

Strengthening Disaster Response: A Scoping Review of Communication and Coordination Training Programs in the Philippine Higher Education Institutions

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ABSTRACT: This scoping review explored communication and coordination training programs for disaster response in Philippine Higher Education Institutions. Drawing on 5 publications from 2019 to 2025 focused on communication and coordination training for disaster response in Philippine HEIs, a comprehensive literature search was conducted. The data were extracted and synthesized into three thematic clusters: Types and Implementation of Communication and Coordination Training Programs, Challenges in Implementing Effective Communication and Coordination Training, and Recommendations for Enhancing Communication and Coordination Training. The review revealed a paucity of formal training programs specifically designed for disaster response in Philippine HEIs. Several impediments to effective communication and coordination during disasters were identified, including limitations in communication infrastructure, unclear information dissemination, inflexible communication systems, and a lack of disaster risk reduction and management training. Recommendations for improving training programs include strengthening communication infrastructure, promoting student engagement, utilizing diverse communication channels, developing comprehensive communication plans, and fostering stakeholder involvement. This review underscores the need for increased investment in formal training programs, robust communication systems, and collaborative approaches to enhance disaster preparedness and response capabilities in Philippine HEIs. Future research should focus on evaluating training effectiveness, exploring context-specific needs, and examining the long-term impact of training programs on HEI resilience and community recovery.

KEYWORDS: Disaster Response, Communication Training, Coordination, Coordination, Higher Education Institutions, Disaster Risk Reduction

I. INTRODUCTION

The Philippines is exposed to different types of disaster commonly caused by natural calamities such as earthquakes, volcanic eruptions, typhoons, and tropical storms that make the Philippines vulnerable. The Philippines is also vulnerable in human-induced disasters due to diverse cultures, values, and religious beliefs that result in conflicts. Communication and coordination have a huge influence in devising strategies on how different agencies respond to different kinds of disaster. Coordination involves extensive communication about specific needs, resources, optimal sizes and packaging of goods, and location and timing of deliveries (Aros & Gibbons, 2018). Disaster response success is dependent on effective communication and coordination among different stakeholders including higher educational institutions, government agencies, and local disaster risk reduction offices (Kapucu & Garayev, 2011). University governing bodies are responsible for the safety of faculty, students, and staff. Higher education institutions play an important role in disaster response by capacitating its students, faculty, and staff with various skills and knowledge to be effective responders during emergencies. Communication and coordination training programs are devices to improve the capacity of an individual and the organization to provide important information effectively and coordinate their actions during a disaster (Perry & Lindell, 2018). Those programs integrate simulated disaster scenarios, disaster response drills, and theoretical framework that will improve preparedness and resilience.

This scoping review aims to provide a comprehensive overview of the existing literature on communication and coordination training programs for disaster response in Philippine Higher Education Institutions (HEIs), specifically to identify and synthesize the types of programs, challenges, and recommendations for improvement.

RQ#1 What types of communication and coordination training programs implemented for disaster response have been implemented in the Philippine Higher Education Institutions?

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RQ#2 What are the key challenges identified in the literature regarding the implementation and effectiveness of communication and coordination training programs for disaster response in Philippines HEIs?

RQ#3 What recommendations can be made for practice to improve communication and coordination training for disaster response in the Philippine HEIs?

II. METHODOLOGY

A. Protocol

This study was conducted in 2025 using the structured and assessment of text paired with the PRISMA checklist 2020 to develop a more quality report. This checklist includes items related to the content of a systematic review and meta-analysis as well as abstract, methods, results, and discussion to create remarkable transparency in article selection (Nikjoo, Partovi, & Biparva, 2022).

B. Search Eligibility Criteria

In this scoping review, the population, concept, and context (PCC) framework was used to state the eligibility criteria and structure the review (Table 1).

III. TABLE 1 ELIGIBILITY CRITERIA

Criterion	Inclusion	Exclusion	Rationale
Population	Studies focusing on individuals (students, faculty, staff) within Philippine Higher Education Institutions (HEIs) involved in or targeted by communication and coordination training programs for disaster response.	Studies focusing on populations outside of Philippine HEIs (e.g., general community, other organizations).	To ensure the focus remains on the specific population of interest: those within Philippine HEIs.
Concept	Studies exploring communication and coordination training programs related to disaster preparedness and response, including risk communication, interagency coordination, emergency protocols, and related concepts.	Studies focusing on other types of training programs (e.g., academic skills, unrelated professional development) or disaster response activities without a training component.	To maintain a focus on the core concepts of communication and coordination training within a disaster response context.
Context	Studies examining communication and coordination training program implementation, best practices, challenges, and recommendations within the specific context of Philippine HEIs.	Studies focusing on training programs in other countries or contexts without specific reference to Philippine HEIs.	To establish applicability to the Philippine HEI situation and avoid generalizations from other settings.
Language	Studies published in English or Filipino (with English translation available).	Studies published in other languages without English translation.	To ensure accessibility and comprehensibility of research findings.
Time Span	Studies published between 2019-2024.	Studies published before 2019	Focuses on recent and relevant research studies.
Types of Sources	Peer-reviewed journals, conference proceedings, reports, and articles available in Publish or Perish and Google Scholar.	Journals with restricted access or non-academic sources.	Ensures credibility and reliability of sources.
Geographical Location	Studies conducted in HEIs in the Philippines.	Studies outside the Philippine HEI context.	Maintains relevance to local disaster response training programs.
Database	Google Scholar and other reputable academic databases.	Non-academic or unverified sources.	Ensures quality and reliability of selected studies.
Areas of Research	Disaster Risk Reduction and Management, Emergency Management, Communication Studies, Education,	Studies unrelated to disaster response, communication, and coordination training in	Aligns with the research focus on communication and coordination training

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Public Administration, Social Work,
Psychology, Sociology, Public Health.

HEIs.

in disaster response within
universities.

C. SEARCH STRATEGY

To scientifically categorize the relevant studies from this scoping review about the communication and coordination training programs for disaster response in universities in HEIs, the researchers used a combination of database searcher keywords “communication and coordination in disaster response”. Other potential keywords were also used like “disaster response of universities” but did not yield relevant results.

D. Data Extraction

Researchers identified relevant and transparent strategies to ensure the availability, quality and relevance of research. This included identification which was a careful search for literature that recognizes the effect of communication and coordination in disaster preparedness and response using Google Scholar. Another one was screening wherein after the initial search, all retrieved studies have been subjected to title and abstract screening based on the eligibility criteria. Last one was the eligibility assessment where studies that passed the initial screening will undergo full-text review to confirm that they met the research objectives.

E. Data Extraction

The data extraction process was guided by the research objectives and the key themes identified through the literature review on communication and coordination training for disaster response in Philippine Higher Education Institutions. Prior to the formal review, preliminary searches allowed the researchers to establish a framework for data extraction focused on three core areas:

Data from the reviewed article related to the types and application of communication and coordination training programs: The study involved collecting details on the particular training programs implemented, including the content and approaches used, the target population, the delivery methods, the duration and frequency of the training, as well as the reported accomplishments and challenges encountered during the implementation process.

1. Data from reviewed publications about the challenges met in implementing effective communication and coordination training: This scoping review required gathering data on the specific obstacles encountered, the results of these hindrances for program execution and efficacy, and the contributing factors.

2. Data on the recommendations for enhancing communication and coordination training: This scoping review required extracting details on the specific recommendations offered, the reasoning underlying these proposals, and their potential influence on improving training initiatives.

To ensure accuracy and consistency, the researchers conducted a comprehensive double-verification procedure for all extracted data. The data was then systematically organized and categorized into pertinent thematic **groupings, which are** explained upon in the results section. The rigorous data extraction process ensured that the review summarize noticeable information from the included studies.

IV. RESULTS

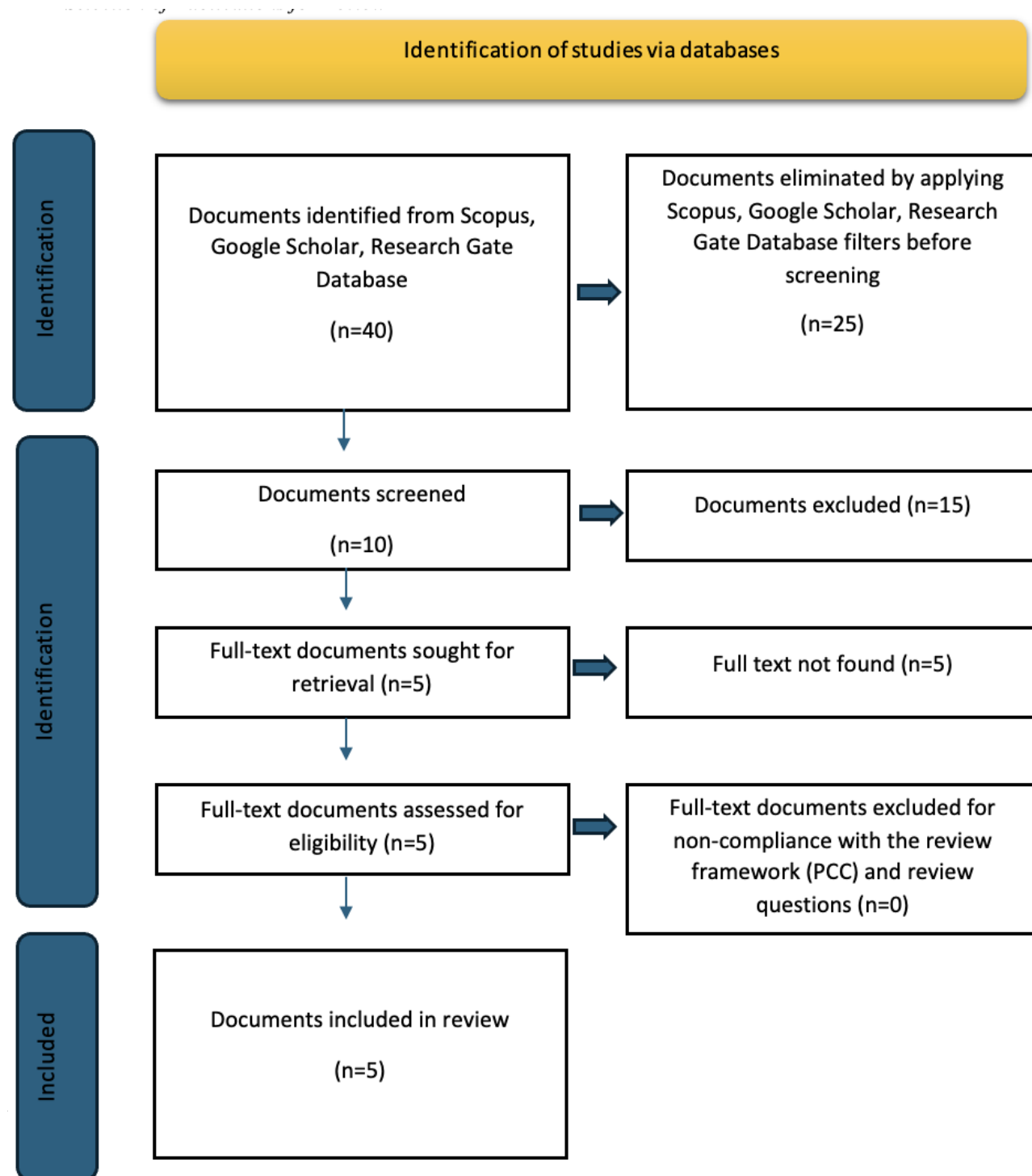
A. Search and Selection Results

The final search was conducted on February 17, 2025. Initially, a total of 40 records were obtained from the chosen databases and government websites. After applying filters for language, subject area, and time span, the number of records were reduced to 10. Titles and abstracts were then evaluated for applicability, and 33 records were removed as they were deemed irrelevant to the research questions. Full texts were retrieved for the remaining 5 records, and another 5 were disapproved after a detailed assessment of their eligibility. This left a final sample of 5 studies included in the scoping review. This search and selection procedure is shown schematically in the PRISMA flow diagram (Figure 1).

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V. FIGURE 1

Selection of Publication for Review (PRISMA-ScR Flow Chart)



The 5 documents included in the current review were analyzed based on the following categories: annual distribution, document types, authors, countries of origin, and publication journals. Geographically, the reviewed publications were concentrated in Luzon, with 3 research articles, while Visayas and Mindanao contributed 2 research articles.

C. Hypothetical Thematic Cluster

In the preliminary research phase, the researchers recognized potential thematic areas that they later refined and investigated further during the process of evaluating studies and gathering data. After iterative revisions, the following three thematic clusters were finalized for this scoping review: (1) Characteristics of Communication and Coordination Training Programs, (2) Barriers to effective training implementation, and (3) Strategies for Strengthening Communication and Coordination Training. These three

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clusters are comprehensively the key aspects of communication and coordination training for disaster response in the Philippine HEIs, aligning with the three research questions guiding this review. They include the primary findings extracted from the studies included in the review, providing a structured and organized framework for analyzing and synthesizing the literature.

VI. TABLE 2

Hypothetical Thematic Cluster

Cluster	Description
Cluster One: Types and Implementation of Communication and Coordination Training Programs	Examines the various types of communication and coordination training programs implemented for disaster response in Philippine HEIs, including the methods, content, and strategies used.
Cluster Two: Challenges in Implementing Effective Communication and Coordination Training	Focuses on identifying and analyzing the key challenges encountered in the planning, implementation, and evaluation of communication and coordination training programs for disaster response in Philippine HEIs.
Cluster Three: Recommendations for Enhancing Communication and Coordination Training	Identifies and analyzes the recommendations proposed in the literature for improving the design, delivery, and effectiveness of communication and coordination training programs for disaster response in Philippine HEIs.

VII. TABLE 3

Mapping the publication to the cluster

SN	Authors and Year	Cluster 1 Types, Key Components, and Delivery Methods of Training Programs	Cluster 2 Effectiveness and Impact on Disaster Response	Cluster 3 Barriers, Facilitators, and Best Practices
1	(Nielo, 2024)	✓	✓	✓
2	(Gochuico, 2023)		✓	✓
3	(Tabangcura, Binlayan, Dumangeng, Udasco, & Maslang, 2023)			✓
4	(Dagatan, Nadera, & Sinang, 2024)			✓
5	(Alian, 2023)	✓		✓
Total		2	2	5

Cluster One: Types and Implementation of Communication and Coordination Training Programs The raw data on the types and implementation of Communication and Coordination Training Programs in the Philippine HEIs, extracted from the reviewed literature; in describing the focus of this study, the research distilled the most salient features and characteristics articulated in the reviewed publications into the following:

Limited Evidence of Formal Training Programs

The raw data suggests a scarcity of formal communication and coordination training programs specifically designed for disaster response in Philippine HEIs. Only one study (Nielo, 2024) mentioned the creation of a disaster communication plan ("SANDATA"). This indicates a potential gap in the provision of structured training programs.

Emphasis on Practical Drills and Coordination

Alian (2023) highlighted the practice of the Disaster Coordinating Program in Sulu HEIs, suggesting a focus on practical drills and coordination activities rather than formal training programs. This could imply a preference for hands-on experience in disaster response.

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Cluster Two: Challenges in Implementing Effective Communication and Coordination Training

The raw data on the Challenges in Implementing Effective Communication and Coordination Training Programs in the Philippine HEIs, extracted from the reviewed literature; in describing the focus of this study, the research distilled the most salient features and characteristics articulated in the reviewed publications into the following:

Communication Infrastructure and Accessibility

Nielo (2024) identified communication challenges related to infrastructure and accessibility, such as reliance on mobile phones susceptible to power outages and signal loss. This highlights the need for robust and redundant communication systems.

Clarity and Accessibility of Information

Nielo (2024) also pointed out the challenge of using technical jargon in communication materials, hindering understanding among stakeholders. This emphasizes the importance of clear, concise, and accessible communication.

Adaptability and Flexibility

Gochuico (2023) mentioned the challenge of inflexible communication systems that struggle to adapt to sudden changes during disasters. This underscores the need for adaptable and flexible communication strategies.

Training and Education for DRRM

Gochuico (2023) further identified the lack of DRRM training and education for extension workers involved in DRRM interventions. This suggests a broader need for capacity building across various roles within HEIs.

Cluster Three: Recommendations for Enhancing Communication and Coordination Training

The raw data on the recommendations for Enhancing Communication and Coordination Training Programs in the Philippine HEIs, extracted from the reviewed literature; in describing the focus of this study, the research distilled the most salient features and characteristics articulated in the reviewed publications into the following:

Strengthening Communication Infrastructure

Tabangcura et al. (2023) recommend adding more DRRM staff, establishing a dedicated office, and developing a communication hub for synchronous and asynchronous communication. This addresses the need for improved communication infrastructure.

Enhancing Student Engagement

Tabangcura et al. (2023) also suggest increasing student involvement in DRRM activities through curricular and extra-curricular activities. This emphasizes the importance of active student participation.

Utilizing Diverse Communication Channels

Nielo (2024) recommends balancing traditional media (e.g., radio) with new media (e.g., social media) to address potential gaps in communication during disasters. This promotes a multi-channel approach to communication.

Developing Comprehensive Communication Plans Nielo (2024) further suggests creating a formal disaster communication plan approved by the HEIs' governing body and executed by a dedicated team. This highlights the need for structured planning and implementation.

Improving Communication Strategies

Gochuico (2023) proposes developing a disaster risk communication model guided by the communication process. This emphasizes the importance of strategic communication planning.

Conducting Targeted Training and Programs

Dagatan et al. (2024) recommend conducting earthquake-related trainings and programs for students and the university community. This highlights the need for specific training tailored to local hazards.

Strengthening Stakeholder Involvement

Alian (2023) recommends that HEI officials actively engage with the disaster coordinating team to enhance community participation. This emphasizes the importance of collaboration and stakeholder involvement.

VIII. DISCUSSIONS

This scoping review examined communication and coordination training programs for disaster response in Philippine Higher Education Institutions (HEIs). A key finding is the scarcity of formal training programs specifically designed for disaster response. While some HEIs engage in practical drills and coordination activities (Alian, 2023), the absence of structured training may hinder the development of comprehensive disaster response skills and knowledge. This gap underscores the need for HEIs to prioritize the development and implementation of formal communication and coordination training programs. Several challenges were identified that impede effective communication and coordination during disasters. These include reliance on vulnerable

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communication infrastructure (Niello, 2024), unclear and inaccessible information (Niello, 2024), inflexible communication systems (Gochuico, 2023), and a lack of DRRM training and education for various stakeholders (Gochuico, 2023). Addressing these challenges requires HEIs to invest in robust communication systems, develop clear and accessible communication strategies, and promote a culture of preparedness through comprehensive training and education initiatives. The review also highlighted recommendations for enhancing communication and coordination training. These include strengthening communication infrastructure (Tabangcura et al., 2023), enhancing student engagement (Tabangcura et al., 2023), utilizing diverse communication channels (Niello, 2024), developing comprehensive communication plans (Niello, 2024), improving communication strategies (Gochuico, 2023), conducting targeted training programs (Dagatan et al., 2024), and strengthening stakeholder involvement (Alian, 2023). By implementing these recommendations, HEIs can foster a more coordinated and effective disaster response.

IX. CONCLUSION

This review underscores the critical need for formal communication and coordination training programs in Philippine HEIs. Addressing the identified challenges and implementing the recommendations can enhance disaster preparedness and response capabilities, contributing to safer and more resilient HEI communities. Future research should focus on evaluating training effectiveness, exploring context-specific needs, and examining the long-term impacts of such training on HEI resilience and community recovery.

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