like class suspensions, road conditions and traffic updates, similar to how elected officials in US municipalities contributed to increasing the reach of the social media posts of their municipalities by sharing their posts (Stoeckel 2018).

The Social Media Officer of Valenzuela City added that the mayor was initially hesitant to use Twitter, similar to how risk aversion and lack of understanding of social media discourage decision-makers from adopting social media (Heaselgrave and Simmons 2015).

The page managers of Malabon noted that the Mayor's page had more followers than the institutional page, which was created later than the Mayor's page. Another explanation is that younger Filipinos are more likely to follow local politicians whom they feel a closer connection (David 2013) compared to an institutional page.

The difference between the mayors and institutional pages confirm that social media is being used to cultivate the image of public officials, whether through the promotion of personal aspects (David & Atun 2012) or their key role in implementing activities that benefit constituents (Kawanaka 2002) for electoral success (Friedrich-Ebert-Stiftung 2012).

Moreover, the personal social media page of the mayor has a potentially important role in relation to the separate institutional or official page of the local government. Eom et al. (2018) found that the Twitter account of the mayor of Seoul serves as a bridge between citizens and the official account of Seoul city. A social network analysis (SNA) showed that tweets from Mayor Park's account had higher centrality within the Twitter network of the Seoul civil administration services or tweets with the "#SeoulCity" hashtag compared to that of the official account of the city. In other words, users in the network are more connected to the mayor rather than the institutional page.

This bridge or brokerage role is useful when there is a lack of access or trust between actors. Eom et al. (2018) found that the mayor's account contributed to increasing government responsiveness by serving as a bridging hub between citizens and the local government. The study found examples that showed when citizens tagged the mayor's account in their complaints, the relevant public official or government unit would then resolve the problem. Similar experiences have been observed in Valenzuela City when citizens voiced their issues or demands directly to the mayor through his Twitter account. The Mayor then directed the complaint to the relevant office (Alampay et al. 2018). In these examples, the mayor's Facebook page serves as the same function as the Governor's Corner page (Ilago 2001); however, citizens can either post their concerns publicly or send direct messages discreetly.

Subchapter Summary

Institutional pages are more common in the sample of 17 LGUs in Metro Manila. Only five (5) LGUs, Caloocan, Mandaluyong, Manila, Parañaque and Pasig lack an institutional page and post updates about the LGU's delivery of public services and facilities exclusively on their respective mayor's page. However, some local chief executives of the 12 LGUs that use institutional pages maintain a separate public mayor's page.

Mayor's pages appear to have more "Symbolic presentation" posts that is consistent with the insights from interviewees that these pages have more personal content compared to the institutional page. The personal Twitter account of the Valenzuela City mayor has been observed to play a brokerage role in relation to the institutional or official page of the local government when citizens sent their issues to the Mayor's Twitter account, which were then personally redirected by the mayor to the relevant office.

Organizational Factors

Follow our New Page: Origins of the Facebook pages

The average years that the 17 pages have been active are 5.24 years, with the average of institutional pages slightly higher at 5.42 while mayor pages are slightly less at 4.80. Table

12 shows that most (11) pages were created before 2013. Alampay et al. (2018) noted that most social media platforms of LGUs took off in 2012.

Table 12. Years of active pages

City Name	Facebook Page Type	Date Page Started	Years Active (as of 2017)	Year of Incumbent Took Office
Caloocan**	Mayor	2013	4	2013
Las Piñas	Institutional	2012	5	2016
Makati*	Institutional	2013	4	2016
Malabon*	Institutional	2012	5	2012
Mandaluyong	Mayor	2015	2	2016
Manila	Mayor	2008	9	2013
Marikina*	Institutional	2012	5	2016
Muntinlupa**	Institutional	2013	4	2013
Navotas	Institutional	2010	7	2020
Parañaque	Mayor	2009	8	2013
Pateros	Institutional	2016	1	2016
Pasay	Mayor	2016	1	2010
Pasig	Institutional	2010	7	2016
Quezon*	Institutional	2010	7	2010
San Juan	Institutional	2012	5	2010
Taguig	Institutional	2010	7	2010
Valenzuela*	Institutional	2009	8	2013

*survey and interview respondents | **interview respondents only

The newest pages are the Public Information Office page of Pateros and the mayor's page of Pasay, which also coincides with the same year that the respective incumbent mayor took office in 2016.

The oldest page in the sample is the page of the mayor of Manila that was created in 2008, preceding Joseph Ejercito Estrada's first-term as city mayor in 2010. While the page name bears the former mayor's full name, his username is @PresidentErap, which suggests that the page was created to reflect his tenure as the President of the Philippines from 1998 to 2001.

Valenzuela is considered one of the early adopters of social media (Alampay et al. 2018) and has the oldest institutional page in the sample. The page was created in 2009 during the 2nd term of former Mayor Sherwin Gatchalian. The longevity of the page may be related to the fact that after Mayor Gatchalian's third and final term, his brother, Rexlon, was elected as mayor 2013 and is serving his third term until 2022.

Most pages, 10 of the 17 pages, were started in the term of then-incumbent mayor. Among the seven (7) that were started before the incumbent's term, three (3) are mayor's pages. These pages were established earlier in the politician's career and may have been used for other purposes such as promoting achievements from their previous position or campaigning, similar to the long-term reason behind creating the personal page of the Valenzuela City mayor. Out of the four institutional pages started before the term of the incumbent, the three (Makati, San Juan and Valenzuela) were established in the term of a former mayor who was a relative of the incumbent mayor. Only the page of Marikina was started during the term of a former mayor with no kinship ties to the incumbent.

The decision to create a Facebook page comes from either (1) the mayor and (2) a local government office.

The mayor played a key role in establishing the institutional Facebook pages of Malabon and Valenzuela, which is similar to how the interest and preferences of key government officials of local government organizations in the US, like the mayor or city manager, influenced the decision to adopt social media (Mahajan-Cusack 2016). This finding is discussed in detail in the succeeding subsection.

For Makati, Marikina and Quezon City, the initiative to create the page came from the local government offices.

The Urban Development Department of the City Government of Makati created the page then handed it over to the ICRD. The OIC of ICRD, Makati City shared that the page was created suddenly and without any instruction from the former Mayor. The incumbent Mayor decided to continue using the page created under the former administration.

The photographers of the Marikina PIO initially created a personal Facebook profile to share photos taken during city government organized events. In response to the positive feedback from constituents, the PIO decided to continue its social media presence by establishing a page.

The CCC of the Quezon City Government started to actively populate its Facebook page as part of its strategy to strengthen the city's social media presence at the start of the mayor's second term in 2013. Their objectives are similar to the commonly cited motivation

for using social media to align the local government with the changing preferences of citizens to use social media as the primary platform for communication (Mahajan-Cusack 2016).

Leadership

Leadership is crucial to starting and maintain transformative initiatives in an LGU (Teng-Calleja 2016). LGU leaders who are more likely to enable transformative initiatives also valued being visible and accessible to their constituents, with being responsive on social media channels as one option. Survey respondents agreed that their mayor strongly supports the use of social media for public engagement (M: 4.67, SD: 0.5).

The Social Media Officer of the City Government of Valenzuela shared that starting the Facebook page was an initiative of the former Mayor Sherwin Gatchalian. He recognized the potential and increasing popularity of social media, particularly the success of MMDA, which is considered as the benchmark of responsiveness (Alampay et al. 2018). The active social media presence of MMDA was one of the reasons behind the former mayor's decision to instruct the local government to create the institutional page.

Similarly, the 100% Pusong Malabon was started by the Mayor's Office. Page administration was then delegated to the current page managers in the Public Information Office. These insights confirm that officials who value the importance of social media are more likely to use the platform (Graham and Avery 2013).

These findings are consistent with previous studies that found that the presence of an internal leader who champions the use of social media also contributes to the success of these initiatives (Ignacio Criado et al. 2017). Like in the Municipality of Cainta, Facebook was successfully integrated into the local disaster risk management and emergency response activities because the mayor valued social media as a platform to connect with his constituents (Congjuico 2014).

In Bandung City, the mayor mandated all city government agencies to use social media and established a citizen reporting system in 2014. With these policies in place, government officials valued the use of social media for public engagement (Roengtam et al. 2017).

Insights from the interview also confirmed that the mayor is involved in managing social media content to some extent. The page managers of Makati, Malabon and Valenzuela shared that they seek the approval of the mayor for uploading sensitive content. The interviewees of Malabon added that they directly seek the approval of the mayor rather than other department heads that may give differing feedback. For Makati and Malabon, the mayor gives input on what to post. The mayor is interested in the analytics of the page in Makati and Quezon City.

Who Manages the Page?

Most of the page managers are relatively new to the organization, with more than half (56%) having been in their role for 1 to 5 years (as of 2018). This number is most likely because social media was a relatively new tool for the government that took off in 2012 (Alampay et al. 2018).

Most interviewees have a background in information and communications technology (ICT) and communications, which are the recommended fields for the Social Media Office recommended by the proposed AO on social media use.

The social media teams of the five cities do not follow the recommended structure described by the proposed AO, which is a team comprised of a Social Media Officer and Account Administrator. Only Valenzuela City has a designated Social Media Officer who also serves as the page administrator. The teams of the other cities do not have these positions, but their members carry out similar tasks and responsibilities.

Another indicator of the institutionalization of social media is creating teams with defined roles and responsibilities related to maintaining the pages (Ignacio Criado et al. 2019). Most cities do not have a dedicated team to maintain social media platforms as the staff members are also involved in other responsibilities. The average number of personnel involved in managing the page is three to four. Alampay et al. (2018) also found that the social media team of most of the 8 LGUs in Metro Manila represented in their study had less than (4) four people. Only respondents of Malabon and Quezon City indicated that they each had a three-person team focused solely on maintaining social media platforms while one (1) Social Media Officer handles the social media channels of Valenzuela City. Both the team in Quezon City and the officer in Valenzuela regularly request support from the graphics team in their main

offices, which is one of the good practices recommended from an assessment of national frontline agencies' use of Facebook (David 2016).

In Makati, the OIC and two writers involved in maintaining the Facebook page have other tasks outside of social media. However, the junior writer's social media responsibilities are focused on responding to comments, which may explain the high level of interactivity on the My Makati page. The IT Consultant of Quezon City explained that while they also assign a team member to reply to comments, their limited human resources constrain their ability to be responsive. He added that the Metro Manila Development Authority (MMDA) has more than 20 staff members to handle their social media channels 24/7.

The teams of five out of seven cities indicated that they receive training at least once a year. The IT Consultant of Quezon City explained that the internal training was more similar to informal skills-sharing sessions within team members. Hiring professional social media managers or providing training has been recommended to improve social media strategies (David 2016).

Only interviewees from Malabon, Quezon City and Valenzuela shared that the resources spent on boosting their social media presence came from the budget of the Mayor's Office. The Quezon City interviewee explained that the CCC is directly under the Mayor's Office and could use its budget to engage additional contractual workers. The mayor of Valenzuela City uses his personal resources to boost or promote posts. The lack of allocated resources can hinder social media activity (Heaselgrave and Simmons 2015).

Subchapter Summary

All survey respondents and interviewees were involved in managing institutional pages, such as city or municipality, public information or city government pages. They are also staff of the Public Information Office, or similar equivalent, and under the Office of the City Mayor.

Most of these pages have been active for at least four years, which has allowed the team to establish mostly unwritten norms and mechanisms that institutionalize the use of social media. Most (4 out of 7) of the pages were also started within the terms of the then incumbent mayor.

The decision to create the page was mostly driven by local government offices (3) instead of the mayor (2). These local chief executives can be considered social media champions as they also manage their respective public Facebook Page and Twitter account, which is distinct from the institutional page. Some cities have reported that their mayor is involved in content creation and page monitoring.

Most of the page managers are relatively new to the organization, with more than half (56%) having been in their role for 1 to 5 years, and have a background in ICT or communications. The social media teams of the five cities do not follow the recommended structure described by the proposed AO, which has a Social Media Officer and Account Administrator. Only Valenzuela City has a designated Social Media Officer who also serves as the page administrator. Most cities do not have a dedicated team to maintain social media platforms as the team members are involved in other responsibilities. The average number of personnel involved in managing the page is three to four. Only Malabon and Quezon City have a three-person team focused solely on maintaining social media platforms while only one person manages the social media channels of Valenzuela City.

The number of team members responsible for maintaining social media channels is not likely to be related to the activity of a page. Among the cities with high activity, Valenzuela has only one social media officer compared to Makati, Marikina and Quezon City that have teams comprised of at least three staff. Cities with average activity, Caloocan and Malabon, also had three to four team members. However, assigning one person to focus on replying to comments, a practice implemented by Makati City that has the highest interactivity among the 17 LGUs, is likely to contribute to higher responsiveness and interactivity.

The teams of five out of seven cities indicated that they received training at least once a year. Only Malabon, Quezon City and Valenzuela shared that the resources spent on maintaining a social media presence come from the budget of the mayor's office.

Institutional Factors

Goal and Objective of Social Media Use

All survey respondents indicated that Facebook was the most preferred social media platform. This was followed by Twitter then YouTube. They mostly agreed that their respective

offices and department have clear objectives in using social media for public engagement (M: 4.89, SD: 0.33)

Facebook page is primarily used as a one-way dissemination channel. The majority of the respondents ranked “public information and outreach” as the most important goal of the local government unit’s social media use. The other high ranked goals are (2) enhancing public services and (3) open and transparent government. They rated “city government employee engagement” as the least important goal of the local government unit’s social media use as some city governments like Makati and Quezon City have a separate internal platform.

Interviewees also confirmed that the main objective of the Facebook page is for information dissemination and promotion. The Makati City interviewee added that the main goal of the Facebook page was to provide information on the programs and projects of the city. The Marikina City interviewees said that it serves as an additional dissemination channel.

The interviewees of Malabon explained that they envisioned the 100% Pusong Malabon Facebook page as a “digital city hall” that enables the local government to deliver public services using technology. They added that it is also a community page, which is similar to one of social media’s identified benefits of building a positive image, such as the approachability, of the local government (Heaselgrave and Simmons 2015). The Quezon City interviewee emphasized that the primary objective of the page, echoing the CCC’s aim, is to promote and build the image of the city as a dynamic investment destination. The Social Media Officer of Valenzuela City said that in addition to the page’s primary objectives of dissemination information on the city’s programs and the mayor’s projects, another goal is to interact with constituents in the digital sphere.

Most of these reported objectives of social media use are aligned with the informational goals of government communication, excepted for Malabon’s specific goal of community building and Quezon City’s aim to promote and build the image of the city as a dynamic investment destination. These persuasive goals that attempt to reframe the reputation or image of the city are reflected in the assessed posts, which will be discussed in the next subsection.

Most responses are consistent with the findings of Roengtam et al. (2017) that the city governments of Bandung, Indonesia, Iligan, Philippines and Phuket, Thailand use social media primarily for disseminating information to the public and collecting feedback and information from citizens rather than involving them in the policy-making process.

The survey respondents reported less interest and preference for using the Facebook page for two-way interaction. They indicated low agreement with the statement, “Our institutional Facebook page is the preferred channel for public dialogue compared to face to face interaction” (M: 3.33; SD: 1.00) and “Our Facebook page is the best platform to gather priorities for the local government” (M: 3.89; SD: 0.78).

The Makati City interviewee affirmed that Facebook could not replace face to face interaction, similar to the sentiments of local government officials in Sweden who also felt that social media serve as new channels to supplement rather than replace interpersonal communication or traditional media (Djeft-Pierre and Pierre 2015). However, the Quezon City interviewee noted that constituents are more likely to their feedback more freely because the platform can provide some degree of anonymity. He observed that Filipinos tend to avoid being direct during face to face interaction.

Benefits and Challenges

The interviewees acknowledged that social media use has benefits for both the LGU and constituents.

The interviewees considered the Facebook page as a platform for the quick dissemination of time-sensitive information and announcements (including disaster risk communication) to a wide audience, which is considered as the most beneficial advantage of social media (Heaselgrave and Simmons 2015).

Another identified benefit is enabling interaction and engagement with the youth. Most interviewees observed that most of the page followers are students. Around 86 % of 18- to 24-year-olds have a Facebook account (SWS 2019). Similarly, social media managers in local governments in the United States noted that having more younger constituents or active users pushes the need to adopt social media (Mahajan-Cusack 2016).

The page managers recognized that the Facebook page serves as a more convenient platform to receive feedback and complaints, but some mentioned that many constituents send their concerns through direct or private messages rather than as comments on public posts.

Similar to the findings of previous studies, the interviewees are aware that its citizens prefer to directly receive information on their Facebook newsfeed rather than access official websites. Their observations are also confirmed by findings that social media has become the second most important source of news for Filipinos, after television (SWS 2019).

The interviewees also noted social media's benefits for constituents. These include easier and faster access to updates and information, particularly convenient access to details about the city's programs, projects and activities without going to the city hall. They also felt that Facebook allows two-way communication where constituents can send questions and concerns then receive a response. However, based on the findings of the survey and content analysis, the platform's functionality to disseminate information is valued and utilized more than listening to or building relationships with its constituents (Heaselgrave and Simmons 2015).

The interviewees shared some challenges in managing the page, such as dealing with trolls, the high volume of comments and direct messages about class suspensions and traffic, and limited resources to create engaging content.

Page managers experienced harassment from users with fake accounts, which reduces the potential benefits of using Facebook to interact with constituents using their actual profiles (Ellison & Hardey 2014). Bradshaw and Howard (2017) found that government actors in the Philippines have used fake accounts, whether automated bots or controlled by a person. These trolls were engaged during Duterte's presidential campaign to spread propaganda but now continue to promote his policies on the platform.

Related to this, the interviewees representing Malabon noted that many of the harassers target the mayor because he is a member of the Liberal Party. Opposition politicians are frequent targets of harassment and online attacks from fake accounts used by pro-Duterte trolls (Palatino 2017). Also, Mayor Oreta has been singled out directly by President Duterte (Valenzuela 2019). The interviewee from Makati has also observed that the page experiences harassment from "DDS" or Duterte Die-hard Supporters.

Some page managers have also experienced challenges in dealing with fake pages that attempt to impersonate the LGU. The Marikina reported a fake page but instead, Facebook banned and blocked their page. As a result, the PIO is hesitant to report the other fake pages. In Quezon City, there have been a few instances when page followers are fooled by imposter

pages of the city and mayor during class suspensions. The Valenzuela City PIO is coordinating with the legal office to stop and take down the multiple fake pages of the Valenzuela city mayor.

Account verification, which requires the page owner to submit documents proving that the existing account is owned and managed by the actual organization it represents, is one solution against fake pages. My Makati is a verified page. The interviewees from Malabon also went through the process to verify the mayor's Facebook Page and Twitter account, which they described it as a challenging endeavor.

The interviewees also shared other solutions to combat fake pages that include promoting the official accounts and posting warnings against the fake pages. Similarly, Turkish local governments are under pressure to actively promote their social media pages as users are likely to assess the credibility of a page based on the number of likes and followers (Yildiz et al. 2016).

Increasing fake pages and accounts is one expression of the blurring distinction between authoritative information source and audience on new media (Kenski & Jamieson 2017). The actual LGUs pages have been previously reported and taken down, and page managers have no other means to effectively deal with impostor pages without securing account verification. Similarly, page managers can block or block trolls but there is no effective option to prevent and stop new trolls from harassing the page. Strategies like posting warnings against imposter pages show that LGUs are aware and try to avoid the reputation risk when constituents are fooled by false information.

Strategies for Content Creation and Management

Most cities are implementing a social media strategy or plan, mostly unwritten, that is aligned with their objectives of social media use. The interviewees shared that their social media practices began with experimentation, which is a common initial approach (Picazo-Vela et al. 2016) then became more formal and systematic over time (Mahajan-Cusack 2016). Mergel and Bretschneider (2013) identified three stages of social media adoption, which begins with decentralized, informal early experimentation to coordinated efforts to follow informal rules then finally widespread adoption of social media guided by institutionalized and

consolidated practices and norms. Based on the data in Table 12, pages that have been active for 4 to 5 years appear to have more procedures in place. This finding is aligned with Alampay et al.'s (2018) assessment that the LGUs of Makati, Malabon, Mandaluyong, Marikina, Muntinlupa, Parañaque, Quezon City and Valenzuela to be at Stage 2 or Constructive Chaos. The oldest institutional Facebook pages of Valenzuela (8 years) and Quezon City (7 years) appear to demonstrate a higher level of institutionalization, which is consistent with the findings of Ignacio Criado et al. (2019) that social media management practices become institutionalized over time. However, the MyMakati page (4 years) is relatively newer yet appears to have similar defined procedures in place. The interviewee representing Quezon City noted that despite the earlier creation date, their Facebook only took off in the last three years when he took over from a deceased colleague.

All survey respondents indicated that they follow guidelines in creating and posting content on the local government's social media accounts. Based on the interview, Malabon, Valenzuela and Quezon City follow unwritten rules and strategies, similar to how the social media policies and guidelines of national frontline agencies like DOH, DepEd and Pag-ibig are also undocumented (David 2016).

In Malabon, the goal of changing the image of the existing yet outdated Facebook page from focused on government projects to a community-page guided the process of content creation. The page administrations emphasized that their approach was initially experimental, and the unwritten guidelines focused on creating and posting content following a daily theme. Quotes were posted on Monday and Sunday, while content on food was posted on Friday. They added that they followed this weekly format when they were trying to increase the number of followers in the first few years of handling the page. While Malabon also posts informational content, its overarching persuasive objective of community-building contributes to the slightly higher percentage of press agency posts (50.64%) compared to public information posts (45.54%) (see Annex D).

The Social Media Officer of Valenzuela explained that content creation is not dictated by written guidelines but guided by the mission-vision of the city government. She added that she no longer creates content plans as she is familiar with the timeline of monthly themes after handling the page for five years. For example, content in July is focused on the birthday of Dr. Pio Valenzuela, a city hero, while seasonal events such as Christmas, Mother's Day and Father's Day are the focus of their respective months. She added that social media campaigns

are created for significant events such as the launch of Valenzuela Works, which was the city's employment program. Quezon City's social media plan focuses on its objective of promoting the city as an investment and tourist destination. Marikina does not follow a monthly theme and instead posts about upcoming events in the city. In contrast, the offices of the city government of Makati must submit an official request for promoting their activities on the Facebook page as part of written content creation guidelines set by the ICRD and approved by the mayor. However, these guidelines are not specific for social media as it covers other materials produced for city events and activities. The guidelines state that all materials must be submitted and approved by ICRD before dissemination.

For most page managers, the unwritten content creation guidelines include topics to avoid. Interviewees representing Makati, Malabon and Marikina explained that they avoid posting political content or commentary. When asked for examples of political content, the Marikina PIO said that it was difficult to put into words and emphasized that they avoid posting about activities and platforms that promote officials as politicians rather than public servants. The IT Consultant of Quezon City said that they rarely post about police reports as the objective of their Facebook page is to promote the city as an investment destination. This shows that persuasive goals can contribute to the selectivity of topics posted on platforms that also support informational objectives.

Survey respondents mostly agreed that regular monitoring and addressing comments on the Facebook page is important (M: 4.89, SD: 0.33). However, the analysis of the Facebook pages showed limited responsiveness to user comments. The observable replies were templated answers, which is considered the least responsive form of interactivity (David 2016). These templates are one of the few documented social media guidelines, similar to Cheng et al. (2016)'s findings that protocols and objectives are eventually defined into user's guides for widespread adoption.

The page administrators of MyMakati, which is the most interactive page, use written templated responses to common questions. The content analysis found that the comments posted by MyMakati frequently included the templated phrases: "For concerns or complaints, you may call..." or "Para po sa inyong katanungan, maaari po kayong tumawag sa..." Similarly, the team in Quezon City page, which has a low level of interactivity, also created templates that outline the procedures and requirements of frequently asked about local government transactions to cope with the volume of questions.

The page administrators of Malabon do not follow written standard templates in answering comments but instead provides the relevant office and their contact numbers. Similarly, the administrators of Marikina PIO do not have written templates in responding to comments and instead have a standard reply, “Salamat po sa feedback, ipaadala po namin ito sa concerned department” (Thank you for the feedback, we will send it to the concerned department).

The IT Consultant of Quezon City observed that they used to receive feedback through email; however, most complaints and suggestions are received from social media. The OIC of ICRD, Makati City noted that they receive many questions about the Makatizen Card, which is a unified identification card for residents of Makati. In response, they repeatedly post information about the card and accompanying mobile application.

The ICRD of Makati also reports its social media analytics to the Mayor every month. Indicators being monitored include the demographics of users, the average turnaround time of addressing comments and metadata engagement, which include the number of reactions, comments and shares. In another study, Makati and Parañaque were the only LGUs that indicated that they consolidate and report all social media data to the Mayor on a monthly basis (Alampay et al. 2018).

All interviewees representing the five cities have an established procedure for handling complaints. Makati and Malabon share complaints with department heads through a group chat on a mobile application. Valenzuela forwards the complaint directly to the concerned department. Quezon City has a hybrid process, forwarding the complaints to the concerned department either through a paper-based transmittal, email or mobile application depending on the capacity and preference of the recipient. Marikina uploads then routes complaints on an internal application.

Interviewees representing Malabon, Quezon City and Valenzuela indicated that they follow an unwritten procedure for moderating comments on the social media accounts. In Quezon City, staff who are assigned to read comments are instructed to always be courteous as their response reflects on the city and mayor. The page administrators in Malabon and Valenzuela send a warning to users who leave comments that contain abusive or explicit language. In Malabon, they try to determine whether a user account is fake by checking if their profiles are new or do not contain any personal information, and delete comments of fake

accounts. Valenzuela avoids hiding or deleting posts unless instructed by the Legal Office. The creation of policies on participation and moderation are among practices recommended by the draft AO on social media use.

The city governments do not have a legal basis for social media use. Quezon City explained that creating support legislation may be a challenge because it involves working with the legislative branch. All offices involved in administering these Facebook pages are under the executive branch.

Internal Mechanisms for Disaster Risk Communication

Disaster risk communication has a central role in government communication in the setting. In addition to the country's high vulnerability to natural hazards, one of the functions of an information office specified in the Local Government Code is "providing information during and in the aftermath of man-made and natural calamities and disasters, with special attention to the victims thereof, to help minimize injuries and casualties during and after the emergency, and to accelerate relief and rehabilitation."

The LGUs actively disseminate information through their Facebook pages during disasters, which has also been observed on the social media platforms of national agencies (David 2016; Alampay et al. 2018). The social media's advantage of facilitating the real-time exchange of information is crucial for disaster risk reduction. This is particularly important for students who comprise a majority of page followers as observed by page managers. Local governments can immediately share updates on risks and the availability of government services, utilities and relief efforts in response to a disaster (Magnusson 2016). Some municipal elected officials in Florida, USA felt the need to use social media only during emergencies (Stoeckel, 2018). The interviewees consider using social media for Disaster Risk Communication as one of the most important benefits of using Facebook. They agreed that sending and receiving updated information in real-time is important for disaster risk communication.

The local governments did not appear to use the page to collect information on the actual situation from its citizens, similar to the case in Cainta (Congjuico 2014). However, the interviewees noted that they responded to users who posted comments or sent direct messages

during the disaster. In contrast, the interviewee representing Quezon City emphasized that the institutional page was primarily for investment promotion and constituents should instead rely on the official channels and emergency hotlines of the Quezon City Disaster Risk Reduction and Management Council rather than the city Facebook page during disasters.

LGUs, through the mayor and Local Disaster Risk Reduction and Management Council (LDRRMC) can declare localized cancellation of classes in the absence of automatic suspensions due to raised typhoon signal warnings (Executive Order No. 66, s. 2012). This ensures that local governments remain the authoritative information source of class suspension announcements. Each city has an internal process and protocol for declaring class suspensions. The mayor and relevant department and emergency services heads monitor the weather and reach a consensus through a group discussion on mobile messaging applications. Social media teams have confirmed that instructions to post disaster-related announcements, directly come from the mayor (Alampay et al. 2018). Despite its internal systems, the entire process of declaring class suspensions while dealing with a barrage of queries remains a contentious process for LGUs. Class suspension announcements under “Disaster risk communication” is considered an example of public information, but reputation-based and issue management considerations are involved in the decision-making process.

Valenzuela developed its system of deciding then announcing class suspensions at 10 PM the day before and 4 AM on the day itself as a lesson learned from a previous mishap. During the mayor’s first month in office, there was a heavy downpour in the early morning that resulted in flooding across the city. The LGU had to quickly announce class suspension at 5 AM in response to public outrage. The Social Media Officer acknowledged that the LGU is under pressure to declare class suspension in response to the persistence demands and complaints of constituents, especially when other cities have suspended their classes. These situations were described as dilemmas where LGUs must make the difficult choice between two negative outcomes, fewer class days or increased risk for students. Any attempts to rationalize the timing or decision of announcements have been met with more negative feedback, which may impact the public’s perception and attitude towards the LGU and mayor. Reputational risks persuade the government to err on the side of caution and declare class suspension. While most angry comments and messages from constituents stay on Facebook, a recent incident of “mishandling” class suspensions that was picked up by mass media (Rappler

2017) demonstrates that the participatory features of Facebook may have increased the public's involvement in this specific example of government decision-making.

The mayor of Marikina considers public clamor from Facebook and the announcements of neighboring LGUs in deciding class suspension. The PIO is tasked with monitoring then reporting public opinion on class suspension to the mayor. The office frequently encounters page followers who use abusive language to demand immediate suspension at the slightest weather disturbance, which has been a common experience for other interviewed LGUs. Similarly, the PIO emphasized that deciding on class suspensions is not as easy as the public thinks it to be.

The Mayor of Makati is known to avoid declaring class suspensions, which has resulted in numerous complaints and harassment online (Lalu 2018), not only directed at the local chief executive but at the MyMakati institutional page as well. The ICRD documented some of these abusive tirades, which include the publicly available identities of the users, then reported it to national and local education agencies to reprimand the student. The OIC of ICRD explained that Makati avoids "bandwagon suspension," wherein the city automatically suspends classes when neighboring areas issue their declarations because Makati follows its own weather monitoring system.

In addition to dealing with irate parents and students, LGUs must also manage posts with false information or imposter pages that are usually more active during these situations.

Working with Other Offices

All the institutional pages managed by the interviewees are linked to their respective city government's official website. The page managers of PIO Marikina said that the mayor decided that the PIO Facebook page be linked to the official website. The Quezon City Facebook Page was linked to the official website because members of the social media team maintain both web-based platforms.

The interviewees noted that other departments have their own Facebook pages, in addition to the main institutional page. For Malabon and Quezon City, the pages of the other departments are used for replying to comments rather than disseminating information. Only the page manager of the Valenzuela City Facebook page said the mayor prefers that there is

only one centralized page. The respondent from Makati City added that while the former mayor was particular about having a single centralized page, the current mayor does not have similar restrictions. However, these other pages are required to share the posts of the MyMakati Page.

Other departments within the LGUs of Makati, Marikina, Quezon City and Valenzuela provide content for the institutional page. Willingness to collaborate with the office managing the institutional page depends on the capacity and rapport of each department. Makati City has a Communication Request Form that city government offices must submit to ICRD for any requests to produce communication materials, which also include social media posts and live video coverage through Facebook Live.

Subchapter Summary

Facebook is considered the most preferred social media platform that is primarily used as a one-way information dissemination and promotion channel. “Public information and outreach” is the most important goal of the local government unit’s social media use. In addition to this primary objective, each city has different supplementary goals such as establishing a “digital city hall,” image building and marketing the city’s programs.

While there are less interest and preference for using the Facebook page for two-way interaction, the interviewees acknowledged that being able to easily interact with constituents is among the benefits of using social media. Along with these benefits, these page managers deal with challenges that prevent the utilization of these platforms for engagement. These include dealing with trolls, the high volume of comments and direct messages about class suspensions and traffic, and limited resources to create engaging content.

Most cities are implementing a social media strategy or plan, mostly unwritten, that is aligned with their objectives of social media use and have internal processes to achieve these goals. The reported objectives of social media use are aligned with the informational goals of government communication, except for Malabon’s specific goal of community building and Quezon City’s aim to promote and build the image of the city as a dynamic investment destination. These persuasive goals that attempt to reframe the reputation or image of the city are reflected in the strategies for content creation and management and posted content.

The interviewees shared that their social media practices began with experimentation that became more formal and systematic over time, which is a common observation among local governments (Mahajan-Cusack 2016). The oldest institutional Facebook pages of Valenzuela (8 years) and Quezon City (7 years) appear to demonstrate a higher level of institutionalization yet the MyMakati page (4 years) that is relatively newer appears to have similar defined procedures in place.

All survey respondents indicated that they follow guidelines in creating and posting content on the local government's social media accounts. Malabon, Valenzuela and Quezon City follow unwritten rules and strategies, which include topics to avoid. Interviewees representing Makati, Malabon and Marikina noted that they avoid posting political content or commentary.

Interviewees representing Malabon, Quezon City and Valenzuela indicated that they follow an unwritten procedure for moderating comments on the social media accounts. Makati and Quezon City use written templated answers to frequently asked questions, which are mostly about forms and processes for government transactions and commonly received complaints were about government services.

All interviewees representing five cities have an established procedure for handling and forwarding complaints to the relevant departments. The city governments do not have a legal basis for social media use.

All the institutional pages managed by the interviewees are linked to their respective city government's official website. The interviewees noted that other departments and offices have their own Facebook pages, in addition to the main institutional page. Other departments within the LGUs of Makati, Marikina, Quezon City and Valenzuela provide content for the institutional page. Willingness to collaborate with the office managing the institutional page depends on the capacity and rapport of each department. Makati City has a Communication Request Form that city government offices must submit to ICRD for any requests to produce communication materials, which also include social media posts and live video coverage through Facebook Live.

The interviewees consider using social media for Disaster Risk Communication as one of the most important benefits of using Facebook. They agreed that sending and receiving updated information in real-time is important for disaster risk communication. Each city has

an internal process and protocol for declaring class suspensions. Despite its internal systems, the entire process of declaring class suspensions while dealing with a barrage of queries remains a contentious process. LGUs are under pressure to declare class suspension in response to the persistence demands and complaints of constituents, especially when other cities have suspended their classes. Any alleged mishandling of the situation may impact the public's perception and attitude towards the LGU and mayor. Reputational risks persuade some LGUs to err on the side of caution and declare class suspension.

Some of the cities demonstrate previously identified indicators to measure the level of social media institutionalization of local government, which include the number of social media technologies platforms, management arrangement, support from leadership as well as the presence of user guides, training and measurement mechanisms (Ignacio Criado et al. 2019). The findings are consistent with the assessment that these LGUs are at Stage 2 or Constructive Chaos of social media adoption, which is characterized as coordinated efforts to follow informal rules (Mergel and Bretschneider 2013; Alampay et al. 2018).

Chapter 5

How Does the Public Engage with Government Content?

This section describes how the public engages with government content by first summarizing engagement metrics then describing public engagement, as well as its differentiated levels of public communication and public participation, on the Facebook pages. The relationship between government social media use, represented through usage metrics and text of government posts, and public engagement is then explored. The chapter ends with an examination of how engagement varies by theme and page type.

Engagement Metrics

The most frequent activity undertaken by users to interact with a government post is leaving a reaction (71%), followed by sharing the post (19%) then leaving a comment (10%), which is described in Table 13. This finding is consistent with previous studies that found that reacting to a post is the most popular form of interaction, followed by sharing and lastly commenting on a post (Bonsón et al. 2015; Haro-de-Rosario 2016.) Users are less likely to perform actions such as share and comment that requires more effort (Bonsón et al. 2014).

Table 13. Percentage of engagement metrics by page type

	Percentage (all pages)	Percentage (institutional pages)	Percentage (mayor pages)
Reaction	71%	71%	72%
Comment	10%	12%	8%
Share	19%	18%	20%
Total	100%	100%	100%

Leaving a reaction requires the least amount of personal resource commitment, which includes time, effort, analysis and feedback among the three interactions (Reddick et al. 2017a; Bonsón et al. 2014). Among the reactions, a like requires the least effort because it requires only one click on desktop or one tap on mobile. Users must hover then click or long-press then select the other reactions.

Sharing a post can be considered a higher level of involvement because it requires more time and effort from the user compared to a leaving a reaction, as demonstrated by the increased number of clicks it requires, but less than leaving a comment. It entails at least two steps. The user must (1) click “Share” then (2) select from a list of options that includes “Share Now”, “Share...”, “Share to Your Story Now (Friends), “Send as Message.” Some options like “Share...” and “Send as a Message” may require users to (3) enter text or select the intended recipient from a list. In contrast, users can tag the intended receipt in the comments by (1) clicking “Comment” then (2) entering the first few letters of the recipient’s name and (3) selecting the user from autofill suggestions requires less effort.

The infrequency of posting a comment, which is the highest level of engagement, is likely because it requires the most amount of personal resource commitment from users to formulate then type their feedback (Reddick et al. 2017a). However, some comments can be attempts to share the post by users tagging or typing the name of another user as a comment, which can even reduce the likelihood that the number of comments reflects attempts of users to engage local governments in discussions.

Levels of Public Engagement

Public engagement is defined as the “practice of involving members of the public in the agenda-setting, decision-making, and policy-forming activities of organizations/institutions responsible for policy development” (Rowe and Frewer, 2005: 253). The three foundational metrics of the Stakeholder Engagement Index (SEI), popularity, commitment and virality, measure the quantity of public feedback based on publicly available and tangible indicators that are the number of fans, posts, reactions, comments and shares.

Table 14 shows that most of the 17 LGU Facebook pages have limited public engagement measured by the SEI. Pasay and Las Piñas have the highest values of SEI, popularity and commitment. However, these two pages may be outliers because of their significantly low activity at 4.33 and 12.67 respectively, compared to the average of 50.94. Institutional pages appear to have a higher SEI average; however, this could be related to the fact that the outliers, Pasay and Las Piñas, are institutional pages.

The 17 LGUs have substantial differences in SEI due to the high standard deviation, which is lower compared a study that measured the SEI of 75 local governments across 15 countries in Western Europe (Bonsón et al. 2014) yet higher than the variation found in a study of 29 local governments in Andalusia, Spain (Bonsón et al. 2019). The substantial differences could also be related to the high standard deviations of usage and engagement metrics (see Annex D) that are the basis of measuring SEI. Institutional pages have a higher SEI average, however this could be related to the fact that the outliers, Pasay and Las Piñas, are institutional pages.

The popularity, which measures the capability of the page to broadcast content to a large receptive audience, of the 17 LGU pages are higher than the commitment, or capability of the page to enable discussion and interaction between the local government and the public. In terms of the differentiated levels of public engagement, these pages are more successful in informing the public, which represents public communication or the lowest level of engagement. The pages have less success in enabling discussion and interaction between the local government and the public through public participation or the higher level of engagement.

There appears to be less variation in popularity and commitment. Institutional pages have a higher popularity and commitment averages, which may be related to the fact that the outliers, Pasay and Las Piñas, are institutional pages. The 17 LGUs have higher averages and variations of popularity and commitment compared to the 19 Italian municipalities examined by Agostino and Arnaboldi (2016). This may mean that the NCR LGUs may be more successful at broadcasting content and enabling discussion with a large receptive audience but at varying degrees across the sample.

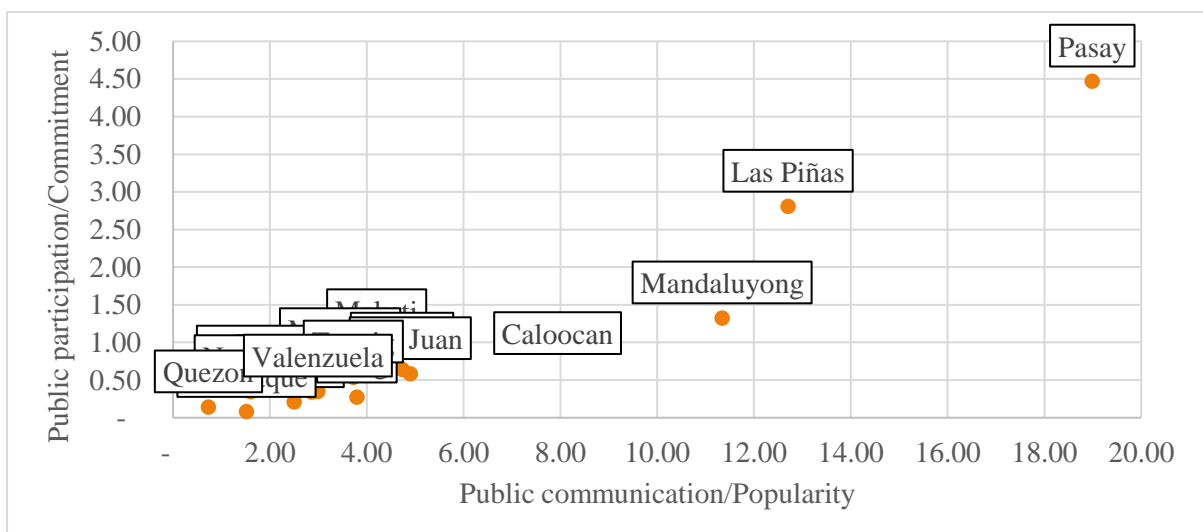
Table 14. Engagement Metrics by LGU

	SEI	Popularity	Commitment
	Public Engagement	Public Communication	Public Participation
Average	8.11	5.16	0.89
Standard Deviation	8.85	4.66	1.09
Average Institutional)	8.58	5.22	1.03
Average (Mayor)	6.99	5.02	0.55
Caloocan	8.90	5.95	0.87
Las Piñas	21.99	12.70	2.80

	SEI	Popularity	Commitment
Makati	6.25	4.20	0.95
Malabon	4.60	3.45	0.70
Mandaluyong	16.57	11.34	1.32
Manila	3.18	2.50	0.21
Marikina	2.91	1.76	0.47
Muntinlupa	3.90	2.86	0.34
Navotas	2.11	1.60	0.34
Parañaque	1.75	1.51	0.08
Pasay	36.65	18.98	4.47
Pasig	4.54	3.79	0.27
Pateros	6.57	4.72	0.64
Quezon	1.07	0.73	0.14
San Juan	7.93	4.89	0.58
Taguig	5.13	3.72	0.54
Valenzuela	3.83	2.99	0.35

Based on the four typologies based on the levels of public communication and public participation (Agostino & Arnaboldi 2016), most cities can be considered ghosts that are characterized as having low levels of public communication or popularity, and public participation or commitment, based on the typologies based on the levels of social media activity, which is illustrated in Chart 1. Only Mandaluyong can be considered as an engager that has a high level of popularity but a low level of commitment. While Pasay and Las Piñas can be considered leaders that have a high level of both popularity and commitment, their values may be significantly skewed because their low activity at 4.33 and 12.67 respectively compared to the average of 50.94.

Figure 1. Public communication and public participation matrix



Insight on Comments

To determine the nature of user comments, the study conducted a word frequency query with a minimum word length of five characters and enabled word grouping, which consolidates the frequency of words with common root words. The top five most common words appear to be personal in nature and directly address the mayor (see Annex K).

These results are similar to Congjuico's (2014) findings that a majority of comments on posts were expressions of gratitude and praises for mayor, which was not related to the flooding event. David et al. (2016) also observed that tweets from ordinary users or citizens are more likely to contain emotions and personal messages compared to official sources of information. Similarly, most tweets from the public express concern and solidarity as well as gratitude during and post-disaster (Soriano et al. 2016).

The study assumes that comments that use "pasok" (school) are likely to be inquiries about whether the LGU has declared class suspension. This confirms the observation of page managers who noted that they receive the most comments and engagements during class suspensions.

The most common category of user posts on the Facebook page of the Municipality of Karlstad, were requesting information (44.76%) (Bellström et al. 2016). Similarly, Reddick et al. (2017b) found that the most frequent nature of user comments to posts by the City of San Antonio Solid Waste Management Department were enquiry (26.11%), followed by reply (23.08%) and remark (15.55%).

Active Pages, Selective Users

Table 15 shows that levels of activity and interactivity are not positively related to SEI, which is consistent with previous studies that have applied SEI (Bonsón et al. 2019; Bonsón et al. 2015; Bonsón et al. 2014). The continuously increasing levels of activity on social media channels does not necessarily result in increased engagement (Born et al. 2019). For example, the Facebook pages of Pasay and Las Piñas Facebook page had the highest SEIs at 36.65 and 21.16 respectively had the least activity from July 1, 2017 to December 31, 2017 with only a total 26 posts and 62 posts.

Table 15. Relationship between usage metrics and public engagement (Pearson's r)

	Popularity	Commitment	Stakeholder's Engagement Index
Activity	-0.23	-0.20	-0.18
Interactivity	-0.08	-0.02	-0.08

One possible explanation of why less active pages have high engagement is that users consider the limited posts to be reliable and relevant to them. Users are more likely to follow a page when they consider its information to be reliable, complete, relevant, timely and understandable, which are the dimensions of information quality (Valaei & Baroto 2017).

Table 16 shows that the percentage of selected themes is related to engagement. Pages that have a higher percentage of “Disaster risk communication” posts are likely to have higher engagement. For example, the Pasay Facebook page that only had 26 posts from July 1, 2017 to December 31, 2017 has the highest SEI at 36.65. Twelve (12) or nearly half (46.15%) of its posts had the theme “Disaster risk communication,” followed by six (6) representing almost a quarter (23.08%) were about “Non-disaster advisories.”

The three most frequent themes “Providing information on services and facilities,” “Marketing activities in the city,” and “Social media sharing” that comprise more than half of the total posts are similar to press releases and news items about the agency which generate low engagement (David 2016). These unidirectional themes turn social media pages into “mini government websites” or “mini government newspapers” (Zheng & Zheng 2014).

Table 16. Relationship between percentage of theme and engagement metrics (Pearson's r)

	Popularity	Commitment	Stakeholder's Engagement Index
Providing information on services and facilities	-0.22	-0.22	-0.26
Disaster risk communication	0.84	0.89	0.88
Non-disaster advisories	0.39	0.49	0.46
Marketing activities in the city	-0.17	-0.27	-0.20
Marketing the city	-0.17	-0.06	-0.16
Social media sharing	-0.17	-0.19	-0.16
Symbolic presentation	-0.07	-0.12	-0.10
Requesting action from citizens	-0.08	-0.08	-0.11

Engagement by Theme and Page Type

Examining the percentage of the total number of reactions, comments and shares by theme also confirms the relationship between themes and engagement metrics. As shown in Table 17, posts categorized “Disaster risk communication” received the highest percentage of total reactions, comments and shares followed by “Providing information on services and facilities” at 25.78% of total engagement.

Table 17. Percentage of total engagement by theme and page type

	Percentage (all pages)	Percentage (Institutional)	Percentage (Mayor)
Providing information on services and facilities	25.78%	26.45%	24.56%
Disaster risk communication	32.22%	26.62%	42.44%
Non-disaster advisories	3.44%	3.75%	2.88%
Marketing activities in the city	16.51%	20.86%	8.56%
Marketing the city	5.03%	6.75%	1.90%
Social media sharing	4.56%	6.03%	1.88%
Symbolic presentation	11.04%	7.60%	17.34%
Requesting action from citizens	1.42%	1.95%	0.44%
Total	100%	100%	100%

The highest percentage of total number of reactions, comments and shares on both institutional and mayor pages are on posts under informational themes “Disaster risk communication” followed by “Providing information on services and facilities.” Persuasive themes receive the third highest percentage of total number of reactions, comments and shares with “Marketing the city” for institutional pages and “Symbolic presentation” for mayor pages, which are aligned with some of these pages’ reputation-based objectives.

“Disaster risk communication” receives the highest average engagement per post as shown in Table 19. This is consistent with the findings of previous studies that citizens are more likely to engage by reacting and commenting on posts that they feel to be relevant issues that impact their daily lives (Hao et al. 2016) and communities (Stoeckel 2018). Declaration of class suspension and weather updates are particularly relevant for students, who make up most of the page followers, according to the interviewees and demographics of social media users in the Philippines (We are Social & Hootsuite 2019). This finding also confirms their observations that these posts receive the most attention and engagement. Similarly, posts like water and

power interruptions in “Non-disaster advisories,” which has the second-highest engagement per post, are also pressing concerns for citizens.

Although “Providing information on services and facilities” posts are the most frequently posted content type, the theme received the second-highest percentage of total engagement yet lowest engagement per post. Based on previous literature (Bonsón et al. 2015; Bellström et al. 2016; Magnusson 2016; Reddick et al. 2017b), a portion of these comments is likely to be inquiries or requests for more information about the promoted services and activities.

Similarly, posts advertising government services are less popular and receive less engagement compared to “other” posts, which receive higher engagement because users are more interested in entertaining and less serious content compared to posts on government activities (Hofmann et al. 2013).

Table 18 shows that mayor pages have higher average reaction per post, share per post as well as total engagement per post compared to institutional pages that only higher average comment per posts. Similarly, Congjuico (2014) observed that the posts of the local executive always had the highest number of comments, shares and likes compared to that of other users and the local disaster risk reduction management office.

Table 18. Descriptive statistics of engagement by page type

		Average Reaction Per Post	Average Comment Per Post	Average Share Per Post	Total Engagement per Post
Institutional	Min	51.11	6.97	10.66	0.75
	Mean	464.72	85.69	161.21	604.69
	Max	1,542.39	340.95	788.22	2,671.57
Mayor	Min	155.53	8.46	16.67	180.66
	Mean	777.34	83.28	199.24	1,059.86
	Max	1,689.24	173.97	412.00	2,149.94

Theme and page types also appear to influence the reactions selected by users. Table 19 shows that the most common reaction is like, followed by love, haha, wow, sad and angry. Users are more likely to react to a post because it is the fastest and easier way to engage with a post. Leaving a “Like” reaction requires less effort (one click on desktop or tap on mobile) than the other reactions (hover then click on desktop, or long press then tap on mobile).

“Non-disaster advisories” posts, such as water and power interruptions and traffic advisories received the highest percentage of overtly negative reactions, sad and angry. “Disaster risk communication” posts have the second-highest percentage of overtly negative reactions yet the highest percentage of love reactions, which can be assumed to have more weight than a like because selecting this reaction requires more effort.

Table 19. Percentage of reaction types by theme

	Like	Love	Wow	Haha	Sad	Angry	Total Reacts
All posts	87.75%	5.64%	2.45%	2.76%	1.09%	0.32%	100%
Providing information on services and facilities	92.70%	3.81%	2.60%	0.53%	0.20%	0.16%	100%
Disaster risk communication	80.20%	7.60%	2.01%	6.16%	3.24%	0.78%	100%
Non-disaster advisories	87.87%	4.35%	1.35%	2.21%	2.54%	1.68%	100%
Marketing activities in the city	89.33%	6.61%	3.63%	0.28%	0.10%	0.05%	100%
Marketing the city	91.01%	5.32%	2.91%	0.69%	0.04%	0.04%	100%
Social media sharing	89.93%	4.50%	3.16%	1.41%	0.85%	0.16%	100%
Symbolic presentation	87.71%	4.93%	1.22%	5.44%	0.61%	0.10%	100%
Requesting action from citizens	85.99%	6.69%	1.54%	5.49%	0.25%	0.04%	100%

The percentage of reactions also varies by page type, as seen in Table 20. A higher percentage of total reactions on institutional pages are likes. Mayor pages have a slightly higher percentage of varied reactions, which can be assumed that users are more likely to exert slightly more effort in selecting a different reaction for mayor pages. The percentage of overtly negative reactions are similar on both page types. Mayor pages appear to receive a higher percentage of haha reactions, which also happen to be among one of the top five frequent words in the user comments.

Table 20. Percentage of reactions by page type

	Percentage (all pages)	Percentage (Institutional)	Percentage (Mayor)
Like	87.75%	88.73%	86.13%
Love	5.64%	6.26%	4.60%
Wow	2.45%	2.69%	2.04%
Haha	2.76%	0.90%	5.83%

	Percentage (all pages)	Percentage (Institutional)	Percentage (Mayor)
Sad	1.09%	0.97%	1.28%
Angry	0.32%	0.44%	0.12%
Total Reacts	100.00%	100.00%	100.00%

Chapter Summary

The most frequent activity undertaken by users to interact with a government post is leaving a reaction (71%), followed by sharing the post with others (19%) then posting a comment (10%). This finding is consistent with previous studies that found that reacting to a post is the most popular form of interaction because it requires the least amount of effort (Bonsón et al. 2014).

Most of the 17 LGU Facebook pages have limited public engagement measured by the SEI. Pasay and Las Piñas have the highest values of SEI, popularity and commitment. However, these two pages may be outliers because of their significantly low activity at 4.33 and 12.67 respectively compared to the average of 50.94. Institutional pages appear to have a higher SEI average; however, this could be related to the fact that the outliers, Pasay and Las Piñas, are institutional pages.

The popularity, which measures the capability of the page to broadcast content to a large receptive audience, of the 17 LGU pages are higher than the commitment, or capability of the page to enable discussion and interaction between the local government and the public. In terms of the differentiated levels of public engagement, these pages are more successful in informing the public, which represents public communication or the lowest level of engagement. The pages have less success in enabling discussion and interaction between the local government and the public through public participation or the higher level of engagement.

Based on the four typologies based on the levels of public communication and public, most cities can be considered ghosts that are characterized as having low levels of public communication or popularity, and public participation or commitment, based on the typologies based on the levels of social media activity. Only Mandaluyong can be considered as an engager that has a high level of popularity but a low level of commitment.

Activity and interactivity are not positively related to the overall concept of public engagement (SEI) and its differentiated levels of public communication (popularity) and public participation (commitment). The continuously increasing levels of activity on social media channels does not necessarily result in increased engagement, which remains low. One possible explanation of why less active pages have high engagement is that users consider the limited posts to be reliable and relevant to them. For example, pages that have a higher percentage of posts with “Disaster risk communication” theme are likely to have higher engagement.

Examining the percentage of the total number of reactions, comments and shares by theme also confirms the relationship between themes and engagement metrics. Posts categorized “Disaster risk communication” received the highest percentage of total reactions, comments and shares and highest engagement per post.

Theme and page types also appear to influence the reactions selected by users. “Non-disaster advisories” posts received the highest percentage of overtly negative reactions, sad and angry. “Disaster risk communication” posts have the second-highest percentage of overtly negative reactions yet the highest percentage of love reactions, which can be assumed to have more weight than a like because selecting this reaction requires more effort. Mayor pages have a slightly higher percentage of varied reactions, which can be assumed that users are more likely to exert slightly more effort in selecting another reaction aside from like for mayor pages.

Chapter 6

Conclusion

This chapter discusses how the findings of the study answer the main research question: how do the local government units of Metro Manila use Facebook for public engagement? It begins with key findings on how local governments use their Facebook pages and how the public engages with the government content.

The next section presents theoretical and practical implications and recommendations. This is followed by study limitations and areas for future research. Given the limitations of the methods and sample of the study, the conclusion puts forward that the identified list of themes can be the baseline for further studies that will seek to explore the nuances of government social media use in the Philippine context.

Key Findings

The study describes how the local governments of Metro Manila use social media. Government social media use was analyzed by summarizing structured data, specifically the usage metrics of activity and interactivity, and classifying the themes and direction of unstructured text through content analysis. Overall public engagement and its differentiated levels of public communication and public participation were measured by engagement metrics, the number of reactions, comments and shares.

Previous literature on e-government and technology-enabled public engagement emphasized the potential of social media to achieve normative objectives of government communication. Initially, social media and its participatory features was envisioned to be an enabling technology-based mechanism for open and user-centered governance through engagement and collaboration (Bertot et al. 2010). However, studies have found that the actual use of these platforms fall short of these expectations and are instead utilized as channels for one-way communication, primarily to announce government activities and services. Frequent themes posted by national and local government agencies from different countries are focused

on providing information on operations, programs and policies as well as marketing events and locales.

With its large network of active users that continue to grow as more affordable smartphones become available (Reyes 2018) and free access is provided by major mobile networks (David 2016), Facebook can be considered a promising platform for governance and communicating with constituents for many Philippine government agencies. Despite the platform's collaborative features and wide reach, research on the Facebook pages of Philippine national and social service agencies (Olaño 2014; David 2016) and selected local government units (LGUs) (Roengtam et al. 2017; Congjuico 2014) found one-way information dissemination rather than two-way interaction. Nevertheless, this study aims to provide a comprehensive examination of how Philippine local governments in the National Capital Region use their Facebook pages to engage with the public within the context of seemingly contradictory goals of informational and persuasive communication.

Using Facebook Pages for Informational Goals

To answer the research question, the study first examined government social media use. The findings show that most posts in LGU Facebook pages feature information on public services and promote activities attended by local officials, particularly the mayor. The identified themes listed in descending frequency are: "Providing information on services and facilities"; "Marketing activities in the city"; "Social media sharing"; "Symbolic presentation"; "Disaster risk communication"; "Marketing the city"; "Non-disaster advisories"; and "Requesting action from citizens."

Most of the posts (63.05%) can be considered as examples of public information, the one-way communication model because the four (4) themes of "Providing information on services and facilities," "Disaster risk communication," "Marketing activities in the city," and "Non-disaster advisories" can be considered as content that seek to provide factual information on government's operations in the delivery of public services and facilities and other activities in the city.

Only 21.63% of the total posts that are categorized as "Symbolic presentation" and "Marketing the city" fit under the Press agency model because its primary objective is to evoke

emotions for persuasive goals rather than provide information. Only one post categorized as “Requesting action from citizens” from Valenzuela City can be considered as an example of the two-way asymmetrical communication model.

Institutional pages have a higher percentage of themes related to the informational goals of government communication while content that achieve persuasive goals is more frequent on mayor pages, which is consistent with observations from page managers.

Persuasive Communication Through Facebook

Institutional and mayor pages appear to use social media for different purposes. The study was only able to interview page managers of institutional pages; however, the interviewees representing Malabon and Valenzuela were involved in the creation and maintenance of their mayor’s page. From the beginning, mayor pages are created for reasons distinct and separate from institutional pages. In Valenzuela City, the mayor’s page was created with the intention that he could continue using the page after his term as city mayor. This decision was undertaken to replicate the success of the former mayor who continued to use his Facebook page, which had gathered a sizable number of page followers during his three terms as city mayor, when he ran for a seat in the Senate.

Starting then maintaining a personal public page throughout a politician’s career may have been the same objective of other mayor pages. The oldest page in the sample, the page of the mayor of Manila was created in 2008, years before Joseph Ejercito Estrada’s first term as city mayor in 2010. Also, the page username (@PresidentErap) suggests that the page reflects his identity as a politician because it references the pinnacle of his political career as the former President of the Philippines from 1998 to 2001.

Similarly, the mayor pages representing Parañaque and Pasig were created sometime earlier in their political careers and before the then-incumbents took office. Robert Eusebio’s Facebook page (page name: Bobby Eusebio) was created in 2010, during his first two terms as Pasig City Mayor from 2007 to 2013 before another term from 2016 to 2019. Similarly, the page of Edwin Olivarez (page name: Mayor Edwin Olivarez; username: @mayoredwinolivarezofficial) was started in 2009, the same year he was elected as the city’s 1st District Representative. Page managers are only allowed to change the Facebook page name

and username a limited number of times, which was also the reason why the personal public page of the Valenzuela mayor did not include his position.

The interviewees of Malabon also mentioned that the mayor, who previously served as vice-mayor, was already maintaining his public page before he took over as mayor in 2012.

Some mayor pages may have been created as part of an election campaign or previous political position then maintained as it already amassed a following. Some teams that manage the mayor's page are part of the mayor's office. In other contexts, different sub-units within a government agency are responsible for carrying out informational and persuasive goals (Canel & Sanders 2012). Communication teams in the mayor's office may have different goals from the Public Information Office that have specific responsibilities and tasks as specified in the Local Government Code.

The interviewees representing Malabon explained that the key difference between the content of the city and mayor's page is that the mayor's page had more posts about personal projects and hobbies, blogs, selfies and events with family. Similarly, the Social Media Officer of Valenzuela City observed that the mayor's tweets are more personalized and only feature LGU activities where he is present, in addition to selected city announcements and advisories.

Social media, particularly mayor pages, are interesting cases that can be examined in the context of the personalization of politics. Social media enabled the shift of focus from political parties to the individual politician (Enli & Skogerbo 2013). By creating and maintaining these personal pages, elected officials take an active role in the self-personalization of politics. Constituents who feel increased feelings of closeness, through exposure to self-personalized posts, are more likely to express more support for these candidates (McGregor 2018).

Frequent "Symbolic presentation" posts may be seen as the mayors' attempts to demonstrate sympathy for their electorate, emphasizing the value of *pagdamay* (Agpalo 1999) that can contribute to building and strengthening the feelings of closeness. In the Philippine context, feelings of intimacy and association with positive emotions instilled through constant media exposure are possible explanations why voters who watch more television, which remains a more common source of information in the country (SWS 2019), are likely to vote for celebrities (David and Atun 2012). The same phenomenon extends to Facebook as younger Filipinos are more likely to follow local politicians whom they feel a closer connection (David

2013) compared to an institutional page. Second to liking posts, following or subscribing to updates from public pages of elected officials, candidates for electoral office and other political figures is the second most frequent political activity of Filipino Facebook users (SWS 2019).

In addition to building a relatable personal image, mayor’s pages can serve as a platform to publicize achievements, which is a key element of constituency contact for the aim of strengthening reelection prospects (Adler et al. 1998). Local government units, and not solely the mayor, are responsible for the provisions of the public services. Posting the tangible results of local government programs and activities on mayor’s pages may be similar to the credit-grabbing practice of “*epalism*” when politicians prominently feature their image, name and other forms of personal branding on publicly funded goods and merchandise (Flores 2015). These achievements are likely to be attributed to the mayor, reinforcing the political support of page followers who already feel an increased feeling of closeness.

To determine the extent of mayor-centric content, the study conducted a word frequency query with a minimum word length of five (5) and word grouping on government posts to determine the frequency of the word “mayor” relative to the total words counted. As expected, the word “mayor” appears more frequently on mayor pages compared to institutional pages, which is disaggregated in Table 21. The word did not appear as often in the Mandaluyong Mayor’s page because most content appears to be written in the first-person point of view, which may be part of her self-personalization strategy. Institutional pages also mention the mayor to a lesser extent.

Table 21. Frequency of the word “mayor” in Facebook Pages

City Name	Facebook Page Type	Frequency Rank	Count	Weighted Percentage
All Pages		1	2,140	0.92
Caloocan	Mayor	2	384	1.44
Las Piñas	Institutional	2	71	2.25
Makati	Institutional	8	82	0.53
Malabon	Institutional	8	67	0.52
Mandaluyong	Mayor	47	17	0.16
Manila	Mayor	1	152	2.50
Marikina	Institutional	15	26	0.31
Muntinlupa	Institutional	2	364	1.25
Navotas	Institutional	4	98	0.44
Parañaque	Mayor	4	60	1.03
Pasay	Institutional	2	11	1.09

City Name	Facebook Page Type	Frequency Rank	Count	Weighted Percentage
Pasig	Mayor	3	140	1.06
Pateros	Institutional	8	38	1.90
Quezon	Institutional	4	148	0.81
San Juan	Institutional	4	13	0.78
Taguig	Institutional	5	190	0.82
Valenzuela	Institutional	4	106	0.55

Institutional pages also engage in persuasive communication, mostly through posts under the theme “Marketing the city.”

Among the interviewed cities, both Malabon and Quezon had image-building goals in addition to information dissemination. Persuasive goals, as part of reputation management, can contribute to the selectivity of topics posted on platforms that also support informational objectives. The page administration of Quezon City said that they rarely post about police reports as the objective of their Facebook page is to promote the city as an investment destination.

As part of the goal of page administrators to rebrand the Malabon page from focused on solely government projects to a community-page, quotes were posted on Monday and Sunday while content on food was posted on Friday. While Malabon also posts informational content, its overarching persuasive objective of community-building contributes to the slightly higher percentage of press agency posts (50.64%) compared to public information posts.

“Marketing the city” posts can be considered as attempts to depict the city positively; however, the link between these positive narratives and the goal of strengthening political capital for electoral success (Canel & Sanders 2011) is less direct in institutional pages. Promoting the city as an attractive place to live or invest may benefit the incumbent mayor as the local government unit is considered synonymous to the local chief executive under mayor-centered local electoral politics in the Philippines (Aspinall et al. 2016).

“Symbolic presentation” posts that feature elected officials in activities outside of the provision of public services were also present on these institutional pages, notably the Taguig Facebook page featured the then-incumbent mayor attending events with foreign dignitaries as the spouse of the then-Secretary of Foreign Affairs. These posts, which increase the visibility

of politicians, reiterate the individual-centered promotion that highlights political personalities rather than broader policy concerns (Teehankee 2010).

Constrained Human Resources Limit Usage and Responsiveness

All survey respondents and interviewees who manage the Facebook pages were staff of the Public Information Office, or similar equivalent for LGUs, and Office of the City Mayor. Social media teams embedded within the local government organizational structure can be more responsive to questions from constituents as they are very familiar with LGU processes and activities (David 2016). Most of these pages have been active for at least four years, which has allowed the team to establish mostly informal norms and mechanisms that institutionalize the use of social media.

Out of the three pages started before the term of the incumbent, the Facebook pages of Makati and Valenzuela were established in the term of former mayors who were siblings of the incumbent mayor, which may explain the longevity of the page. Only the page of Marikina was started during the term of a former mayor with no kinship ties to the incumbent. The interviewees representing Makati and Marikina occupy plantilla positions and were involved in managing the page since the term of the former mayor. Mandating the management of Facebook pages to the Public Information Office and the Information and Community Relations Department (ICRD) that are part of LGU's organizational structure instead of an ad-hoc co-terminus team can also contribute the longevity of a page.

The social media teams of the five cities do not follow the recommended structure described by the proposed AO, which has a Social Media Officer and Account Administrator. Only Valenzuela City has a designated Social Media Officer who also serves as the page administrator. Most cities do not have a dedicated team to maintain social media platforms as the team members have other responsibilities. The average number of personnel involved in managing the page is three to four. Only Malabon and Quezon City each have a three-person team focused solely on maintaining social media platforms.

Some interviewees mentioned the need for more human resources to create engaging content. Limited financial and human resources are common challenges cited by Philippine LGUs in undertaking organization transformation (Teng-Calleja et al. 2016).

While the number of team members responsible for maintaining social media channels does not seem to influence the activity of a page, assigning one person to focus on responding to comments, a practice implemented by Makati City, is likely to contribute to a higher level of interactivity. Maintaining a social media presence creates an expectation of responsiveness (David 2016). MMDA, which is considered as the benchmark of responsiveness, has 25 social media managers that operate 24/7 shift work divided into three (3) shifts (Alampay et al. 2018).

Role of the Mayor in Content Creation

The mayors of the five cities represented in the interviews support social media, confirming that the presence of an internal leader who champions the use of social media also contributes to the success of these initiatives (Ignacio Criado et al. 2017). In two cities, the mayor played a crucial role in starting the page while other local chief executives signed-off on the pages created by other offices. While the mayor's involvement may have limited influence on usage metrics, the page managers of Makati, Malabon and Valenzuela shared that they seek the approval of the mayor for uploading sensitive content.

An example of sensitive content provided by the Social Media Officer of Valenzuela was a rescued wild bird was turned over to the LGU. There was uncertainty whether promoting the news could create any legal issues as the city government did not have a permit or is mandated to handle wild animals. In a separate discussion about hiding posts, the Social Media Officer emphasized that the page practices transparency and does not avoid controversial issues, specifically mentioning the Kentex Manufacturing factory fire on May 15, 2015. The page posted frequent updates that included photographs of the aftermath and funerals of the victims despite its potential reputational risk for the LGU. Other examples include being transparent about the situation of evacuees or casualties from natural disasters. The interviewee emphasized that the LGU pursues transparency because "we owe it to the public," which is aligned with the normative goals of government communication.

The page manager of Makati said that sensitive content was difficult to explain and evaded providing an example of sensitive content. He alluded that it would be evident on the page, which shows that sensitive content is still posted but could be carefully worded to avoid controversy.

Institutional Preference for Disseminating Information

All survey respondents indicated that Facebook was the most preferred social media platform, which was confirmed during the interviews. The objective of using Facebook is for information dissemination and promotion. Other goals of social media use include serving as a digital city hall, building a sense of community and promoting the city as an investment and tourist destination.

The survey respondents reported less interest and preference for using the Facebook page for two-way interaction. However, they recognize that these channels serve as a more convenient platform to receive feedback and complaints, which are mostly received through direct messages rather than as a comment on a public post. Another recognized benefit of using Facebook page is the quick dissemination of time-sensitive information and announcements particularly during disasters to a wide audience.

Most cities are implementing a social media strategy or plan, mostly unwritten, that is aligned with their objectives of social media use and have internal processes to achieve these goals. All survey respondents indicated that they follow guidelines in creating and posting content on the local government's social media accounts. These rules are unwritten in Malabon, Valenzuela and Quezon City. Makati has documented content creation guidelines that have been approved by the Mayor; however, these standards cover all communications materials created by all city government offices that are submitted to ICRD.

The findings are consistent with the assessment that these LGUs are at Stage 2 or Constructive Chaos of social media adoption, which is characterized as coordinated efforts to follow informal rules (Mergel and Bretschneider 2013; Alampay et al. 2018). The three (3) cities with higher activity, Makati, Quezon City and Valenzuela, have more defined procedures for content creation and user interaction. Malabon and Marikina, which have less activity, appear to have less structured processes.

Only Makati and Quezon City have written response templates to frequently asked questions. The content analysis found that the comments posted by MyMakati, which has the highest level of interactivity, frequently included the templated phrases: "For concerns or complaints, you may call..." or "Para po sa inyong katanungan, maaari po kayong tumawag sa..." The use of these templates, which was also found on the Taguig page, can be considered as attempts to institutionalize standard replies as part of increasing page responsiveness. However,

templated responses can be considered the least responsive form of interactivity in contrast to responsive client-servicing replies provide direct answers to the users' specific questions and provide a web link for more information (David 2016).

Local government units with a high level of institutionalization are more likely to demonstrate higher interactivity. For example, citizen interaction is the most frequent content category posted by the Utrecht Twitter profile, which demonstrates a high level of social media practice institutionalization (Ignacio Criado et al. 2019). MMDA, the benchmark of government responsiveness on social media, also has a similar database of common concerns with corresponding templated responses (Alampay et al. 2018).

All cities have their own internal procedures for handling and forwarding complaints to other departments. Makati and Malabon share a complaint with a group message on a mobile application to department heads. Valenzuela forwards the complaint directly to the concerned department. Quezon City has a hybrid process, forwarding the complaints to the concerned department either through a transmittal, email or mobile application depending on the capacity of the recipient. In Marikina, complaints are uploaded then routed on an internal application.

The ICRD of Makati reports its social media analytics to the Mayor every month. Indicators being monitored include the demographics of users, the turnaround time of addressing comments and metadata engagement, which include the number of reactions, comments and shares.

All the institutional pages managed by the interviewees are linked to their respective city government's official website. The interviewees noted that other departments within the five LGUs have their own Facebook pages, in addition to the main institutional page. Other departments within the LGUs of Makati, Marikina, Quezon City and Valenzuela provide content for the institutional page. Willingness to collaborate with the office managing the institutional page depends on the capacity and rapport of each department. Makati City has a Communication Request Form that city government offices must submit to ICRD for any requests to produce communication materials, which also include social media posts and live video coverage through Facebook Live.

Engagement Limited to Public Communication

The engagement metrics, or the number of reactions, comments and shares, show that members of the public are more likely to interact with government posts by leaving a reaction, which requires the least amount of time, effort, analysis and feedback compared to posting a comment or sharing the post (Reddick et al. 2017a; Bonsón et al. 2014).

The 17 LGU Facebook pages have limited public engagement, or involvement members of the public in the activities of the LGU (Rowe and Frewer 2005), measured by the SEI. Applying the differentiated levels of public engagement, the study found that these pages are more successful in informing the public through a unidirectional flow of information through public communication or the lowest level of engagement. The pages have less success in enabling discussion and interaction between the local government and the public based on the commitment metric that represents public participation which is a higher level of engagement.

Most cities can be considered ghosts that are characterized as having low levels of popularity/public communication and commitment/public participation. Only Mandaluyong can be considered as an engager that has a high level of popularity but a low level of commitment. Pasay and Las Piñas that have a high level of both popularity and commitment may be outliers because of their significantly low activity at 4.33 and 12.67 respectively compared to the average of 50.94. Institutional pages appear to have a higher SEI average; however, this could be related to the fact that the outliers, Pasay and Las Piñas, are institutional pages.

The user comments appear to be personal in nature and directly address the mayor, which supports previous studies that found comments from the public are more likely to contain emotions, personal messages (David et al. 2016), expressions of gratitude, concern and solidarity (Soriano et al. 2016) and praises for mayor (Congjuico 2014). The nature of user comments may also explain why the pages have less success in enabling discussion and interaction between the local government and the public.

Usage metrics, activity and interactivity, are not positively related to engagement metrics. In contrast to the hypotheses, there was a strong negative relationship between activity, the average number of posts in a month, and public engagement, measured by the SEI, confirming the findings of previous studies (Bonsón et al. 2014; Bonsón et al. 2019). The

continuously increasing levels of activity on social media channels does not necessarily result in increased engagement. One possible explanation is that users tend to ignore uninteresting posts from pages that post frequently (Agostino and Arnaboldi 2016).

Another reason is that users only seek out the information they consider to be reliable and relevant. Filipino Facebook users are twice as likely to like a post on political or social issues than follow the public pages of elected officials, candidates for electoral office and other political figures (SWS 2019). Users that engage with posts are not necessarily fans or followers of the page. For example, a student may only go to the page for updates about class suspensions suspended and ignores all other content. This explains why pages that have a higher percentage of posts with “Disaster risk communication” theme are likely to have higher engagement.

Also, SEI and its metrics of popularity and commitment, are based on a ratio of total engagement metrics to the number of posts. Outliers with a significantly lower number of posts like Pasay and Las Piñas have higher engagement based on these metrics. Under the normative assumption that access to information is the essential first step for public participation, pages that rarely posts should not be considered successful cases.

The study also found that there was a strong negative relationship between the level of interactivity, or the local government’s response rate to comments, and engagement, measured by the SEI, instead of a positive relationship as initially hypothesized. These findings differ from the previous studies that found that local government units or officials that maintain more interaction on their Facebook pages are more likely to have higher levels of public engagement (Haro-de-Rosario et al. 2016; Stoeckel 2018) and lower levels of engagement have been observed on pages where the government agency do not reply to comments (Gao & Lee 2017; Haro-de-Rosario et al. 2016).

A closer examination of comments posted by the local governments reveals that most replies are templated responses that acknowledge complaints or provide contact details of the relevant offices rather than attempts to engage users in discussion. Templated responses can be considered the least responsive form of interactivity. Repeating canned replies and reposted answers may discourage users from leaving a comment and convince them to send a direct message instead. Examples of highly responsive client-servicing replies provide direct answers to the users’ specific questions and provide a web link for more information (David 2016).

Examining the percentage of the total number of reactions, comments and shares by theme also confirms the relationship between themes and engagement metrics. Posts categorized “Disaster risk communication” received the highest percentage of total reactions, comments and shares and highest engagement per post despite its lower frequency. Disaggregating the types of reactions, “Non-disaster advisories” posts, such as water and power interruptions and traffic advisories received the highest percentage of overtly negative reactions, sad and angry. “Disaster risk communication” posts have the second-highest percentage of overtly negative reactions yet the highest percentage of love reactions, which can be assumed to have more weight than a like because selecting this reaction requires more effort. Persuasive themes received the third-highest percentage of total number of reactions, comments and shares with “Marketing the city” for institutional pages and “Symbolic presentation” for mayor pages, which shows that users are also receptive to this kind of content.

Mayor pages have a higher average reaction, share as well as total engagement per post compared to institutional pages that only higher average comment per posts. Congjuico (2014) also observed that the posts of the local executive always had the highest engagement compared to that of other users and the local government office.

Similarly, mayor pages have a slightly wider variety of reactions compared to institutional pages, which have a higher percentage of only likes. This can be assumed that users are more likely to exert more effort in selecting a more differentiated reaction for mayor pages. Also, mayor pages appear to receive a higher percentage of haha reactions, which also happen to be among one of the top five frequent words in the user comments of all pages. The frequency of “informal” language may suggest that members of the public are likely to interact and engage with these pages, particularly mayors’ pages, in a personal manner, which may be related to social media’s role in strengthening the public’s feelings of closeness to politicians as a result of their personalization strategy (McGregor 2018).

Suspended na ba? Facebook for Disaster Risk Communication

LGUs consider disaster risk communication as one of the most important benefits of using Facebook, particularly being able to send and receive the latest information in real-time. Despite each city’s internal systems and protocols, the process of declaring class suspensions while dealing with a barrage of queries remains a contentious process for LGUs.

LGUs are allowed to declare localized cancellation of classes in the absence of automatic suspensions due to raised typhoon signal warnings (Executive Order No. 66, s. 2012), ensuring that local governments remain the authoritative information source of class suspension announcements. Local information offices, are tasked to provide information during and in the aftermath of and natural disasters, aligned with the informational goals of government communication. However, the decision-making process behind these announcements is influenced by reputation-based and issue management considerations.

The previous section described how “Disaster risk communication” posts receive the highest percentage of total reactions, comments and shares as well as average reactions, comments and shares per post. Page managers also confirmed that they receive the most engagement observed by the number of comments or direct messages received during weather disturbances. Based on the high engagement metrics and insights from the interview, the level of public engagement in the context of “Disaster risk communication,” or class suspensions in particular, is similar to public consultation or the unidirectional flow of when the public conveys information to the local governments in response to a specific engagement exercise focused on a topic (Rowe and Frewer 2005). The internal procedures of Marikina and Makati illustrate how Facebook can be used for public consultation.

The mayor of Marikina considers public clamor from Facebook and the announcements of neighboring LGUs in deciding class suspension. The PIO is tasked with monitoring then reporting public opinion on class suspension to the mayor. There did not appear to be a post explicitly inviting feedback from constituents; instead, members of the public conveyed their opinions and demands through direct messages, which is beyond the scope of the study. Also, public sentiment can be easily monitored through posts from other profiles and pages in the social media network.

In contrast, Makati does not provide any opportunity for public involvement in its class suspension decision-making process. The Mayor of Makati is known to avoid declaring class suspensions in response to the situation in neighboring areas or public opinion and strictly follows its internal procedures. As a result, both the mayor’s personal profile and MyMakati page are bombarded with complaints and harassment from irate parents and students, which can also be considered as a unidirectional flow of messages from the public to the government.

Based on these examples, the role of citizens from passive consumers to active contributors (Linders 2012) seems to have expanded specifically within the context of declaring class suspensions. The use of Facebook's features to gather input on the decision is related to the extent allowed by the government. In Marikina, citizens and their opinion on the matter are included in the decision-making process at the behest of the mayor. In contrast, public clamor is excluded from considerations in deciding class suspension in Makati. While Marikina's consultative approach does not demonstrate a level of engagement that increased the public's influence, authority and accountability in the political decision-making processes (Arnstein 1969), this example shows that the participation-enabling features of Facebook may have given the public more opportunities to be involved in this specific process of declaring class suspensions. Before social media, local governments had limited channels, most likely through landline phone or SMS text messaging, to gather public feedback quickly. Neither technology would have been as efficient in managing a massive influx of messages that were tied to a form of verifiable identity as social media.

How do local governments use social media for public engagement?

In conclusion, local governments of Metro Manila use their Facebook pages primarily for the unidirectional dissemination of information to the public, which is observable both in the usage metrics and posted content as well as the LGU's support institutional arrangements.

Solely informational content is essential to achieving good governance as posts that promote the activities of the LGU can contribute to increasing the awareness and trust in government institutions of constituents (David 2016). In turn, this trust is essential to encouraging and motivating constituents to comply with government regulations. However, local governments, and by extension publicly directed communication that it undertakes, operates within a complex arrangement of multi-faceted goals, constraints and audiences, which is reflected in its internal structures and processes underpinning social media use.

All pages, whether institutional or mayor pages, post a variety of content that support informational, persuasive and other goals. While the role of mayor pages in achieving persuasive and reputation-based objectives is more apparent, institutional pages may also contribute to strengthening public support for an incumbent's electoral success. Local government social media use, as an extension of mayor-centered local electoral politics in the

Philippines (Aspinall et al. 2016), is mayor-centric as observed through the frequency of the word “mayor” in both government posts and personal nature of citizen comments that seem to address the mayor.

While the page managers recognize that social media is a more convenient platform to receive feedback and complaints from citizens, they appear to be less interested in using the Facebook page for two-way interaction. Replies from local governments to constituents appear to be limited to templated responses to frequently asked questions rather than attempts to engage users in discussions. At the same time, the extent of public engagement, or involvement of members of the public in the activities of the LGU, is limited to leaving a reaction of a post, which requires the least effort compared to other forms of engagement.

Government social media use, as observed and described by the study, offers limited opportunities for members of the public to be involved in local government affairs. Only one out of more than five thousand posts within a six-month time frame attempted to solicit public feedback on a national government program. There appears to be more public engagement, measured by the number of reactions, comments and shares, related to disaster risk communication because members of the public consider it to be a relevant concern that directly impacts their daily lives.

Engagement related to disaster risk communication appears to originate from the public rather than an intentional government initiative to elicit higher levels of engagement. Facebook users appear to be more inclined to exert the additional effort to draft and send direct messages to an LGU page when the interaction is likely to contribute to achieving results that directly benefit them. The role of citizens in the decision-making process of class suspension is determined by the local governments or mayors as some local chief executives see the value of considering public clamor while others do not.

The findings show that the LGU Facebook pages bring the government closer to the public and vice-versa. Facebook, due to its wide network and free access, remains a promising tool for governments to communicate with their constituents. However, the opportunities to balance the power dynamics between those who govern and those who are governed do not appear to be present, despite the participation-enabling features of the platform (Hand & Ching 2011). Public engagement, or the extent that members of the public are involved in local government affairs, is focused primarily on informing the constituents rather than expanding

their role as active contributors in the co-production of public services, which may be an unrealistic expectation due to the local government's constrained human resources. The limited engagement related to disaster risk communication seems to originate from the public rather than an intentional government initiative to elicit higher levels of engagement, which appear to be largely absent on these pages.

Public preference, which is beyond the study's scope, may also need to be considered in understanding the limited engagement. The most frequent political activity of Filipino Facebook users on the platform is leaving a "like" or sharing posts with political comments (SWS 2019), which is confirmed by the study's findings. Younger demographics, which comprise the bulk of Filipino Facebook users, tend to avoid engaging in civil discourse on social media because they fear online harassment and surveillance and purposely consider the platform to be for positive interactions (Kruse et al. 2017). Integrating game mechanics into digital engagement initiatives can contribute to motivating both constituents and policymakers (Gastil & Broghammer 2020). Regardless of the interventions to be undertaken, achieving the full potential of Facebook to enable deliberative engagement towards empowered participatory governance requires significant investment from the LGUs to invest in its human resources and technology.

Implications and Recommendations

LGUs can consider adopting good practices based on the results of this study such as establishing then using an institutional page separate from the mayor's page. The mayor's page can play a brokerage role independent of the institutional page while cross-post each other's posts. Some LGUs have established procedures on cross-posting by requesting administrators of the mayor's page to share posts from the institutional page regularly.

This practice can also be to the advantage of the mayor because their personal page can be used after their term. This can also avoid discontinuity between transfers of leadership. After the term of the then incumbent mayor of Manila, the new administration had to establish an institutional page on 31 May 2019, Manila Public Information Office with 226,719 followers as of 28 August 2019. However, an institutional page does not guarantee long-term use as the Quezon City Local Government (@qclocalgovernment) was deleted when a new mayor was elected in 2019.

Another practice is posting more content that requests action or information from its users. The results show that posts with a two-way asymmetrical direction receive a higher than expected total engagement relative to its low frequency. Local government can consider posting more content to involve followers in policy-making activities because “most citizens are concerned with local government topics and want to be heard and included in the decision-making processes in their immediate neighborhood” (Mergel 2013a:147).

Institutionalizing content creation guidelines through a written strategy or at the very least templates is another useful practice. Also, integrating social media in other internal procedures such as declaring class suspensions and complaints handling can contribute to embedding the use of the platform in government operations.

Designating a team member to focus on addressing comments can also contribute to increased responsiveness and interactivity. Dedicated responders must be familiar and knowledgeable of the administrative and technical LGU procedures to be able to provide direct answers rather than templated responses. Engagement towards increasing the public’s involvement and participation in policy-making may require a long-term programmatic approach with deliberate campaigns extending outside of social media rather than one-off sporadic questions.

The Facebook pages of government organizations should have the exact name of the municipality or city, use the official logo and be categorized as a page of a government organization to distinguish itself as the official page because many unofficial or fake pages exist (Yildiz et al. 2016). The proposed AO on social media use also has similar naming convention guidelines.

Local governments can consider requesting for account verification to address issues related to fake pages. While Makati and Malabon had varying experiences in verifying their respective pages, the presence of the verified badge on a Facebook page will help constituents identify the real page from imposter pages.

LGUs also need to define their measure of success for using Facebook as part of their overall social media strategy. Paid promotion and resource-intensive content creation may increase a page’s visibility; however, increased reach does not necessarily result in higher engagement. The findings show that only certain content that is of interest to users like “Disaster risk communication” consistently receive high engagement. More specific objectives

of social media use can help LGUs determine how additional resources can be used to achieve their goals.

Furthermore, the findings can be used to customize the proposed AO on social media use for the specific functions of local governments. In addition to advisories, official statements and press releases, content on local programs and services that constituents can benefit from are essential for local government Facebook pages.

The study confirms that the frequent content types identified from previous literature are relevant to the Philippine setting. The area of disaster risk communication is an area of interest (David et al. 2016; Soriano et al. 2016) and offers many opportunities for future studies.

While this study adopted the measurement of engagement as the number of reacts, comments and shares, more work is needed to determine the validity of quantitative metrics such as the SEI as a measure of engagement. The limited scope of this study could not determine whether SEI captured the full extent of engagement, particularly for outliers, and whether it leads to deeper participation.

Future research that will require data extraction from social media platforms may become more challenging due to recent changes to privacy policies. Free applications commonly used for academic studies such as Netvizz and Facepager will be unable to extract data from public Facebook pages after 4 September 2019 as a result of stricter API permission (Rieder 2018). Alternative data extraction methods may be more resource intensive.

Limitations

This exploratory study proposed a set of frequently posted themes as part of describing government social media use and public engagement on Facebook pages. The common themes observed across these 17 LGUs cannot be used to generalize the activity of all Philippine government agencies because of the limited sample size. Neither can the identified organization and institutional factors as the willing participants were page managers of institutional pages, which had relatively similar usage and engagement metrics compared to the rest of the sample. Also, the survey results cannot be considered statistically significant because of the limited sample size.

As urbanization and population density are related to social media use in the Philippines (Legara 2015), examining the Facebook pages of other highly urbanized cities in the country could have enriched the results and identified a more extensive range of common themes. As this study focused solely on text, an examination of images, videos linked material can identify other common themes.

The adopted frameworks, such as the SEI, may not have been able to consider the wide range of varying case sizes. For example, Las Piñas and Pasay, the pages with the highest SEI, only had 69 and 26 extracted and analyzed posts respectively compared to seven cities that had more than 400 posts. Under the normative assumption that access to information is the essential first step for public participation, pages that post mostly announcements without initiatives to encourage discussion cannot be considered platforms that enable public engagement. While this study found limited citizen engagement through social media, engagement may be higher in the direct messages to the page, which is beyond the scope of the study.

The study intended to explore how organizational and institutional factors contributed to the activity and engagement of all 17 LGUs. Due to time and resource constraints as well as a lack of response from representatives of the other local governments, the study focused on city governments that expressed their willingness after at least one follow-up. The interviews did not gather substantial evidence that could explain how institutionalized structures and practices impacts social media use with a degree of certainty. Instead, gathered insights on organizational and institutional factors were used to contextualize the findings of social media use. While the study could have benefited from a documentary review of institutional policies similar to the multi-method approach of David's (2016) analysis of national government agencies, the page managers mentioned that most of their strategies, guidelines and practices are unwritten.

Also, the study was only able to interview page managers of institutional pages, which shared similar organizational arrangements and objectives for social media use. A social media team embedded in the mayor's office rather than the public information office may have experienced these organizational and institutional factors differently. The discussion on these contextual arrangements could have been improved by including the perspective of a social media team responsible for the maintenance of only mayor pages.

The survey and interview responses may also be impartial as interviewees may have been self-censoring to present their local governments in a positive light. While the interviewees were assured that their responses would be confidential and anonymous, they provided their positions in the survey forms and may feel that their expressed views will reflect on their mayors or cities. Also, most of the interviewed page managers participated in a previous study on social media for disaster risk reduction and mitigation in local governments (Alampay et al. 2018), which may indicate that they are relatively more open about their social media management practices or are considered as good benchmarks. The perspective of managers of pages with relatively less activity and largely ad-hoc practices could have enriched the findings of this study.

Future Research

The key findings can serve as potential hypotheses for future studies. Moreover, the list of frequent themes can be used as a baseline for future quantitative studies that aim to produce more statistically significant results. These themes can also be validated by research that will combine automatic and manual approaches to discover themes in extracted social media posts or tweets (Syliongka et al. 2016). In-depth qualitative studies could be expanded to examine the actual procedures of local governments for content creation through documentary review and data analytics only available to page owners.

Future studies can also consider focusing on how the youth engages with the government through social media. All interviewees observed that most followers are students and youth, based on their interactions and pages analytics that include the user demographics. They noted that these youth are students who attend schools in the city but are not residents, which reduces the possibility of Facebook providing an opportunity to engage with “actual constituents.” Their observation is supported by the results that show that posts about class suspensions, which are relevant and of interest to the youth, receive the most engagement.

Additionally, future research can focus exclusively on comments as a close examination of these interactions is needed to determine whether discussions on social media enable participation. These studies may also need to consider that comments may be users tagging their friends to a post. An initial scan of the extracted comments found many names. Tagging

other users by entering a comment requires fewer steps or actions than clicking “Share” than selecting a username.

Personal content emerged within several different contexts, particularly the mayor’s posts and user comments. These pages in the Philippine context appear to have a wider range of press agency content that appeals to emotion. A new framework beyond press agency may be needed to capture the nuances of these posts. The prominence of personal content can also be examined within the personalization of politics.

Modernizing then applying models of citizen participation to measure participation on technology-based platforms can be explored on pages that have evidence of robust engagement. Contextualizing engagement metrics from the page with rich insights gathered from discussions with page fans who actively engage on LGU pages can be considered.

Furthermore, the use of social media, whether for disseminating factual or misleading information has become widespread and nuanced in the Philippine setting. Future studies may need to explore how phenomena like trolls and fake news impact e-participation initiatives on social media.

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Annexes

Annex A. Social Media Use for Local Government Survey Questionnaire

Survey on Social Media Use for Local Government

Please answer the following questions honestly and to the best of your knowledge. Your answers will be kept confidential and anonymous.

Position

How long have you worked in your current office/department?

How long have you been responsible for managing the institutional Facebook page?

Does your office/department have a team, comprised of staff focused only on maintaining social media platforms?

Yes

No

How many people are involved in managing the institutional Facebook page? Please indicate if they are part of a different office/department.

Does your social media team receive training on social media management?

Yes

No

Is your office/department implementing a social media strategy or plan?

Yes

No

How often does your team receive training in a year?

Does your office/department have an allotted budget for maintaining the social media presence of your city/mayor?

Yes

No

Does your team follow guidelines in creating and posting content on the local government's social media accounts?

Yes

No

Does your team have a standard procedure for moderating comments on the social media accounts? Yes No

Does your local government have a legal basis, which may be a resolution or similar document, for social media use? Yes No

The goal of our local government unit's social media use is (Please rank from 1 to 8, with 1 as the most important and 8 as the least important)

promoting the local community and city/municipality	<input type="text"/>
citizen engagement	<input type="text"/>
business engagement	<input type="text"/>
city government employee engagement	<input type="text"/>
government/policy awareness	<input type="text"/>
enhancing public services	<input type="text"/>
open and transparent government	<input type="text"/>
public information and outreach	<input type="text"/>

The preferred social media platform of the local government is (Please rank from 1 to 7, with 1 as the most preferred and 8 as the least preferred. Use 0 if the platform is not used)

Facebook	<input type="text"/>
Twitter	<input type="text"/>
YouTube	<input type="text"/>
Google+	<input type="text"/>
Instagram	<input type="text"/>
Pinterest	<input type="text"/>
Snapchat	<input type="text"/>

Please select the option that best represents your level of agreement with the statement.

	Strongly disagree (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Strongly Agree (5)
Our office/department has clear objectives in using social media for public engagement.	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Our institutional Facebook page is the best channel to share information on...	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
activities and programs organized by the local government	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
benefits of residents	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
local resolutions and ordinances	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Please select the option that best represents your level of agreement with the statement.

	Strongly disagree (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Strongly Agree (5)
national programs and policies					
employment opportunities within the city or municipality					
positive stories from the city/municipality					
public services provided by the local government					
service disruptions and ongoing repairs in the city/municipality					
real-time advisories and updates during disasters and emergencies					
Our institutional Facebook page is the preferred channel for public dialogue compared to face to face interaction.					
Posts and comments on the Facebook page are the best way to learn about the preferences of the public.					
Our institutional Facebook page is an appropriate platform to publicly address comments from the public on...					
complaints about public services					
inquiries on public services					
requests for information					
feedback on public services					
reports of problems or breakdown of public services					
suggestions for local policy priorities					
Information provided by the public on the local government's Facebook page is very valuable.					
Regularly monitoring and addressing comments on our Facebook page is important.					

Please select the option that best represents your level of agreement with the statement.

	Strongly disagree (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Strongly Agree (5)
Our Facebook page is the best platform to gather priorities for the local government.					
Information from social media is important input for our local plans, policies and programs.					
Using Facebook to communicate with our citizens is important to the success of our local programs.					
Our mayor strongly supports the use of social media for public engagement.					
Our mayor and elected leaders prioritize solving problems and concerns reported on social media.					
Issues raised in the comments on our page must be reported to the mayor.					
Our mayor and elected leaders value transparency and access to public information.					
Technology is important to improving the delivery of public services.					

Thank you for completing this survey!

Annex B. Interview Guide

Adapted from Gil-Garcia, J.R. 2012, *Enacting Electronic Government Success*, New York: Springer-Verlag.

Can you give me a brief description of your job title and major responsibilities?

Prompts: role in managing Facebook page, formal education, professional background

Can you please describe how the page was started?

Prompts: How was it started?

Could you discuss the mission and goals of the Facebook Page?

Prompts: provision of services, management improvement, political image

Please, could you describe the main characteristics of the Facebook page such as the services it offers?

Prompts: technical features, services provided, audiences, management strategy

Was the initial strategy of using the page affected by the mayor's policy agenda? If so, how?

Prompts: mayor's support/pushes for social media, involvement of mayor in content creation

Similarly, how does the Facebook page that you manage fit into the priorities of the local government?

Prompts: Commitments to transparency, access to information, e-administration (Some cities have 10-point agendas)

What are some of the most important policies governing the page?

Prompts: content management

Could you describe how the page is managed? Who does what, how are decisions made?

Prompts: Participation of different actors, social media team (skill level, availability of training), decisions about content, review and approval steps, participation of other key people or offices

Could you describe a normal day in your office in relation to the page?

Prompts: management, use, development

What do you think are the most difficult challenges in managing the page? Why?

Prompts: people, organizational problems, resources, trolls

What do you think are the most important benefits from the page? Why?

Prompts: for citizens and local government

Do you have any comments that you would like to add to this interview?

Thank you very much for your time.

Annex D. Structured data, usage metrics and engagement metrics by LGU

	Total Posts	Total Replies	Total Reactions	Total Comments	Total Shares	Activity	Interactivity	Public Engagement	Popularity	Commitment
Min	26	0	11,919	1,756	3,314	4.33	-	1.05	0.72	0.08
Mean	305.71	403.53	146,365	21,562	38,259	50.94	0.0100%	8.16	4.19	1.59
Max	485	4,183	446,909	52,786	119,480	80.83	0.0815%	40.09	11.96	16.64
N	5197	6,860	2,488,207	366,556	650,396	866.00	0.1693%			
Std Deviation	141.84	1,062.45	129,034.89	18,097.09	34,176.39	23.64	0.02	9.46	3.00	3.81
Caloocan	290	3	341,995	50,451	119,480	48.33	0.0059%	8.63	5.75	0.85
Las Piñas	76	2	117,222	25,912	59,905	12.67	0.0077%	21.16	11.96	2.73
Makati	444	4,183	225,884	51,354	59,408	74.00	8.1474%	6.22	4.17	0.95
Malabon	315	23	66,546	13,590	8,822	52.50	0.1692%	4.59	3.44	0.7
Mandaluyong	374	61	239,816	28,014	82,824	62.33	0.2177%	16.54	11.31	1.32
Manila	135	164	228,048	19,321	42,873	22.50	0.8488%	3.18	2.5	0.21
Marikina	337	40	84,665	22,653	33,030	56.17	0.1766%	2.87	1.73	0.47
Muntinlupa	440	33	138,191	16,587	34,044	73.33	0.1990%	3.9	2.86	0.34
Navotas	453	33	44,919	9,698	4,831	75.50	0.3403%	2.11	1.6	0.34
Parañaque	421	7	65,478	3,560	7,020	70.17	0.1966%	1.75	1.51	0.08
Pasay	26	17	11,919	2,806	8,287	4.33	0.6058%	40.09	4.47	16.64
Pasig	168	6	37,198	2,682	4,788	28.00	0.2237%	4.48	3.74	0.27
Pateros	253	13	12,879	1,756	3,314	42.00	0.7973%	6.27	4.49	0.62
Quezon	485	46	75,947	14,950	20,871	80.83	0.3077%	1.05	0.72	0.14
San Juan	147	0	16,627	1,984	8,383	24.50	0.0000%	6.96	4.35	0.51
Taguig	409	2,099	333,964	48,452	78,371	68.17	4.3321%	5.13	3.72	0.54
Valenzuela	424	130	446,909	52,786	74,145	70.67	0.3505%	3.83	2.99	0.35

Annex E. Descriptive statistics of engagement metrics by theme

	Total Posts	Total Reacts	Total Comments	Total Shares	Total Engagement	Average Reacts Per Post	Average Comments Per Post	Average Shares Per Post	Average Total Engagement Per Post
Providing information on services and facilities	1,756	631,126	95,095	110,644	836,865	359.41	54.15	63.01	476.57
Disaster risk communication	361	609,039	135,834	399,196	1,144,069	1,687.09	376.27	1,105.81	3,169.17
Non-disaster advisories	231	76,715	17,369	28,082	122,166	332.10	75.19	121.57	528.86
Marketing activities in the city	819	473,221	57,948	55,121	586,290	577.80	70.75	67.30	715.86
Marketing the city	348	143,748	20,990	13,994	178,732	413.07	60.32	40.21	513.60
Social media sharing	784	134,721	14,722	12,561	162,004	171.84	18.78	16.02	206.64
Symbolic presentation	761	345,609	22,557	23,957	392,123	454.15	29.64	31.48	515.27
Requesting action from citizens	66	38,376	7,076	4,875	50,327	581.45	107.21	73.86	762.53

Annex F. Percentage of Themes by LGU

Post Type	Providing information on services and facilities	Disaster risk communication	Non-disaster advisories	Marketing activities in the city	Marketing the city	Social media sharing	Symbolic presentation	Requesting action from citizens	Total
N	1756 (34.26%)	361 (7.04%)	231 (4.5%)	819 (15.98%)	348 (6.79%)	783 (15.27%)	762 (14.86%)	65 (1.26%)	5125 (100%)
Caloocan	139 (53.67%)	33 (12.74%)	15 (5.79%)	38 (14.67%)	11 (4.25%)	10 (3.86%)	13 (5.02%)	0 (0%)	259 (100%)
Las Piñas	31 (44.93%)	12 (17.39%)	0 (0%)	5 (7.25%)	5 (7.25%)	2 (2.9%)	14 (20.29%)	0 (0%)	69 (100%)
Makati	317 (71.56%)	15 (3.39%)	15 (3.39%)	31 (7%)	28 (6.32%)	7 (1.58%)	26 (5.87%)	4 (0.9%)	443 (100%)
Malabon	69 (21.97%)	25 (7.96%)	3 (0.96%)	20 (6.37%)	74 (23.57%)	12 (3.82%)	85 (27.07%)	26 (8.28%)	314 (100%)
Mandaluyong	106 (28.57%)	55 (14.82%)	3 (0.81%)	69 (18.6%)	10 (2.7%)	25 (6.74%)	91 (24.53%)	12 (3.23%)	371 (100%)
Manila	37 (27.41%)	12 (8.89%)	4 (2.96%)	18 (13.33%)	2 (1.48%)	4 (2.96%)	58 (42.96%)	0 (0%)	135 (100%)
Marikina	47 (14.03%)	60 (17.91%)	12 (3.58%)	27 (8.06%)	4 (1.19%)	176 (52.54%)	7 (2.09%)	2 (0.6%)	335 (100%)
Muntinlupa	116 (26.48%)	11 (2.51%)	10 (2.28%)	104 (23.74%)	20 (4.57%)	113 (25.8%)	63 (14.38%)	1 (0.23%)	438 (100%)
Navotas	194 (42.83%)	22 (4.86%)	16 (3.53%)	43 (9.49%)	65 (14.35%)	33 (7.28%)	63 (13.91%)	17 (3.75%)	453 (100%)
Parañaque	136 (32.3%)	6 (1.43%)	2 (0.48%)	65 (15.44%)	6 (1.43%)	44 (10.45%)	162 (38.48%)	0 (0%)	421 (100%)
Pasay	1 (3.85%)	12 (46.15%)	6 (23.08%)	3 (11.54%)	1 (3.85%)	1 (3.85%)	2 (7.69%)	0 (0%)	26 (100%)
Pasig	89 (53.29%)	3 (1.8%)	2 (1.2%)	48 (28.74%)	8 (4.79%)	2 (1.2%)	15 (8.98%)	0 (0%)	167 (100%)
Pateros	28 (11.48%)	12 (4.92%)	6 (2.46%)	17 (6.97%)	3 (1.23%)	165 (67.62%)	13 (5.33%)	0 (0%)	244 (100%)
Quezon	193 (39.96%)	13 (2.69%)	61 (12.63%)	82 (16.98%)	61 (12.63%)	40 (8.28%)	33 (6.83%)	0 (0%)	483 (100%)
San Juan	14 (10.29%)	14 (10.29%)	3 (2.21%)	11 (8.09%)	1 (0.74%)	93 (68.38%)	0 (0%)	0 (0%)	136 (100%)
Taguig	130 (31.78%)	14 (3.42%)	7 (1.71%)	129 (31.54%)	14 (3.42%)	26 (6.36%)	87 (21.27%)	2 (0.49%)	409 (100%)
Valenzuela	109 (25.77%)	42 (9.93%)	66 (15.6%)	109 (25.77%)	35 (8.27%)	30 (7.09%)	30 (7.09%)	1 (0.23%)	423 (100%)

Annex G. Subthemes under Providing information on services and facilities

Subtheme	Percentage (all pages)	Description	Top (10) frequent words (arranged in decreasing frequency)
social welfare	14%	Mass weddings; activities for vulnerable groups such as children in conflict with the law, persons with disabilities, senior citizens, drug users; disaster or emergency relief; nutrition programs; activities organized by the Social Service Department	mayor, senior, citizens, ating, barangay, office, kanilang, lahat, program, lungsod
health	12%	Health and medical programs, including immunization programs, blood donation drives, medical missions to areas in the LGU, maternal health, family planning; medical-related donations	medical, health, barangay, mayor, centers, navotas, program, office, ating, dental
education	10%	Activities within a school or involves students such as recognition and graduation ceremonies; educational assistance, includes scholarships, school supplies; inauguration of education facilities such as school buildings; training for entrepreneurial skills	school, mayor, education, students, taguig, office, aral, program, kanilang, ating
employment livelihood	9%	Job fairs; cash for work programs; job openings within the LGU; training for micro and small entrepreneurship and livelihood; announcements on Special Program for Employment of Students	office, training, employment, certificate, servicing, mayors, navotas, school, graduate, registration
hotlines, mobile, card	9%	“Mobile City Hall” or “Caravan” events bring multiple services hosted in the city hall such as civil registry and health to communities; information about citizen cards or mobile application	barangay, caravan, medical, #makatizens, mayor, dental, services, office, ating, #mymakati
transportation	9%	Transportation services provided by the government; traffic management that includes road clearing operations	operators, #makatizens, #mymakati, conducting, illegal, clearing, teams, tricycles, morning, parking
infrastructure	7%	Inauguration and opening ceremonies of infrastructure and facilities like the sports complex, multi-purpose halls, recreational areas, drainage; updates on infrastructure projects	barangay, mayor, office, inauguration, ating, drainage, caloocan, courts, blessing, cemetery
legislative functions	7%	Marketing policy-making activity, such as city council session, city government council and department head meetings, and other activities when city government formulate local plans and budgets; promoting information about ordinances	barangay, mayor, school, muntinlupa, elementary, ordinance, council, tangos, firecrackers, office

Subtheme	Percentage (all pages)	Description	Top (10) frequent words (arranged in decreasing frequency)
disaster preparedness	6%	Earthquake and fire drills; activities to strengthen disaster preparedness, safety tips	disaster, drill, office, management, mayor, earthquake, emergency, maging, month, reduction
businesses and taxation	5%	Reminders about real property tax, business registration; inspections of business, including markets; improvements to business permits and licensing operations; activities to encourage entrepreneurship	business, office, january, market, mayor, muntinlupa, inspection, payment, navotas, ating
environment	3%	Tree planting, clean-up drives, solid waste management	caloocan, mayor, ating, barangay, management, trees, environmental, malapitan, environment, office
information campaign	3%	Awareness-raising information activities such as World AIDS Day, Family and Community Resilience Fair	quezon, office, celebration, month, program, awareness, national, december, lungsod, ating
police-related	2%	Features activities of the Philippine National Police; official statements that refer or originate from the police	police, mayor, caloocan, lungsod, units, bagong, office, pulis, local, malapitan
veterinary	2%	Anti-rabies vaccination activities, pet registration that includes microchipping	rabies, vaccination, veterinary, office, barangay, makati, registration, drive, inyong, department
housing	1%	Updates on relocation activities; inauguration of housing projects	housing, mayor, kanilang, project, valenzuela, government, barangay, families, development, maayos
national	1%	Promotes national government services within the city, such as voter registration, PhilHealth registration, E-Passport services	passport, certificate, registration, philhealth, office, applicants, mayor, birth, cards, please

Annex H. Descriptive statistics of subtypes under Providing information on services and facilities

	Social welfare	health	education	employment livelihood	Hotlines, mobile, card	transportation	infrastructure	Legislative functions	disaster preparedness	businesses and taxation	environment	information campaign	police-related	veterinary	housing	national	
Total	14%	12%	10%	9%	9%	9%	7%	7%	6%	5%	3%	3%	2%	2%	1%	1%	100%
Calocan	17%	20%	8%	17%	4%	1%	9%	3%	1%	1%	11%	0%	4%	1%	3%	0%	100%
Las Piñas	39%	16%	3%	10%	0%	10%	0%	3%	16%	0%	0%	0%	3%	0%	0%	0%	100%
Makati	6%	6%	3%	4%	14%	43%	1%	10%	3%	4%	0%	1%	0%	4%	0%	1%	100%
Malabon	23%	12%	16%	17%	4%	3%	7%	1%	4%	3%	9%	0%	0%	0%	0%	0%	100%
Mandaluyong	25%	11%	15%	5%	0%	3%	17%	5%	4%	0%	3%	9%	2%	0%	2%	1%	100%
Manila	15%	27%	10%	4%	23%	0%	4%	0%	0%	2%	0%	2%	2%	0%	4%	6%	100%
Marikina	0%	2%	6%	17%	13%	2%	4%	2%	11%	4%	9%	6%	2%	19%	2%	0%	100%
Muntinlupa	19%	7%	17%	2%	4%	0%	6%	17%	6%	9%	0%	7%	2%	0%	3%	1%	100%
Navotas	19%	13%	6%	13%	0%	3%	8%	9%	18%	8%	2%	1%	1%	0%	0%	0%	100%
Paranaque	34%	8%	18%	7%	5%	4%	14%	4%	1%	1%	4%	0%	2%	0%	0%	0%	100%
Pasay	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	100%
Pasig	14%	20%	8%	9%	10%	1%	15%	11%	2%	6%	0%	0%	1%	0%	1%	0%	100%
Pateros	0%	4%	7%	29%	7%	11%	4%	14%	18%	0%	4%	0%	4%	0%	0%	0%	100%
Quezon	4%	9%	2%	10%	12%	2%	6%	5%	11%	9%	6%	12%	2%	5%	1%	2%	100%
San Juan	14%	0%	29%	0%	0%	0%	0%	29%	14%	0%	0%	7%	7%	0%	0%	0%	100%
Taguig	5%	27%	23%	5%	15%	1%	6%	2%	3%	1%	3%	3%	1%	1%	1%	3%	100%
Valenzuela	15%	2%	13%	8%	18%	2%	8%	5%	6%	9%	2%	2%	3%	0%	5%	3%	100%

Annex I. Percentage of Direction by LGU

	Press agency	Public information	Two-way asymmetrical	No direction
N	21.66%	63.08%	0.00%	15.28%
Caloocan	9.27%	86.87%	0.00%	3.86%
Las Piñas	27.54%	69.57%	0.00%	2.90%
Makati	12.19%	86.24%	0.00%	1.58%
Malabon	50.64%	45.54%	0.00%	3.82%
Mandaluyong	27.23%	66.03%	0.00%	6.74%
Manila	44.44%	52.59%	0.00%	2.96%
Marikina	3.28%	44.18%	0.00%	52.54%
Muntinlupa	18.95%	55.24%	0.00%	25.80%
Navotas	28.26%	64.46%	0.00%	7.28%
Parañaque	39.91%	49.65%	0.00%	10.45%
Pasay	11.54%	84.62%	0.00%	3.85%
Pasig	13.77%	85.03%	0.00%	1.20%
Pateros	6.56%	25.83%	0.00%	67.62%
Quezon	19.46%	72.26%	0.00%	8.28%
San Juan	0.74%	30.88%	0.00%	68.38%
Taguig	24.69%	68.94%	0.00%	6.36%
Valenzuela	15.36%	77.31%	0.24%	7.09%

Annex J. Metrics of stakeholder engagement index

Cities	P1	P2	P3	C1	C2	C3	V1	V2	V3	SEI
	Percentage of posts that have reactions	Average number of reactions per post	Average number of reactions per post per 1,000 fans	Percentage of posts that have been commented	Average number of comments per post	Average number of comments per post per 1,000 fans	Percentage of posts that have been shared	Average number of shares per post	Average number of shares per post per 1,000 fans	Stakeholders' Engagement Index
Min	62%	48.40	0.72	24%	6.71	0.08	44%	10.66	0.16	1.05
Mean	98%	526.56	4.19	73%	101.33	1.59	81%	179.19	2.38	8.16
Max	100%	1689.24	11.96	100%	401.84	16.64	100%	786.68	18.98	40.09
St. Deviation		505.43	4.66		81.95	1.09		194.84	3.21	8.85
Caloocan	100%	1,179.29	5.95	99%	173.96	0.87	98%	412.00	2.08	8.90
Las Piñas	100%	1,542.39	12.70	96%	340.94	2.80	100%	788.22	6.49	21.99
Makati	100%	508.74	4.20	95%	115.66	0.95	99%	133.80	1.10	6.25
Malabon	100%	211.25	3.45	61%	43.14	0.70	83%	28.00	0.45	4.60
Mandaluyong	99%	641.21	11.34	64%	74.90	1.32	78%	221.45	3.91	16.57
Manila	100%	1,689.24	2.50	100%	143.11	0.21	98%	317.57	0.47	3.18
Marikina	100%	251.23	1.76	71%	67.21	0.47	47%	98.01	0.68	2.91
Muntinlupa	100%	314.07	2.86	72%	37.69	0.34	84%	77.37	0.70	3.90
Navotas	99%	99.15	1.60	56%	21.40	0.34	62%	10.66	0.17	2.11
Parañaque	100%	155.52	1.51	56%	8.45	0.08	96%	16.67	0.16	1.75
Pasay	100%	458.42	18.98	88%	107.92	4.47	85%	318.73	13.20	36.65
Pasig	100%	221.41	3.79	73%	15.96	0.27	94%	28.50	0.48	4.54
Pateros	62%	50.90	4.72	24%	6.94	0.64	44%	13.09	1.21	6.57
Quezon	100%	156.59	0.73	57%	30.82	0.14	58%	43.03	0.20	1.07
San Juan	99%	113.10	4.89	55%	13.49	0.58	69%	57.02	2.46	7.93
Taguig	100%	816.53	3.72	82%	118.46	0.54	96%	191.61	0.87	5.13
Valenzuela	100%	1,054.03	2.99	90%	124.49	0.35	88%	174.87	0.49	3.83

Annex L. Summary of Survey Responses

Tallied responses

How long have you worked in your current office/department? (years)	1 to 5 years: 5 (56%) 6 to 10 years: 2 (22%) 11+ years: 2 (22%)
How long have you been responsible for the institutional Facebook page of your local government? (years)	1 to 4 years: 6 (67%) 5 to 8 years: 3 (33%)
Does your office/department have a team, comprised of staff focused only on maintaining social media platforms?	Yes:3; No:6
How many people are involved in managing the institutional Facebook page? Please indicate if they are part of a different office/department.	Unknown: 1 Caloocan 1 person: 1 Valenzuela 3 persons: 3 Malabon, Quezon City 4 persons: 3 Marikina, Muntinlupa 7 persons: 1 Makati
Does your social media team receive training on social media management?	Yes: 6 No: 3 Caloocan, Marikina, Quezon City
How often does your team receive training in a year?	None: 3; Once a year: 5; Twice a year: 1
Does your office/department have an allotted budget for maintaining the social media presence of your city/mayor?	Yes:2; No:7
Is your office/department implementing a social media strategy or plan?	Yes:7; No:2
Does your team follow guidelines in creating and posting content on the local government's social media accounts?	Yes:9; No:0
Does your team have a standard procedure for moderating comments on the social media accounts?	Yes:7; No:2
Does your local government have a legal basis, which may be a resolution or similar document, for social media use?	Yes:0; No:9
The goal of our local government unit's social media use is (Please Rank from 1 to 8, with 1 as the Most Important and 8 as the Least Important)	Mean
promoting the local community and city/municipality	2.89
citizen engagement	3.33
business engagement	4.00
city government employee engagement	5.56
government/policy awareness	2.89
enhancing public services	2.56
open and transparent government	2.56
public information and outreach	1.67

Tallied responses

The preferred social media platform of the local government is (Please Rank with 1 Being the Highest and use 0 if the platform is not used)

Facebook	1 (N=9)
Twitter	2 (Marikina, Muntinlupa, Malabon, Quezon City) 1 (Valenzuela)
Youtube	2 (Caloocan) 3 (Marikina, Makati, Muntinlupa) 4 (Quezon City) 1 (Valenzuela)
Google+	
Instagram	3 (Malabon, Quezon City) 4 (Makati) 1 (Valenzuela)
Pinterest	
Snapchat	

Cluster	Question	Mean Standard Deviation
processes involved in social media use	Our office/department has clear objectives in using social media for public engagement.	M: 4.89, SD: 0.33
disseminating information	Our institutional Facebook page is the best channel to share information on...	
	activities and programs organized by the local government	M: 5, SD: 0
	benefits of residents	M: 4.89, SD: 0.33
	local resolutions and ordinances	M: 4.67, SD: 0.5
	national programs and policies	M: 4.63, SD: 0.74
	employment opportunities within the city or municipality	M: 5, SD: 0
	positive stories from the city/municipality	M: 5, SD: 0
	public services provided by the local government	M: 5, SD: 0
	service disruptions and ongoing repairs in the city/municipality	M: 4.78, SD: 0.67
	real-time advisories and updates during disasters and emergencies	M: 4.89, SD: 0.33
public interaction	Our institutional Facebook page is the preferred channel for public dialogue compared to face to face interaction.	M: 3.33, SD: 1
public interaction	Posts and comments on the Facebook page is the best way to learn about the preferences of the public.	M: 4.22, SD: 0.67
public interaction	Our institutional Facebook page is an appropriate platform to publicly address comments from the public on...	

Cluster	Question	Mean Standard Deviation
	complaints about public services	M: 4.33, SD: 0.5
	inquiries on public services	M: 4.56, SD: 0.53
	requests for information	M: 4.56, SD: 0.53
	feedback on public services	M: 4.63, SD: 0.52
	reports of problems or breakdown of public services	M: 4.56, SD: 0.53
	suggestions for local policy priorities	M: 4.44, SD: 0.53
public interaction	Information provided by the public on the local government's Facebook page is very valuable.	M: 4.56, SD: 0.53
public interaction	Regularly monitoring and addressing comments on our Facebook page is important.	M: 4.89, SD: 0.33
policy making	Our Facebook page is the best platform to gather priorities for the local government.	M: 3.89, SD: 0.78
policy making	Information from social media is important input for our local plans, policies and programs.	M: 4.33, SD: 0.71
policy making	Using Facebook to communicate with our citizens is important to the success of our local programs.	M: 4.33, SD: 0.5
leadership	Our mayor strongly supports the use of social media for public engagement.	M: 4.67, SD: 0.5
leadership	Our mayor and elected leaders prioritize solving problems and concerns reported on social media.	M: 4.56, SD: 0.73
leadership	Issues raised in the comments on our page must be reported to the mayor.	M: 4.44, SD: 0.73
leadership	Our mayor and elected leaders value transparency and access to public information.	M: 4.67, SD: 0.5
processes involved in social media use	Technology is important to improving the delivery of public services.	M: 4.89, SD: 0.33