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Disaster Education and Mitigation: Social Media Content Management Strategy of the Regional Disaster Management Agency of Subang Regency

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Abstract
This study aims to analyze social media as a medium for disaster mitigation education to enhance public knowledge, awareness, preparedness, and capacity to reduce disaster risks, focusing on the management of social media content by the Regional Disaster Management Agency (Badan Penanggulangan Bencana Daerah/BPBD) of Subang Regency. The study employed a qualitative approach using interviews, observations, and document analysis to examine content management strategies, information verification mechanisms, the delivery of mitigation messages, and digital interactions with the public. The findings indicate that Instagram is utilized by BPBD as an educational medium to disseminate information on preparedness, mitigation, emergency response, and increased awareness of disaster risks. Information validity is strengthened through the verification of supporting evidence, including photographs and videos, prior to dissemination. However, the effectiveness of disaster mitigation education remains constrained by inconsistent educational content, limited diversity of learning formats, suboptimal utilization of interactive features, and limited two-way communication and public participation. The novelty of this study lies in conceptualizing social media as a digital-based medium for disaster mitigation education that integrates disaster literacy, information verification, risk communication, mitigation learning, and public participation to strengthen community capacity.
Keywords: Management Information System, BPBD, Social Media

Abstrak
Penelitian ini bertujuan untuk menganalisis media sosial sebagai medium edukasi mitigasi bencana dalam meningkatkan pengetahuan, kesadaran, kesiapsiagaan, dan kapasitas masyarakat dalam mengurangi risiko bencana, dengan fokus pada pengelolaan konten media sosial Badan Penanggulangan Bencana Daerah (BPBD) Kabupaten Subang. Penelitian menggunakan pendekatan kualitatif melalui wawancara, observasi, dan studi dokumentasi untuk mengkaji strategi pengelolaan konten, mekanisme verifikasi informasi, penyampaian pesan mitigasi, dan interaksi digital dengan masyarakat. Hasil penelitian menunjukkan bahwa Instagram dimanfaatkan BPBD sebagai medium edukasi melalui penyampaian informasi kesiapsiagaan, mitigasi, kedaruratan, dan peningkatan kesadaran terhadap risiko bencana. Validitas informasi diperkuat melalui verifikasi bukti pendukung berupa foto dan video sebelum diseminasi. Namun, efektivitas edukasi masih terkendala oleh ketidakonsistenan konten edukatif, keterbatasan variasi format pembelajaran, belum optimalnya fitur interaktif, serta rendahnya komunikasi dua arah dan partisipasi masyarakat. Novelty penelitian ini terletak pada konseptualisasi media

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sosial sebagai medium edukasi mitigasi bencana berbasis digital yang mengintegrasikan literasi kebencanaan, verifikasi informasi, komunikasi risiko, pembelajaran mitigasi, dan partisipasi publik dalam penguatan kapasitas masyarakat..
Keywords: Sistem Informasi Manajemen, BPBD, Media Sosial

Introduction

Subang Regency is an area located in a disaster-prone zone, with potential hazards such as landslides, floods, and fallen trees. This condition presents significant challenges for Subang Regency in disaster management efforts. Success in minimizing damage and casualties depends heavily on the speed, accuracy, and efficiency of emergency response. Therefore, a system capable of supporting appropriate and responsive decision-making is required.

One important element in supporting this effort is the implementation of a reliable Management Information System (MIS). MIS plays a role in providing fast, accurate, and accessible information to all stakeholders, including local governments, field personnel, and the community. With an integrated information system, coordination and information distribution in disaster management can be carried out more effectively. Therefore, this study aims to examine the implementation of the Management Information System at the Regional Disaster Management Agency (BPBD) of Subang Regency (Mareta et al., 2025).

As an empirical illustration, data from the Central Statistics Agency (BPS) in 2024 show that Subang Regency experienced various disaster events with a relatively significant frequency. The details of these disaster events are presented in the following table:

DISTRICT	Number of Villages/Urban Villages Experiencing Natural Disaster – Flood	Number of Villages/Urban Villages Experiencing Natural Disaster – Earthquake	Number of Villages/Urban Villages Experiencing Natural Disaster – Landslide
Segaalaherang	-	-	-
Serangpanjang	-	-	
Jalancagak	-	-	-
Ciater	-	-	2
Cisalak	-	-	5
Kasomalang	-	-	4
Tanjungsiang	-	-	4
Cijambe	1	-	5
Cibogo	1	-	1
Subang	-	-	1

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DISTRICT	Number of Villages/Urban Villages Experiencing Natural Disaster – Flood	Number of Villages/Urban Villages Experiencing Natural Disaster – Earthquake	Number of Villages/Urban Villages Experiencing Natural Disaster – Landslide
Kalijati	-	-	-
Dawuan	1	-	3
Cipendeuy	1	-	-
Pabuaran	3	-	-
Patokbeusi	3	-	-
Purwadadi	1	-	-
Cikaum	-	-	-
Pagaden	-	-	-
Pagaden Barat	-	-	-
Cipunagara	1	-	-
Compreng	-	-	-
Binong	-	-	-
Tambakdahan	-	-	-
Ciasem	3	-	-
Pamanukan	1	-	-
Sukasari	2	-	-
Pusakanagara	-	-	-
Pusakajaya	-	-	-
Legonkullon	2	-	-
Blanakan	2	-	-
Subang	22	-	25

Source: BPS data, 2024

Based on the table above, the 2024 data indicate that Subang Regency remains vulnerable to hydrometeorological disasters, particularly floods and landslides. According to the recorded events, 47 villages/urban villages were affected by disasters, including 22 villages/urban villages affected by landslides. No earthquake events directly affecting villages/urban villages in this area were recorded throughout 2024. Landslides

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were most prevalent in the southern part of Subang Regency, which has hilly terrain and slopes, with the highest numbers recorded in Cisalak District (5 villages/urban villages) and Cijambe District (5 villages/urban villages). Kasomalang (4 villages/urban villages) and Tanjungsiang (4 villages/urban villages) also showed high levels of vulnerability. Other districts, such as Ciater (2 villages/urban villages), Dawuan (3 villages/urban villages), Cibogo (1 village/urban village), and Subang (1 village/urban village), also recorded landslide incidents. This confirms that areas with hilly topography and high rainfall intensity have a greater risk of landslides.

Previous studies have shown that regional disaster management agencies in Indonesia have utilized social media platforms such as Instagram, Twitter, and Facebook for rapid information dissemination, public education, and disaster mitigation campaigns. However, content management strategies, communication orientations, and the effectiveness of public interaction remain highly varied. Findings from several BPBD case studies reveal that official accounts are considered relatively effective in providing emergency warnings and current situation updates, but are not yet optimal in delivering preventive educational content and have not fully utilized various platform features, such as highlights, repeated infographics, or data-driven content scheduling. Consequently, public engagement and understanding remain inconsistent (Abidin et al., 2023). Other researchers have emphasized the importance of implementing an integrated communication model that combines crisis communication and educational frameworks, as well as improving the competence of media managers so that messages can be adapted to each phase of disaster response (Sasmita, 2024). Differences in research methods—some using qualitative case studies and others using quantitative content analysis—as well as differences in platform focus, such as Instagram and Twitter, have resulted in varied recommendations across studies. Therefore, research on BPBD Subang Regency is important to examine: (1) how content strategies are adapted to the platforms on which content is distributed, (2) how consistent and high-quality the educational and informational content is, and (3) how the use of insight data can help determine schedules and content formats that are more effective in improving community preparedness (Hutabarat et al., 2023).

Management Information Systems (MIS) play an important role in various sectors, including disaster management. The success of an institution in responding to disasters quickly and appropriately depends heavily on information that is accurate, accessible, and delivered in real time. This is reinforced by the findings of the information systems study “Information Systems in Disaster Management: A Narrative Review” (Sataria & Petrus, 2025), which explains that information systems improve efficiency, data accuracy, and cross-institutional coordination during emergencies. Aloysius J. Rego also emphasizes that an integrated disaster information system is a key component of preparedness and response, particularly in countries or regions with high levels of disaster vulnerability. In addition, the use of geoinformation-based systems can simplify emergency management processes by presenting structured spatial data, making information flows clearer and easier for field personnel to understand. These findings

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confirm that advances in information technology increasingly strengthen the role of MIS as a primary foundation for improving coordination, analysis speed, and disaster response effectiveness. At the regional level, MIS is essential to the success of BPBD in carrying out mitigation and emergency response functions. Subang Regency, with its geographical characteristics and vulnerability to floods and landslides, therefore requires a robust MIS to ensure optimal response. Accordingly, examining the implementation of MIS at BPBD Subang Regency, particularly in supporting emergency and logistics management, is important for understanding how effectively information systems are used to strengthen disaster preparedness.

The research questions cover three main aspects: how BPBD Subang Regency manages disaster information disseminated through social media to prevent misinformation and hoaxes; what social media content management strategies are implemented by BPBD Subang Regency in the context of disaster education and mitigation; and what challenges and obstacles BPBD Subang Regency faces in managing social media content for disaster education and mitigation. Based on these questions, this study aims to analyze information management, identify the strategies employed, and reveal the constraints faced by BPBD Subang Regency in utilizing social media as a means of disaster education and mitigation. This research is expected to provide strategic recommendations for BPBD to optimize social media content management so that the effectiveness of disaster information dissemination can support disaster risk reduction in the community. Finally, this study identifies technical and non-technical weaknesses and provides recommendations for improvement, including feature enhancement, interface design, training, system integration, and collaboration among agencies and the community (Mareta et al., 2025).

Theoretical Framework

Disaster management in the contemporary digital era requires an integrated approach that combines institutional capacity, information technology, public communication, and community education. The increasing complexity of disaster risks necessitates not only rapid emergency response but also systematic efforts to strengthen public knowledge, awareness, preparedness, and mitigation capacity. Within this context, information constitutes a strategic resource because accurate and timely information is essential for supporting institutional decision-making and enabling communities to understand and respond to disaster risks.(Nabriz et al., 2025) The development of digital technologies has consequently expanded the possibilities for disaster management institutions to process, communicate, and disseminate risk-related information to broader segments of society. This transformation creates opportunities to integrate disaster information management with continuous public education and risk-reduction initiatives.

Management Information Systems (MIS) in disaster management constitute an integrated framework for transforming raw data into reliable and actionable information to support timely, accurate, and evidence-based decision-making. Within disaster management institutions such as the Regional Disaster Management Agency (BPBD), the effectiveness of MIS depends substantially on data accuracy, timeliness, accessibility, and interoperability, particularly when information must be processed and communicated

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under emergency conditions (Sataria & Petrus, 2025). The integration of information technology enables complex disaster-related information to be transformed into spatial, visual, and textual representations that can be more readily interpreted by decision-makers and field personnel. Beyond administrative and operational functions, MIS also provides an essential information foundation for communicating disaster risks to the wider public. Reliable information generated through institutional information systems can subsequently be transformed into educational messages that support public understanding of hazards, vulnerabilities, preparedness, and mitigation measures. Thus, MIS represents an important technological foundation for developing evidence-based disaster mitigation education and strengthening institutional capacity for risk communication.

Building upon this information infrastructure, social media has emerged as an important medium for disaster mitigation education and crisis communication. Digital platforms such as Instagram and Facebook enable local governments and disaster management agencies to disseminate information rapidly while simultaneously creating opportunities for public interaction and engagement. In the context of disaster education, these platforms can function beyond conventional one-way communication by providing accessible learning materials related to disaster preparedness, mitigation procedures, early warning information, emergency response, and risk awareness.(Bakr et al., 2025) The educational potential of social media is particularly evident in its ability to present complex disaster information through visual and concise formats, including infographics, short videos, instructional materials, and interactive content. The repeated dissemination of such messages can reinforce public understanding and support continuous learning beyond formal educational settings. Accordingly, social media can function as a digital learning environment when its content is deliberately designed according to educational objectives and community needs.

However, the educational and communicative potential of social media depends substantially on the quality and management of the content disseminated by disaster management institutions. Effective disaster mitigation education requires content that is accurate, relevant, understandable, contextual, consistent, and oriented toward actionable knowledge. Consequently, social media content management involves more than the technical process of producing and publishing posts; it encompasses planning educational themes, identifying target audiences, selecting appropriate communication formats, verifying information, scheduling publications, monitoring audience responses, and evaluating educational effectiveness.(Susanti et al., 2025) Information verification is particularly important because disaster situations are often accompanied by misinformation, rumors, and unverified community reports that may influence public perceptions and decisions. Rigorous verification using reliable sources and supporting evidence, including photographs and videos, is therefore essential to maintain the credibility of disaster information before it is disseminated or followed up.

Furthermore, the effectiveness of disaster mitigation education through social media cannot be separated from the degree of public participation and interaction established between disaster management institutions and communities. Social media provides opportunities to move beyond a one-way communication model toward a more participatory form of risk communication in which communities can ask questions, provide information, express concerns, and contribute local knowledge. Features such as comments, direct messages, polls, quizzes, live broadcasts, and other interactive functions can support continuous communication and create opportunities for public learning.

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Nevertheless, limited two-way communication, inconsistent educational content, and suboptimal use of interactive features may constrain the ability of social media to function as an effective educational medium. These conditions indicate the importance of examining social media not merely as a channel for disseminating disaster information but as a medium through which educational processes, risk communication, information verification, and community participation can be integrated.

Based on these considerations, the theoretical foundation of this study is constructed by integrating several interconnected concepts, namely disaster education and mitigation, disaster literacy, risk awareness, community preparedness, Management Information Systems, social media, disaster risk communication, content management, information verification, public participation, digital disaster governance, and community resilience. These concepts provide an analytical framework for understanding how institutional information can be transformed into educational content and subsequently communicated to communities through digital platforms. The framework also emphasizes that the effectiveness of social media in disaster management should not be assessed solely from the perspective of information dissemination but also from its educational contribution to strengthening community capacity. Therefore, the following theoretical discussion establishes the conceptual basis for examining the role of social media content management as a medium for disaster mitigation education within the disaster management practices of BPBD Subang Regency.

1. Disaster Education and Disaster Mitigation

Disaster education is a systematic process aimed at developing knowledge, awareness, attitudes, skills, and capacities among individuals and communities to understand and respond appropriately to disaster risks. Disaster education is not limited to disseminating information about the types, characteristics, and impacts of disasters, but also seeks to develop people's ability to make appropriate decisions before, during, and after disaster events. From an educational perspective, this process encompasses cognitive, affective, and psychomotor dimensions that enable disaster-related knowledge to be translated into preparedness and mitigation behaviors. Disaster education also serves a preventive function by enabling communities to understand the characteristics of hazards, vulnerabilities, and risks within their surrounding environments.(Hushin et al., 2025) Accordingly, disaster education should be understood as a continuous learning process that develops individual and collective capacities to anticipate, reduce, and respond to disaster risks. Its ultimate orientation is not merely to increase knowledge but to foster communities capable of translating knowledge into concrete actions for disaster risk reduction.

Within this framework, disaster mitigation education represents an essential component of disaster education that specifically focuses on reducing disaster risks and impacts before hazardous events occur. Mitigation encompasses various structural and non-structural measures designed to reduce the potential consequences of disasters. From an educational perspective, mitigation should not merely be understood as a set of technical procedures but as knowledge, attitudes, and practical skills that communities need to acquire and apply in everyday life.(Begum et al., 2025) Disaster mitigation education enables communities to understand the relationship among hazards, vulnerability, capacity, and risk and to determine preventive actions appropriate to their local conditions. Such education includes understanding potential hazards, recognizing warning signs, identifying evacuation routes, preparing for emergency situations, and developing the capacity to undertake appropriate risk-reduction measures. Therefore,

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disaster mitigation education can be conceptualized as a public learning process that connects disaster knowledge with practical actions for reducing vulnerability and strengthening preparedness.

The concept of disaster mitigation education is closely associated with disaster risk reduction (DRR), which places risk reduction at the center of contemporary disaster management. Disaster risk is not determined solely by the presence or magnitude of hazards but is also influenced by vulnerability, exposure, and community capacity. This perspective emphasizes a shift from reactive disaster response toward preventive and risk-informed approaches. Education plays a strategic role in this transition because it enables individuals and communities to recognize risks and develop appropriate preparedness and mitigation capacities before disasters occur. Through continuous educational processes, communities can understand local risk characteristics, develop appropriate mitigation strategies, and participate in disaster risk reduction initiatives. Consequently, disaster education constitutes an important social and pedagogical mechanism for strengthening DRR and developing communities that are capable of adapting to and reducing disaster risks.

2. Disaster Literacy, Risk Awareness, and Community Preparedness

Disaster literacy refers to the capacity of individuals and communities to access, understand, evaluate, and utilize disaster-related information as a basis for decision-making and risk-reduction actions. Disaster literacy constitutes an important dimension of mitigation education because information about hazards and risks must be transformed into practical understanding and behavioral capacity. It encompasses knowledge of disaster hazards, risk characteristics, early warning systems, safety procedures, evacuation mechanisms, and mitigation measures that can be implemented by individuals and communities.(Desyulita et al., 2025) In increasingly digital environments, disaster literacy has become particularly important because people encounter disaster-related information through multiple sources with varying levels of accuracy and credibility. Communities therefore require the ability to distinguish reliable information from misinformation, rumors, and misleading content. Strengthening disaster literacy through systematic education can consequently enhance people's ability to interpret risk information and make informed decisions during both normal and emergency conditions.

Risk awareness represents another fundamental dimension of disaster mitigation education because knowledge alone does not necessarily produce preparedness or preventive behavior. Risk awareness concerns the extent to which individuals recognize the existence, relevance, and potential consequences of hazards within their environment. Educational processes need to connect disaster information with the lived experiences and local conditions of communities so that risk is perceived as relevant rather than abstract. Contextual, visual, and action-oriented educational messages can facilitate this process by illustrating how particular hazards may affect individuals, families, and communities.(Abdullah et al., 2025) Such an approach can encourage a transition from merely knowing about disasters toward recognizing risks and developing a willingness to take preventive action. Disaster mitigation education should therefore seek to strengthen not only cognitive understanding but also awareness and behavioral intention.

Community preparedness represents an important outcome of disaster education because it reflects the extent to which knowledge and awareness have developed into practical capacities. Preparedness includes the ability to understand risks, prepare emergency plans, identify evacuation routes, recognize early warning information, prepare essential resources, and undertake appropriate actions during emergency

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situations. From an educational perspective, preparedness develops through continuous learning, repeated exposure to relevant information, practical training, experience, and community capacity-building activities. Consequently, mitigation education needs to provide clear, contextual, accessible, and action-oriented information that communities can apply in real situations. Digital platforms can support this process by providing repeated access to preparedness messages through different formats and communication channels. The integration of disaster literacy, risk awareness, and preparedness therefore provides an essential foundation for strengthening community capacity and resilience.

3. Management Information Systems, Social Media, and Disaster Risk Communication

Management Information Systems (MIS) in disaster management constitute an integrated framework for transforming raw data into reliable and actionable information to support timely, accurate, and evidence-based decision-making. Within disaster management institutions such as the Regional Disaster Management Agency (BPBD), the effectiveness of MIS depends substantially on data accuracy, timeliness, accessibility, and interoperability, particularly when information must be processed and communicated under emergency conditions (Sataria & Petrus, 2025). The integration of information technology enables complex disaster-related information to be transformed into spatial, visual, and textual representations that can be more readily interpreted by decision-makers and field personnel. Beyond administrative and operational functions, MIS also provides an essential information foundation for communicating disaster risks to the wider public. Reliable information generated through institutional information systems can subsequently be transformed into educational messages that support public understanding of hazards, vulnerabilities, preparedness, and mitigation measures. Thus, MIS represents an important technological foundation for developing evidence-based disaster mitigation education and strengthening institutional capacity for risk communication.

Building upon this information infrastructure, social media has emerged as an important medium for disaster mitigation education and crisis communication. Digital platforms such as Instagram and Facebook enable local governments and disaster management agencies to disseminate information rapidly while simultaneously creating opportunities for public interaction and engagement. In the context of disaster education, these platforms can function beyond conventional one-way communication by providing accessible learning materials related to disaster preparedness, mitigation procedures, early warning information, emergency response, and risk awareness.(Mukhlis et al., 2025) The educational potential of social media is particularly evident in its ability to present complex disaster information through visual and concise formats, including infographics, short videos, instructional materials, and interactive content. The repeated dissemination of such messages can reinforce public understanding and support continuous learning beyond formal educational settings. Accordingly, social media can function as a digital learning environment when its content is deliberately designed according to educational objectives and community needs.

In this context, disaster risk communication constitutes an integral component of mitigation education delivered through digital platforms. Risk communication involves the exchange and dissemination of information concerning hazards, risks, uncertainties, and appropriate actions that communities should undertake to reduce potential impacts. Effective risk communication requires more than rapid information dissemination because the information must also be accurate, clear, relevant, credible, and timely. In

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disaster education, risk communication serves as a bridge between technical information produced by disaster management institutions and the practical decisions made by communities. Complex information concerning hazards and risks must therefore be translated into accessible messages without compromising their substantive accuracy. Social media facilitates this translation through visualizations, concise explanations, instructional videos, infographics, and other audience-oriented formats. Consequently, digital risk communication can become an important pedagogical mechanism for strengthening public understanding and preparedness.

4. Social Media Content Management, Information Verification, and Educational Strategy

The effectiveness of social media as a medium for disaster mitigation education depends substantially on the content management strategy implemented by disaster management institutions. Content management encompasses planning, production, verification, publication, monitoring, and evaluation of digital content according to specific organizational and educational objectives. In the disaster management context, content management should be oriented toward the informational and educational needs of communities regarding hazards, risks, preparedness, and mitigation actions. Content production should not be restricted to periods when disasters occur but should be systematically planned as part of continuous public education. Such planning may include determining educational themes, identifying target audiences, selecting appropriate formats, scheduling publications, establishing key messages, and evaluating audience responses.(Bolat et al., 2025) Consistency in content production is essential because disaster mitigation education is a long-term process requiring repetition, reinforcement, and updating of knowledge. Therefore, content management represents a strategic mechanism through which social media can be transformed from an information dissemination channel into a structured medium for continuous disaster mitigation education.

The educational effectiveness of social media content is also influenced by its pedagogical quality, relevance, accessibility, and format diversity. Disaster-related information can often involve technical concepts that may be difficult for the general public to understand without appropriate simplification and contextualization. Infographics can be used to visualize data and procedures, videos can demonstrate mitigation actions, while short-form educational content can communicate essential safety messages efficiently. Interactive formats can further encourage users to test their knowledge, ask questions, and engage with educational materials. Content diversity is therefore important for accommodating different levels of prior knowledge, information preferences, and patterns of digital engagement among community members. Nevertheless, the simplification of information must not compromise its accuracy or scientific basis. Effective educational content should consequently integrate factual accuracy, pedagogical clarity, visual communication, contextual relevance, and action orientation.

Information verification is another critical dimension of disaster content management because the circulation of inaccurate information can directly influence public safety and decision-making. Disaster situations often produce large volumes of rapidly circulating information, including community reports, eyewitness accounts, photographs, videos, and user-generated content. Although such information may provide valuable situational awareness, its reliability cannot be assumed without appropriate verification.(Yilmaz et al., 2025) Rigorous verification through supporting evidence,

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including photographs and videos, constitutes a responsible approach to disaster information management and communication. Verification mechanisms can involve checking information sources, confirming field reports, cross-referencing data, and examining visual evidence before information is disseminated or followed up. Such practices serve not only to prevent misinformation and hoaxes but also to strengthen public trust in disaster management institutions. From an educational perspective, reliable information is fundamental because the quality of learning depends on the accuracy and credibility of the knowledge presented to the public.

The integration of content management and information verification therefore establishes an important relationship between institutional information systems and public disaster education. Reliable institutional information needs to be transformed into educational messages that are understandable, relevant, and actionable for different segments of the community. At the same time, educational content needs to maintain sufficient credibility to prevent the spread of inaccurate interpretations of disaster risks. This process requires coordination between data management, field personnel, communication officers, and social media managers. Effective coordination can ensure that the information published through social media remains aligned with verified field conditions and institutional assessments. Consequently, content management should be understood as an organizational process that integrates information accuracy, educational objectives, communication strategies, and technological capabilities.

5. Public Participation, Digital Disaster Governance, and Community Resilience

The interactive characteristics of social media create opportunities to develop disaster education through participatory communication. Communication is no longer limited to a one-way model in which government institutions transmit information to passive audiences; instead, communities can respond, ask questions, provide information, and contribute experiences through digital platforms. Features such as comments, direct messages, polls, quizzes, live broadcasts, and interactive stories can facilitate dialogue between authorities and citizens. Such interactions can provide BPBD with feedback concerning community information needs, levels of understanding, and emerging local risks. Public participation can also contribute to more responsive educational content because information can be adapted according to the questions and concerns raised by the community.(Mukhlis et al., 2026) Therefore, social media can function as a participatory learning environment in which disaster knowledge is exchanged rather than simply transmitted.

Nevertheless, the educational potential of social media can be constrained when communication remains predominantly one-directional and community participation is limited. High numbers of followers or content views do not necessarily indicate meaningful learning, understanding, or behavioral change. Educational effectiveness requires meaningful engagement through which community members can interpret information, ask questions, provide feedback, and connect knowledge with practical actions. Two-way communication can also strengthen trust between disaster management institutions and communities by demonstrating institutional responsiveness. Therefore, public engagement should be considered not merely as a measure of social media performance but as a component of the educational process itself. The development of interactive communication strategies is consequently essential for strengthening the pedagogical and participatory functions of disaster-related social media.

From the perspective of digital disaster governance, social media can serve as an institutional instrument for strengthening transparency, responsiveness, information

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exchange, and community participation in disaster risk management. Disaster management institutions are not the sole producers of relevant information because communities also possess localized knowledge concerning environmental conditions, hazards, and emerging risks. Social media can facilitate the exchange of these different forms of knowledge and create a more connected relationship between institutional actors and citizens. In this framework, BPBD's social media management can be understood as part of a broader disaster information governance system that connects technology, institutional knowledge, public communication, and community participation. Information accuracy, responsiveness, educational quality, and interactive engagement consequently become important dimensions of digital disaster governance. Social media content management should therefore be situated within the broader institutional framework of disaster risk governance rather than treated merely as a technical publication activity.

Within the context of regional disaster management, BPBD occupies a strategic position in strengthening community capacity through prevention, mitigation, preparedness, emergency response, and recovery activities. Its role is not limited to responding to disasters after they occur but also includes developing public awareness, knowledge, preparedness, and capacity before disasters take place. Digital transformation provides BPBD with opportunities to extend disaster mitigation education beyond conventional outreach activities that may be limited by geographical, temporal, and logistical constraints. Through social media, BPBD can continuously communicate information concerning local hazards, mitigation measures, preparedness procedures, and emergency responses. Strategic digital communication can also support closer relationships between institutions and communities by enabling continuous information exchange. Thus, BPBD's capacity to manage digital communication represents an important component of institutional capacity in implementing disaster education and risk reduction at the regional level.

Ultimately, the integration of disaster education, disaster mitigation, disaster literacy, risk awareness, community preparedness, MIS, social media content management, information verification, risk communication, and public participation provides a comprehensive theoretical foundation for understanding digital-based disaster mitigation education. MIS provides the technological and informational infrastructure required to generate and process reliable disaster data, while social media facilitates the transformation and dissemination of this information into accessible educational content. Content management determines the consistency, relevance, pedagogical quality, and accessibility of educational messages, whereas verification mechanisms ensure their credibility and reliability.(Wahidah Wahidah, Irfan Noor, 2025) Public interaction and participation provide feedback that can strengthen educational relevance and improve institutional responsiveness. This integrated process positions social media not merely as a technological communication channel but as a digital medium for disaster mitigation education that connects institutional knowledge with community learning and capacity building. The ultimate objective of this process is to strengthen knowledge, awareness, preparedness, mitigation capacity, and community participation, thereby contributing to the development of resilient communities capable of reducing and responding to disaster risks sustainably.

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Method

This research was conducted at the Regional Disaster Management Agency (BPBD) of Subang Regency, West Java. The study employed a qualitative research method as its primary approach, utilizing descriptive data and in-depth explanations. According to Fatimah (2019), the qualitative approach is more commonly used in research related to social issues because qualitative research places greater emphasis on data and the research process. The qualitative method was selected because it enables researchers to explore disaster communication, information dissemination strategies, and social media content management processes in greater depth issues that cannot always be explained through numerical or quantitative data. According to Nurdin and Hartati (2019, p. 42), qualitative research, grounded in post-positivist philosophy, is used to explore natural object conditions with the researcher as the primary instrument, combining multiple sources through triangulation and analyzing data inductively, with a focus on meaning rather than generalization.

In this study, the collected data provide a detailed description of how the content management strategy is implemented by BPBD Subang Regency, from the process of preparing disaster education materials and planning information distribution flows to the mechanisms used to respond to reports and interactions from the community. The data were then analyzed using descriptive and analytical techniques to examine the information in depth, enabling the identification of patterns, important themes, and comprehensive relationships related to the effectiveness of disaster communication strategies through social media. In addition, the study employed documentation techniques by examining various important documents, such as post archives and digital activity reports. All data obtained served to strengthen the research and to illustrate how social media is utilized as a means of education, emergency information dissemination, and enhancement of community preparedness in facing potential disasters in Subang Regency.

Results and Discussion

BPBD Subang Regency Information Management to Prevent Hoaxes

In the context of disaster communication, the general strategy of BPBD Subang Regency is based on a vision and mission aligned with the regent's directives and the institution's main duties and functions. Based on an interview with the head of the BPBD Subang Call Center, every communication activity, including the use of social media, always begins with a planning meeting involving all divisions within BPBD.

BPBD's mission in using social media focuses not only on educating the community about disaster preparedness and mitigation but also on supporting the institution's main functions, namely coordination, command, and implementation. As stated by the informant, BPBD has a central role when a major disaster occurs, serving as the main command at the regency level, while other regional agencies act as supporting units. Thus, BPBD's vision and mission in disaster communication through social media

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are directed toward strengthening education, accelerating information delivery, and ensuring effective cross-sectoral coordination in disaster management.

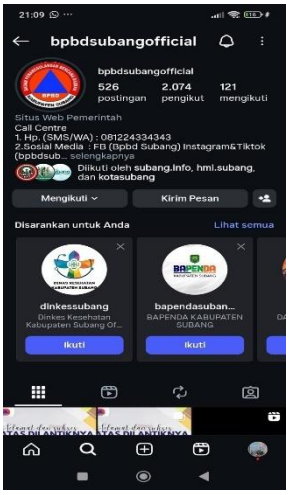






Figure 1: Instagram Account Figure 2: Website Account Figure 3: Mitigation Training

The first figure shows BPBD Subang's active social media activity through its official Instagram account, @bpbdsubangofficial, which is used to disseminate disaster information, provide public education, and facilitate rapid communication with the community through various digital channels.

The second figure presents the activities and profile of the Regional Disaster Management Agency (BPBD) of Subang Regency as an institution that plays an important role in disaster mitigation and management in its area. The first photograph shows the BPBD Subang office building, representing the institutional presence and structure of a local government that is responsive to disasters. The institutional identity is indicated by the official nameplate and the local government logo.

The third figure depicts field training in which the BPBD team practices evacuation and rescue techniques in hazardous terrain. This reflects professionalism, preparedness, and team collaboration in dealing with emergency situations. Overall, the documentation emphasizes the role of BPBD Subang as the frontline institution in building community resilience to disasters.

BPBD Subang Regency Disaster Education and Mitigation Content Strategy

Information management in the context of disaster communication is crucial to ensuring data accuracy before information is delivered to the public or followed up by field teams. Interviews with BPBD Subang personnel showed that the institution applies a strict verification mechanism. Every community report must be accompanied by authentic evidence, either photographs or videos of the incident, such as landslides or floods. If a report is not supported by visual evidence, it will not be immediately followed up by BPBD. This measure was adopted because there had previously been many cases of false reports or hoaxes that hindered the effectiveness of disaster response. Therefore,

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information management functions not only as a means of collecting data but also as a filtering and validation process to ensure that circulating information is accurate and accountable.





Figure 1. Documentation after the research

Figure 1. Regional Emergency Services

The first figure shows that the interview with BPBD Subang Regency was conducted directly at the institution's official office to obtain information regarding disaster education and mitigation content strategies. After the interview, the researchers documented the activity through a photograph with the informant, Udin Jazudin, Head of BPBD Subang Regency. This documentation serves as evidence that the data were obtained from a competent source.

The flyer in the second figure is emergency service information uploaded through BPBD Subang's official Instagram account and contains various important telephone numbers for reporting emergencies in Subang Regency. During the research process, in addition to collecting data through interviews, the researchers also conducted a document study by reviewing information published by BPBD. One of the documents examined was the social media post, which demonstrates how BPBD utilizes digital platforms to disseminate emergency information quickly, accurately, and accessibly to the community. The presentation of emergency contact numbers and related agencies reflects BPBD's efforts to improve disaster literacy and strengthen community preparedness. The document study also reinforces the interview findings by demonstrating consistency between the informant's explanation and the public communication practices actually implemented by the institution in the field.

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Challenges Faced by BPBD Subang Regency in Managing Social Media

Evaluation of disaster information management shows that the main obstacle lies in communication with the community. According to the informant, not all reporters provide consistent responses when asked to provide additional information. This condition makes field verification difficult because incomplete information can delay the response process. Conversely, when community members are active and responsive, coordination becomes easier, allowing clarification and follow-up to be conducted quickly. Thus, the main challenge lies in establishing a continuous two-way communication pattern between reporters and BPBD so that every incoming piece of information can be promptly verified and effectively followed up.

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Conclusion

The findings show that BPBD Subang Regency's information and social media management has operated with a structured communication direction aligned with the institution's vision and mission, while supporting its coordination, command, and implementation functions in disaster management. BPBD applies a strict report verification mechanism to prevent hoaxes, requiring every incoming piece of information to be accompanied by visual evidence before it is published or followed up. Social media, particularly Instagram, is utilized as the main means of disseminating emergency information, disaster education, and public communication, although the quality of educational content still needs to be improved to make it more consistent and effective. The main challenge lies in two-way communication with the community, as some reporters do not provide the additional information required for verification, thereby slowing field response. Overall, BPBD Subang Regency has been sufficiently active in utilizing social media for disaster information dissemination, but further strengthening is needed in disaster literacy, the use of digital features, and community engagement to establish more responsive disaster communication.

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