



SOCIAL MEDIA UTILIZATION FOR PUBLIC SAFETY AND EMERGENCY MANAGEMENT IN DAVAO CITY

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ABSTRACT

Utilizing social media, which was heavily used by individuals before, during, and after a crisis, is a new trend in public safety. However, a centralized government page in Davao City that would cater to and address all disaster-related concerns is lacking, and consequently, there is inefficient utilization of social media. A Qualitative Descriptive Research design using secondary resources such as previous studies, maps, blogs, journals, and other legitimate data that are available online helped the author in the analysis to comprehend the significance and position of social media in society as well as the advantages it offers for each facet of disaster management. The findings of this study would be insightful and suggest ways forward in line with the creation of appropriate methods and efficient information dissemination during disasters.

Background of the Study

Philippines is one of the nations with the highest risk of natural disasters. Its islands frequently experience floods, typhoons, landslides, earthquakes, volcanoes, and droughts due to their location at the intersection of two main tectonic plates at the heart of a typhoon belt. Also, it is among the top three nations in the world for population exposure and hazard vulnerability (Bollettino et al., 2018).

In the southeastern part of the island of Mindanao in the Philippines, a highly urbanized city is situated known as the Davao City. According to Philippine Statistics Authority (2018), Davao City is the largest city in the Philippines in terms of land area with 2,444 square kilometers. It is the third most populated city in the country after Quezon City and Manila with a population of 1,632,991. Despite it being considered as a typhoon-free zone, Davao City is not exempted to being hit by natural disasters.

During the course of its extensive history dealing with disasters, Davao City has developed effective coping methods. On her Valedictory and State of the City Address, the former City Mayor and now the Philippine's Vice President have emphasized that the city has installed more than 80 early warning signages and four cameras along the rivers in Tamugan, Crossing Bayabas, Tugbok, Matina Biao, Fatima, and Pañalum to monitor movements in the Davao Gulf as part of the River Monitoring Project. She said that new sirens were installed throughout the city, especially in disaster-prone areas, to alert residents of weather disturbances or emergencies. Three LED billboards were also installed in strategic locations in the city to provide early warning updates and advisories, the first of which was installed in Ulas. In addition, five mobile kitchens, called the Kusina Ng Bayan, were also

activated through the City Social Welfare and Development Office and Barangay Cultural Communities and Affairs Division (BCCAD), to deliver food assistance to communities, especially during times of disasters and emergencies (Davao City Government Disaster Response Strong, 2022).

Several offices are installed in Davao City, mandated to provide immediate response in time of calamities: The Central 911, the Public Safety and Security Command Center, the Davao City Disaster Risk Reduction and Management Office, the Davao City Social Welfare and Development Office, Philippine National Police (PNP) and Armed Forces of the Philippines (AFP) units, and the various volunteer rescue units. Despite initiatives, natural disasters are inevitable.

The emerging trend in Public Safety includes the use of social media, which was greatly utilized by people before, during, and after a disaster. People can immediately post and share real time scenarios relating to disasters on social media platforms such as Facebook. Social media platforms could also be used to share your location during disasters for easy detection by the concerned families and rescuers. Local Government Units and National Agencies use social media as one of today's main platforms to raise awareness on what to do before, during, and after a disaster.

Social media is a great tool, unless abused. However, development of a centralized social media platform is a good idea to have an integrated social media network where communities, local institutions, and other stakeholders could easily reach one another in terms of disasters, which may also filter verified and unverified information or exaggerated news and could quickly deliver factual and relevant information to the communities.

Statement of the Problem

With inbound messages, wall posts, and polls, social media can be used passively to disseminate information and gather user response and can be used systemically as an emergency management tool (Robbins, 2023).

This study would like to explore the following:

1. What is the importance of social media platform utilization in disaster management?
2. How did Davao City Local institutions, or groups, actively utilize social media platforms before, during, and after the disaster?
3. What are the ways forward that can be drawn from using social media in disaster management?

Objectives of the Study

The goal of this study is to:

1. Describe the importance of social media platforms utilization in disaster management.
2. Describe the ways Davao City Local institutions, or groups, utilize social media platforms before, during, and after disaster.
3. Provide ways forward that are drawn from the analysis of how social media is used in disaster management.

Significance of the Study

Through this study, we will realize the utmost meaning of social media in disaster management. This will help us realize its role in society and its level of importance, to see the benefit of social media in each angle of disaster management.

The result of the study is hoped to be meaningful and provide ways forwards in line with the development of proper techniques and effective information dissemination.

Scope and Limitation of the Study

The study focused on the utilization of Facebook, Instagram and Twitter applications in disaster management in Davao City.

Time has become one of the restrictions of this study as there were a lot of intervening factors along the writing process, hence, no face-to-face encounter were conducted but only through review on social media utilization on previous disasters.

The scope of the problem is limited only on how social media act as a vital tool in the success of the disaster management of the chosen area, excluding several disaster support groups, non-governmental organizations, and others that are not officially part of the city local government.

Definition of Terms

Disaster - a sudden occurrence that results in deaths and/or property damage.

Disaster Management - entails planning for probable catastrophes and acting as swiftly, intelligently, and successfully as you can when they occur. This often entails adhering to the fundamental disaster management cycle, which has five important steps.

Engagement – refers to how much the public interacts using social media during disaster.

Natural Disaster - Any form of severe weather, which have the potential to pose a serious threat to property, vital infrastructure which may occur seasonally and ad hoc that subject the country to periodic times of instability, disruption, and financial loss.

Social Media – any digital technology that enables users to rapidly produce and disseminate information to the public by the help of internet connection.

Chapter II: REVIEW OF LITERATURE AND THEORETICAL FRAMEWORK

This chapter consists of the review of related literature, the framework itself including its presentation in the form of a paradigm, the hypotheses, and the discussion on key variables.

Related Literature and Studies

Many studies have already coined to discuss the use of social media in disaster management, more specifically in the aspects of donations & financial support, business & economic activities, information support, mental health & emotional support, reconstruction & infrastructure services, socio-economic & physical wellbeing, and solidarity & social cohesion.

The public's involvement on the social media photo-sharing platform Flickr during the reaction and recovery phases of disasters is discussed in detail in the study of Liu et al. (2008). The study discovered that during disaster recovery, individuals post photographic social media content on Flickr, including images to inventory their homes for insurance purposes, images of found personal items, images of missing persons, images of post-disaster relief activities, and images of disaster tourism where individuals congregate to witness the devastation of disasters.

Taylor et al. (2012) examined the contribution of social media to supporting disaster recovery and community resiliency. The study discovered that social media plays a variety of supporting roles in disaster recovery, including empowering people and communities to ask for and provide help, improving people's feelings of connectedness and usefulness, extending the reach of official messages, limiting the psychological harm caused by rumors and troll accounts, providing psychological first aid to disaster-impacted communities, and promoting a collective narrative of the disaster experience.

Social media, on the study of Semaan and Mark (2012), helps individuals recover from crises by enabling them to check on the safety of friends and family,

ask for and give aid, rebuild their social networks, uphold and create new social standards, and self-organize to strengthen the community.

The findings of the study of David et al. (2016) demonstrate that social media can support a variety of disaster recovery efforts, such as the expression of emotions (such as gratitude), coordination of relief efforts, facilitation of specific calls for assistance, and pledges of monetary or nonmonetary aid from people, nations, and international aid organizations outside the disaster-affected area.

Brandt et al. (2019) study looked at Twitter's use as a response and recovery method prior to, during, and following South Carolina's catastrophic rains and flooding. Devastation of the constructed environment, weather patterns, destruction of the natural environment, steps taken to lessen health hazards, and resource donations were the most prevalent themes of tweets across all four time periods. Across the time periods analyzed, the focus shifted.

Based on a case study of the 2016 Wuhan flood disaster, this study of Fang et al. (2019) investigated how social media messages from the Weibo platform could assist in disaster response and recovery. According to the study, messaging concerning the effects of disasters tended to emphasize transportation (42.77%), followed by normal activities like working and studying (34.30%), emotion (13.36%), and disaster loss and destruction (9.57%).

To explore the impact of social media in influencing the relief and recovery process following the Gorkha earthquake in April 2015, Dahal et al. (2021) performed ethnographic fieldwork and 50 in-depth interviews with Nepali youth who were directly involved in relief activities. The outcomes demonstrate the value of social media, particularly Facebook, in terms of information sharing, volunteer

coordination, fundraising, peer motivation, and accountability. Due to false information and the duplication of the same messages, social media also made it more difficult to distribute aid and coordinate relief efforts.

The study of Willson et al. (2021) Twitter users from Australia and abroad offered encouragement to individuals who were affected, focusing mostly on fundraising, relief efforts, news updates, and animal welfare. Concerns about the climate emergency and a perceived lack of governmental action dominated negative sentiment.

Theory Base

The theories used are based on the work of Qi et al. (2018).

Social media and Goffman's presentation of self

The presentation of oneself has a purpose. It gives the impression to others that one is acting in their own best interests. The focus of Goffman's book is on how actions appear on the surface. The agent is given this outer look first. The way we portray ourselves to others determines how others perceive us honestly. Via the perceptual rational process, others will build an opinion about us. With their outward, objective features and appearance, others are seen in turn. "Others" are not "us," and vice versa.

Social media and Bourdieu's social capital

Social capital is a collection of assets that is connected to belonging to a group or having a long-lasting network of ties based on mutual recognition and

acquaintance. With the support of the group's capital, each member of this capital has a "credential" that enables them access credit. The basis of solidarity is the benefits gained through collective membership. This does not imply that these profits are being actively sought after. First off, rationality is unmistakably opposed in Bourdieu's lifeworld. Habitus (inherited inclinations) has the advantage of displacing interpretations in terms of "rational choice," according to the author. Nonetheless, some continue to be treated as instruments.

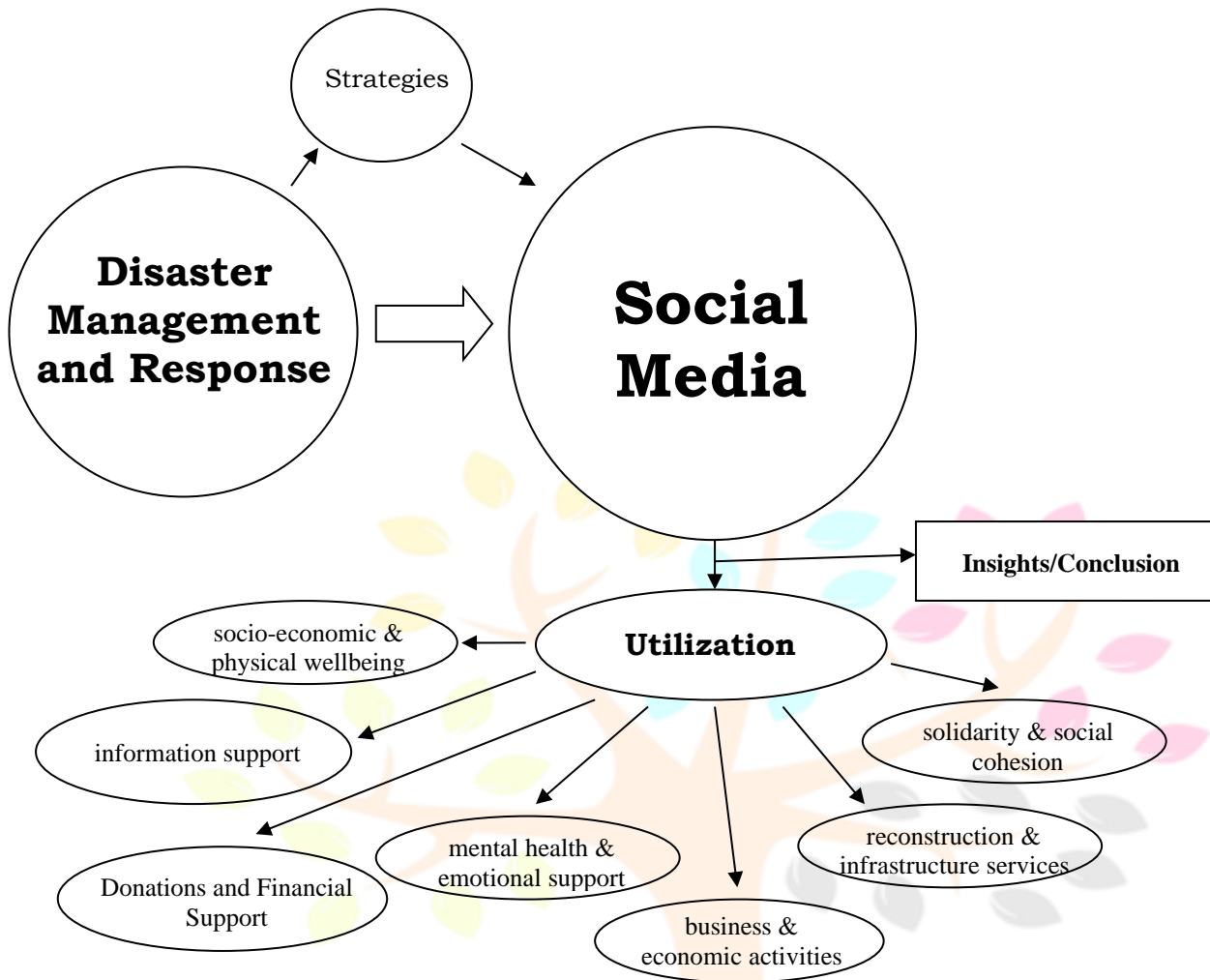
Social media and Sartre's existential project

Burrell and Morgan have proposed existentialism as a sociological paradigm. Experience allowed Yoo to inject an existential dimension: "Our existential struggle is really an experience-based one. Our experiences are what mold our identities, values, and worldview. Sartre's existential endeavor may undoubtedly be used to promote existentialism as a social media usage archetype. What presumptions does this theory make about the nature of existence and the position of others?"

Social media and Heidegger's "shared-world"

Yoo has cited Heidegger as one of the key sources for comprehending experiential computing. The placement of Heidegger's lifeworld toward the "being-in-the world" that he himself developed might be seen of as an expected outcome given his aforementioned hostility to Descartes' rationality. Heidegger's theory of the "shared-world" is situated on the "being-with" side in the same way that his critique of instrumentalism does, but what does Heidegger's theory of the "shared-world" actually entail and how does it relate to social media use? This section begins by explaining the status of others before detailing the lifeworld due to the significance of others in Heidegger's conception of the "shared-world."

Conceptual Framework



Research Assumptions / Research Hypothesis (es)

Alternative Hypothesis: The government can incorporate social media in public safety and disaster management.

Null Hypothesis: Social media is a tool for other purposes but not for public safety and disaster management.

This study discusses the social media practices of the *Dabawenyos* and public safety agencies within Davao City, more particularly the Central 911, the Public Safety and Security Command Center, City Disaster Risk Reduction and Management Office, Bureau of Fire, the Davao City Social Welfare and Development Office, PNP and AFP units.

Method Used

For the purpose of the study, a Qualitative Descriptive Research design was used.

Sources of Data

The study utilized secondary resources that were utilized in this study such as previous studies, maps, blogs, journals, and other legitimate sources that are available online.

Data Gathering Instrument

In this study, Facebook, Instagram, and Twitter will be used as primary tools to gather data from people in Davao City.

Google research tool is also used to gather available published journals, articles, news, and the like. According to Southern (2021), on the other hand, Google Search updates will make it easier for people to decide whether a website is a reliable source of information before clicking a link in search results. This tool is also one of the most accessible online research engines today.

To verify further legitimate sources of information, screening process steps are utilized for a systematic review of data.

Based on the Subject Guides: Systematic Review: Screening Process Steps (n.d.), multiple reviewers (researcher and the supervisors or co-reviewers) will decide which articles to include and exclude based on the criteria specified in your protocol when reviewing the final search results from your chosen databases (and other sources if relevant). The process will include the following:

- **Pre-screening:** Before screening begins, note the numbers of results from each database or source.
- **Remove duplicates:** Although Covidence automates this procedure, EndNote also offers the option of reference de-duplication.
- **Title/abstract screening:** In order to determine whether a title or abstract meets the requirements or is useful for the systematic review, reviewers quickly skim them. This can be done by a single reviewer but doing it separately with different reviewers and comparing the results lessens the chance of bias.
- **Full-text screening:** To optimize the final collection of papers that will contribute to the review, numerous reviewers independently read through the full-text of included publications.

Sampling Technique

Facebook, Instagram and Twitter will be used to randomly review online posts pertaining to natural disasters such as, but not limited to, landslide, flooding, tsunami, tornadoes, and typhoon.

Social media pages of the government Offices concerned with public safety will also be reviewed online. Moreover, government reports, articles, published news, and journals that are available online are utilized.

Procedure of the Study

Here are the steps undertaken in this study referred from Blankenship (n.d.).

1. Identify the Problem.
2. Review of Related Literature - Only those that contains significant original empirical research were included in the review.
3. Clarify the Problem – based on observed real-life situations; select dependent and independent variables.
4. Define the Population – Based on the problem, the population is composed of Facebook, Instagram and Twitter users.
5. Develop the Instrumentation Plan.
6. Collect data through secondary sources as discussed in the above sections.
7. Analyze the data.

Statistical Treatment

Descriptive statistics will be used in the study to analyze and interpret the data and raw conclusions.

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