

Social Media Response to the 2025 Myanmar Earthquake: Digital Crisis Communication and Disaster Governance

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ABSTRACT

This study examines the role of social media in crisis communication and disaster governance during the 2025 Myanmar Earthquake. In this study, we systematically investigate the content and functions of social media posts related to the 2025 Myanmar Earthquake by qualitative content analysis. The study examined 97 publicly available social media posts, which were purposefully sampled from Facebook, TikTok, Instagram, X (Twitter), and YouTube from March 28 to April 4, 2025. Findings revealed three main functions of social media: information dissemination, emotional expression and community mobilization. Information dissemination was the dominant function (51.7%), followed by emotional expression (29.9%) and community mobilization (18.6%). Facebook was the most frequently represented platform, while organizational and public pages contributed the largest proportion of posts. The findings demonstrate that social media functioned as a multidimensional crisis communication mechanism supporting information sharing, emotional support, and collective action. From the perspective of public administration and disaster governance, the study emphasizes the importance of social media use for emergency communication, public information management, citizen engagement, and relief coordination. The study offers context-specific evidence from Myanmar and practical insights for strengthening digital communication in disaster governance.

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INTRODUCTION

Social media has become a major vehicle for communicating to the public in the digital age, including in emergency and disaster situations. Facebook, TikTok, Instagram, X (Twitter) and YouTube, for example, allow individuals, organizations, media and public entities to create and share information as it occurs. These platforms can be used for functions of information dissemination, situational awareness, emotional expression and community mobilization during disasters, but the rapid dissemination of user-generated content can also exacerbate the issues of misinformation, information overload, information credibility ([Houston et al., 2015](#); [Imran et al., 2015](#); [Palen & Anderson, 2016](#)).

The value of digital communication was especially noted during the 2025 Myanmar Earthquake. 10 km deep 28 March 2025 06:20 UTC - Near Mandalay, Myanmar: Magnitude 7.7 The U.S. Geological Survey (USGS) has named it the 2025 Mandalay,

Burma (Myanmar) Earthquake. The effect of the earthquake was felt across Myanmar and there was an urgent requirement for information on damage, safety, assistance and relief.

Existing research shows that social media can be a resource in disaster response, offering opportunities for real-time information sharing, situational awareness, public engagement and collective action ([Houston et al., 2015](#); [Kryvasheyeu et al., 2015](#); [Imran et al., 2015](#)). Social media can also be an important space for emotional expression and social support in times of crisis. Previous studies of Myanmar's digital environment have also focused more on political communication, misinformation, and digital activism than the role of social media in disaster communication and governance.

The study of these functions can help to shift the understanding of crisis communication from a mainly information-centered perspective to a more integrated view of digital disaster governance, where institutional communication and citizen participation are happening at the same time.

Hence, this research has been conducted to explore social media response in the first week after the 2025 Myanmar Earthquake. The posts were gathered from various platforms, publicly available, between 28 March and 4 April 2025. A total of 97 posts were selected and then analyzed to understand the portrayal of platforms, user agency, and how social media was used for crisis communication purposes. From a theoretical perspective, the study contributes to the crisis-communication literature by proposing a tripartite model of the information, sentiment, and community mobilization functions of social media. This tripartite model underscores that social media can be a multidimensional digital disaster-governance space that combines the exchange of information, citizen expression, and collective response rather than merely a platform for the dissemination of emergency information.

The study is guided by research questions concerning which social media platforms were represented most frequently in the sampled earthquake-related posts during the first week of crisis? what types of users contributed to earthquake-related posts? and how social media was used for crisis communication through information dissemination, emotional expression, and community mobilization?

Based on these research questions, the study aims to identify the social media platforms most frequently represented in the sampled earthquake-related posts, examine the types of users who contributed to earthquake-related social media communication, and analyze how social media was used for crisis communication during the earthquake, particularly for information dissemination, emotional expression, and community mobilization.

These research concerns are situated within the interconnected development of social media, its communication functions, digital governance, disaster management, and crisis response. Social media has now become an essential and widely used way to communicate, as all original social media applications were built for social interaction

and now the word itself describes a growing list of online platforms for real-time information sharing, user-generated content, and global connection, regardless of geographic and demographic boundaries. However, smartphones and the internet have forever changed the media landscape, with social media now providing the primary source of news, social communication, and public discussion. Today, media consumption and production do not happen in one-directional mass media systems. Instead, social media has provided an interactive and participatory environment in which users are both producers and consumers of information ([Seneviratne et al., 2024](#)).

Recent studies have indicated that billions of users are actively involved in the creation, sharing, and exchange of content through social media platforms. This makes these platforms rich sources of real-time and user-generated data in different fields such as disaster management and crisis communication ([Sufi, 2024](#)). Studies have shown that social media can enhance situational awareness, enable the dissemination of information related to disasters and improve communication and coordination between emergency responders and communities ([Kruspe et al., 2020](#)). In particular, communication through social media can support public information and warning, peer-to-peer assistance, and self-organized community support during emergencies ([Imran et al., 2015](#)).

In addition, the continuous evolution of social media has also produced new types of digital communications, such as live streaming, short-form videos, visual content, and interactive storytelling, which can increase user engagement and improve the accessibility and reach of information related to crises ([Lou et al., 2023](#)). Recent disaster communication research also shows that visual and interactive platforms can facilitate both information engagement and emotional coping for affected communities ([Liu et al., 2016](#)). During disasters, the capacity of citizens to critically analyze, evaluate and disseminate information online can have an impact on the effectiveness of communication ([Wulandari & Nugroho, 2021](#)).

Social media serves multiple functions in contemporary communication systems, particularly in facilitating information dissemination, community engagement, and emotional expression. One of its primary functions is to facilitate the rapid dissemination of information, allowing users to instantly share updates, news and alerts. Social media differs from traditional media, as the communication and information dissemination are decentralized and can be rapidly spread through user networks, thus increasing access and dissemination ([E et al., 2025](#)).

Social media also has a big part to play in encouraging community interaction and participation. They work together and share ideas, and respond to events together. This creates a feeling of community, and shared experience. This participatory nature allows individuals to actively engage in discussions and contribute to collective knowledge ([Lam et al., 2023](#)). Additionally, social media provides a space for emotional expression, where users can share their feelings, experiences, and reactions to events. This emotional

dimension is particularly important during crises, as it helps individuals cope with stress and build social support networks ([Fraustino et al., 2017](#)).

Digital governance is the use of digital technologies to improve how governments communicate, provide public services, engage citizens and make decisions. It has jumped over the digitization of government processes to forms of governance that are more interactive and participatory. [Janowski \(2015\)](#) describes that digital government is evolving from digitization, transformation, engagement and contextualization, with an increasing focus on interaction between governments and citizens. Similarly, the [OECD \(2020\)](#) calls for user-driven, data-driven, open and proactive approaches to digital government. From a disaster-governance perspective, effective disaster management requires collaboration among government institutions, communities, and other relevant stakeholders. Community participation and communication are therefore important elements in strengthening collective disaster response ([Noer & Putra, 2022](#)). Social media has therefore become an important component of digital governance during disasters. It enables public institutions and organizations to disseminate emergency information while allowing citizens to report conditions, request assistance, express emotions, and participate in collective action ([Houston et al., 2015](#); [Lovari, 2019](#)). However, the importance of digital technologies is not only based on their capability to communicate or work at a certain speed but also by citizen involvement and response in order to produce public value ([Noor et al., 2026](#)). In this study, this perspective is reflected through the three functions of information dissemination, emotional expression, and community mobilization, providing a basis for understanding how social media contributed to digital crisis communication and disaster governance during the 2025 Myanmar Earthquake.

Disaster management refers to the systematic process of preparing for, responding to, and recovering from disasters. It involves a number of stages such as mitigation, preparedness, response, and recovery, all of which require effective communication strategies to ensure that action is coordinated ([Seneviratne et al., 2024](#)). Poor communication, however, can cause confusion, the spread of misinformation, and a delay in response, all of which may worsen the effects of disasters ([Acikara et al., 2023](#)). Therefore, the integration of efficient communication systems is crucial for improving disaster preparedness and response outcomes.

In dynamic environments, where disasters occur, the disaster governance process will demand that the policy, structure, and coordination mechanisms of the governmental organizations be adjusted according to the new circumstances and needs of the communities ([Wialdi et al., 2022](#)). This type of content created by users is a form of “crowdsourced intelligence” that assists emergency responders in assessing damage, locating affected regions, and deciding on the most efficient deployment of resources ([He & Hu, 2025](#)).

Social media also facilitates rapid communication between disaster response organizations and the public. Relief agencies are using these platforms to disseminate

information, coordinate rescue efforts and interact with affected communities. Social media also assists in marshaling resources by connecting volunteers, donors and victims, thus enhancing the effectiveness of response efforts..

During crisis situations, social media plays a crucial role in enabling dynamic and interactive communication. This interactive nature enhances engagement and allows for immediate feedback, which is essential in rapidly evolving disaster scenarios (Seneviratne et al., 2024) .

Some studies suggest that the pattern of social media use during disasters might be related to the time period (e.g., more social media activity within the first days of the disaster) and highlight the value of timing in communicating during the first phase of disaster response. Moreover, social media might also serve as an avenue for emotional expression and collective coping, where individuals share the event and support each other (Liu et al., 2016; Zhao et al., 2018).

Despite the benefits of social media, it also presents challenges for crisis communication, such as misinformation, information overload, and trust and credibility issues (Seneviratne et al., 2024) . These challenges highlight the need for effective strategies to manage and verify information during disasters.

The research framework provides an analytical structure for examining social media response during the 2025 Myanmar Earthquake. Before coding, three analytical dimensions of information dissemination, emotional expression and community mobilization were derived from the research questions, study objectives and related literature of disaster communication. These dimensions therefore became analytical categories instead of themes that claimed to have emerged through grounded theory. During the analysis, the researchers reviewed the sampled posts and classified their content into the relevant categories and subcategories. The framework was used consistently to organize and interpret the observed communication functions.

METHOD

This study employs a qualitative content analysis as its sole analytical approach. The method was used to systematically classify and interpret 97 social media posts related to the 2025 Myanmar Earthquake. Three dimensions were analyzed: information dissemination, emotional expression and community mobilization. These dimensions were drawn from the research objectives and are supported by the disaster-communication literature. The observable communication content of each post was analyzed and coded. The distribution of platforms, user types, and communication functions was then described using frequencies and percentages.. This approach provides a systematic means of connecting qualitative interpretation with descriptive analysis without claiming that a new grounded theory was generated from the dataset.

Data Collection

We collected 97 publicly posted Myanmar Earthquake response social media posts from Facebook, TikTok, Instagram, X (formerly Twitter), and YouTube. Data collection of social media posts occurred from 28th March 2025 (the date of the 2025 Myanmar Earthquake) to 4th April 2025 when the first 7 days of immediate response after the earthquake ended.

The posts were found using the search functions offered on social media platforms with the search queries containing the key words and hashtags about the earthquakes in Myanmar, such as "Myanmar Earthquake", "Myanmar Earthquake 2025", "Mandalay Earthquake", "Sagaing Earthquake", "Myanmar quake" and their respective hashtags in Myanmar language. The time range of the search was a factor. Where the platform search functions had rankings based on algorithms, only public posts whose content was relevant to the earthquake were screened, starting from the date of the earthquake.

The inclusion criteria stated that the posts had to be (1) public, (2) posted in the seven-day period, (3) contain content on the earthquake and its immediate aftermath, and (4) contain enough text, images, or audiovisual material to be able to assign a primary communicative function to the post. The exclusion criteria were that the posts did not contain earthquake-related content, were duplicates of other posts already used, could not be retrieved, or did not contain sufficient material to code. The double submissions were removed, and the final dataset was compiled.

The analysis focused on the text of the social media post, in addition to relevant visual or audiovisual elements. The posts were public, and the study did not collect any identifying information or make contact with users. Usernames, profile information, personal identifiers, and other potentially identifying details were not included in the analysis or reporting. The report uses aggregated frequencies and classifications without reproducing any actual user information. Contexts of the posts, such as account type, platform used, and other captions that accompanied them were taken into consideration while interpreting the data. Posts in Myanmar language have been classified in their original language and then translated to English for reporting purposes. The final dataset was recorded in an Excel database containing information on platform, user type, language, media format, publication date, and coded communication function.

Coding Procedure

In this study, the coding unit was the individual post on social media, whereas the context unit comprised the post caption, image, or video attached to it, along with related account details for interpreting the meaning behind the post.

Since a post could potentially serve more than one communication purpose, multiple coding was possible where there was a clear indication that the post was categorized into more than one group. For instance, a post highlighting the damage caused by an earthquake while also asking for help was categorized as information and mobilization. However, when reporting the main distribution of communication

functions, the most prominent function of each post was identified based on its primary communicative purpose to avoid inflating the total number of posts.

To improve the consistency of coding decisions, a coding guide was developed that defined each main category and subcategory and provided decision rules and representative examples. The code was applied in a systematic manner, while ambiguous codes were resolved through going back to the original post. This was done so as to have a consistent application of the definitions of the coding. These procedures aimed to strengthen the dependability and consistency of the qualitative content analysis.

This study adopts a qualitative content analysis approach to examine how social media was used for crisis communication during the 2025 Myanmar Earthquake. To begin with, the research utilized the directed qualitative content analysis approach in which an initial coding scheme had been developed based on existing literature on the role of social media in disaster and crisis management. Three theoretical categories of communication were coded in this analysis: information sharing, emotional communication, and mobilization communication. These categories served as an initial basis for analysis, although additional meanings of the analyzed text have also been uncovered during the coding process.

Qualitative content analysis was chosen as the method due to its ability to analyze and interpret various meanings and patterns of communication in the user-generated content. The approach also allows the study to examine how different social media platforms and user types contributed to crisis communication during the immediate response period.

Table 1. Coding Framework for Social Media Crisis Communication

Sample Post Content (Data Extract)	Open Coding (Initial Codes)	Axial Coding (Categories)	Selective Coding (Core Theme)
“Strong earthquake felt in Mandalay. Buildings damaged.”	Earthquake update, Damage report	Information dissemination	Social media as crisis communication system
“Breaking news: 6.8 magnitude earthquake hits Sagaing region.”	News update, Magnitude report	Information dissemination	Social media as crisis communication system
“Please send food and water to affected villages.”	Help request, Urgent need	Community mobilization	Social media as crisis communication system

“Donation campaign for earthquake victims—please support.”	Donation appeal, Fundraising	Community mobilization	Social media as crisis communication system
“We are organizing volunteers for rescue work.”	Volunteer coordination, Community action	Community mobilization	Social media as crisis communication system
“I am so scared, my house is shaking.”	Fear expression, Personal emotion	Emotional expression	Social media as crisis communication system
“Pray for Myanmar. Stay strong everyone.”	Sympathy, Solidarity message	Emotional expression	Social media as crisis communication system
“Families are sleeping outside due to aftershocks.”	Personal experience, Risk situation	Emotional expression / Information dissemination	Social media as crisis communication system
“Government announced emergency hotline numbers.”	Official information, Safety instruction	Information dissemination	Social media as crisis communication system

Note. The coding framework was developed through directed qualitative content analysis. The three main communication functions were derived from previous literature on social media and disaster communication and were operationalized through relevant subcategories for systematic coding of the sampled posts.

Coding was done by following the three phases of grounded theory approach: open coding, axial coding, and selective coding. As shown in [Table 1](#), the initial codes generated from the analysis of social media messages were categorized into general groups like information sharing, community activation, and emotional communication. These groups were then used in building the core theory theme of using social media as a multidimensional crisis communication tool.

RESULTS AND DISCUSSION

Before presenting the empirical distributions, [Figure 1](#) summarizes the analytical framework used to organize the findings around information dissemination, emotional expression, and community mobilization.

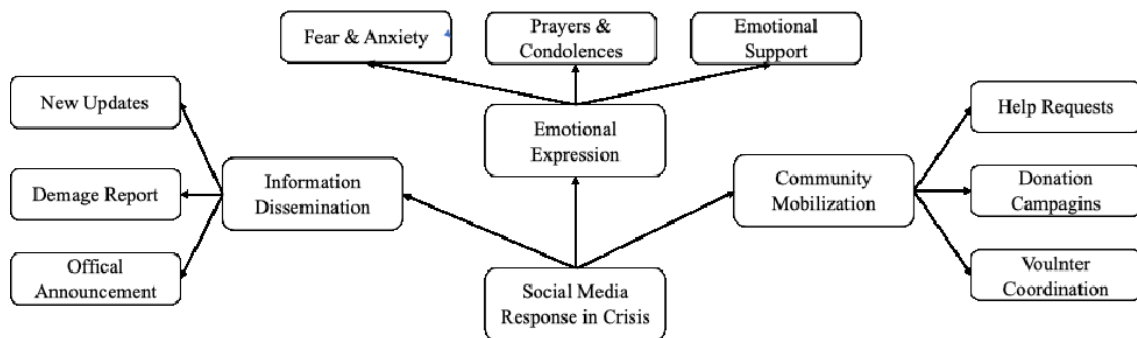


Figure 1. Research Framework

This research works highlight the social media response to crisis communication during 2025 Myanmar earthquake. The results are organized directly according to the three research questions. 1) To examine the distribution of sampled posts across social media platforms. 2) To examine the types of users represented in the dataset. 3) To examine the functions of social media content in crisis communication. This arrangement helps to ensure that every research question is answered by its relevant empirical data, without confusing one analytic dimension with empirical data from another. The result on distribution on social media posts by platform shown with tabulation method and visual chart method. The platform distribution is presented in [Table 2](#) and visualized in [Figure 2](#).

Table 2. Distribution of Social Media Posts by Platform

No.	Platform	Frequency	Percentage (%)
1.	Facebook	43	44.3
2.	TikTok	27	27.8
3.	Instagram	16	16.5
4.	X (Twitter)	5	5.2
5.	YouTube	2	2.1
6	Others	4	4.1
Total		97	100

Note. Frequencies are based on 97 social media posts collected between March 28 and April 4, 2025. Percentages are calculated based on the total sample size (N = 97).

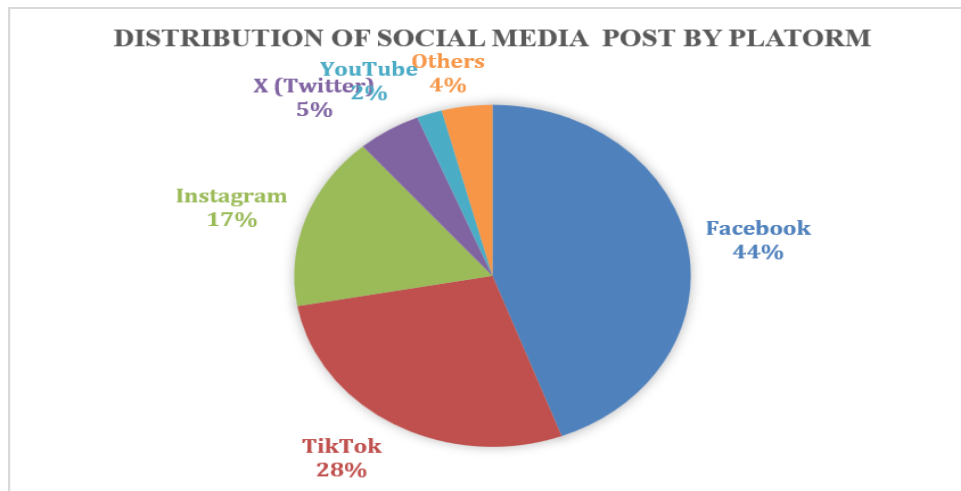


Figure 2. Distribution of Social Media Post by Platform

The distribution of the 97 sampled posts shows that Facebook had the largest representation, with 43 posts (44.3%), followed by TikTok (27.8%) and Instagram (16.5%). This finding indicates that Facebook was the most frequently represented platform in the present sample; it does not establish Facebook as the nationally dominant or most actively used crisis platform in Myanmar. The remaining posts were distributed across X (Twitter), YouTube, and other platforms.

Table 3. Distribution of Post by User Type

No.	User Type	Frequency	Percentage (%)
1.	Page / Organization	58	59.8
2.	Personal Users	36	37.1
3.	Others	3	3.1
Total		97	100

Note. Frequencies are based on 97 social media posts collected between March 28 and April 4, 2025. Percentages are calculated based on the total sample size (N = 97). Categories were derived using grounded theory coding procedures

Distribution of Social Media Posts by User Type

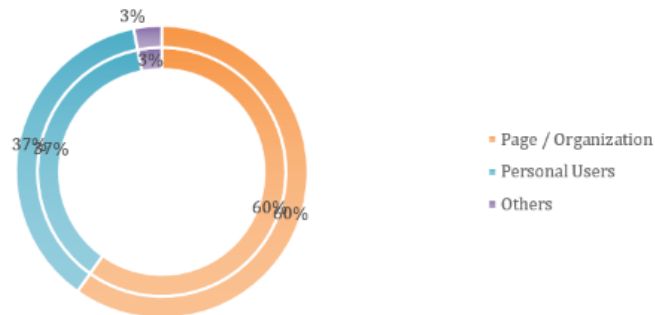


Figure 3. Distribution of Social Media Posts by User Type

As summarized in [Table 3](#) and illustrated in [Figure 3](#), the distribution by user type shows that Page/Organization users accounted for 58 posts (59.8%), personal users accounted for 36 posts (37.1%), and other users accounted for 3 posts (3.1%). These findings are based on the marginal distribution of users in the sample. Since no cross-tabulation was done between the user type and content category variables, it cannot be concluded that specific user types generated certain types of crisis communications.

Table 4. Distribution of Social Media Content by Categories and Subcategories

No.	Category	Subcategory	Frequency	Percentage (%)
1	Information Dissemination	News updates / reports	29	30
		Damage reports	12	12.4
		Official announcements	9	9.3
		Subtotal	50	51.7
2	Community Mobilization	Help requests	8	8.2
		Donation campaigns	6	6.2
		Volunteer coordination	4	4.1
		Subtotal	18	18.6
3	Emotional Expression	Fear and anxiety	10	10.3
		Sympathy and condolences	11	11.3
		Emotional Support	8	8.2
		Subtotal	29	29.9
Total			97	100

Note. Frequencies are based on 97 social media posts collected between March 28 and April 4, 2025. Percentages are calculated based on the total sample size (N = 97). Categories were derived using grounded theory coding procedures

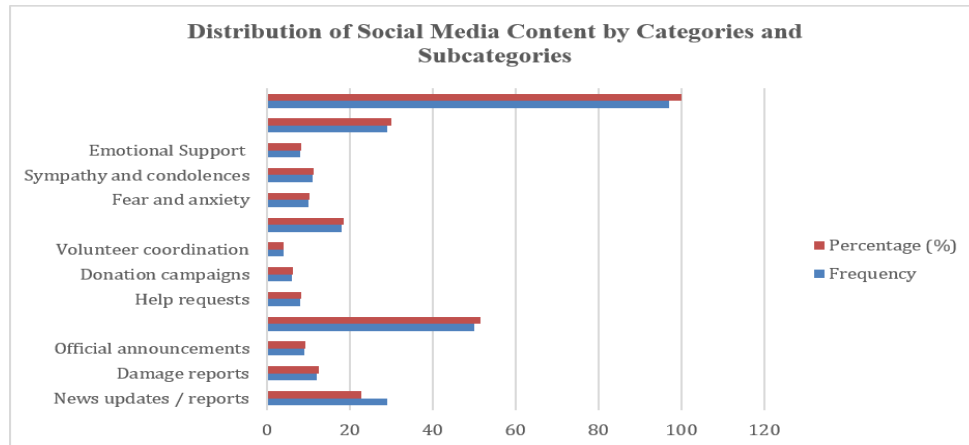


Figure 4. Distribution of Social Media Content by Categories and Subcategories

As detailed in [Table 4](#) and visualized in [Figure 4](#), the analysis of the 97 posts found three main functions: information dissemination, emotional expression and community mobilization. The most common function was information dissemination with 50 posts (51.7% of posts analyzed). The most common information dissemination posts were news updates and news reports with 29 posts (30%), then damage reports with 12 posts (12.4%), and official announcements with 9 posts (9.3%). An expression of emotion was relatively frequent (29 posts, 29.9%) and included an expression of empathy and condolences (11 posts, 11.3%), expression of fear and anxiety (10 posts, 10.3%), and emotional support (8 posts, 8.2%). Community mobilization included requests for help (8 posts, 8.2%), donation campaigns (6 posts, 6.2%), and volunteer recruitment (4 posts, 4.1%). Frequencies/counts in this study represent the occurrence of each category present in each post, and they reflect the 97 posts that the analysis targeted. The percentages were calculated based on the number of posts (97), and they are rounded to the nearest one decimal point.

This section presents the empirical findings of the study based on the three research objectives, using the dataset of 97 social media posts collected during the first week following the 2025 Myanmar Earthquake. The results are derived from frequency analysis and grounded theory coding, highlighting patterns in content type, platform usage, and user participation.

Objective 1 : To identify the social media platforms most frequently represented in the sampled earthquake-related posts

Facebook was the most used social media channel for posting about the earthquake with a proportion of 44.3% of posts, supporting Facebook's dominance as the most-used social media in Myanmar. In addition, TikTok and Instagram were also

heavily used with respective proportions of 27.8% and 16.5% for posting visual and video-based content, improving engagement and immediacy during the crisis.

X (Twitter) (5.2%) and YouTube (2.1%) were less common, which may suggest that they are less widely used platforms in the context of disaster communication in Myanmar. Overall, the existence of many different platforms suggests that many types of message shared through different platforms, and the results suggest that the use of platforms is context-specific and depends on local digital culture as well. Facebook was the main center of communication (information dissemination and interaction) among the people in the crisis in the country.

Objective 2: To examine the types of users who contributed to earthquake-related social media communication.

Studying posts on social media, we find that over half of the posts shared information (51.5%). Within informative posts, the sub-category of news updates, reports, warnings, and notifications made up most of the posts (22.7%). The other sub-categories of damage reports, announcements by official channels, and safety announcements came next, with 12.4%, 9.3%, and 7.2%. It was suggested that social media acted mainly as an instant messaging system for posting updates about the effects of the quake and developments following it.

The second most common type of post was ones that contained emotive content (29.9% of posts), and posts with sympathetic wording (11.3%), fearful wording (10.3%) and solidarity-based wording (8.2%) were the most common emotional content. These results indicate that social media was also a platform for emotional support that conveyed concern, empathy and personal experiences related to the disaster. The final code was community mobilization, representing 18.6% of the data. Among the different types of help seeking, help appeals (8.2%), donation drives (6.2%), and mobilizing of volunteers (4.1%) were the most common. This shows that social media helped support the processes of collective behavior, as it was a platform that helped connect people who provide aid.

Overall, the analysis shows that social media served a number of roles during the disaster, where information exchange was one of the main ones.

Objective 3: To analyze how social media was used for crisis communication during the earthquake, particularly for information dissemination, emotional expression, and community mobilization.

The third research question focuses specifically on the functions of social media content rather than user type. Three core functions were observed from the analysis; information dissemination, emotional expression, and community mobilization. Information dissemination involved 50 posts (51.7%), emotional expression involved 29 posts (29.9%) and community mobilization involved 18 posts (18.6%). These findings indicate that the sampled social media content served multiple communication purposes during the first week following the earthquake.

CONCLUSION

The study investigated 97 posts available on various social media regarding the 2025 Myanmar Earthquake within the first week of the incident. The study used directed qualitative content analysis to investigate the representation of social media platforms and types of users along with three roles of communication, which include information sharing, expression of emotions, and community mobilization.

Facebook was found to be the most represented platform in the study sample, followed by TikTok and Instagram. Organizational and public pages accounted for more of the posts in the sample compared to personal users.. Regarding communication functions, information dissemination was the most frequently identified function, followed by emotional expression and community mobilization. The findings indicate that the sampled posts were used not only to share updates and report disaster-related conditions but also to express fear and solidarity and to facilitate requests for assistance, donations, and volunteer activities.

The research contributes to the existing body of knowledge regarding digital crisis communication through demonstrating the possibility of the presence of several actors and communication roles simultaneously within a social media context during the acute phase of a crisis event. Nevertheless, owing to the nature of data used in the research (a small but purposeful sample of public posts), the conclusions drawn from it should not be considered an exhaustive depiction of the social media usage and the crisis communication system in Myanmar as a whole.

Based on the findings, several recommendations can be made to enhance the effectiveness of social media in disaster response. Firstly, government departments and agencies of emergency management should consider enhancing their use of technology in communicating with people through social media platforms. The verification of the official channels for disseminating relevant information will help improve the level of trust in the government's official information and minimize the spread of rumors.

Secondly, there should be a campaign aimed at improving the digital literacy and awareness of social media users. Users will learn how to identify reliable sources of information and how not to spread false information. This is particularly important in contexts where misinformation can spread rapidly due to the high volume of user-generated content.

Third, humanitarian organizations and community groups should leverage social media for coordinating relief efforts more effectively. Creating centralized digital platforms or hashtags for donations, volunteer coordination, and emergency assistance can improve communication and resource allocation. Additionally, integrating social media data into disaster management systems can support real-time decision-making and response planning.

This paper makes an empirical contribution to disaster communication literature by studying social media communication in the 2025 Myanmar Earthquake disaster, a situation which is relatively understudied in the field of disaster-communication research in terms of empirical research. Instead of making a contribution from the point of methodology in the form of grounded theory, the paper highlights the utility of using qualitative content analysis for systematically recording the platform representation, user involvement, and communication functions of crises in a set of a disaster event.

In view of the fact that information dissemination constituted the highest percentage of the sampled posts (51.7%), it is recommended that the relevant government agencies and disaster management organizations give priority to dissemination of information in digital format in the early stage of the disaster. The finding that emotional expression represented 29.9% of the sampled content indicates that social media also provides space for public emotional responses and social support. Public communication strategies should therefore recognize citizens' emotional and social needs alongside the provision of factual information, particularly during the immediate aftermath of disasters.

The 18.6% of posts classified as community mobilization included help requests, donation campaigns, and volunteer coordination. Disaster-response organizations and community groups can use social media to support the communication of assistance needs, donation information, and volunteer opportunities, while ensuring that such information is verified before wider dissemination.

These recommendations are limited to the communication patterns observed in the 97-post sample and should therefore be considered practical implications rather than evidence of nationwide social-media behavior.

This study has several limitations. First, the dataset consisted of 97 social media posts collected during the first week following the earthquake. The sample therefore provides a focused examination of crisis communication during a specific period but cannot represent the full volume or diversity of social media activity surrounding the earthquake.

Second, the platform sampling method may cause inherent disparities in analyzing Facebook, TikTok, Instagram, X (Twitter), and YouTube platforms. The study did not apply the platform-normalized sampling method using the total number of posts, users, views, and engagement per platform with regards to the earthquake. Hence, the observation of Facebook having the most dominant share of the sample could be seen as the representation of the Facebook platform from the collected samples rather than dominance of the platform in Myanmar.

Finally, the study is based only on social media content available to the public and cannot be applied to private messages, closed groups, deleted posts, or hidden posts during the platform search process. These limitations should be considered when interpreting the findings and when comparing platform distributions. Finally, the study relies on publicly available social media data, which may exclude private or restricted

content that could provide additional insights into user behavior and communication patterns.

CONFLICT OF INTEREST

We declare that there are no conflicts of interest related to the conduct, findings, or publication of this study.

AUTHOR CONTRIBUTION

Atar Thaung Htet, corresponding author, contributed to the conceptualization, research design, data collection, data analysis, interpretation of findings, and preparation of the manuscript. Htin Kyaw Lin, co-author, contributed to data collection, data analysis, and interpretation of findings of this research. We reviewed and approved the final version of the manuscript.

ETHICAL STATEMENT

This study analyzed publicly accessible social media content. No personal or confidential information was collected, and the data were used solely for academic research purposes while respecting ethical principles of privacy and responsible research.

FUNDING STATEMENT

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DECLARATION OF GENERATIVE AI

Generative artificial intelligence was used as a supportive tool for language refinement and improving the clarity of the manuscript. We reviewed, verified, and take full responsibility for the final content of the manuscript.

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