

Strategic Framework for School-Based Disaster and Crisis Management: Enhancing Resilience Among School Administrators and Teachers

John Mark Estera Gersalia

St. Louise de Marillac College of Sorsogon Inc.

Abstract— This study examined crisis management strategies among school administrators and teachers in the Juban District of Sorsogon province, a region frequently affected by volcanic eruptions, typhoons, and flooding. The research utilized a quantitative framework based on the four phases of disaster management: prevention and mitigation, preparedness, response, and recovery. Data collection methods included structured questionnaires, checklists, interviews, and documentary analysis. Results indicated that schools implemented hazard mapping, contingency planning, emergency drills, and infrastructure upgrades to enhance readiness and reduce risks. Response measures comprised organized evacuations, coordination with local agencies, and provision of psychological first aid. Recovery efforts emphasized alternative learning delivery, facility rehabilitation, and collaboration with stakeholders. However, deficiencies persisted in logistics, technical training, and psychosocial support. The study underscored the need for continuous improvement, community engagement, and targeted investment to strengthen resilience. By focusing on Juban District, the research offered context-specific insights and practical recommendations for improving crisis preparedness and response in educational settings.

Keywords— Crisis Management, Disaster Risk Reduction, Educational Resilience, Emergency Preparedness, Infrastructure Planning, Juban District, Psychosocial Support, Quantitative Research, Response and Recovery, School Safety.

I. INTRODUCTION

In an ever-evolving world, educational institutions encounter various challenges and emergencies that can interfere with the learning process and threaten the safety and well-being of students and school personnel. Schools must prepare to handle uncertainties such as natural disasters, pandemics, conflicts, or technological disruptions by showing resilience and adaptability. Administrators and teachers must develop effective crisis management plans to ensure uninterrupted education, maintain a safe and nurturing environment, and mitigate the adverse effects of crises on the school community.

Education Cannot Wait (ECW) reports in 2023 that these crises also represent serious challenges to educational advancement, potentially endangering the futures of whole generations of students. In 2023, 73 nations faced crises that influenced 224 million children of school age. Among these, 72 million (32%) are not attending school (comprising 53% girls, 17% with functional challenges, and 21% forcibly displaced). In comparison, 127 million (57%) enrolled but failed to reach minimum proficiency levels in reading or math (48% girls), and 25 million (11%) are in school and meeting the minimum proficiency levels in both reading

and math (50% girls). The effects of crises on education involve the destruction or impairment of school facilities, a decrease in the number of teachers, and an escalation in gender inequality and other forms of injustice.

According to IIEP-UNESCO (2023), crisis-sensitive educational planning has recently become a primary focus for education authorities in numerous nations impacted by crises. Proactive planning is crucial to mitigate the adverse effects of crises on education. This approach aims to enhance the resilience of students, educators, and educational systems, ensuring continuous access to education. Crisis-sensitive educational planning helps identify the risks posed by conflicts, natural disasters, and epidemics, assess their potential impacts, and determine how education systems can improve prevention, preparedness, response, and recovery.

Successful crisis management entails formulating educational policies and initiatives that can help avert crises from occurring. Crisis management is "a set of factors designed to counter crises and minimize the actual harm caused by a crisis" Coombs (2015). Based on the literature on emergency preparedness, Coombs

(2015) noted that crisis management consists of four interconnected elements: prevention, preparation, response, and revision. These elements fit into a widely recognized three-phase approach: the pre-crisis phase (prevention and preparation), the crisis phase (response), and the post-crisis phase (learning and revision).

Despite the region's success in making primary education mandatory, the right to education for children continues to be disturbed in the wake of natural catastrophes and human-made disasters. In 2018, for instance, the AHA Centre documented 424 disasters affecting 27 million individuals and resulting in economic losses of 1.3 billion USD. ASEAN leaders have acknowledged the significance of disaster risk reduction (DRR) within the education sector and have implemented the ASEAN Safe Schools Initiative.

Since 2007, the Philippines Department of Education (DepEd) has begun integrating disaster risk reduction into the educational framework. DepEd issued a policy, DepEd Order No. 55, which focuses on the initial integration of disaster risk reduction within the school system. A comprehensive manual on disaster risk reduction resources has been made available to support school administrators and teachers in effectively implementing these initiatives.

The Philippine Disaster Risk Reduction and Management Act was enacted, leading to the establishment of the Disaster Risk Reduction and Management Office (DRRMO) by the Department of Education (DepEd) as the central entity for planning, implementing, coordinating, and monitoring activities related to disaster risk reduction, education in emergencies, and climate change adaptation. Additional duties involved starting and coordinating efforts with governmental bodies and organizations within civil society, in addition to serving as the central hub for all resources associated with school safety, which entails developing and disseminating educational materials and school supply kits. In 2010, with the creation of DRRMO, a Disaster Risk Reduction and Management (DRRM) Focal Point was assigned for each region and division.

To ensure school safety, the Philippines Department of Education (DepEd) has issued several key policies. DO 10, s. (2011) supports calamity loans for teaching and non-teaching staff in disaster-stricken areas. DM 104, s. (2011) outlines guidelines for utilizing the quick

response fund available to schools affected by disasters. DO 83, s. (2011) details disaster preparedness measures for schools. DO 48, s. (2012) mandates the quarterly execution of national school-based earthquake and fire drills. DO 27, s. (2015) promotes family earthquake preparedness in all elementary schools with appropriate instructions and guidance. DO 72, s. (2012) implemented a Continuing Fire Safety and Awareness Program (FSAP) in schools. DO 23, s. (2014) integrates disaster risk reduction into data collection forms within the Enhanced Basic Education Information System (EBEIS). Lastly, DO 23, s. (2015) aimed to ensure student preparedness by engaging all public elementary and secondary schools in instructing students on identifying and addressing hazards and risks.

According to ASSI (2015), Sorsogon ranks as one of the most typhoon-prone areas in the Philippines. Therefore, World Vision has advocated for villages to create risk maps and develop DRRM plans. The local government, in collaboration with DepEd, carries out initiatives focused on disaster risk reduction for children, designed to educate children and adults to enhance awareness among community members.

Schools in the SDO-Province conduct quarterly drills for students and teachers to promote instinctive reactions in emergencies. School leaders and SDRRM Coordinators create contingency plans and engage students in hazard mapping to help them understand safety procedures and strategies for risk reduction.

Per DM 260, s. (2023), the Department of Education (DepEd), through the Disaster Risk Reduction and Management Service (DRRMS), hosted a meeting and a year-end evaluation and planning conference in 2023 called "KAANDAMAN 2023" to ensure the continuity of services amid disasters and emergencies, as part of ongoing documentation, planning, monitoring, reporting, and evaluation of DRRM implementation.

The Department of Education (DepEd) organizes division-level training sessions and workshops on contingency planning to enhance disaster and emergency readiness and response. DM 152, s. (2024) underscores the importance of addressing the vulnerabilities within the education sector and ensuring the continuous provision of equitable education amid natural and human-induced hazards.

In the current dynamic educational environment, schools encounter a variety of potential crises, ranging from natural disasters and human-caused risks to the

impacts of climate change. The ability of school administrators and teachers to handle these crises efficiently is crucial for ensuring the safety and welfare of students and personnel. However, despite the critical nature of crisis management, numerous educational institutions remain insufficiently equipped to handle emergencies, which can lead to significant disruptions in the learning atmosphere and enduring psychological effects on students and staff.

The aim of this research is to develop and assess effective crisis management strategies specifically tailored for school settings. Pinpointing best practices and creating comprehensive frameworks, and to enhance the preparedness and response capabilities of school administrators and teachers. Additionally, the research will underscore the importance of mental health support, communication strategies, and community partnerships in fostering a resilient school community.

Crisis management in schools requires a multidimensional approach that includes proactive planning, continuous training, and collaboration among administrators, teachers, and stakeholders. This study explored various aspects of crisis management, such as development of contingency plans, the formation of crisis response teams, the implementation of security measures, and the importance of regular drills. Through the examination of these elements, the study seeks to offer a comprehensive insight into how educational institutions can enhance their readiness for and reaction to emergencies. One critical element of crisis management is the formation of dedicated crisis response teams within schools. These teams are tasked with organizing responses during crises, ensuring that all procedures are adhered to, and enhancing their efficiency through training and available resources.

This research highlighted the significance of mental health support for students and staff during and after crises. Addressing the emotional and psychological well-being of the school community is essential for fostering a supportive and resilient environment. This study will examine strategies for providing mental health resources, training for school personnel, and creating a culture of openness and support. Effective communication strategies play a crucial role in crisis management. Ensuring an accurate and timely information is disseminated to students, staff, parents, and the community can prevent misinformation and reduce panic. This study will explore best practices for communication during crises, including the use of

technology and social media to keep all stakeholders informed.

Another key aspect of crisis management is the implementation of security measures to prevent and mitigate threats. This study assessed various security protocols and technologies that schools can adopt to enhance campus safety. From surveillance systems to controlled access points, the research provided insights into the most effective security practices.

The importance of regular drills and simulations in crisis management cannot be overstated. By conducting routine emergency drills, schools can ensure that students and staff are familiar with evacuation procedures and other critical actions. This study evaluated the impact of these drills on overall crisis management strategies and identify best practices for their implementation.

The study explored the role of community partnerships in crisis management. Building strong relationships with local law enforcement, emergency responders, and mental health professionals can significantly enhance a school's ability to respond to crises. The research highlighted successful examples of community collaboration and offer recommendations for fostering these partnerships.

This research aimed to help administrators and teachers develop effective crisis management strategies, contributing to a safer and more supportive educational environment. By equipping school personnel with the knowledge and resources to manage crises with confidence and competence, schools can better protect their students and staff, ensuring a conducive learning environment even in the midst of crises.

II. STATEMENT OF THE PROBLEM

In today's dynamic environment, challenges like natural disasters, incidents of school violence, and health crises frequently leave educators and school leaders poorly equipped to handle emergencies. This lack of preparation arises from the absence of comprehensive crisis management plans, insufficient training, and limited resources. Consequently, this can lead to confusion, delayed responses, and potentially harm during emergencies.

To ensure the safety and well-being of students and personnel. It is crucial to develop and implement effective crisis management plans. These plans encompassed clear communication protocols, regular

training sessions, collaboration with local authorities, and the integration of technology to improve emergency responses. This research created a safe and resilient school environment where all stakeholders feel confident in their ability to manage crises effectively.

Thus, this research addressed the following problems:

1. What are the different disaster and crisis management strategies utilized by school administrators and teachers in terms of:
 - a. Disaster Prevention and Mitigation
 - b. Disaster Preparedness
 - c. Disaster Response
 - d. Disaster Rehabilitation and Recovery
2. What are the impacts of disaster and crisis management strategies utilized in terms of:
 - a. Disaster Prevention and Mitigation
 - b. Disaster Preparedness
 - c. Disaster Response
 - d. Disaster Rehabilitation and Recovery
3. What are the problems encountered by school administrators and teachers in utilizing disaster and crisis management strategies in terms of:
 - a. Disaster Prevention and Mitigation
 - b. Disaster Preparedness
 - c. Disaster Response
 - d. Disaster Rehabilitation and Recovery
4. What are the solutions and actions offered by school administrators and teachers to the problems they encountered in utilizing disaster and crisis management strategies?
 - a. Disaster Prevention and Mitigation
 - b. Disaster Preparedness
 - c. Disaster Response
 - d. Disaster Rehabilitation and Recovery
5. What strategic framework for school-based disaster and crisis management can be proposed in terms of the four (4) pillars?

III. METHODOLOGY

Research Design- This study used a quantitative research design to examine crisis management practices in educational institutions. It analyzed how school leaders and educators responded to emergencies, assessed the effectiveness of their strategies, identified recurring challenges, and proposed targeted training to improve preparedness. The research focused on school administrators and Disaster Risk Reduction and Management coordinators due to their key roles in crisis management. Data were collected through structured surveys, providing measurable insights into strategies

used, challenges faced, perceived effectiveness, and current training levels. Statistical methods, including frequency distributions and percentages, were applied to identify patterns and relationships among key variables.

Policy documents and institutional reports were reviewed to supplement the survey findings, providing additional data on incident frequency, disaster preparedness budgets, and training participation rates. The study maintained strict ethical standards, including informed consent, confidentiality, and secured data storage. The primary goal was to deliver a data-driven evaluation of crisis management strategies in schools and to develop practical, context-specific recommendations for training that enhance institutional resilience and readiness for future emergencies.

The Respondents- To ensure the relevance and depth of the data, participants were chosen through purposive sampling, focusing on those with hands-on involvement in crisis response, who were actively serving in Juban's school system, and willing to share their experiences through surveys, interviews, or group discussions. This approach allowed the study to gather practical, grounded perspectives from individuals who best understood the local challenges. By tapping into their knowledge, the research aimed to uncover both the strengths and gaps in existing practices and used these findings to inform training programs designed to better equip schools in Juban to handle future emergencies with confidence, coordination, and resilience.

The study involved 28 selected respondents, 15 school administrators and 13 teachers, from public schools across the Juban District, Sorsogon. These individuals were directly engaged in handling emergencies and shaping the way schools responded to crises. The participants represented 23 elementary schools and 5 high schools, ensuring a diverse and representative sample of the district's educational landscape. Their day-to-day experiences in managing real-life situations, including typhoons, earthquakes, fire drills, and other hazards, provided valuable insights into what worked, what didn't, and what needed improvement.

Research Instruments- To gather meaningful data on how school administrators and teachers managed crises, the study utilized tools aligned with a quantitative research framework. The main data collection instruments included checklists and structured survey questionnaires, primarily featuring closed-ended items such as Likert scale ratings and multiple-choice

questions. These formats were designed to produce measurable insights into areas such as the effectiveness of crisis strategies, the nature of emergencies encountered, the level of institutional readiness, and the availability of relevant training.

In addition to survey responses, the study incorporated documentary analysis by reviewing school records, official policies, and incident reports. This approach helped extract numerical data such as the frequency of crisis events, response durations, and budget allocations for emergency preparedness. Structured interviews were also used in a modified format, with standardized questions and limited response options that could be quantified and analyzed statistically. After data collection, the information was processed using statistical techniques including descriptive statistics, correlation analysis, and regression analysis. These methods supported the identification of patterns and relationships among key variables. By combining multiple sources of quantitative data, the study produced reliable, replicable findings that offered a clearer understanding of crisis management practices in educational settings and informed future improvements.

Data Collection Procedure- The data gathering process for this research was systematically carried out to ensure precision, reliability, and completeness in capturing measurable information on crisis management strategies employed by school administrators and teachers. On June 25, 2025, a formal letter requesting permission to conduct the survey was submitted to the Schools Division Office (SDO) of Sorsogon. Upon approval, the survey officially commenced on July 10, 2025, targeting school administrators and teachers within the Juban District.

Participants were selected through purposive sampling, focusing on individuals with direct involvement in managing school-related crises, 15 school administrators and 13 teachers a total of 28 respondents. Prior to participation, an orientation session was conducted to inform them about the study's purpose, procedures, and ethical safeguards, including confidentiality and voluntary participation.

To support the quantitative nature of the study, the primary instruments included checklists and structured interviews. The checklist was designed to examine specific aspects across the four pillars of crisis management: prevention and mitigation, preparedness, response, and recovery. Participants confirmed the

presence or absence of essential protocols, resources, and strategies associated with each pillar, allowing for standardized data collection. Structured interviews followed a fixed set of questions with predefined response categories, ensuring consistency and enabling numerical coding and analysis.

Additionally, documentary analysis was used to extract numerical data from institutional records, policy documents, incident reports, and budget statements, offering empirical context to support the data gathered from other sources. Upon completion of data collection, all responses were organized and analyzed through statistical treatment methods. Descriptive statistics summarized the data, while correlation and regression analysis identified significant trends, relationships, and patterns among the variables associated with each crisis management component.

Ethical standards were rigorously upheld throughout the research process by securing informed consent, maintaining participant anonymity, and ensuring secure data handling. This structured and ethically guided approach enhanced the reliability and practical relevance of the findings, ultimately contributing to the development of more effective crisis management frameworks within educational institutions.

Data Analysis Methods- This study applied quantitative analysis to explore how school administrators and teachers implemented crisis management strategies, using a framework based on the four key phases of disaster management: prevention and mitigation, preparedness, response, and recovery. Data were gathered primarily through structured survey questionnaires and checklists, featuring closed-ended questions that assessed specific elements within each phase.

For the prevention and mitigation aspect, the study examined the presence of risk-reduction measures, safety infrastructure, and forward-planning initiatives. Preparedness was evaluated by looking at factors such as the existence of emergency protocols, the frequency of training sessions for staff, and the availability of essential resources. The response phase focused on how schools coordinated during emergencies, their access to support services, and the effectiveness of communication systems. Recovery was assessed through indicators like the speed of restoration efforts, support mechanisms provided after a crisis, and financial resources allocated for rehabilitation. These

tools were designed to ensure uniform and reliable data collection across all participants.

Statistical Analysis/ Quantitative Analysis -This study employed a structured quantitative approach to assess disaster and crisis management strategies practiced by school administrators and teachers. It was guided by the four key pillars of disaster risk reduction: Prevention and Mitigation, Preparedness, Response, and Rehabilitation and Recovery. The research used structured checklists composed of closed-ended items that corresponded directly with the study's objectives. These tools were designed to gather measurable data on current practices, observed impacts, challenges encountered, and proposed solutions across each crisis management phase.

To interpret the data, frequency count and percentage analysis were exclusively applied as statistical tools. These methods captured how often particular strategies were used and how widely they were adopted across institutions. They also highlighted the perceived effectiveness of various practices and identified recurring issues faced by school personnel. In addition, the study quantified proposed interventions and solutions to address these problems.

The formulas used were as follows:

Frequency Count (f):

The number of times a particular response or item was observed.

Percentage (%):

$$\text{Percentage} = \left(\frac{f}{N} \right) \times 100$$

Where:

f = frequency of a specific response

N = total number of responses or participants

Documentary analysis of institutional resources such as crisis logs, policy manuals, and inventories served as a supplementary data source, adding context and depth to the primary findings. All findings were presented in direct alignment with each research question, providing clear, actionable insights that guided the creation of a strategic framework to strengthen disaster resilience in the educational sector.

IV. SUMMARY OF KEY FINDINGS

I. Different Disaster and Crisis Management Strategies

1.1 Different Disaster and Crisis Management Strategies in Disaster Prevention and mitigation

The different disaster and crisis management strategies in disaster prevention and mitigation utilized by school administrators and teachers of Juban district. The most widely adopted strategies are hazard mapping and risk assessment in the school vicinity, reported by 93% (frequency: 26). Closely following is the crafting school-based Contingency Plan, practiced by 89% (frequency: 25).

Other notable strategies include assessing the physical integrity of school buildings and facilities and putting up early warning systems and signages in the school premises, both cited by 75% (frequency: 21).

Different Disaster and Crisis Management Strategies in Disaster Preparedness

The different disaster and crisis management strategies in disaster preparedness utilized by school administrators and teachers of Juban district. The widely practiced strategies are holding regular emergency drills (earthquake, fire, typhoon, volcanic eruptions...), adopted by 96% (frequency: 27). This is followed by the integration of DRRM in teaching and learning activities, meetings, and LAC Cells, implemented by 82% (frequency: 23). Additionally, disseminating the school emergency plans is carried out by 75% (frequency: 21).

Different Disaster and Crisis Management Strategies in Disaster Response

The different disaster and crisis management strategies in disaster response utilized by school administrators and teachers of Juban district. The commonly adopted strategies, each practiced by 75% (frequency: 21), include activating the School Disaster Risk Reduction and Management (DRRM) Team, implementing evacuation procedures and designated evacuation areas, coordinating with local DRRM councils and emergency responders, and conducting headcounts and ensuring accountability of all learners and staff.

Additionally, providing first aid and psychological first aid (PFA) to affected individuals is carried out by 61% (frequency: 17), while distributing relief goods and emergency supplies is implemented by 25% (frequency: 7).

Different Disaster and Crisis Management Strategies in Disaster Recovery and Rehabilitation

The different disaster and crisis management strategies in disaster recovery and rehabilitation utilized by school administrators and teachers of Juban district. The widely practiced strategies are resuming teaching and learning through alternative delivery modes, reported by 86% (frequency: 24). This is followed by documenting lessons learned and updating contingency plans, implemented by 71% (frequency: 20).

Equally prioritized by 64% (frequency: 18) are conducting post-disaster needs assessment (PDNA) and repairing and reconstructing damaged school facilities.

II. Impact of Disaster and Crisis Management Strategies

2.1 Impact of Disaster and Crisis Management Strategies in terms of Disaster Prevention and Mitigation

The impacts of disaster and crisis management strategies in terms of disaster prevention and mitigation. A notable 86% (frequency: 24) reported increased awareness of school vulnerabilities and hazard-prone areas. Structural improvements have also played a key role, with 75% (frequency: 21). These efforts have contributed to a 64% (frequency: 18), which reduced risk of injury and damage during disasters, alongside more timely alerts and safer evacuation during emergencies.

2.2 Impact of Disaster and Crisis Management Strategies in terms of Disaster Preparedness

The impacts of disaster and crisis management strategies in terms of disaster preparedness. A remarkable 93% (frequency: 26) reported improved readiness and faster response during actual disasters.

Additionally, 89% (frequency: 25) noted increased awareness and confidence among learners and staff. The strengthened disaster awareness and culture of safety is evident, with 64% (frequency: 18) recognizing a strengthened culture of disaster awareness.

2.3 Impact of Disaster and Crisis Management Strategies in terms of Disaster Response

The impacts of disaster and crisis management strategies in terms of disaster response. A majority, 82% (frequency: 23) reported safe and orderly movement to designated areas. Coordinated and efficient emergency operations have become more streamlined, with 71% (frequency: 20) ensuring that resources and personnel are mobilized swiftly. The same percentage and

frequency also highlighted the ensured safety and tracking of all school members. Emotional and psychological support has not been overlooked, as 54% (frequency: 15) acknowledged the provision of immediate care and emotional support for affected individuals.

2.4 Impact of Disaster and Crisis Management Strategies in terms of Disaster Recovery and Rehabilitation

The impacts of disaster and crisis management strategies in terms of disaster recovery and rehabilitation. A majority of school, 71% (frequency: 20) reported that continued learning despite damaged facilities. The same percentage and frequency also highlighted improved future planning and resilience, indicating that lessons learned from past disasters are actively shaping more robust systems.

Informed planning for recovery and resource allocation, with 64% (frequency: 18) recognizing better resource allocation and strategic planning. As 57% (frequency: 16) noted the restored learning environments and infrastructure. Sustained recovery and community support has remained strong throughout, same at 57% (frequency: 16).

III. Problems Encountered in Utilizing Disaster and Crisis Management Strategies

3.1 Problems Encountered in Utilizing Disaster and Crisis Management Strategies in terms of Disaster Prevention and Mitigation

The problems encountered by school administrators of Juban district in utilizing disaster and crisis management strategies in terms of disaster prevention and mitigation. The pressing problem, cited by 87% (frequency: 16), is the insufficient budget for structural assessments and retrofitting. Additionally, 73% (frequency: 11) reported a limited technical expertise in hazard mitigation planning. With 33% (frequency: 5) highlight the absence or malfunctioning of early warning systems and signage.

On the part the problems encountered by teachers of Juban district in utilizing disaster and crisis management strategies in terms of disaster prevention and mitigation, were the insufficient budget, with a 77% (frequency: 10). The poor maintenance of drainage systems and natural barriers, and limited technical expertise, both cited by 54% (frequency: 7).

3.2 Problems Encountered in Utilizing Disaster and Crisis Management Strategies in terms of Disaster Preparedness

The problems encountered by school administrators of Juban district in utilizing disaster and crisis management strategies in terms of disaster preparedness. A problem, reported by 93% (frequency: 14), is the limited training and capacity-building opportunities for school personnel.

Additionally, 67% (frequency: 10) cited the inadequate supply of GO Bags or emergency kits. Also, 40% (frequency: 6) noting the Low participation or sustainability of learners' DRRM brigades.

On the part the problems encountered by teachers of Juban district in utilizing disaster and crisis management strategies in terms of disaster preparedness, limited training and the inadequate Go bags and emergency kits were also noted by the teachers with frequencies of 11 (85%) and 10 (77%), respectively. Also, with 46% (frequency: 6) cited that emergency plans not fully disseminated to learners, parents, and staff.

3.3 Problems Encountered in Utilizing Disaster and Crisis Management Strategies in terms of Disaster Response

The problems encountered by school administrators of Juban district in utilizing disaster and crisis management strategies in terms of disaster response. The critical problem, cited by 87% (frequency: 13), is the lack of trained personnel for first aid and psychological first aid (PFA), which compromises immediate care and emotional support during emergencies.

Additionally, 53% (frequency: 8) reported insufficient relief goods or logistical support for affected learners and staff. Operational delays also pose a risk, with 27% (frequency: 4) noting the delayed activation of the School DRRM Team during actual emergencies.

On the part the problems encountered by teachers of Juban district in utilizing disaster and crisis management strategies in terms of disaster response, the Lack of trained personnel for first aid and psychological first aid (PFA), with 85% (frequency: 11) and insufficient relief goods or logistical support for affected learners and staff cited by 62% (frequency: 8).

Additionally, delayed activation of the School DRRM Team during actual emergencies and Confusion or panic during evacuation due to unclear procedures were both cited by 23% (frequency: 3).

3.4 Problems Encountered in Utilizing Disaster and Crisis Management Strategies in terms of Disaster Recovery and Rehabilitation

The problems encountered by school administrators of Juban district in utilizing disaster and crisis management strategies in terms of disaster recovery and rehabilitation. The pressing problem, identified by 87% (frequency: 13), is the limited funding for repair and reconstruction of school facilities, which significantly delays the return to safe and functional learning environments.

Additionally, 67% (frequency: 10) reported difficulty in mobilizing resources for long-term recovery efforts. Psychosocial support remains insufficient, with 53% (frequency: 8) noting the inadequate provision of psychosocial support and counseling services.

On the part the problems encountered by teachers of Juban district in utilizing disaster and crisis management strategies in terms of disaster recovery and rehabilitation, there were 85% (frequency: 11) of teacher respondents who faced limited funds for repair as a problem, and the difficulty in mobilizing resources was met by 62% (frequency: 8). Also, 31% (frequency: 4) reported inadequate provision of psychosocial support and counseling services.

IV. Solutions and Actions Offered to Problems Encountered in Utilizing Disaster and Crisis Management

4.1 Solutions and Actions Offered to Problems Encountered in terms of Disaster Prevention and Mitigation

The solutions and action offered by school administrators of Juban district to the problem encountered in terms of disaster prevention and mitigation. A key strategy, supported by 80% (frequency: 12), is to update the school-based Contingency Plan annually with stakeholder input.

Conduct annual hazard mapping and risk assessments with student involvement and to install and regularly test early warning systems (bells, sirens, signage) were both noted by 73% (frequency: 11). Also, with 67% (frequency: 10), coordinate with LGUs and DRRM experts for technical training and support.

The solutions and actions offered by teachers to the problems encountered in terms of disaster prevention and mitigation, the frequently implemented solution is conducting annual hazard mapping and risk assessments

with student involvement, with 92% (frequency: 12). Updating the school-based Contingency Plan and installing/testing early warning systems follow closely at 85% (frequency: 11), while allocating school MOOE or seeking LGU/NGO support for structural assessments and coordinating with DRRM experts both register at 77% (frequency: 10).

4.2 Solutions and Actions Offered to Problems Encountered in terms of Disaster Preparedness

The solutions and action offered by school administrators of Juban district to the problem encountered in terms of disaster preparedness. A key initiative, supported by 73% (frequency: 11), is institutionalize quarterly multi-hazard drills (earthquake, fire, typhoon, etc). Complementing this, 67% (frequency: 10) emphasized the importance to disseminate emergency plans through orientations, posters, and digital platforms and integrate DRRM topics in classroom lessons and LAC sessions.

The solutions and actions offered by teachers to the problems encountered in terms of disaster preparedness, institutionalizing quarterly multi-hazard drills and disseminating emergency plans are each practiced with 85% (frequency: 11). Capacity-building for teachers, staff, and learners, along with integrating DRRM topics in lessons and LAC sessions, are noted at 69% (frequency: 9), while ensuring classrooms have GO Bags and forming trained learner brigades are reported at 62% (frequency: 8).

4.3 Solutions and Actions Offered to Problems Encountered in terms of Disaster Response

The solutions and action offered by school administrators of Juban district to the problem encountered in terms of disaster response. A top priority, supported by 87% (frequency: 13), is to immediately activate the School DRRM Team immediately during drills and emergencies.

Additionally, train selected staff in first aid and psychological first aid (PFA), were also endorsed by 73% (frequency: 11). Also, conduct orientation on evacuation procedures for all school personnel and learners and establish formal coordination protocols with local DRRM councils and responders are both recommend by 67% (frequency: 10).

The solutions and actions offered by teachers to the problems encountered in terms of disaster response, activating the School DRRM Team and conducting evacuation orientations are top actions with a 85%

(frequency: 11). Training staff in first aid and using buddy systems for headcounts follow at 77% (frequency: 10), and establishing coordination protocols with local DRRM councils is noted at 69% (frequency: 9).

4.4 Solutions and Actions Offered to Problems Encountered in terms of Disaster Recovery and Rehabilitation

The solutions and action offered by school administrators of Juban district to the problem encountered in terms of disaster recovery and rehabilitation. A key recommendation, supported by 93% (frequency: 14), is mobilize school and community resources for facility repair and reconstruction.

Additionally, with 80% (frequency: 12), implement modular or blended learning during recovery periods. Partner with NGOs, LGUs, and private donors for recovery support were also recommended by 73% (frequency: 11)

The solutions and actions offered by teachers to the problems encountered in terms of disaster recovery and rehabilitation, mobilizing resources for facility repair is the most common action with 85% (frequency: 11). Conducting PDNA, providing psychosocial support, implementing flexible learning, and revising contingency plans are all reported by 69% (frequency: 9), while partnering with NGOs, LGUs, and private donors is noted by 62% (frequency: 8). These findings highlight teachers' active engagement in comprehensive disaster risk reduction efforts, emphasizing collaboration, preparedness, and community involvement.

V. Strategic Framework for School-Based Disaster and Crisis Management

The strategic framework for school-based disaster and crisis management in Juban District, SDO Sorsogon is anchored on four key pillars: Prevention and Mitigation, Preparedness, Response, and Recovery. Prevention and Mitigation efforts focus on fortifying school infrastructure, enhancing hazard awareness, and bolstering environmental protections through partnerships with engineering institutions and local government units. Preparedness initiatives aim to cultivate a culture of readiness by equipping learning spaces with emergency kits, conducting regular capacity-building sessions, and integrating disaster risk reduction themes into curriculum and school activities. In the Response phase, the framework emphasizes

coordinated action through trained personnel in first aid and psychological support, and maintaining clear communication protocols and evacuation procedures. Finally, Recovery and Rehabilitation prioritize restoring education and emotional wellness through flexible learning delivery modes, securing reconstruction funds, and providing psychosocial support. Together, these interconnected strategies ensure that schools not only respond effectively to disasters but also foster daily resilience and sustained continuity in education.

V. CONCLUSIONS

1. The disaster and crisis management strategies employed by Juban district schools demonstrate a comprehensive and proactive approach across all phases: prevention, preparedness, response, and recovery. Hazard mapping, emergency drills, contingency planning, and alternative learning delivery reflects strong institutional commitment. Notably, integrating psychosocial support and coordination with local DRRM councils highlights a holistic understanding of safety and resilience in educational settings.
2. The disaster and crisis management strategies implemented in Juban district schools have significant impacts to safety, preparedness, and resilience. From increased awareness and structural improvements to effective evacuation and recovery planning.
3. The problems encountered by school administrators and teachers in utilizing disaster and crisis management strategies are chiefly budget constraints, limited technical expertise, and gaps in training and logistics. These issues hinder effective prevention, preparedness, response, and recovery. Addressing these barriers through sustained funding, capacity-building, and inter-agency coordination is essential to strengthening school resilience and ensuring the safety and well-being of all stakeholders.
4. Juban district schools have responded to disaster management problems with practical, community-driven solutions and actions. They've built a more resilient and responsive system by enhancing planning, training, coordination, and resource mobilization. Emphasis on student involvement, psychosocial care, and continuity of learning reflects a holistic approach that prioritizes safety, empowerment, and recovery.
5. Juban District's school-based disaster management framework will ensure a resilient learning environment by integrating infrastructure safety,

preparedness education, coordinated emergency response, and recovery support. Anchored in collaboration and care, it will empower schools to safeguard lives and sustain education through every crisis.

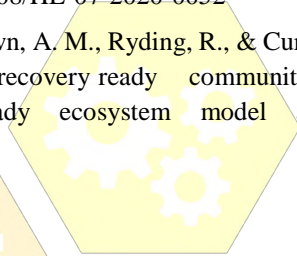
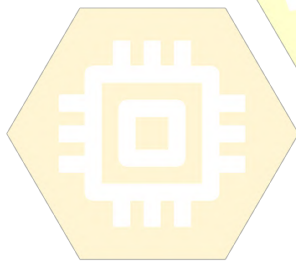
VI. RECOMMENDATIONS

1. Institutionalize regular capacity-building programs for staff and students that enhance and improve competencies in mental health awareness, adaptive learning strategies, and community-based disaster risk reduction.
2. Establish a monitoring and evaluation system to continuously assess and enhance the effectiveness of disaster and crisis management strategies.
3. Strategically invest in comprehensive training, robust infrastructure, essential learning resources, and holistic psychosocial support to enhance and improve the resilience, adaptability, and responsiveness of the education system.
4. Scale up community-led initiatives, training, resource access, and psychosocial care for comprehensive resilience.
5. Enhance technical collaboration, adopt inclusive strategies, and support sustained recovery through funding, psychosocial care, and flexible learning.

REFERENCES

- [1] Alcántara, I., Oliver-Smith, A., Sudmeier-Rieux, K., Fernández, M., Penna, I. M., Jaboyedoff M., & Gaillard, J.-C. (2017). The necessity of early warning articulated systems (EWASs): Critical issues beyond response. In K. Sudmeier-Rieux, M. Fernández, I. Montaña, & O. Altan (Eds.), *Identifying emerging issues in disaster risk reduction, migration, climate change and sustainable development* (pp. 101–124). Springer.
- [2] Alvarez, A. V. (2020). Blended learning: An approach in Philippine basic education curriculum in the new normal—A review of current literature. *Asian Journal of Distance Education*, 15(2), 112–123. <https://files.eric.ed.gov/fulltext/EJ1285361.pdf>
- [3] American Planning Association. (2020). *Hazard Mitigation Policy Guide*. <https://w1.planning.org/publications/document/9203323/>
- [4] American Psychological Association. (2021). *Professional practice guidelines for evidence-based psychological practice in health care*. <https://www.apa.org/about/policy/evidence-based-psychological-practice-health-care.pdf>

- [5] Anaya-Arenas, A., Renaud, J., & Ruiz, A. (2014). Relief distribution networks: A systematic review. *Annals of Operations Research*, 223(1), 53–72. <https://doi.org/10.1007/s10479-014-1649-4>
- [6] Ancheta, J. R. (2022). Youth Participation and Disaster Risk Reduction Management in Metro Manila. <https://www.researchgate.net/publication/365770227>
- [7] Anwar-McHenry, J., Drane, C. F., Joyce, P., & Donovan, R. J. (2020). Impact on staff of the Mentally Healthy Schools Framework. *Health Education*, 120(5–6), 289–296. <https://doi.org/10.1108/HE-07-2020-0052>
- [8] Ashford, R. D., Brown, A. M., Ryding, R., & Curtis, B. (2020). Building recovery ready communities: The recovery ready ecosystem model and community framework. *Addiction Research and Theory*, 28(1), 1–11. <https://doi.org/10.1080/16066359.2019.1571191>
- [9] Balgos, B., Uy, N., Molina, J. G., & Haw, N. J. (2020). National Disaster Risk Reduction and Management Plan (2020–2030). Office of Civil Defense. <https://studylib.net/doc/27160473/ndrrmp-pre-publication-copy-v2>
- [10] Ballesteros, M. M., & Macandog, D. B. (2019). Building school-level disaster risk reduction capacities through participatory vulnerability assessment. *Philippine Journal of Environmental Science and Management*, 22(1), 53–66.



UIJRT

ISSN: 2582-6832