

School-Based Disaster Risk Reduction Management (DRRM) in Mangaldan, Pangasinan

Mylene C. Tongson¹, Romary R. Lincod, EdD²

Pangasinan State University – Open University Systems

mylene.tongson@deped.gov.ph¹, gad@psu.edu.ph²

ABSTRACT

This descriptive study assessed the disaster risk reduction management (DRRM) capacities of four public secondary schools in Mangaldan, Pangasinan. Using a validated questionnaire, the research identified the respondents' level of preparedness, communication challenges, and effective mitigation strategies. Data were analyzed using mean percentage scores and chi-square tests. Results showed that while the majority of respondents, mostly older students, teachers, and middle-aged administrators are knowledgeable and actively practice key DRRM activities (prevention, mitigation, response, and recovery), their profiles (age, education, and length of service) create significant differences in their management approach. To address these gaps and enhance school-based capacity, the study recommends the implementation of targeted seminars and community extension programs focused on disaster risk communication.

Keywords: - Disaster risk reduction, public schools, emergencies

INTRODUCTION

Research on the patterns of disasters and the effects of climate change indicate that 175 million children are at risk of suffering harm each year as a result of natural risk that result in disasters. Schools are places where children spend a significant portion of their day. Ensuring their safety in the event of a disaster is paramount. Effective Disaster Risk Reduction (DRR) strategies help protect students from injuries and fatalities during emergencies.

Schools are important during disasters because they are where students, teachers and school administrators spend most of their time - students, teachers, and school administrators included. With a thorough analysis of the communication plan in emergency scenarios, this study aims to demonstrate how well-prepared teachers, students, and school administrators are for risk and disaster scenarios. The problems on disaster risk reduction management could be addressed by discussing strategies, ongoing initiatives and collaboration between the educational municipality in Mangaldan, Pangasinan.

Statement of the Problem

Generally, the study determined the extent of preparedness of the disaster risk reduction management in Public Schools in Mangaldan, Pangasinan. Specifically, it sought to answer the following questions:

1. What is the profile of the respondents in the secondary public schools in Mangaldan, Pangasinan in terms of:
 - a. age;
 - b. sex;
 - c. civil status;

- d. grade level (for students);
 - e. academic rank (for teachers);
 - f. position (school administrators);
 - g. highest educational attainment;
 - h. number of coordinators (for teachers); and
 - i. number of related training and seminars attended related to DRRM?
2. What is the level of preparedness of Grades 7 to 12 students, teachers, school administrators in the disaster risk communication management in Mangaldan public secondary schools in terms of:
- a. policies and guidelines
 - b. risk assessment and planning
 - c. information dissemination
 - d. partnerships and coordination
 - e. emergency drills and training?
3. Is there a significant difference in the level of preparedness in disaster risk communication management among the group of respondents?
4. What are the problems encountered in the implementation of the disaster risk communication management in the public secondary schools in Mangaldan, Pangasinan?
5. What action plan could be proposed to enhance disaster risk communication management in the public secondary schools in Mangaldan, Pangasinan?

Scope and Delimitations

The study was limited to the Disaster Risk Reduction Management to the students, teachers, and school administrators of the public secondary schools in Mangaldan, Pangasinan namely Mangaldan National High School, David National High School, Gueguesangen Integrated School, and Mangaldan Integrated School SPED Center in the School Year 2024-2025. A questionnaire-checklist was patterned from related studies and adopted from the DRRM laws and policies crafted from Republic Act 10121 or the Philippine Disaster Risk Management Act of 2010.

It delimits that the study may not be generalizable to other populations or to students, teachers, and school administrators who are not from Mangaldan, Pangasinan.

Review of Related Literatures

The Department of Education (DepEd) prioritizes Disaster Risk Reduction and Management (DRRM) by institutionalizing a culture of safety through comprehensive policies like DepEd Order No. 50, s. 2011 and the Comprehensive DRRM in Basic Education Framework. Given the Philippines' high vulnerability to natural hazards, these initiatives focus on three critical pillars: establishing safe learning facilities through disaster-resilient construction, integrating DRR and Climate Change Adaptation (CCA) into the K-12

curriculum, and fostering proactive disaster preparedness behaviors among students and staff. Research emphasizes that education plays a vital role in reducing vulnerability, as it equips the younger generation with the analytical skills and indigenous knowledge necessary to respond effectively to crises. By promoting participatory governance—such as youth leadership in DRRM and collaborative community action plans—DepEd aims to ensure educational continuity and the protection of children's rights to a secure learning environment even in the face of sudden catastrophes.

Theoretical Framework

This study is anchored on several key theories that explain the dynamics of disaster preparedness, risk perception, and organizational response within the school setting.

The Protection Motivation Theory (PMT) Developed by Rogers (1975) – it suggests that self-protection is driven by the perceived severity of a threat, its probability, the effectiveness of preventive actions, and self-efficacy. In this study, the theory explains why preparedness varies: while administrators are highly motivated by their leadership roles, teachers and students face a "training gap" caused by low self-efficacy and a perceived lack of proper tools and knowledge to respond effectively to disasters.

The Social Cognitive Theory (SCT) Proposed by Albert Bandura - this posits that learning is a reciprocal interaction between persons, their environment, and their behavior. In this study, SCT explains how students and teachers develop preparedness through observational learning and modeling during emergency drills. The identified disparities in readiness suggest that the school's social environment—specifically administrative support and policies—directly dictates the cognitive and behavioral disaster response of the individuals within the community.

The Crisis Management Theory - this theory outlines how organizations handle significant negative events through three stages: pre-crisis (preparedness), acute-crisis (response), and post-crisis (recovery). This theory underpins the study's Proposed Action Plan by emphasizing that effective crisis response is entirely dependent on the quality of pre-crisis planning and equipment acquisition. It validates the critical need for viable emergency protocols and functional communication infrastructure as the foundation for institutional resilience.

The Systems Theory - it views the school as an interrelated system where the readiness of students, teachers, and administrators is fundamentally linked. Under this framework, a failure in one subsystem—such as a critical lack of equipment—compromises the safety of the entire organization. This underscores the conclusion that DRRM is a systemic function rather than an individual task, requiring coordinated resources and information dissemination to achieve true institutional resilience.

Conceptual Framework

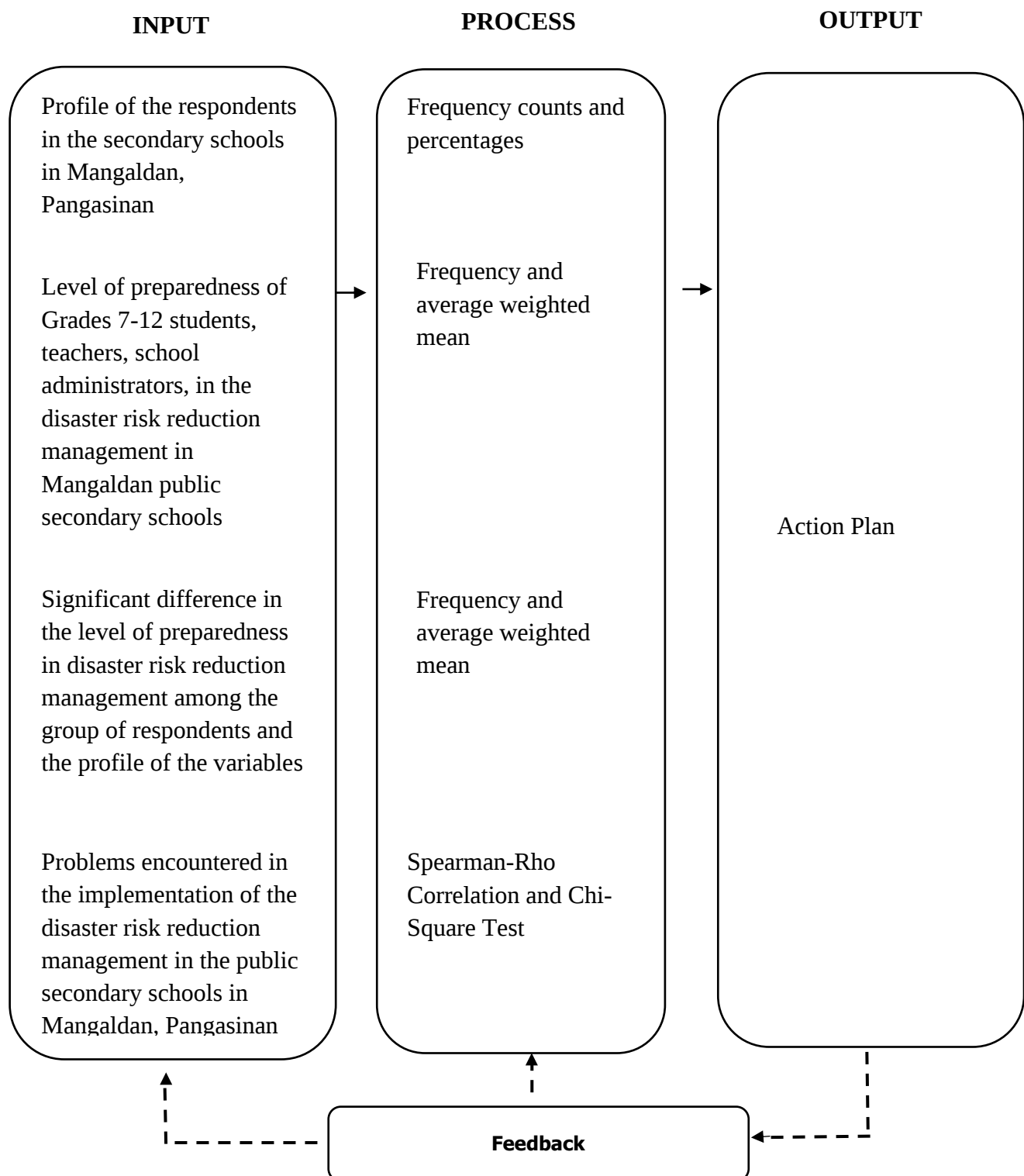


Figure I. Paradigm of the Study

METHODOLOGY

This study employed a quantitative method involving 408 students, 200 teachers, and 14 administrators from four public secondary schools in Mangaldan, Pangasinan. Using Slovin's Formula to determine sample sizes, the researcher gathered data through a revised questionnaire-checklist adapted from DepEd Order 21, s. 2015 and related literature. Respondents were selected via random sampling using a "fishbowl" technique, with additional participants listed as backups to ensure the required sample size was met. All necessary administrative clearances were secured from the Town Mayor, Schools Division Superintendent, and school heads prior to data collection.

Research Design

The study utilized a quantitative, descriptive research methodology to methodically characterize the current readiness and comprehension of students, teachers, and administrators regarding DRRM. This fact-finding approach focused on obtaining first-hand information to ensure an accurate interpretation of findings and the development of sound conclusions. Specifically, a survey-style design was employed, using questionnaires to gather systematic data from the respondents while providing them sufficient time to reflect on the subject matter.

Research Steps

The study utilized random sampling and Slovin's Formula to determine the appropriate number of student, teacher, and administrator respondents across the participating schools. After securing formal authorizations from the Town Mayor and the Schools Division Office in May 2023, the researcher selected specific participants through a fishbowl technique, including backup respondents to ensure data integrity. Data collection was conducted in person from June 17 to July 15, 2023, benefiting from established professional rapport with the school personnel. Following the collection phase, all data was tabulated under strict confidentiality and processed by the University Statistician using specialized software to generate the final analytical tables.

Data Collection and Sample Selection

The research utilized a structured survey questionnaire adapted from DepEd Order 21, s. 2015 and related literature to ensure alignment with DRRM standards. To guarantee clarity and ease of response, particularly for students, the instrument included Filipino translations and underwent validation by expert reviewers. The data collection process followed a quantitative descriptive design, using both Google Forms and in-person methods to reach a sample selected via simple random sampling and Slovin's Formula. To interpret the gathered data, the researcher employed a comprehensive suite of statistical tools, including Frequency Counts, Weighted Mean, Spearman-Rho Correlation, and Chi-Square Tests, all processed through professional statistical software.

Data Analysis Methods

The collected data underwent systematic statistical processing to accurately interpret DRRM preparedness levels across the four schools. Demographic profiles were analyzed using Frequency Counts and Percentages, while the Average Weighted Mean (AWM) on a five-point Likert scale was used to evaluate preparedness levels and the severity of encountered problems. To assess differences across groups, the researcher employed Multivariate Analysis of

Variance (MANOVA) with Wilks' Lambda, followed by Univariate Tests and Post-Hoc Multiple Comparisons to identify specific variations between respondents. Additionally, Spearman-Rho Correlation and Chi-Square Tests were applied to examine relationships and categorical associations, with all computations performed by the University Statistician using professional software to ensure the precision and validity of the findings.

Research Hypotheses and Validation

The research was guided by a null hypothesis, tested at a 0.05 level of significance, which posited that no statistically significant difference existed in DRRM preparedness levels among students, teachers, and administrators across five key domains. This hypothesis provided the framework for the multivariate and univariate analyses used to determine if group affiliation influenced readiness.

To ensure the integrity of the data, the research instrument underwent a rigorous validation process. Adapted from DepEd Order 21, s. 2015, the questionnaire-checklist was refined based on expert feedback and content validation by the researcher's adviser and critic reader. This process included translating key sections into Filipino to guarantee student comprehension. Finally, pilot testing and statistical software analysis were used to confirm the instrument's reliability and internal consistency, establishing it as a valid tool for measuring the DRRM landscape and identifying institutional challenges.

Study Limitations and ethical considerations

The study focused on DRRM preparedness among students, teachers, and administrators in Mangaldan, Pangasinan, but was limited by its reliance on self-reported data, which may reflect subjective perceptions rather than objective readiness. Its scope was also geographically restricted to four public secondary schools and offers a cross-sectional snapshot of preparedness as of mid-2023, meaning the results may not apply to private or primary schools or account for subsequent policy changes.

Ethically, the researcher adhered to strict protocols by securing formal permissions from local and school authorities and ensuring that participation was entirely voluntary. To protect participants, the study maintained full anonymity and data confidentiality, while the purpose of the research was clearly explained—particularly to minor students—to ensure transparency and an environment of trust.

RESULTS AND DISCUSSION

SOP 1. What is the profile of the respondents in the secondary public schools in Mangaldan, Pangasinan in terms of:

- a. age;***
- b. sex;***
- c. civil status;***
- d. grade level (for students);***
- e. academic rank (for teachers);***
- f. position (school administrators);***
- g. highest educational attainment;***

h. number of coordinators (for teachers); and
i. number of related training and seminars attended related to DRRM?

The study involved 408 students, 200 teachers, and 14 administrators. The results reveal that most student respondents are aged 15-17 (59.6%), female (58.3%), and from Grade 10 (39%). The teaching force is predominantly female (68.5%), married (72.5%), and holds the rank of Teacher III (55.5%) with Masteral units (72.5%). Administrators are mostly male (64.3%), married (85.7%), and serve as Head Teacher 4-6 (42.9%).

In terms of DRRM training, administrators (85.8%) and students (80.1%) show higher participation rates compared to teachers. Notably, 27% of teachers and 19.9% of students have had no formal DRRM training at all.

The data shows a "resilience gap" within the school community. While administrators are highly trained and academically advanced, a significant portion of the teaching staff—who act as primary first responders—lacks formal disaster training. The concentration of participation among older students (Grade 10) suggests that maturity and longer school stay increase DRRM involvement. However, the high number of untrained teachers and students indicates that the culture of safety is not yet universal, necessitating more inclusive and mandatory training programs across all levels to ensure collective school resilience.

SOP 2. What is the level of preparedness of Grades 7 to 12 students, teachers, school administrators in the disaster risk reduction management in Mangaldan public secondary schools in terms of:

- a. policies and guidelines***
- b. risk assessment and planning***
- c. information dissemination***
- d. partnerships and coordination***
- e. emergency drills and training?***

The study assessed the level of DRRM preparedness across five key areas. As shown in the findings, the School Administrators achieved the highest level of preparedness with an overall mean of 4.69 (Very Much Prepared). Their strongest areas are Partnership and Coordination and Emergency Drills (both at 4.76).

On the other hand, both Students (4.30) and Teachers (4.06) are categorized as Prepared. Students showed their highest preparedness in Emergency Drills (4.36), while Teachers performed best in Policies and Guidelines (4.08). Notably, Information Dissemination consistently received lower scores from both students and teachers, indicating a relative weakness in how DRRM knowledge is shared.

The "Very Much Prepared" status of administrators reflects their direct involvement in policy-making and school management, ensuring they are well-versed in disaster protocols. However, the slightly lower "Prepared" status of teachers and students suggests that while the knowledge exists, it has not yet reached the same depth as that of the leadership.

The high scores in Emergency Drills across all groups show a strong emphasis on physical preparedness (e.g., earthquake and fire drills). However, the lower means in Information

Dissemination suggest a gap in communication. This implies that while the school is capable of performing physical drills, the systematic flow of information and the deeper understanding of risk assessment protocols among the general school population need further reinforcement to bridge the gap between administrative planning and actual classroom awareness.

SOP 3. Is there a significant difference in the level of preparedness in disaster risk reduction management among the group of respondents and the profile of the variables?

The study employed Multivariate Analysis of Variance (MANOVA), which resulted in the rejection of the null hypothesis ($p = 0.000$), confirming statistically significant differences in DRRM preparedness among students, teachers, and administrators across all five domains. Post-hoc comparisons revealed a distinct "Preparedness Gap," where teachers consistently scored the lowest, while students and administrators showed higher, comparable levels of readiness.

This disparity is particularly concerning given the teachers' leadership roles during emergencies. The findings suggest that while modern K-12 curriculum and youth organizations have successfully empowered students, and administrative roles have bolstered leadership readiness, teachers require targeted, advanced DRRM training to bridge this gap and ensure effective institutional safety.

SOP 4. What are the problems encountered in the implementation of the disaster risk reduction management in the public secondary schools in Mangaldan, Pangasinan?

The assessment of problems encountered in the implementation of DRRM reveals a notable difference in perception between the respondent groups. School Administrators perceived the problems as Very Serious (4.53), while Teachers (3.45) and Students (3.28) only considered them Moderately Serious.

Across all groups, the most critical issues identified were the Lack of disaster response equipment and the Lack of standby power supply equipment. For the administrators specifically, the Not enough viable emergency response plans (4.86) and Defective radio communication devices (4.79) were flagged as the most severe problems. Interestingly, the Lack of proper training was rated as the least serious concern by all groups, particularly by administrators (3.50).

The disparity in scores suggests that administrators have a more comprehensive view of the school's logistical and operational weaknesses. Their high concern regarding "emergency response plans" and "defective communication devices" indicates a significant vulnerability; even if personnel are trained, a lack of functional tools and clear protocols can lead to failure during an actual disaster.

The fact that "Lack of Proper Training" was rated lowest aligns with the earlier findings in SOP 2, where respondents described themselves as "Prepared." This implies that the school's primary challenge is not a lack of human knowledge, but a lack of material resources and infrastructure. The "Moderately Serious" rating from students and teachers may suggest a level of complacency or a lack of awareness regarding the technical requirements of a full-scale disaster response. Overall, the findings suggest that the school must shift its priority from purely instructional activities to the procurement of essential disaster response hardware and the refinement of operational plans.

SOP 5. What action plan could be proposed to enhance disaster risk reduction management in the public secondary schools in Mangaldan, Pangasinan?

Problem 1. Defective Radio Communication Device

Programs/ Projects	Strategies/ Objectives	Persons Involved	Resources Needed	Time Frame	Source of Fund	Expected Output
Enhancing Radio Communication Infrastructure for Disaster Risk Reduction and Management (DRRM)	To address the issues with defective radio communicat ion devices utilized in DRRM operations, ensuring reliable and effective communicat ion during emergencies and disasters	SDRRM coordinator , principals IT specialists, technicians Procureme nt Officers Communic ation Team	Radio communicat ion devices Funding for assessment and procurement of new devices Funding for training materials and sessions	Year- round 3-6 months	MOOE Govern ment budget Grants Internati onal aid; commun ity donation s	Efficient radio communic ation devices Identificat ion of defective devices and their replaceme nt purchase and installatio n of communic ation equipment Improved knowledg e and skills in maintainin g communic ation devices
Communication Equipment Replacement Program	Assessment of current communicat ion devices					

Defective radio communication devices present a critical risk during emergencies, requiring schools to establish alternative protocols and maintain operational backups. To resolve this, SDRRM coordinators and principals must assess existing infrastructure and utilize MOOE funds to procure and upgrade necessary equipment. This is implemented through a 3-to-6-month Communication Equipment Replacement Program, where IT specialists manage the installation of new units and technical teams provide specialized training—supported by government budgets and community donations—to ensure personnel can effectively maintain and operate the new communication systems.

Problem 2. Not Viable Emergency Plans

Programs/ Projects	Strategies/ Objectives	Persons Involved	Resources Needed	Time Frame	Source of Fund	Expected Output
Development of Comprehensive Emergency Plans	To conduct a thorough assessment of potential hazards, vulnerabili- ties, and risks specific to the school community	SDRRM coordinator , school administrat- ors, students, teachers	Document- ation and supplies Funding for assessmen- t and revision of plans	Year- round	MOOE Govern- ment funds Grants	Increased community resilience and preparednes- s to withstand and recover for disasters
Emergency Planning Revision	Review and Assessment of Current Emergency Plan Stakeholder Consultatio- n and Participatio- n Developme- nt of Comprehens- ive Emergency Plans	Emergency Manageme- nt Stakeholde- rs Emergency Planners; Local Authorities	Funding for meetings, consultati- ons Data gathering and plan developm- ent	3-6 months	Internat- ional aid, commu- nity donatio- ns	Identificatio- n of weaknesses in current plans and areas for involvement and ownership of community in planning process. Creation of robust and adaptable emergency plans

Non-viable emergency plans pose a severe risk by failing to address specific disaster scenarios, potentially leading to inefficient responses and increased danger. To mitigate this, school administrators and SDRRM coordinators must collaborate to conduct thorough reviews of existing protocols, identifying gaps and ensuring plans are data-driven and tailored to the school community's needs.

This objective is formalized through an Emergency Planning Revision process—a 3-to-6-month collaborative effort involving stakeholders and management personnel. Funded by MOOE, government grants, and community donations, this initiative focuses on updating documentation and fostering community ownership. The ultimate goal is to transition from outdated strategies to robust, adaptable, and year-round emergency plans that significantly enhance institutional resilience.

Problem 3. Lack of Disaster Response Equipment

Programs/ Projects	Strategies/ Objectives	Persons Involved	Resources Needed	Time Frame	Source of Fund	Expected Output
Enhancing Disaster Response Equipment Availability and Accessibility	Procure essential disaster response equipment to supplement existing resources and address identified gaps.	SDRRM coordinator , school administrators, students teachers	Medical supplies, personal protective equipment , emergency response vehicles	Year- round 2-4 months	MOOE Govern ment budget Grants	Improved preparedness; Enhanced response capabilities Increased resilience Reduced loss of life and property
Equipment Acquisition Program	Assessment of Current Inventory and Needs Procurement of Essential Equipment Training on Equipment Usage and Maintenance	Emergency Management Team Training Instructors; Emergency Responders	Training instructors ; emergency responders Budget for purchasing emergency response gear Funding for training materials and sessions		Internat ional aid; commu nity donatio ns	Identificatio n of required equipment and existing gaps Purchase and installation of essential disaster response equipment Enhanced preparedness and efficiency in disaster response.

A critical lack of disaster response equipment increases institutional vulnerability and delays life-saving interventions. To address this, the study proposes an Equipment Acquisition Program, a 2-to-4-month initiative led by SDRRM coordinators and school administrators. This program involves assessing inventory gaps and utilizing MOOE funds, government grants, and international aid to procure essential gear, including medical supplies (antiseptics, bandages), personal protective equipment (PPE), and emergency response vehicles.

The initiative emphasizes a systemic approach to readiness: administrators advocate for resources, while teachers are trained to manage classroom-level equipment and lead response protocols. By filling these logistical gaps and providing necessary training, the program aims

to enhance response efficiency, protect responders, and ultimately reduce the loss of life and property during emergencies.

SUMMARY

This research determined the extent of Disaster Risk Reduction Management (DRRM) preparedness in public secondary schools in Mangaldan, Pangasinan, for the School Year 2024-2025 by surveying 408 students, 200 teachers, and 14 administrators. Using a quantitative descriptive design, the study revealed a significant profile disparity where administrators were the most academically advanced and highly trained, while a notable "resilience gap" was found among teachers and students, with 27% and 19.9% respectively having no formal DRRM training. This demographic reality is anchored on the Protection Motivation Theory and Systems Theory, which suggest that the school's safety is only as strong as its least prepared subsystem, emphasizing that the lack of self-efficacy among teachers directly impacts the institution's collective readiness.

In terms of the level of preparedness, school administrators were found to be "Very Much Prepared" with an overall mean of 4.69, whereas both students and teachers were only "Prepared" with means of 4.30 and 4.06. While all groups demonstrated high competency in conducting emergency drills, they consistently struggled with information dissemination. This indicates that while the physical act of duck-cover-and-hold is well-practiced, the systematic flow of disaster-related information remains a relative weakness. The study further confirmed through MANOVA that these differences in preparedness are statistically significant, with teachers scoring the lowest across all domains, which is a critical concern given their role as frontline responders during school hours.

The implementation of DRRM is severely hindered by logistical and structural problems, which administrators categorized as "Very Serious." The most pressing issues identified were the lack of functional disaster response equipment, a lack of standby power supply, and defective radio communication devices. Interestingly, all groups rated the "lack of training" as their least serious concern, suggesting that the stakeholders feel knowledgeable but are frustrated by the lack of physical tools to execute their knowledge. This shift in perspective moves the problem from a human-resource issue to a procurement and infrastructure crisis, where even the most viable emergency plans would fail without the necessary hardware.

To bridge these gaps, a comprehensive DRRM Enhancement Action Plan was proposed, focusing on three major pillars: infrastructure upgrade, plan localization, and inclusive capacity building. The plan specifically targets the replacement of defective communication devices, the refinement of hazard-specific emergency protocols through stakeholder consultations, and the systematic procurement of rescue gear and medical supplies using school MOOE and government funds. By integrating these interventions, the study concludes that the public secondary schools in Mangaldan can transition from being theoretically prepared to being operationally resilient, ensuring that every member of the school community is equipped to survive and recover from sudden disasters.

CONCLUSIONS

Based on the findings of the study, the following conclusions are drawn:

The school leadership, represented by the administrators, possesses an exceptional level of disaster preparedness and academic qualification, yet this expertise has not successfully permeated the entire school hierarchy. The identified "resilience gap," particularly among the teaching staff, suggests that the primary frontline responders in any school-based emergency are the least trained group, which creates a significant vulnerability in the institution's overall safety framework. This lack of self-efficacy among teachers and a portion of the student body implies that while policies exist at the administrative level, the practical readiness of the individuals responsible for direct classroom evacuation and safety remains insufficient.

Furthermore, the study concludes that the schools in Mangaldan rely heavily on physical routines, such as earthquake and fire drills, which masks a deeper deficiency in theoretical and logistical preparedness. While the "Prepared" status of students and teachers indicates a functional awareness of basic protocols, the consistently low scores in information dissemination and risk assessment highlight a communication breakdown. This suggests that the school community is capable of performing mechanical actions during a crisis but lacks a comprehensive understanding of the underlying risk factors and the systematic flow of information required for long-term disaster resilience.

The most critical barrier to total disaster readiness is not a lack of human competency but a severe shortage of functional infrastructure and localized response equipment. The "Very Serious" problems identified by administrators, such as defective radio communication devices and the lack of viable emergency plans, indicate that the schools are operationally crippled. Even with highly motivated personnel, the absence of standby power supplies and specialized disaster response gear ensures that any large-scale emergency would be met with significant logistical failures. Therefore, the current state of DRRM in these schools is more theoretical than operational.

Lastly, the significant differences in preparedness levels among stakeholders confirm that DRRM is currently functioning as a top-down administrative task rather than a cohesive, system-wide culture of safety. The higher preparedness of students compared to teachers suggests that curriculum-integrated training is effective, but it also underscores the neglect of teacher-specific capacity building. Until the schools shift their priority toward the procurement of essential hardware and the mandatory certification of all staff members, the institution will remain reactive rather than proactive in the face of natural and human-induced disasters.

RECOMMENDATIONS

Based on the findings and conclusions of the study, the following recommendations are offered to improve the Disaster Risk Reduction Management (DRRM) landscape in the public secondary schools of Mangaldan, Pangasinan:

The Department of Education and school heads should institutionalize mandatory, specialized DRRM certification programs specifically designed for teachers. Since the study identified a significant training gap among the teaching staff, these sessions should move beyond basic drills and focus on advanced life-saving skills, search and rescue, and classroom-level crisis leadership to ensure that those in direct contact with students are fully equipped as first responders.

School administrators must prioritize the modernization of disaster response infrastructure

by allocating a specific portion of the school's Maintenance and Other Operating Expenses (MOOE) and seeking external grants for the procurement of industrial-grade radio communication devices and standby solar-powered generators. This will address the "Very Serious" logistical problems identified in the study and ensure that the school remains operational and reachable even during total power failures or network outages.

The School DRRM Council should undertake a comprehensive revision of existing emergency response plans to ensure they are localized, viable, and inclusive of all school subsystems. These plans must be transitioned from theoretical documents into operational manuals through regular "tabletop exercises" and scenario-based simulations that involve not just the administrators, but also teachers and student leaders to foster a shared sense of ownership and institutional resilience.

To improve the consistently low scores in information dissemination, schools should launch a digitized DRRM Information Hub or an SMS-based alert system. This will ensure that risk assessments, weather updates, and emergency protocols are communicated rapidly and accurately to all stakeholders, bridging the communication gap between administrative planning and the actual awareness of the student body and faculty.

The proposed DRRM Enhancement Action Plan, focusing on the systematic replacement of defective equipment and the development of comprehensive emergency protocols, should be adopted and implemented immediately. Periodic monitoring and evaluation must be conducted to assess the effectiveness of the acquired tools and the proficiency of the school personnel, ensuring that the culture of safety becomes a permanent and evolving priority within the Mangaldan public school system.

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