

THE IMPLEMENTATION OF DISASTER PREPAREDNESS OF TEN SELECTED PUBLIC HIGH SCHOOLS IN RIZAL AS PERCEIVED BY GRADE 9 MAPEH TEACHERS

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ABSTRACT

The study assessed disaster preparedness in ten public high schools in Rizal Province, focusing on safety procedures, training, and drills. It aimed to identify gaps and propose interventions to improve teachers' disaster response capabilities. A quantitative descriptive-correlational research design was employed. Forty (40) Grade 9 MAPEH teachers from selected public high schools in Rizal were chosen through simple random sampling. Data were collected using a researcher-made questionnaire composed of three parts: respondent profile, implementation of safety and evacuation procedures, and training and disaster drill participation. Responses were measured using a five-point Likert scale. Frequency, percentage, mean, standard deviation, and Pearson Product-Moment Correlation Coefficient were used for statistical analysis at a 0.05 level of significance. Most respondents were early-career teachers with limited service and exposure to disaster training, though many participated in drills. School safety and evacuation procedures were well-implemented, with established protocols observed. Disaster preparedness training and drills were also highly rated, indicating regular preparedness activities. Correlational analysis revealed no significant relationship between disaster preparedness training, drill participation, and safety/evacuation procedures. This suggests that while trainings and drills are conducted, they don't necessarily lead to improved implementation practices. Additionally, no significant differences were found among respondents based on profile variables. Despite positive results, gaps in practical competencies like first aid, emergency communication, and post-drill evaluation were identified. The study recommends developing a Teacher Capacity Enhancement Program to improve hands-on disaster response skills, enhance training effectiveness, and ensure preparedness activities are applied in schools.

Keywords: *Disaster preparedness, safety drills, disaster trainings, and evacuation procedures*

INTRODUCTION

Natural hazards are naturally occurring events that become disastrous when they create large casualties and property losses, which impede social and economic development. Natural hazards occur globally and frequently. They threaten human society, natural systems, and major infrastructures. (Cui et al., 2021). Disasters, both natural and man-made, present significant risks to communities globally. The rising frequency and intensity of earthquakes, floods, typhoons, and other hazards around the world emphasize the critical importance of effective disaster preparedness strategies. International frameworks like the United Nations Educational, Scientific and Cultural Organization (UNESCO) highlight the significance of being prepared for disasters. UNESCO is an international organization that focuses on disaster preparedness to safeguard lives, property, and the ongoing education of students. It integrates Disaster Risk Reduction (DRR) into schools, supplies tools and training for teachers, and provides scientific and practical guidance to countries around the globe (UNESCO, 2023).

In the program brief for last 2024 of the Department of Health Cordillera Center for Health Development (DOH CAR), Philippines; due to its geographical location in the Pacific Ring of Fire and the typhoon belt, may experience approximately 20 earthquakes per day along with 20 typhoons per year. Despite the advent of technology and means to prognosticate earthquakes and other natural hazards, it remains unlikely to predict the extent of the repercussions, including the possibility of the next “big one.” Therefore, it is vital to remain prepared as so preparedness for natural disasters has become a national priority. Nonetheless, resilience at both national and regional levels is still not well explored, especially concerning socio-economic inequalities, gender dynamics, and governance (Chong et al., 2025). In fact, according to Manila Bulletin (2025), the WorldRiskIndex 2025. This ranking comes amid scrutiny of flood control projects over alleged irregularities, highlighting the country's high risks from floods, storms, droughts, and earthquakes. The Philippines has a high vulnerability score due to its fragmented geography, dense coastal populations, and limited ability to adapt to extreme weather conditions. In response, the government has implemented various laws and policies to enhance disaster risk reduction and management (DRRM). The Republic Act No. 10121, known as the Philippine Disaster Risk Reduction and Management Act of 2010, established disaster risk reduction and management at both national and local levels. The Department of Education (DepEd) has issued policies like DepEd Order No. 55, s. 2007, which adopts the Framework for Disaster Risk Reduction in the School System, and DepEd Order No. 48, s. 2012, which provides guidelines for conducting disaster preparedness measures. These policies aim to help schools incorporate safety drills, evacuation protocols, and preparedness programs into their operations. These guidelines highlight that teachers have an important role in keeping students safe during emergencies.

Public high schools in Rizal province face various hazards such as flooding, earthquakes, and landslides. Recent news reports indicate that 3,899 families, totaling 14,390 individuals, in San Mateo, Rizal have been impacted by Severe Tropical Storm

Crising (international name Wipha) and the enhanced southwest monsoon, known as "habagat." Currently, 546 families, totaling 2,102 individuals, are taking shelter at Maly Elementary School due to flooding in some areas of San Mateo caused by ongoing rains (Philippine News Agency, 2025). Grade 9 MAPEH teachers play a crucial role in schools by actively participating in disaster preparedness activities, particularly because MAPEH encompasses health and safety education. Their skill in managing evacuation procedures, conducting disaster drills, and applying safety protocols directly impacts the readiness of their schools. However, variations in resources, training opportunities, and school conditions can influence the effectiveness of disaster preparedness across different institutions.

Despite the implementation of various Disaster Risk Reduction and Management (DRRM) policies in Philippine schools, limited studies have focused on assessing teachers' actual preparedness at the school level, particularly in public high schools where average class size increases to 50 students per classroom. In that sense, teachers ought to demonstrate adept skills and understanding about disaster preparedness for they served as critical frontliners. Most existing research emphasizes students' awareness or institutional compliance, while fewer studies examine teachers' practical knowledge, perceptions, and implementation of disaster preparedness measures, especially in subject areas such as MAPEH where health and safety are integral. Furthermore, there is a lack of comparative studies involving multiple schools within the same province that identify specific gaps in safety procedures, evacuation practices, and disaster preparedness training and drills. This gap highlights the need for localized and teacher-centered assessments to better understand current preparedness levels and to develop targeted capacity enhancement programs.

Theoretical Framework

Protection Motivation Theory (PMT)

This study utilizes Protection Motivation Theory (PMT), developed by Ronald W. Rogers in 1975 and revised in 1983. This theory attempts to explain how someone can react to a certain event or situation based on what they know, how aware they are of it, and how much they think they can handle it. It shows reactions that are both helpful and harmful. When someone acts in a way that keeps them safe and secure, that's called an adaptable response. On the other hand, when someone acts in a way that doesn't keep them safe or secure, that's called a maladaptive response. People are more likely to be hurt in emergencies when they have maladaptive reactions, such as attitudes or actions that don't work.

To provide further insight, Rogers asserts that individuals exhibit a desire to safeguard themselves in specific circumstances, such as disasters, due to four primary reasons:

Perceived Severity	the extent to which a person believes a threatening event, like a disaster, poses serious consequences;
Perceived Vulnerability	the degree to which an individual feels personally at risk or exposed to the potential hazard;
Response Efficacy	the belief that recommended preventive measures or behaviors will be effective in reducing the threat; and
Perceived Self Efficacy	the confidence in one's ability to perform the necessary actions to ensure safety during emergencies.

The four components above show how people choose whether to take action to protect themselves or not. They show how teachers of Grade 9 MAPEH in ten chosen public high schools in Rizal think they can handle disasters in this study. When teachers know how dangerous potential threats can be, how vulnerable their school is, and believe that established safety procedures and disaster drills work, they are more likely to adapt their responses. For example, they are more likely to lead evacuations correctly, follow safety protocols, and help students during emergencies. Fear, panic, or a lack of understanding, on the other hand, that stops people from acting effectively are called maladaptive reactions, and they can make people less ready for school.

The theory helps us understand and guess how someone will protect themselves based on how aware they are, how much they have trained, and how they have actually reacted to possible threats. The Protection Motivation Theory fits well with this study because it looks at how teachers' knowledge of safety and evacuation plans, as well as their training and involvement in drills, affects their overall readiness for disasters. The framework stresses that ongoing training and hands-on drills make teachers more confident and skilled, which helps them act more appropriately in situations.

This theory also shows that the importance or necessity of an event can change how people act and behave around it. In a school setting, this means that how ready and how Grade 9 MAPEH teachers act during drills or real emergencies can affect how students, other teachers, and administrators act and respond. In this way, the theory helps researchers figure out how teachers, who play a big part in making sure schools are safe, are motivated, ready, and take action.

Conceptual Framework

The conceptual framework of this study demonstrates how the characteristics of the respondents, particularly the Grade 9 MAPEH teachers, affect their degree of disaster

readiness in educational institutions. The independent variables— years of teaching experience, number of disaster-related trainings attended, number of disaster drills participated in during the past school year, educational qualification, and school size — are anticipated to influence the teachers’ ability to perform and respond successfully in emergency situations. These characteristics are thought to cause disparities in how ready the teachers are, especially when it comes to safety and evacuation protocols, training, and catastrophe exercises, which are the dependent variables. The arrows linking the profile variables to these two primary constructs suggest that the respondents' attributes may influence their awareness, implementation, and engagement in disaster preparedness initiatives.

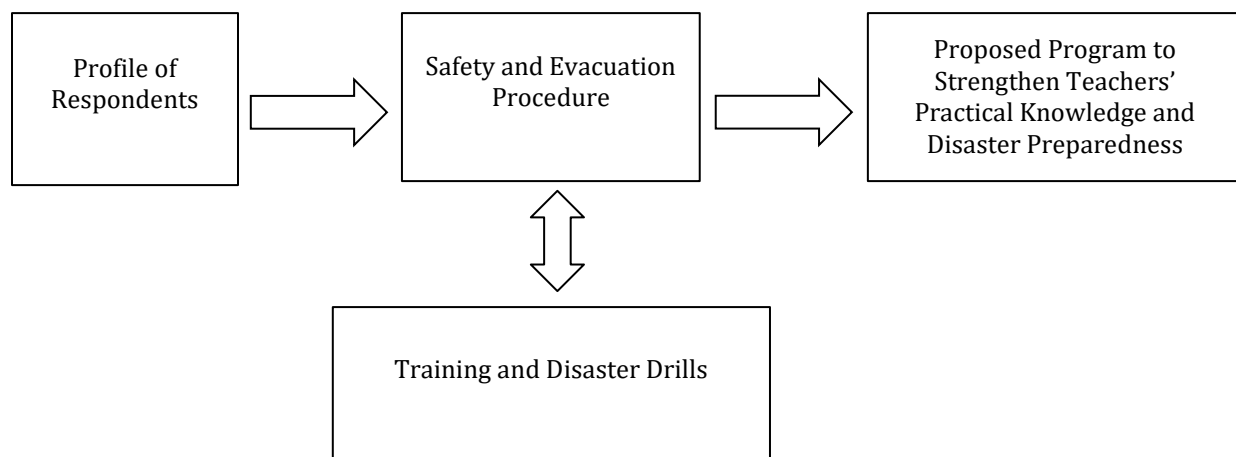


Figure 1
Schematic Diagram of the Conceptual Framework of the Study

Also, the two-way arrow between safety and evacuation protocols and training and disaster exercises shows how these two things are related to each other. The independent variables— availability and functionality of safety resources and equipment, clarity and accessibility of evacuation plans and routes, implementation of school disaster risk reduction (DRRM) policies, and teacher and student awareness of safety protocols. Teachers' capacity to use the right safety and evacuation procedures is improved by effective and well-run training and exercises. On the other hand, clear and practiced evacuation protocols show how well disaster training programs work. The independent variables— frequency and quality of disaster preparedness trainings, teacher competence developed from trainings, and implementation of disaster drills. These two things work together to make people more ready in general. Lastly, the arrows pointing to both dependent variables lead to the proposed program, which is what the study is trying to find out. Based on the results, this program will be created to help instructors improve their practical knowledge, readiness, and confidence in dealing with disasters at school.

Despite the extensive research on Disaster Risk Reduction and Management (DRRM), there is a clear lack of subject-specific integration, especially in MAPEH. The majority of current research concentrates on administrative frameworks or general school readiness, paying little attention to how DRRM concepts are applied in MAPEH instruction. By investigating the function of MAPEH instructors in disaster preparedness education, this study fills that gap.

Comparing results from comparable studies, discovering recurring themes, and incorporating ideas like curriculum integration, teacher readiness, and school-based DRRM procedures improved the synthesis. To gain a better knowledge of how disaster preparedness is implemented, especially in the context of MAPEH, differences and similarities between studies were examined.

Research Questions

This study was conducted in ten selected public high schools in Rizal Province, specifically: Silangan National High School, San Mateo National High School, Ampid National High School, JFD National High School, Ginayang National High School, Pintong Bukawe National High School, Burgos National High School, Manggahan National High School, Sorrento National High School, and Justice National High School.during the school year 2025-2026.

Specifically, it sought to answer the following sub-problems:

1.What is the demographic profile of the respondents in terms of:

- 1.1 Years of teaching experience;
- 1.2 Number of disaster-related trainings attended;
- 1.3 Number of disaster drills participated in during the past school year;
- 1.4 Educational qualification; and
- 1.5 School size?

2.What is the level of implementation of safety and evacuation procedures in the selected schools by the respondents in terms of:

- 2.1 Availability and functionality of safety resources and equipment;
- 2.2 Clarity and accessibility of evacuation plans and routes;
- 2.3 Implementation of school disaster risk reduction (DRRM) policies; and
- 2.4 Teacher and student awareness of safety protocols?

3.What is the level of disaster preparedness training and drill implementation in the selected schools by the respondents in terms of:

- 3.1 Frequency and quality of disaster preparedness trainings;
- 3.2 Teacher competence developed from trainings; and
- 3.3 Implementation of disaster drills?

4.Is there a significant relationship between the level of implementation of safety and evacuation procedures and the level of disaster preparedness training and drills?

5. Is there significant difference in the level of implementation of safety and evacuation procedures and the level of disaster preparedness training and drill

implementation in the selected schools as perceived by the respondents when grouped according to profile?

6. Based on the findings of the study, what teacher capacity enhancement program may be proposed to strengthen practical disaster preparedness knowledge and skills?

METHODOLOGY

This study employed a quantitative descriptive-correlational research design. The descriptive method was used to identify the demographic profile of the respondents and to evaluate the implementation of safety and evacuation procedures, along with the level of disaster preparedness training and drill execution in the chosen public high schools in Rizal.

The association between the demographic profile of Grade 9 MAPEH instructors and their perceived degree of disaster preparation implementation was investigated using a correlational research design. Because it enables the researcher to look at correlations between variables without changing them, this strategy is suitable for revealing potential influencing factors.

The data gathered from the respondents were measured and examined using suitable statistical methods to identify patterns, levels, and relationships among the variables. This research design was considered suitable because it enabled the researcher to outline the current state of disaster preparedness and assess whether a significant relationship exists between key variables among Grade 9 MAPEH teachers in selected public high schools in Rizal for the School Year 2025–2026.

Scope and Delimitation of the Study

This study examines the disaster preparedness of ten selected public high schools in Rizal, based on the perceptions of Grade 9 MAPEH teachers. The study focuses on three main areas: (1) the respondents' profiles, including the years of teaching experience, number of disaster-related trainings attended, number of disaster drills participated in during the past school year, educational qualification, and school size; (2) the level of implementation of safety and evacuation procedures, including availability and functionality of safety resources, clarity of evacuation plans and routes, implementation of Disaster Risk Reduction and Management (DRRM) policies, and teacher and student awareness of safety protocols; and (3) the level of disaster preparedness training and drill implementation, including frequency and quality of trainings, teacher competence, and implementation of disaster drills.

Ten (10) public high schools were chosen based on factors such as accessibility, respondent availability, and representation of various Rizal neighborhoods. These schools supplied enough information to investigate how Grade 9 MAPEH teachers assessed the implementation of disaster preparedness. This, however, also acts as a study restriction because the results are limited to the chosen schools that are easily

accessible. As a result, the findings could not apply to all public high schools in Rizal or other areas.

The study will cover the School Year 2025–2026 only. This research does not consider variables beyond its scope, including students' perspectives, administrative support, financial resources, and infrastructure. The results of the study reflect the perspectives of the Grade 9 MAPEH teachers who participated and should not be generalized to all teachers in Rizal Province. In addition, the findings could serve as a foundation for grasping trends in disaster preparedness among public secondary schools in the region.

Definition of Terms

Correlation. In this study, the term refers to a statistical technique which was used to determine whether a significant relationship exists between level of implementation of safety and evacuation procedures and the level of disaster preparedness training and drill implementation.

Disaster Preparedness. This term describes how prepared schools and teachers are to handle emergencies. This includes implementation of safety procedures, evacuation plans, trainings, and disaster drills.

Disaster Drills. In this study, this term refers to organized and practiced emergency response activities in schools, like earthquake or fire drills, aimed at preparing teachers and students for actual disasters.

Disaster Preparedness Training. In this study, this refers to structured learning activities or programs designed to enhance teachers' knowledge, skills, and competencies in responding to different types of disasters.

Evacuation Procedures. In this study, this term refers to the systematic steps and protocols followed by schools to ensure safe and orderly evacuation of students and staff during emergencies.

Grade 9 MAPEH Teachers. In this study, these are public secondary school teachers in Rizal, handling Grade 9 classes in Music, Arts, Physical Education, and Health (MAPEH). They are the main respondents of the study.

Safety Procedures. This term refers to precautionary measures and policies implemented within schools to reduce risks and protect students and staff during emergencies.

Standardized Survey. This refers to a pre-developed, validated questionnaire created by another researcher or organization, used to measure disaster preparedness in this study with proper permission from its owner.

Tools for Data Analysis

The following tools were employed to treat the data statistically:

This research aims to provide answers to the statements of the problem through the use of appropriate statistical treatments. The data gathered from the questionnaire administered to Grade 9 MAPEH teachers in Rizal public high schools will be analyzed as follows:

Research Question 1: What is the profile of the respondents?

To determine the profile of the respondents, the data gathered from Part I of the questionnaire will be analyzed using frequency distribution and percentage for categorical variables such as educational qualification and school size. For variables like years of teaching experience, number of disaster-related trainings attended, and number of disaster drills participated in during the past school year, mean will be used. This will give a clear understanding of the demographic and professional characteristics of the Grade 9 MAPEH teachers.

Research Question 2: What is the level of disaster preparedness of the respondents in terms of Safety and Evacuation Procedures?

To determine the level of disaster preparedness of the respondents in terms of Safety and Evacuation Procedures, the responses from Part II of the questionnaire will be analyzed using mean and standard deviation. This will provide a quantitative measure of the teachers' awareness, understanding, and implementation of safety protocols in their respective schools.

Research Question 3: What is the level of disaster preparedness of the respondents in terms of Training and Disaster Drills?

To determine the level of disaster preparedness of the respondents in terms of Training and Disaster Drills, the responses from Part III of the questionnaire will be analyzed using mean and standard deviation. This will provide a measure of the respondents' participation, competence, and effectiveness in attending or conducting disaster preparedness trainings and drills.

Research Question 4: Is there a significant relationship between the different aspects of disaster preparedness of the respondents?

To determine whether a significant relationship exists between the level of implementation of Safety and Evacuation Procedures and the level of Training and Disaster Drills, the data gathered will be subjected to Pearson Product-Moment Correlation Coefficient (Pearson r). This will indicate whether a relationship exists between the teachers' preparedness in terms of safety protocols and their training and drill experiences.

All statistical analyses will be performed at a 0.05 level of significance ensuring that the interpretations of the results are valid and reliable for the study.

RESULTS AND DISCUSSION

This chapter contains information about the results of the study and the analysis and interpretation of data gathered with the use of the adapted statistical measures. The presentation includes a narrative discussion of the results and implications of the data gathered which are illustrated in tables.

Research Question 1. Profile of the Respondents

1.1 Years of teaching experience

Table 1.1

Demographic profile of the Respondents in Terms of Years of Teaching Experience

Years of Teaching Experience	Frequency	Percentage
0-5 years old	25	62.5
6-10 years old	10	25
11-15 years old	5	12.5
Total	40	100

The table shows that the majority of the respondents, 25 (62.5%), have 0–5 years of teaching experience, followed by 10 (25%) with 6–10 years, and 5 (12.5%) with 11–15 years. This indicates that most respondents are early-career teachers, suggesting that disaster preparedness practices are largely implemented by relatively less experienced educators.

This distribution implies that while the schools have personnel involved in disaster preparedness, many of them may still be developing their confidence, skills, and exposure in handling emergency situations. As a result, the effectiveness of preparedness practices may be influenced by the limited experience of the majority of the respondents.

This finding is supported by the study of Dasci Sonmez and Gokmenoglu (2023), which identified teaching experience as a significant demographic factor that influences teachers' beliefs and perspectives. Their study highlighted that experience contributes to the development of professional judgment, confidence, and role perception among teachers.

Similarly, Mohamed et al. (2024) underscored that years of teaching experience are significantly associated with variations in knowledge, attitudes, and preparedness-related practices among educators. Their findings suggest that experienced teachers are more likely to demonstrate improved decision-making skills and more positive attitudes toward disaster preparedness, which may enhance their ability to respond effectively during emergencies.

Consequently, it is necessary to delineate the roles of teachers and ensure that their knowledge, emotional intelligence, and adaptability to learn and manage in the face of potential emergencies are commensurate with their years of experience. This will facilitate effective management and preparedness for disasters.

Generally, the results imply that while disaster preparedness is being implemented in schools, the predominance of early-career teachers highlights the need for continuous capacity-building programs. Strengthening training, mentoring, and hands-on exposure to disaster situations would help enhance teachers' competence and ensure more effective implementation of safety and evacuation procedures regardless of teaching experience.

1.2 Number of disaster-related trainings attended

Table 1.2

Demographic profile of the Respondents in Terms of Number of Trainings Participated in During the Past Year

Number of Disaster-Related Trainings Attended	Frequency	Percentage
None	21	52.5
1-2	10	25
3-4	9	22.5
Total	40	100

The table reveals that 21 respondents (52.5%) have not attended any disaster-related trainings, while 10 (25%) have attended 1–2 trainings, and 9 (22.5%) have attended 3–4 trainings. This indicates that more than half of the respondents have no formal exposure to disaster-related training programs, suggesting limited structured capacity-building opportunities among teachers in the selected schools.

This distribution implies that a significant proportion of teachers may have insufficient practical knowledge and hands-on skills in responding to emergency situations. Without adequate and continuous training exposure, teachers may rely mainly on general awareness or personal experience rather than standardized disaster response

protocols. This may affect the consistency, confidence, and effectiveness of implementing safety and evacuation procedures in actual emergency situations.

This finding is supported by Lopez et al. (2018), who emphasized that although schools generally demonstrate compliance with disaster risk reduction and management (DRRM) programs, one of the major challenges encountered is the lack of sufficient training resources and limited opportunities for continuous disaster preparedness training. These gaps hinder the full effectiveness of DRRM implementation in schools.

Similarly, Acierto, Robas, and Monte (2023) highlighted that limitations in training opportunities, along with inadequate support systems, contribute to incomplete implementation of disaster risk reduction initiatives in educational institutions. This suggests that even when policies and programs are in place, insufficient training exposure may weaken their practical application.

As a case in point, public schools in the Philippines implement comprehensive Disaster Risk Reduction and Management (DRRM) training in accordance with Republic Act 10121, emphasizing prevention, preparedness, response, and recovery. Led by the School Disaster Risk Reduction Management (SDRRM) personnel, schools conduct training sessions during their In-Service Trainings to foster a culture of safety, ensure educational continuity, and safeguard learners and staff in hazardous areas. This training also enables schools to transcend mere compliance and develop proactive contingency plans.

Overall, the results imply that while disaster preparedness programs exist in schools, the low number of training experiences among teachers highlights the need for strengthened and sustained capacity-building initiatives. Schools should prioritize regular, structured, and skills-based disaster training programs to ensure that teachers are adequately equipped with the knowledge and competence needed to respond effectively during emergencies.

1.3 Number of disaster drills participated in during the past school year

Table 1.3

Demographic profile of the Respondents in Terms of Number of Disaster Drills Participated in During the Past Year

Number of Disaster Drills Participated in During the Past Year	Frequency	Percentage
None	4	10
1-2	18	45
3-4	12	30

5 or more	6	15
Total	40	100

The data show that 18 respondents (45%) participated in 1–2 disaster drills, followed by 12 (30%) who participated in 3–4 drills, 6 (15%) in 5 or more drills, and 4 (10%) who reported no participation. This indicates that while disaster drills are being implemented in the schools, the frequency of participation among teachers varies, with most respondents having only limited exposure.

This suggests that while disaster drills are being implemented in the schools, the frequency of participation may still be limited for a considerable number of teachers. As a result, respondents may have basic familiarity with emergency procedures, but repeated exposure—which is necessary for building confidence, speed, and accuracy in actual emergency situations—may not yet be fully developed among all participants.

As per the National Disaster Management Authority (NDMA), disaster preparedness among schools in every country should not involve transforming schools into emergency rooms or instilling fear in students through worst-case scenarios. Instead, it should focus on replacing panic and confusion with a well-defined plan and establishing clear roles.

In the Philippines, for instance, the Department of Education (DepEd) has issued Order No. 033 series of 2021, which mandates school authorities to practice, implement, and adhere to procedures for disaster preparedness and mitigation measures within their institutions through Earthquake drills and such. This includes a comprehensive understanding of the risks associated with natural hazards, particularly hydrometeorological events such as tropical cyclones, weather disturbances, flooding, and storm surges. Consequently, it is imperative to develop a well-defined plan that outlines the coordination of management, the dissemination of information, and the issuance of drills, training programs, and other relevant guidelines. This plan will enable us to respond effectively and provide appropriate safeguards for both learners and personnel.

In this notion, finding is supported by Navigate360 Editorial Team (n.d.), which emphasized that regular and repeated disaster drills are essential in reinforcing safety procedures, strengthening preparedness, and ensuring that both teachers and students can respond effectively during actual emergencies. Frequent practice helps individuals internalize procedures, making responses more efficient and less prone to panic during real disaster events.

In summary, the findings imply that while disaster drills are implemented in schools, the limited frequency of participation for many teachers suggests the need for more regular and systematic drill activities. Increasing the frequency of drills would help strengthen familiarity, improve coordination, and enhance the readiness of teachers in actual emergency situations.

1.4 Educational qualification

Table 1.4

Demographic profile of the Respondents in Terms of Educational Qualification

Number of Educational Qualification	Frequency	Percentage
Bachelor's Degree	22	55
With Master's Units	12	30
Master's Degree Holder	6	15
Total	40	100

The table shows that most respondents, 22 (55%), are Bachelor's degree holders, followed by 12 (30%) with Master's units, and 6 (15%) who are Master's degree holders. This indicates that while the majority of teachers meet the minimum academic requirement for teaching, a considerable proportion are engaged in or have completed graduate-level education.

This distribution suggests that respondents generally possess adequate academic qualifications, which may support their ability to understand, interpret, and implement disaster preparedness policies and school safety procedures. At the same time, the presence of teachers pursuing or completing graduate studies may contribute to enhanced professional competence, critical thinking skills, and improved decision-making, particularly in complex responsibilities such as disaster risk reduction and management.

This finding is supported by Mohamed et al. (2024), who emphasized that educational attainment is significantly associated with teachers' knowledge and attitudes toward disaster preparedness. Their study suggests that higher educational levels are linked to improved understanding, more positive attitudes, and better preparedness-related practices, which may enhance the effectiveness of disaster response in school settings.

Furthermore, Dasci Sönmez and Gökmenoglu (2023) highlighted that teachers' demographic characteristics, including educational background, influence their preparedness beliefs and self-efficacy. This implies that teachers with higher academic qualifications may demonstrate greater confidence and stronger professional judgment in implementing safety and emergency procedures.

The International Journal of Disaster Risk Reduction emphasizes the transfer of knowledge and skills from teachers to learners. The objective is to equip learners with the necessary knowledge and skills to engage in Disaster Risk Reduction (DRR)-related

activities and respond effectively to actual disasters. Furthermore, teachers are expected to adopt a proactive approach to continuous Disaster Risk Reduction Education. This approach aims to bridge the gap between theoretical knowledge acquired through training and drills and practical application in safety management.

Based on the data, the results imply that while most teachers possess sufficient basic academic qualifications, the presence of graduate-level education among a portion of respondents may contribute positively to the implementation of disaster preparedness practices. Strengthening opportunities for continuous professional and academic development may further enhance teachers' competence and effectiveness in school disaster risk reduction and management.

1.5 School Size

Table 1.5

Demographic profile of the Respondents in Terms of School Size

School Size	Frequency	Percentage
Small (Below 1,000)		
Medium (1,000–2,000)		
Large (Above 2,000)	40	100
Total	40	100

All respondents (100%) belong to large-sized schools (Above 2,000 students). This indicates uniformity in school size, which explains why no significant comparison can be made across this variable.

This suggests that the findings of the study will primarily reflect the context and conditions of large-sized schools only. Since there is no variation in school size, comparisons across different school categories cannot be made. As a result, the influence of school size on disaster preparedness practices is not examined in this study, and the results should be interpreted within the context of medium-sized institutions alone.

2. Level of implementation of safety and evacuation procedures in the selected schools as perceived by the respondents

Table 2.1
Level of Implementation of Safety and Evacuation Procedures in the Selected Schools as Perceived by the Respondents in terms of Availability and functionality of safety resources and equipment

Availability and Functionality of safety Resources and Equipment	WM	VI
1. Fire extinguishers are available in key areas of the school.	3.62	A
2. First aid kits are complete and accessible when needed.	3.82	A
3. Safety equipment is inspected regularly.	3.59	A
4. Emergency communication systems are functional.	3.38	M A
5. The school has adequate emergency supplies for different types of disasters.	3.74	A
Composite Mean	3.63	A

Legend: 5(4.21-5.00) - Strongly Agree (SA), 4(3.41-4.4.20) – Agree (A), 3(2.61-3.40)- Moderate Agree (MA), 2(1.81-2.60)- Disagree (D), 1(1.00-1.80)-Strongly Disagree (SD)

The results reveal that the availability and functionality of safety resources and equipment in the selected schools are generally adequate, as reflected by the composite mean of 3.63, interpreted as Agree. This indicates that essential safety materials such as fire extinguishers, first aid kits, and emergency supplies are present and accessible within the school environment, which is a critical component of disaster preparedness.

This finding supports the study of Polinar and Gonzaga (2023), which found that schools demonstrate a high level of awareness and implementation of School-Based Disaster Risk Reduction and Management (DRRM) measures, including the provision of safety equipment such as fire extinguishers and other emergency resources. However, their study also emphasized that some safety resources received lower ratings, suggesting that availability does not always guarantee optimal functionality and accessibility.

Among the indicators, first aid kits obtained the highest mean (3.82), suggesting that immediate medical response resources are prioritized and readily available. In fact, public schools in the Philippines are mandated to establish SDRRM corners that disseminate information regarding natural hazards, emergency hotlines, safety routes, evacuation plans, and emergency kits, including SOS kits and first aid kits, to ensure the safety of students during calamities. On the other hand, emergency communication systems received the lowest mean (3.38), interpreted as moderately agreed, indicating that communication systems may not be consistently functional or reliable during emergencies.

This implies that while the schools are adequately equipped with essential safety materials, there are still limitations in communication infrastructure that may affect coordination and response during emergency situations. Strengthening communication systems would therefore enhance the overall effectiveness of disaster preparedness in schools.

Kawasaki (2022) in The International Strategy for Disaster Reduction (ISDR) defines disaster as events that significantly impair a society's functioning, large-scale human casualties due to material, economic, or environmental factors, and surpass the capacity of the affected community to recover using their own resources. In this regard, it is crucial that schools, particularly through their students and teachers, have convenient access to safety resources and equipment for survival. These resources should serve as the final, essential line of defense against injuries, fatalities, and long-term health hazards.

As shown by the results, the findings imply that while schools are adequately equipped with essential safety resources, there are still existing gaps, particularly in terms of communication systems and consistent functionality of equipment. These limitations may hinder efficient coordination and timely response during emergencies. Therefore, it is essential for schools to strengthen their communication infrastructure, conduct regular inspection and maintenance of safety equipment, and ensure proper allocation of resources to enhance overall disaster preparedness.

Table 2.2
Level of Implementation of Safety and Evacuation Procedures in the Selected Schools as Perceived by the Respondents in terms of Clarity and Accessibility of Evacuation Plans and Routes

Clarity and Accessibility of Evacuation Plans and Routes		
1. Evacuation plans are clearly posted in classrooms and hallways.	3.18	M A
2. Evacuation routes are free from obstruction.	3.74	A
3. Assembly areas are clearly designated and known to teachers.	3.72	A
4. I clearly understand my assigned role during evacuation.	3.95	A
5. Students are informed about evacuation procedures at the start of the school year.	4.26	S A
Composite Mean	3.77	A

Legend: 5(4.21-5.00) - Strongly Agree (SA), 4(3.41-4.4.20) – Agree (A), 3(2.61-3.40)- Moderate Agree (MA), 2(1.81-2.60)- Disagree (D), 1(1.00-1.80)-Strongly Disagree (SD)

The composite mean of 3.77 indicates that the clarity and accessibility of evacuation plans and routes are generally perceived as Agree by the respondents. This suggests that evacuation procedures are largely understood and implemented within the schools, reflecting a satisfactory level of preparedness in terms of planning and awareness.

The highest-rated indicator, students are informed about evacuation procedures at the start of the school year (4.26, Strongly Agree), implies that schools prioritize early orientation and dissemination of safety protocols. This finding is consistent with Navigate360 Editorial Team (n.d.), which emphasized that regular orientation and drills help reinforce safety procedures, improve readiness, and enable both students and teachers to respond calmly and appropriately during emergencies. This highlights the importance of continuous information dissemination as a key component of effective disaster preparedness.

Moreover, the high rating for teachers' understanding of their assigned roles during evacuation (3.95, Agree) supports the study of Galicha (2025), which found that structured disaster risk reduction (DRR) training enhances teachers' preparedness, confidence, and ability to guide students during emergencies. This suggests that when roles and responsibilities are clearly communicated, teachers become more effective in executing evacuation procedures, thereby improving overall school safety.

However, the item evacuation plans are clearly posted in classrooms and hallways received the lowest mean (3.18, Moderately Agree), indicating that visual representations of evacuation procedures are not consistently available or visible in all areas of the school. This finding aligns with Polinar and Gonzaga (2023), who identified that certain DRRM measures, particularly those related to accessibility and visibility of safety resources, tend to receive lower ratings despite overall high awareness and participation. This implies that while knowledge and understanding are present, the physical reinforcement of such information through posted plans may still be lacking.

Nogami (2022) noted that the Philippines is visited by an average of 20 typhoons every year, more than anywhere else in the world (GOVPH, n.d.). Consider the possibility of a natural disaster occurring. In the event of such an occurrence, evacuation is a crucial action that individuals must undertake to ensure their survival. It is essential to recognize that disasters are unpredictable and can strike at any time and in any location, including schools. Therefore, it is a pressing matter that evacuation plans and routes be clearly visible and accessible to all students and staff. This can be achieved by prominently displaying evacuation plans and routes in designated areas such as corners, classroom boards, and building entrances.

The findings indicate that while schools demonstrate strong awareness and understanding of evacuation procedures, there is a need to improve the visibility and accessibility of evacuation plans within the school premises. The lack of consistent posting of evacuation maps may hinder immediate decision-making during emergencies, especially in high-stress situations. Therefore, schools should enhance the placement of

clear and visible evacuation signage, regularly update posted plans, and ensure that all areas of the school are equipped with accessible visual guides. Strengthening both the cognitive understanding and physical visibility of evacuation procedures will further improve the effectiveness of school disaster preparedness.

Table 2.3
Level of Implementation of Safety and Evacuation Procedures in the Selected Schools as Perceived by the Respondents in terms of Implementation of School Disaster Risk Reduction (DRRM) Policies

Implementation of School Disaster Risk Reduction (DRRM) Policies		
1. The school has a written disaster preparedness plan.	3.95	A
2. Disaster preparedness plans are updated regularly.	3.51	A
3. School administrators strictly enforce safety policies.	3.97	A
4. DRRM policies are integrated into school activities.	3.54	A
5. Risk assessments are conducted to identify potential hazards.	4.21	S A
Composite Mean	3.84	A

Legend: 5(4.21-5.00) - Strongly Agree (SA), 4(3.41-4.4.20) – Agree (A), 3(2.61-3.40)- Moderate Agree (MA), 2(1.81-2.60)- Disagree (D), 1(1.00-1.80)-Strongly Disagree (SD)

The table reveals a composite mean of 3.84, interpreted as Agree, indicating that the implementation of School Disaster Risk Reduction and Management (DRRM) policies in the selected schools is generally evident. This suggests that schools have established formal disaster preparedness plans and are actively enforcing safety-related policies as part of their institutional practices.

The presence of a written disaster preparedness plan (3.95) and the strict enforcement of safety policies by school administrators (3.97) demonstrate that schools have a structured approach to disaster management. This finding supports Cresencio and Yabut (2023), who emphasized that schools exhibit uniformity in implementing School Disaster Risk Reduction Management (SDRRM) systems, particularly in terms of disaster management structures and policy implementation. Their study highlights the importance of consistent policy enforcement in maintaining safety across school environments.

The highest-rated indicator is the conduct of risk assessments (4.21, Strongly Agree), implying that schools actively identify and evaluate potential hazards as part of their preparedness efforts. Meanwhile, the updating of disaster preparedness plans (3.51) and integration of DRRM into school activities (3.54) received relatively lower ratings, suggesting that continuous updating and full integration into daily operations may still need improvement.

However, the relatively lower ratings for updating disaster preparedness plans (3.51) and integration of DRRM policies into school activities (3.54) suggest that while policies exist, their continuous improvement and full integration into everyday school operations may still be limited. This finding is consistent with Lopez et al. (2018), who noted that although schools generally comply with disaster preparedness programs, there are still gaps in implementation, such as inadequate training resources and the need for continuous program development.

Similarly, the findings support the study of Acierto, Robas, and Monte (2023), which revealed that while schools have existing DRRM policies in place, not all components are fully implemented due to challenges such as limited resources, insufficient training, and lack of policy integration into the curriculum. This indicates that the effectiveness of DRRM policies depends not only on their presence but also on how well they are sustained and embedded in school practices.

Furthermore, Buntong (2020) indicates that the growing emphasis on integrating DRRM programs into the curriculum of public schools, aiming to cultivate a culture of preparedness and resilience as key to educational outcomes among students and educators. So, the implementation of DRRM must involve direct coordination of structure, planning, prevention, preparedness, mitigation, response, and recovery throughout its adoption.

Buntong's study (2020) in the Philippine context emphasizes the significance of integrating DRRM into the K-12 curriculum, emphasizing the need for a holistic approach that incorporates disaster preparedness and resilience as key educational outcomes. Additionally, the work of the United Nations Office for Disaster Risk Reduction (UNISDR) (2015) stresses the importance of community engagement and participatory approaches in DRRM initiatives, highlighting the pivotal role of public schools as hubs for disseminating knowledge and fostering community resilience.

The data reveal that the findings indicate that while schools have established and enforced DRRM policy frameworks, there is a need to strengthen their dynamic implementation, particularly in terms of regular updating and integration into daily school operations. Without continuous improvement and active integration, policies may become outdated or less effective over time. Therefore, schools should prioritize periodic review of disaster plans, strengthen policy integration into curricular and co-curricular activities, and ensure sustained implementation to enhance long-term disaster preparedness and resilience.

Table 2.4

Level of Implementation of Safety and Evacuation Procedures in the Selected Schools as Perceived by the Respondents in terms of Teacher and Student Awareness of Safety Protocols

Teacher and Student Awareness of Safety Protocols		
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1. Teachers are knowledgeable about school disaster protocols.	4.1 8	A
2. Students demonstrate awareness of safety rules.	3.8 2	A
3. Safety reminders are regularly communicated to students.	4.2 1	S A
4. Hazard-prone areas are clearly identified in the school.	3.5 1	A
5. I actively remind students about safety measures during school activities.	3.9 0	A
Composite Mean	3.9 2	A
Grand Mean	3.8 2	A

Legend: 5(4.21-5.00) - Strongly Agree (SA), 4(3.41-4.4.20) – Agree (A), 3(2.61-3.40)- Moderate Agree (MA), 2(1.81-2.60)- Disagree (D), 1(1.00-1.80)-Strongly Disagree (SD)

The composite mean of 3.92 indicates that teacher and student awareness of safety protocols is high, interpreted as Agree. This suggests that both teachers and students possess adequate knowledge of disaster preparedness measures and actively contribute to maintaining a safe school environment. Awareness plays a crucial role in ensuring that safety procedures are not only understood but also properly executed during emergency situations.

The highest-rated indicator, safety reminders are regularly communicated to students (4.21, Strongly Agree), indicates that schools consistently reinforce safety awareness through continuous communication. This finding is supported by Navigate360 Editorial Team (n.d.), which emphasized that regular reinforcement of safety procedures through communication and drills helps improve readiness, reduce panic, and enable individuals to respond appropriately during emergencies. This highlights the importance of consistent reminders in strengthening a culture of preparedness within schools.

Additionally, the high level of teacher knowledge regarding disaster protocols (4.18) aligns with the study of Galicha (2025), which found that teachers who are well-trained in disaster risk reduction (DRR) significantly contribute to improved student safety outcomes. When teachers possess sufficient knowledge and actively guide students, it enhances students' awareness, confidence, and ability to respond effectively during emergencies.

The results are also consistent with the findings of Polinar and Gonzaga (2023),

who reported that teachers demonstrate a high level of awareness and active participation in School-Based Disaster Risk Reduction Management (DRRM) measures. Their study further established that increased awareness is strongly associated with active involvement in implementing safety practices, reinforcing the idea that knowledge directly influences preparedness behaviors.

However, the indicator hazard-prone areas are clearly identified in the school received the lowest mean (3.51), suggesting that spatial awareness of risks may not be fully emphasized or effectively communicated. This finding is supported by Guzman and Zipagan (2024), who identified that physical vulnerabilities and structural limitations in schools can affect preparedness, particularly in terms of identifying safe and unsafe zones within the school environment. Without clear identification of hazard-prone areas, both teachers and students may face difficulties in making immediate and informed decisions during emergencies.

Furthermore, Kawasaki et al. (2022) highlighted that disaster awareness, including the ability to anticipate and recognize potential hazards, is essential in reducing anxiety and improving preparedness. Their findings suggest that strengthening individuals' ability to visualize and understand disaster scenarios enhances their responsiveness and overall readiness.

The results suggest that, the findings imply that while schools demonstrate strong awareness and communication of safety protocols, there is still a need to improve the identification and visibility of hazard-prone areas within school premises. Enhancing this aspect will allow both teachers and students to better recognize potential risks and respond more effectively during emergencies. Schools should therefore strengthen hazard mapping, improve visual indicators of risk areas, and integrate hazard awareness into regular safety discussions and activities.

Moreover, the grand mean of 3.82 indicates that the overall level of implementation of safety and evacuation procedures in the selected schools is high, suggesting that disaster preparedness measures are generally established and practiced. This supports the findings of Cresencio and Yabut (2023), which emphasized the consistent implementation of School Disaster Risk Reduction Management (SDRRM) practices across schools.

However, despite the overall positive results, certain areas such as emergency communication systems, visibility of evacuation plans, and continuous updating and integration of DRRM policies still require improvement. These findings are consistent with Lopez et al. (2018) and Acierto et al. (2023), who identified gaps in implementation despite overall compliance with DRRM standards.

In conclusion, while schools demonstrate a strong foundation in disaster preparedness—particularly in terms of awareness and policy implementation—addressing existing gaps will further enhance the effectiveness of safety and evacuation procedures. Strengthening communication systems, improving visibility of safety

materials, and ensuring continuous policy development are essential in achieving a more comprehensive and resilient school disaster preparedness system.

Research Question No. 3. Level of disaster preparedness training and drill implementation in the selected schools as perceived by the respondents.

Table 3.1
Level of Disaster Preparedness Training and Drill Implementation in the Selected Schools as Perceived by the respondents in terms of Frequency and Quality of Disaster Preparedness Trainings

Frequency and Quality of Disaster Preparedness Trainings	WM	VI
1. Disaster preparedness training are conducted annually.	3.97	A
2. Training addresses different types of disasters (earthquake, fire, flood, etc.).	4.82	SA
3. Training sessions are practical and skills-based.	4.00	A
4. Resource persons during training are knowledgeable.	4.00	A
5. The training activities simulate realistic emergency situations.	3.95	A
Composite Mean	4.15	A

Legend: 5(4.21-5.00) - Strongly Agree (SA), 4(3.41-4.4.20) – Agree (A), 3(2.61-3.40)- Moderate Agree (MA), 2(1.81-2.60)- Disagree (D), 1(1.00-1.80)-Strongly Disagree (SD)

The results show that the frequency and quality of disaster preparedness trainings are generally rated as Agree, with a composite mean of 4.15. This indicates that training programs are regularly conducted and are perceived as relevant, structured, and effective by the respondents. Such findings suggest that schools are actively investing in capacity-building initiatives to enhance teachers' preparedness in handling disaster situations.

The highest-rated indicator, training addresses different types of disasters (4.82, Strongly Agree), reflects that training programs are comprehensive and cover a wide range of emergency scenarios such as earthquakes, fires, and floods. This finding is consistent with the study of Kawasaki et al. (2022), which emphasized that well-designed training programs improve participants' cognitive, emotional, and psychomotor competencies in disaster response. Exposure to diverse disaster scenarios enhances teachers' ability to respond appropriately and adapt to different emergency situations.

As indicated by Chisty (2020) on Disaster Risk Reduction Programs To Increase Public Awareness Of Natural Disaster, Disaster management seen from the perspective of community perception is very urgent and important to know as basic knowledge for the community about what to do in the face of disasters. The main components of disaster risk reduction (DRR) usually include disaster risk assessments, early warning systems,

community awareness and education, and sustainable development. Risk assessment involves identifying, assessing, and analyzing the risks associated with various hazards, including their potential impact on society and the environment. Thus, implementation in terms of frequency and quality of disaster preparedness may help minimize the impact of disasters by alerting populations in the area, in this study; learners and school personnels.

Collectively, the findings suggest that disaster preparedness training programs in the selected schools are regularly conducted, comprehensive, and practical, contributing positively to teachers' level of preparedness. The inclusion of diverse disaster scenarios, hands-on activities, and knowledgeable facilitators enhances the overall effectiveness of these programs.

However, while the results are generally positive, continuous improvement in training design, frequency, and evaluation is still essential to ensure sustained effectiveness. Strengthening training programs through regular updates, advanced simulations, and integration of emerging disaster risks will further enhance the disaster preparedness of teachers and the overall resilience of the school community.

Table 3.2
Level of Disaster Preparedness Training and Drill Implementation in the Selected Schools as Perceived by the respondents in terms of Teacher Competence Developed from Trainings

Teacher Competence Developed from Trainings		
1. I feel confident applying what I learned in training.	4.13	A
2. I can perform basic first aid during emergencies.	3.54	A
3. I know how to coordinate with school DRRM personnel.	4.08	A
4. I understand proper student management during disasters.	4.05	A
5. I can assist students with special needs during emergencies.	4.00	A
Composite Mean	3.96	A

Legend: 5(4.21-5.00) - Strongly Agree (SA), 4(3.41-4.4.20) – Agree (A), 3(2.61-3.40)- Moderate Agree (MA), 2(1.81-2.60)- Disagree (D), 1(1.00-1.80)-Strongly Disagree (SD)

The composite mean of 3.96, interpreted as Agree, indicates that teacher competence developed from disaster preparedness training is generally high. This suggests that teachers feel capable of applying the knowledge and skills they have acquired from training sessions, reflecting the effectiveness of training programs in enhancing their preparedness for emergency situations.

Among the indicators, confidence in applying learned training obtained the highest mean (4.13), indicating that teachers feel relatively prepared to implement what they have

learned in real-life situations. However, the ability to perform basic first aid received the lowest mean (3.54), suggesting that this specific skill may require further reinforcement through more hands-on training. This may suggest further institutions, such as the Red Cross, through its Disaster Management Services (DMS), to assist in training teachers to become volunteers and acquire humanitarian assistance skills during emergency and disaster situations. The objective is to save lives, minimize human suffering, and reduce losses and damages.

According to Setyawan (2021), Disasters are no longer considered a sporadic phenomenon but are managed and reduced as much as possible. It is no longer considered a danger that is impossible to handle. However, in this manner, the issue now lies in how to be adequately prepared and well-informed. This may involve taking the matter seriously and ensuring safety during catastrophic events. To achieve this, further and repeated training and drill implementation are necessary. To include school authorities, the concept of “vulnerability” emerges, as learners and teachers from such disasters have limited experience. Disasters, their causes, and their impact on human existence must be minimized and identified as early as possible to facilitate the development of effective disaster management solutions.

Overall, the findings imply that while teachers demonstrate satisfactory levels of competence in disaster preparedness, there is still a need to strengthen specific practical skills, particularly in first aid. The ability to provide immediate medical assistance is crucial during emergencies, especially in situations where professional medical help may not be immediately available.

Therefore, schools should enhance their training programs by incorporating more hands-on, skills-based activities, particularly in first aid and emergency medical response. Continuous training, simulation exercises, and competency-based assessments will further improve teachers’ preparedness and ensure a more effective and responsive school disaster management system.

Table 3.3
Level of Disaster Preparedness Training and Drill Implementation in the Selected Schools as Perceived by the respondents in terms of Implementation of Disaster Drills

Implementation of Disaster Drills		
1. Disaster drills are conducted regularly.	4.10	A
2. Drill procedures follow the official evacuation plan.	4.05	A
3. Teachers actively participate in drills.	3.95	A
4. Post-drill evaluations are conducted.	3.69	A

5. Feedback from drills is used to improve preparedness plans.	4.13	A
Composite Mean	3.98	A
Grand Mean	4.03	A

Legend: 5(4.21-5.00) - Strongly Agree (SA), 4(3.41-4.4.20) – Agree (A), 3(2.61-3.40)- Moderate Agree (MA), 2(1.81-2.60)- Disagree (D), 1(1.00-1.80)-Strongly Disagree (SD)

The composite mean of 3.98, interpreted as Agree, indicates that the implementation of disaster drills in the selected schools is generally effective and consistent. This suggests that disaster drills are regularly conducted and are aligned with established evacuation procedures, reflecting schools' commitment to reinforcing preparedness through practice-based activities.

The indicator disaster drills are conducted regularly (4.10) confirms that schools recognize the importance of continuous practice in disaster preparedness. This finding is supported by the Navigate360 Editorial Team (n.d.), which emphasized that regular drills help reinforce safety procedures, improve readiness, and enable both students and teachers to respond calmly and appropriately during emergencies. Frequent drills allow individuals to internalize procedures, making responses more automatic during actual disaster situations.

Notwithstanding the Nationwide Simultaneous Earthquake Drill (NSED) which implements a quarterly initiative in the Philippines, led by the NDRRMC through the Office of Civil Defense (OCD), designed to strengthen earthquake preparedness across all sectors. It focuses on key implementation – compliance, reporting, and scenarios. The schedule of 2026 NSED are as follows: for 1st Quarter, March 12, 2026 – 3:30 PM; for 2nd Quarter: June 18, 2026 – 9:00 AM; 3rd Quarter: September 10, 2026 – 2:00 PM; and 4th Quarter: November 5, 2026 – 9:00 AM.

The data reveal that while disaster drills are regularly conducted, structured, and participatory, the evaluation and reflection component require further strengthening. Effective disaster preparedness does not only rely on the conduct of drills but also on the systematic assessment of their outcomes to inform improvements.

Furthermore, the grand mean of 4.03 indicates a high level of disaster preparedness training and drill implementation in the selected schools. This suggests that schools are actively engaging in both training and drills, which significantly contribute to enhancing teachers' preparedness, competence, and response capabilities.

In conclusion, while the implementation of disaster drills is generally strong, schools should place greater emphasis on formal post-drill evaluation, documentation, and continuous improvement mechanisms. Strengthening these aspects will ensure that disaster preparedness practices are not only implemented but are also continuously refined to achieve a more effective and resilient school safety system.

Research Question 4. Relationship between the level of implementation of safety and evacuation procedures and the level of disaster preparedness training and drills.

Table 4
Relationship Between level of Implementation of Safety Evacuation Procedures and the level of Disaster Preparedness Training and Drills

Variable	Computed Pearson r Value	Description	p-value	Decision	Interpretation
Level of safety evacuation and Level of Disaster Preparedness	-0.110	Very Low Correlation	0.506	Do not the Reject the Hypothesis	Not Significant

Note: $p\text{-value} \leq 0.05$ – significant, $p\text{-value} > 0.05$ – not significant

Scale of correlation coefficient	Value
$0 < r \leq 0.19$	Very Low Correlation
$0.2 \leq r \leq 0.39$	Low Correlation
$0.4 \leq r \leq 0.59$	Moderate Correlation
$0.6 \leq r \leq 0.79$	High Correlation
$0.8 \leq r \leq 1.0$	Very High Correlation

The computed Pearson r value of -0.110 indicates a very low negative correlation between the level of implementation of safety and evacuation procedures and the level of disaster preparedness training and drills. The p-value of 0.506, which is greater than the 0.05 level of significance, indicates that the relationship is not statistically significant. Therefore, the null hypothesis is not rejected. This means that there is no sufficient evidence to establish a significant relationship between the two variables in the selected schools.

The negative and very low correlation further suggests that the two variables do not move in the same direction. This implies that an increase in disaster preparedness training and drills does not necessarily correspond to a higher level of implementation of safety and evacuation procedures. In practical terms, this indicates that even if trainings and drills are regularly conducted and perceived as effective, they do not automatically translate into stronger implementation of safety and evacuation protocols within schools.

This finding suggests that the implementation of safety and evacuation procedures may be influenced more by other institutional and operational factors rather than training and drills alone. These may include the availability and functionality of safety resources and equipment, adequacy of school infrastructure, administrative enforcement of policies, and overall organizational support systems. This is supported by Lopez et al. (2018), who emphasized that despite the presence of disaster preparedness programs, gaps in resources, implementation support, and infrastructure may hinder the full effectiveness of DRRM initiatives in schools.

Similarly, Acierto, Robas, and Monte (2023) found that the implementation of DRRM programs is often affected by challenges such as insufficient manpower, limited funding, and lack of proper integration into school systems. These barriers may explain why training and drills alone are insufficient to ensure strong implementation of safety and evacuation procedures.

On the other hand, this result contradicts the findings of Galicha (2025), who reported a strong and significant relationship between teacher training in disaster risk reduction and student safety outcomes, suggesting that training plays a direct role in improving preparedness and response. However, the present study aligns with the findings of Polinar and Gonzaga (2023), which revealed that there is no significant relationship between demographic and training-related variables and the level of DRRM implementation, indicating that awareness and participation alone may not guarantee effective execution of safety practices.

Furthermore, this result implies that disaster preparedness should be viewed as a multidimensional system rather than being dependent solely on training and drills. As emphasized in the Comprehensive School Safety Framework (Shahid, 2024), effective school safety requires the integration of three key pillars: safe learning facilities, school disaster management, and risk reduction education. This means that training and drills represent only one component of a broader system that must be supported by infrastructure, policy enforcement, and resource availability.

Based on the data, the results indicate that while disaster preparedness training and drills are essential components of school safety programs, they are not sufficient on their own to ensure the effective implementation of safety and evacuation procedures. Schools must therefore adopt a more holistic approach that combines training with strong administrative support, adequate resources, functional communication systems, and consistent policy enforcement.

In conclusion, strengthening school disaster preparedness requires not only continuous training and drills but also the enhancement of structural, organizational, and operational factors that collectively support effective implementation of safety and evacuation procedures.

Research Question 5 . Difference in the level of implementation of safety and evacuation procedures and the level of disaster preparedness training and drill

implementation in the selected schools as perceived by the respondents when grouped according to profile.

Table 5.1
Difference in the Level of Implementation of Safety and Evacuation Procedures in the Selected Schools as perceived by the Respondents When Grouped According to Profile

Profile	Mean	Computed ANOVA Value	p-value	Decision	Interpretation
Years of Teaching Experience					
0-5 years old	3.81	0.854	0.434	Do not Reject the Hypothesis	Not Significant
6-10 years old	3.80				
11-15 years old	3.98				
Number of Disaster-Related Trainings Attended					
None	3.78	0.747	0.481	Do not Reject the Hypothesis	Not Significant
1-2	3.86				
3-4	3.89				
Number of Disaster Drills Participated in During the Past Year					
None	3.73	1.679	0.178	Do not Reject the Hypothesis	Not Significant
1-2	3.84				
3-4	3.83				
5 or more	3.62				
Number of Educational Qualification					
Bachelor's Degree	3.86	0.501	0.610	Do not Reject the Hypothesis	Not Significant
With Master's Units	3.78				
Master's Degree Holder	3.79				
School Size					
Medium (1,000–2,000)	3.82	Cannot be computed since only one variable			

Note: p-value ≤ 0.05 – significant, p-value > 0.05 – not significant

The results of the ANOVA test show that there are no significant differences in the level of implementation of safety and evacuation procedures when respondents are grouped according to years of teaching experience ($p = 0.434$), number of disaster-related trainings attended ($p = 0.481$), number of disaster drills participated in ($p = 0.178$), and

educational qualification ($p = 0.610$). All p -values are greater than 0.05, leading to the non-rejection of the null hypothesis for all variables.

This indicates that respondents, regardless of their demographic profile, have similar perceptions of the level of implementation of safety and evacuation procedures in their schools. It suggests that the implementation of safety measures is likely standardized or uniformly practiced across the selected schools, resulting in minimal variation in how these procedures are observed and experienced by different groups of teachers.

In addition, this may imply that school-level policies, administrative directives, and established safety protocols play a more influential role in shaping the implementation of safety and evacuation procedures than individual characteristics such as teaching experience, training exposure, or educational attainment. Since schools typically follow mandated guidelines for disaster preparedness and evacuation, these standardized systems may ensure consistency in implementation regardless of differences among respondents.

This also suggests that teachers, regardless of their profile, are operating within the same institutional framework and are exposed to similar procedures, training content, and enforcement mechanisms. As a result, their assessments of safety and evacuation implementation tend to converge rather than differ significantly.

This finding aligns with Polinar and Gonzaga (2023), who found that DRRM practices in schools do not significantly vary when respondents are grouped according to profile variables, implying that institutional policies and school-wide systems may have a stronger influence than individual characteristics.

In conclusion, the results suggest that factors such as experience, training exposure, and educational attainment do not significantly influence teachers' perceptions of safety and evacuation implementation. This reinforces the idea that standardized school policies and coordinated implementation strategies contribute to a consistent level of safety practices across different groups of respondents.

Table 5.2
Difference in the Level of Disaster Preparedness Training and Drill Implementation in the Selected Schools as perceived by the Respondents When Grouped According to Profile

Profile	Mean	Computed ANOVA Value	p-value	Decision	Interpretation
Years of Teaching Experience					
0-5 years old	4.01	ANOVA Value = 0.874	0.426	Do not Reject the Hypothesis	Not Significant
6-10 years old	4.02				
11-15 years old	4.20				
Number of Disaster-Related Trainings Attended					
None	4.05	0.354	0.705	Do not Reject the Hypothesis	Not Significant
1-2	3.97				
3-4	4.06				
Number of Disaster Drills Participated in During the Past Year					
None	3.82	0.745	0.568	Do not Reject the Hypothesis	Not Significant
1-2	4.03				
3-4	4.08				
5 or more	4.11				
Number of Educational Qualification					
Bachelor's Degree	4.03	0.060	0.942	Do not Reject the Hypothesis	Not Significant
With Master's Units	4.05				
Master's Degree Holder	4.00				
School Size					
Medium (1,000–2,000)	4.03	Cannot be computed since only one variable			

Note: p-value ≤ 0.05 – significant, p-value > 0.05 – not significant

The results of the ANOVA test reveal that there are no significant differences in the level of disaster preparedness training and drill implementation when respondents are grouped according to years of teaching experience ($p = 0.426$), number of disaster-related trainings attended ($p = 0.705$), number of disaster drills participated in ($p = 0.568$), and educational qualification ($p = 0.942$). All p-values are greater than 0.05, leading to the non-rejection of the null hypothesis across all variables.

This indicates that respondents, regardless of their profile, have similar perceptions of disaster preparedness training and drill implementation in their respective

schools. It suggests that training programs and drill activities are consistently implemented across groups, resulting in relatively uniform experiences among teachers.

In addition, this uniformity may imply that disaster preparedness initiatives are centrally planned and systematically implemented within the schools. Since training schedules, drill procedures, and preparedness activities are typically guided by institutional policies and DepEd-mandated DRRM frameworks, all teachers—regardless of their background—are exposed to similar training content, frequency, and implementation processes. This reduces variability in how disaster preparedness training and drills are experienced and evaluated by respondents.

Furthermore, the results suggest that individual characteristics such as years of experience, number of trainings attended, and educational attainment do not significantly influence how teachers perceive the implementation of disaster preparedness programs. This may indicate that the quality and structure of training and drills are standardized enough to produce consistent outcomes across different groups of respondents. In other words, the effectiveness and delivery of training are likely uniform, minimizing differences in perception.

The findings also imply that the schools' disaster preparedness systems are implemented in a coordinated manner, where participation in trainings and drills is not dependent on personal background but is instead required and regulated across all personnel. This contributes to a shared understanding and similar evaluation of preparedness efforts among teachers.

This supports the study of Polinar and Gonzaga (2023), which found that DRRM implementation does not significantly vary when respondents are grouped according to profile variables, suggesting that school-based systems and policies play a key role in ensuring consistency in implementation.

Ultimately, the results indicate that disaster preparedness training and drill implementation are uniformly perceived across different demographic groups, reinforcing the effectiveness of standardized school practices in promoting consistent preparedness. This also highlights the importance of maintaining structured, policy-driven DRRM programs to sustain uniformity and ensure that all teachers, regardless of profile, receive equal opportunities to develop disaster preparedness competencies.

Research Question 6. Based on the findings of the study, what teacher capacity enhancement program may be proposed to strengthen practical disaster preparedness knowledge and skills?

Based on the findings of the study, a Teacher Capacity Enhancement Program on Disaster Preparedness and Response is proposed to strengthen teachers' practical knowledge and skills in disaster risk reduction and management (DRRM). Although the results show a generally high level of implementation of safety procedures and training, there are still areas that require improvement, particularly in practical application (e.g.,

first aid skills), emergency communication systems, and post-drill evaluation practices. Thereby, the proposed program focuses on skills-based, simulation-driven, and continuous development training designed to enhance teachers' competence in real-life emergency situations. The program may include the following key components:

Conclusions

Based on the foregoing findings, the following conclusions were drawn:

1. The respondents are mostly early-career teachers with limited years of experience, and more than half have not attended any disaster-related training, although many have participated in at least one or two disaster drills and possess at least a bachelor's degree.
2. The level of implementation of safety and evacuation procedures in schools is high, indicating that schools generally follow established protocols and that teachers and students are aware of safety measures.
3. The level of disaster preparedness training and drill implementation is also high, showing that schools regularly conduct trainings and drills that help build general preparedness among teachers.
4. There is no significant relationship between the level of disaster preparedness training and drills and the implementation of safety and evacuation procedures, suggesting that trainings do not directly influence implementation outcomes.
5. There are no significant differences in the level of implementation of safety procedures and disaster preparedness training when respondents are grouped according to their profile variables, indicating consistency in experiences and perceptions across different groups of teachers.
6. Despite the high levels of implementation and training, gaps remain in practical application, particularly in first aid skills, emergency communication systems, and post-drill evaluation, indicating the need for a Teacher Capacity Enhancement Program focused on improving hands-on competencies and continuous improvement practices.

Recommendations

In the light of the conclusions drawn from the study, the following are hereby recommended:

1. School administrators and education stakeholders may consider providing more opportunities for teachers to attend disaster-related training programs to further enhance their knowledge and preparedness, especially for those with limited training exposure.
2. Schools may continue strengthening the implementation of safety and evacuation procedures by sustaining regular drills, improving awareness campaigns, and

ensuring that safety protocols are consistently followed by both teachers and students.

3. School authorities are encouraged to maintain and further improve the conduct of disaster preparedness trainings and drills by incorporating more realistic, scenario-based, and interactive activities that enhance practical learning.
4. Since no significant relationship was found between training and implementation, schools may revisit and redesign their disaster preparedness programs to ensure that training outcomes are effectively translated into actual practice.
5. Educational planners and administrators may continue implementing standardized disaster preparedness practices across schools while also considering targeted support programs that address specific needs rather than relying solely on demographic differences.
6. A Teacher Capacity Enhancement Program on Disaster Preparedness and Response is recommended to strengthen practical competencies, particularly in first aid skills, emergency communication systems, DRRM coordination, and post-drill evaluation. Continuous professional development and regular refresher courses should also be integrated to ensure sustained improvement in teachers' disaster preparedness capabilities.

This training program is designed to enhance the capacity of teachers and school personnel to prepare for, respond to, and recover from disaster situations, ultimately fostering a culture of safety and resilience in schools.

I. GENERAL PROGRAM INFORMATION:	
Program Title	"Teacher Capacity Enhancement Program on Disaster Preparedness and Response"
Duration	2 days
Participants	15 MAPEH Teachers
Date	April 28-29, 2026
Venue	Silangan National High School (AVR Room)
Delivery Mode	Formal Face to Face
Rationale	Teachers generally implement safety protocols and participate in training activities, according to a new study on disaster preparedness. Despite these encouraging results, some crucial areas still need to be strengthened, including the actual application of first aid skills, the efficiency of emergency communication systems, and the uniformity of post-drill evaluation procedures. These gaps demonstrate the need for a training program that is more thorough, skill-based, and goes beyond theoretical comprehension. In order to ensure the safety and well-being of pupils during emergencies, teachers must possess not only the necessary information but also the competence and self-assurance to act appropriately in actual disaster scenarios.

	By emphasizing practical instruction, simulation-based exercises, and ongoing professional development, this suggested Teacher Capacity Enhancement Program on Disaster Preparedness and Response seeks to meet these demands. Teachers will boost coordination and communication mechanisms, improve evaluation procedures after catastrophe simulations, and gain real emergency response skills through this effort. The program's ultimate goal is to instill in the school community a culture of readiness, resiliency, and proactive reaction.				
Objectives	After completing the training course, the teachers are capable of: 1. Show off your emergency response and first aid abilities. 2. Participate in and lead simulation-based disaster exercises with effectiveness. 3. During emergencies, follow the proper emergency communication procedures. 4. Boost leadership and coordination roles in the implementation of DRRM in schools. 5. Create improvement action plans and carry out post-drill assessments.				
End of Program Outputs	A. Formal Face to Face: At the conclusion of the training, participants will present their developed outputs in a formal setting. These include: 1. Disaster Response Plan: With an emphasis on responsibilities, processes, and coordination mechanisms, each group will create and present a structured disaster response plan specific to their school. 2. Simulation Drill Plan: Using realistic reaction techniques and coordination procedures, participants will create a scenario-based catastrophe drill plan (such as an earthquake, fire, or flood). B. Expected Final Outputs: Upon completing the training program, participants are expected to achieve the following outcomes: 1. Improved Emergency Response Skills: Teachers will exhibit increased proficiency in emergency response protocols, first aid, and basic life support. 2. Better DRRM Implementation: Teachers will be more adept at putting disaster preparedness measures—such as communication systems, coordination, and evaluation procedures—into practice.				
II. PROGRAM CONTENT FOCUS:					
Modules	Session Title	Session Objectives	Content	Duration	Expected Output
1	Hands-on First Aid and Emergency Response	Develop practical first aid skills	Basic life support, wound care, emergency response techniques, return demonstrations	3 hours	Demonstrated first aid skills
2	Simulation-Based Disaster Drills	Enhance participation in realistic drills	Scenario-based drills (earthquake, fire, flood), decision-making, coordination	3 hours	Draft of simulation

					drill plan
3	Emergency Communication Systems	Strengthen communication during emergencies	Communication tools, protocols, reporting systems	3 hours	Communication plan
4	DRRM Leadership and Coordination	Improve leadership roles in DRRM	Roles and responsibilities, coordination with DRRM teams	2 hours	Role assignment plan
5	Post-Drill Evaluation and Feedback	Develop evaluation and improvement strategies	Debriefing techniques, gap analysis, action planning	2 hours	Evaluation framework

III. PROGRAM SCHEDULE:

Seminar "Teacher Capacity Enhancement Program on Disaster Preparedness and Response" April 28-29, 2026

I. Opening Program

- Opening Remarks
- Statement of Purpose

II. Seminar Proper

- Hands-on First Aid and Emergency Response
- Simulation-Based Disaster Drills
- Emergency Communication Systems
- DRRM Leadership and Coordination
- Post-Drill Evaluation and Feedback

III. Closing Ceremonies and Giving of Certificates

- Recognition and Awarding
- Reflections and Sharing
- Guest Speaker Remarks

IV. Closing Remarks

- Program Coordinator's Address
- Acknowledgment of Organizers and Participants
- Future Steps and Continued Support
- Formal Closure

IV. INTEGRATION SESSIONS:

Collaborative sessions where teachers share best practices, reflect on experiences, and integrate disaster preparedness strategies into their school systems and classroom management practices.

V. ASSESSMENT AND REFLECTION:

The program will use continuous assessment methods such as observation, participation in simulations, and return demonstrations to evaluate teachers' skills. A final reflective session will be conducted to share insights and assess the program's effectiveness and areas for improvement.

Table 6.2

ESTIMATED BUDGET FOR TEACHER CAPACITY ENHANCEMENT PROGRAM ON DISASTER PREPAREDNESS AND RESPONSE

6. The estimated budget is designed for a two-day School-Based Teacher Capacity Enhancement Program on Disaster Preparedness and Response, catering to 15 MAPEH teachers. It assumes a mix of in-house expertise and external speakers. Cost-efficient strategies such as the use of existing school facilities, partnerships with stakeholders, and reusable learning materials are recommended to optimize resources. Funding may be sourced from school Maintenance and Other Operating Expenses (MOOE), Special Education Fund (SEF), and support from local stakeholders. All costs are estimates in Philippine Pesos and may be adjusted based on school context, available resources, and partnerships.

Item / Activity	Description	Estimated Quantity	Unit Cost (PHP)	Total Amount (PHP)
I. Training Materials & Supplies				
Training Kits	Folders, pens, notebooks, handouts	15 sets	100.00	1,500.00
Workshop Materials	Cartolina, markers, masking tape, flipcharts	Lot	1,500.00	1,500.00
Tarpaulin & Backdrop	Venue decoration/branding	1 pc	500.00	500.00
II. Meals and Snacks				
Snacks (AM/PM)	2 days (4 snacks)	15 pax x 4	50.00	3,000.00
Lunch	2 days	15 pax x 2	150.00	4,500.00
III. Honoraria & Training Staff				
External Speaker/Trainers	BFP/DRRMO personnel	2 pax x 2 days	2,000.00	8,000.00
Certificates & Tokens	For speakers/trainers	Lot	1,000.00	1,000.00
IV. Equipment & Logistics				
Sound System/LCD Rental	(If not available in-house)	2 days	1,000.00	2,000.00
Simulation Gear/Props	First aid kits, stretcher, fire extinguishers	Lot	2,000.00	2,000.00
V. Miscellaneous				
Contingency Fund	For unexpected expenses	-	-	2,000.00
TOTAL ESTIMATED BUDGET				PHP 26,000.00

This proposed program aims to address the gaps identified in the study by focusing not only on awareness but also on practical application, system efficiency, and continuous improvement. By strengthening these areas, teachers will be better equipped to respond effectively to emergencies and contribute to a safer school environment.

Table 6.3

EXPECTED OUTCOME OF TEACHER CAPACITY ENHANCEMENT PROGRAM ON DISASTER PREPAREDNESS AND RESPONSE

A teacher capacity enhancement program on disaster preparedness and response is designed to transition educators from basic awareness to active, confident managers of school safety.

Domain	Expected Outcome
Cognitive	Deep understanding of local hazards, risk assessment, and school protocols.
Practical	Proficiency in first aid, evacuation procedures, and simulation drills.
Attitude	High self-efficacy, readiness to lead, and a proactive culture of safety.
Systemic	Functional School DRRM committee and documented emergency plans.

The Department of the Interior and Local Government (DILG) continues to enhance the capacities of local government units (LGUs) in disaster preparedness through robust systems-based protocols, grassroots engagement, and anticipatory planning. Following President Ferdinand R. Marcos, Jr.'s 2025 State of the Nation Address, the DILG reaffirmed its commitment to building resilient communities by equipping both barangays and cities in partnership with the Department of Education and National Disaster Risk Reduction Management Office (NDRRMO) with tools that prevent loss of lives and ensure rapid response.

Former DILG secretary, Remulla (2025) said that the Department's posture is simple but resolute: anticipate, prepare, and act decisively before disasters strike. Disaster preparedness must be embedded in how we govern every day.

In an International Peer Reviewed Journal of Galicha (2025) titled "The Relationship Between Teacher Training In Disaster Risk Reduction And Student Safety Performance In Public High Schools", students taught by well-trained teachers demonstrated higher levels of preparedness, including familiarity with emergency protocols, confidence in managing crisis situations, and increased participation in school-based safety initiatives. Moreover, the presence of structured drills, teacher-guided emergency routines, and integration of first-aid knowledge contributed to students' overall sense of safety. Thus, it is important that the training program must be implemented.

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