

Disaster Preparedness and Risk Reduction Management in Governor Feliciano Leviste Memorial National High School Lemery, District, Division of Batangas

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Abstract: School is said to be the heart of the community where our next generation stays most of the time than in their own houses, thus, disaster are very much vulnerable to the students. The concept of a safe school and overall well-being of school children is gaining its significance under the overarching commitment towards quality education for all. In addition, due to vulnerability of the country in the effects of climate change and wrath of nature, management of schools does not only deal on students, facilities, curriculum, community partnership but also disaster management and prevention. It is the school's concern and responsibility to ensure the safety of the students in which they need the support of the local government and of course the Department of Education. Hence, being alert about possible hazards is an important aspect in a school, to guard the damages caused by floods, landslides, strong winds caused from falling trees and worst was broken houses, buildings and even school physical structures which have convinced us that the society should be better prepared to cope with such disasters in the future. Therefore, the Department of Education has a yearly conduct of earthquake drill and prioritizing the mainstreaming of disaster risk reduction management in school system.

Keywords: Alert, Disaster, Responsibility, Risk reduction.

1. Introduction

Education is considered to be the best way for making a safe and disaster resilient society. School is an important agency to reduce disasters risk through knowledge, innovation and education. Teachers and students play crucial roles in the development of a culture of prevention and preparedness, because they can transfer knowledge and skills to the family and community. Therefore, the active participation of teachers and students in school disaster safety programs are desired for moving the world towards a safer living place and sustainable developed society.

School disaster management involves the familiar cycle of steps found in all project management: assess hazards, vulnerabilities, capacities and resources; plan and implement for physical risk reduction, maintenance of safe facilities, standard operating procedures and training for disaster

response; regular test mitigation and preparedness plans and skills, with realistic simulation drills; and revise plan based on your experience.

2. Literature Survey

In the Philippines, calamities and disasters have always hounded the populace as well as education. In July 16, 1991,

The country experienced a major earthquake. The jolt happened at 4:26 p.m. local time on the densely populated island of Luzon. The shock had a surface wave magnitude of 7.8 and produced a 125 km-long ground rupture that stretched from Dingalan, Aurora to Cuyapo, Nueva Ecija. The event was a result of strike-slip movements along the Philippine Fault and the Digdig Fault within the Philippine Fault System. The earthquake's epicenter was near the town of Rizal, Nueva Ecija, northeast of Cabanatuan City. An estimated 1,621 people were killed most of the fatalities located in Central Luzon and the Cordillera region.

Recently, the country once again is in the mercy of natural calamity when Typhoon Haiyan, known locally as Typhoon Yolanda, was one of the strongest tropical cyclones ever recorded, devastated portions of Southeast Asia, particularly the Philippines, in early-November 2013. It is the deadliest Philippine typhoon recorded in modern history killing at least 6,300 people in the country alone. Haiyan is also the strongest storm recorded at landfall, and the second-strongest tropical cyclone ever recorded in terms of one-minute sustained wind speed. The thirtieth named storm of the 2013 Pacific typhoon season, Haiyan originated from an area of low pressure several hundred kilometers east-southeast of Pohnpei in the Federated States of Micronesia on November 2, 2013.

On January 12, 2020 Taal Volcano erupted, three weeks after Taal Volcano's phreatic eruption on January 12, 2020, PHIVOLCS lowered the Alert Level from 4 to 3. At this time, more than 400,000 people have been affected. Satellite images complemented with reports from the ground revealed

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environmental changes and social impacts of the eruption. Satellite observations detected drying of Taal’s crater, ash deposits on the volcano island and the surrounding provinces, increased turbidity in Laguna Lake, damaged fish pens, and ground deformation.

For disaster preparedness to be achieved in schools, the Disaster Risk Reduction Resource Manual Philippines (2008) and Republic Act (RA) No. 10121 entitled The Philippine Disaster Risk Reduction and Management Act, mandate that all heads of the department, bureaus, offices, agencies, instrumentalities and political sub-divisions of the government, the armed forces, government hospital and public educational institutions to establish their respective disaster control organizations. Information dissemination campaigns on basic concepts for all hazards, their causes, preventive measures, and consequences shall be used as one of the strategies in providing awareness and knowledge to the public. This shall be implemented through integration of disaster risk reduction concepts in school curricula as contained in Department Memorandum No. 100, s. 2007 “Mainstreaming Disaster Risk Reduction Concepts in the Secondary Curriculum”, and mainstreaming disaster risk management in the school system as contained in DepEd Order no. 55, s. 2007 “Prioritizing the Mainstreaming of Disaster Risk Reduction Management in the School System and Implementation of Programs and Projects Relative Therefore”.

3. Methods

A. Problem

Was there a significant difference in the assessments of the respondents regarding the following aspects:

1. Implementation of disaster preparedness and risk reduction management;
2. Disaster preparedness and mitigations against Philippine hazards as provided in the Disaster Risk Reduction Manual;
3. Adequacy of the requirements and materials of the school regarding disaster preparedness and risk reduction management; and
4. Extent of the problems encountered by Governor F, Leviste MNHS regarding disaster preparedness and risk reduction management?
5. What action plan may be proposed to effectively implement the school disaster risk reduction management program in Governor F. Leviste MNHS, Lemery District, Division of Batangas?

B. Hypothesis

There was no significant difference in the assessments of the respondents regarding the disaster preparedness and risk reduction management of the schools.

1. The assessment of the respondents regarding their knowledge about disaster preparedness and mitigations against Philippine hazards as provided in the DRR manual have no significant difference.
2. The assessments of the respondents regarding the

adequacy of the requirements and materials of the schools regarding disaster preparedness and risk reduction management have a significant difference.

3. There was no significant difference about the assessments of the respondents on the problems encountered by the secondary schools regarding the disaster preparedness and risk reduction management.

C. Research Design

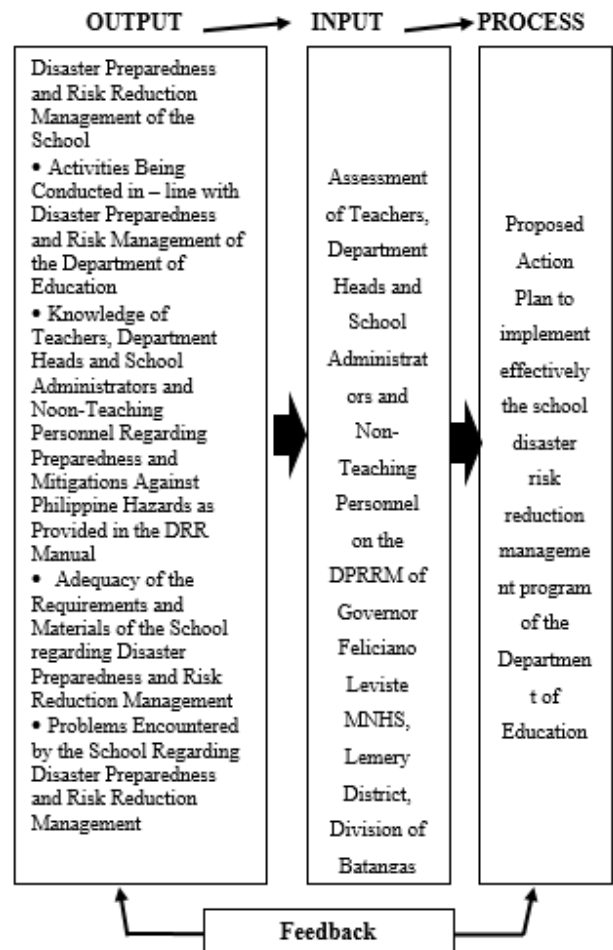
The study utilized the descriptive method of research to assess the status of the disaster preparedness and risk reduction management in Governor F. Leviste MNHS, Lemery District, Division of Batangas for the school year 2020– 2021.

The main gathering tool used in this study is the questionnaire. This was formulated himself by the researcher in relation to the specific problems of the study.

D. Research Sample

The respondents of this study emanated from Faculty and Staff of Governor F. Leviste MNHS Lemery District, Division of Batangas. They were composed of 238 secondary school teachers and 17 Non-teaching personnel as respondents who were chosen using the Slovin’s formula.

4. Conceptual Paradigm of the Study



Proposed Action Plan to Effectively Implement the School Disaster Risk Reduction Management Program in Governor F. Leviste MNHS, Lemery District, Division of Batangas. SY 2020-2021.

Table 1

Areas of Concern	Objectives	Strategies	Persons Involved	Time Frame	Expected Results
1. Activities conducted in – line with Disaster Preparedness and Risk Reduction Management of the Department of Education	1. Implement regularly the activities in – line with disaster preparedness and risk reduction management of the Department of Education in GF:MNHS with the participation of both internal and external stakeholders.	1. Conducting regularly disaster drills and other related activities in line with the disaster preparedness and risk reduction management. 2. Involving external stakeholders and concerned agencies in the activities.	School Administrators Department Heads Teachers Non-Teaching Students LGU Concerned Government Agencies	Year Round	1. Realized a meaningful and constant implementation of the activities in – line with disaster preparedness and risk reduction management of the Department of Education in GF:MNHS
2. Mainstreaming of the Disaster Preparedness and Risk Reduction Concepts in the Classes as Provided in the DRR Manual	1. Mainstream constantly the disaster preparedness and risk reduction management of the school and its concepts in the classes by the teachers.	1. Monitoring and observing the mainstreaming of the disaster preparedness and risk reduction management concepts in the classes. 2. Preparing and submitting accomplishment reports regarding the mainstreaming of the disaster preparedness and risk reduction management concepts in the classes.	School Administrators Department Heads Teachers Non-Teaching Students	Year Round	1. Demonstrated readiness against disaster and risk by the students and school personnel. 2. Showed strong commitment by all stakeholders regarding the preservation of life and properties.
3. Mitigation Measures being Implemented against Natural Calamities and the Programs Related in the Mainstreaming of the Disaster Risk Reduction Management	1. Employ steadily the mitigation measures against natural calamities and the programs related in the mainstreaming of the disaster risk reduction in the School System	1. Monitoring and observing the implementation of the mitigation measures against natural calamities and the programs related in the mainstreaming of the disaster risk reduction management in the school system. 2. Preparing and submitting accomplishment reports regarding the mainstreaming of the implementation of the mitigation measures against natural calamities and the programs related in the mainstreaming of the disaster risk reduction management in the school system.	School Administrators Department Heads Teachers Non-Teaching Students	Year Round	1. Demonstrated readiness against disaster and risk by the students and school personnel. 2. Showed strong commitment by all stakeholders regarding the preservation of life and properties
4. Human – Induced Hazards	1. Train the school personnel regarding the concepts of disaster preparedness and mitigations against human – induced hazards. 2. Include the concepts of disaster preparedness and mitigations against human – induced hazards in the classes.	1. Conducting training to school personnel regarding disaster preparedness and mitigations against human – induced hazards. 2. Observing classes in relation to disaster preparedness and mitigations against human – induced hazards 3. Inviting key speakers from concerned government agencies who have vast experience and knowledge in disaster preparedness and risk reduction management.	School Administrators Department Heads Teachers Students LGU Concerned Government Agencies	Year Round	1. Enhanced both students and school personnel about their knowledge on the concepts of disaster preparedness and mitigations against human – induced hazard. 2. Manifested a strong commitment to disaster preparedness and risk reduction management of all stakeholders.

5. Adequacy of the Requirements and Materials of the School Regarding Disaster Preparedness and Risk Reduction Management	1. Prepare and or acquire the requirements and materials in relation to disaster preparedness and risk reduction management	1. Seeking assistance from LGU and concerned government agencies in order to secure the funds and materials for the implementation of the disaster preparedness and risk reduction management. 2. Allocating funds for the materials and requirements in relation to disaster preparedness and risk reduction management.	School Administrators Department Heads Teachers Students LGU Concerned Government Agencies	Year Round	1. Achieved full adequacy and availability of the requirements and materials in relation to disaster preparedness and risk reduction management. 2. Exhibited cooperation of all stakeholders on disaster preparedness.
6. Problems Encountered by the Secondary Schools Regarding Disaster Preparedness and Risk Reduction Management	1. Lessen the difficulties encountered by the secondary schools in implementing the programs and activities in relation to disaster preparedness and risk reduction management.	1. Focusing on the imminent threat to the activities of the disaster preparedness and risk reduction management of the school. 2. Securing the assistance and expertise of all concerned groups and stakeholders in the possible solutions.	School Administrators Department Heads Teachers Students LGU Concerned Government Agencies	Year Round	1. Minimized problems encountered by the secondary schools in implementing the programs and activities in relation to disaster preparedness and risk reduction management.

5. Conclusion

Based from the foregoing findings, the study concluded that:

1. The respondents sometimes organize in relation to disaster prepared and risk reduction management.
2. The respondents asserted that they are familiar and knowledgeable on the disaster preparedness and mitigations against Philippine hazards as what is mandated in the DRR Manual.
3. The respondents emphasized that the materials of the school regarding disaster preparedness and risk reduction management is moderately adequate.
4. There was a great extent regarding the problems encountered by the respondents during the implementation of the disaster preparedness and risk reduction management.
5. There was no significant difference in the assessments of the respondents regarding the disaster preparedness and risk reduction management of Gov. F. Leviste MNHS.
6. There was no significant difference in the assessments of the respondents regarding their knowledge about disaster preparedness and mitigations against Philippine hazards as provided in the DRR manual.
7. There was a significant difference on the assessments of the respondents regarding the adequacy of the requirements and materials of the school regarding disaster preparedness and risk reduction management.
8. There was no significant difference about the assessments of the respondents on the problems encountered by Governor F. Leviste MNHS regarding the disaster preparedness and risk reduction management.
9. An action plan to effectively implement the school disaster preparedness and risk reduction management program in Governor F. Leviste MNHS, Lemery District, Division of Batangas was proposed.

6. Recommendations

In the light of the aforementioned findings and conclusions, the researcher offers the following recommendations:

1. Governor Feliciano Leviste MNHS, Lemery District, Division of Batangas should give immediate emphasis on the programs and policies in relation to disaster preparedness and risk reduction management.
2. There is a need for the respondents to constantly familiarize themselves about the disaster preparedness and mitigations against Philippine hazards as what is mandated in the DRR Manual.
3. The school administrators, department heads, teachers and non-teaching personnel themselves should find ways and means to acquire the other materials for the effective implementation of the policies and programs of the disaster preparedness and risk reduction management.
4. Give preferential attention on the problems that have a great effect on the disaster preparedness and risk reduction management of the school.
5. The proposed action plan of to effectively implement the school disaster preparedness and risk reduction management program of GFLMNHS should be carefully studied by the all three groups of respondents for amendments before its implementation.
6. A similar study should be undertaken in the future specifically using in the elementary level in order to arrive on a much larger scope.

References

- [1] DepEd and UNICEF, Disaster Risk Reduction Resource Manual. Plan International Philippines: 2008.
- [2] Davis, I. and Wall, M., Christian Perspective in Disaster Management Tear fund, Middlesex, 1999.
- [3] Librera, W., Bryant, I. and Martz, S., The School safety manual: Best Practices Guidelines, Department of Education, Trenton; New Jersey, 2008.

- [4] Towards a Disaster Safe School – National Guidelines for School Disaster Safety, 7 Steps in School Disaster Safety Planning, Sri Lankan-German Development Cooperation.
- [5] Schneider, S.K., *Dealing with Disaster Public Management in Crisis Situation*, (Second Edition); London England, 1952.
- [6] Tejero, Erlinda G., *Thesis and Dissertation Writing: A Modular Approach*, Mandaluyong City: National Book Store, 2004.
- [7] Zulueta, F. A. & Perez, J. R. *Methods of Research Thesis Writing and Applied Statistics*. Navotas City: Navotas Press, 2010.
- [8] 1990 Luzon Earthquake, Retrieved November 10, 2015, https://en.wikipedia.org/wiki/1990_Luzon_earthquake
- [9] Alderas, Don and Duroy, Chozara P., (2015), *Disaster Risk Reduction and Management: Bicol Experience*, Retrieved November 10, 2015, <http://hubpages.com/education/Disaster-Risk-Reduction-and-Management-Bicol-Experience>
- [10] Amstauch, (2014), *Best Practices on Earthquake Drills*, Retrieved November 10, 2015, <http://www.fgsna.com/best-practices-earthquake-drills/>
- [11] Caribbean Disaster Emergency Management Advisory, CDEMA (2015), *Earthquake Drills*, Retrieved December 5, 2015, http://www.weready.org/earthquake/index.php?option=com_content&view=article&id=26&Itemid=44
- [12] Ganguly, P. (2010). *What causes Earthquakes* www.buzzle.com/articles
- [13] Kikuvi, E.M. (2011), *Secondary schools' preparedness on disaster Management in the Provision of Education in Nairobi Country Kenya*. February 26, 2014, <http://researchkenya.or.ke/node/17296>
- [14] NCEF (2008). *Earthquakes and schools*. U.S. Department of Education, Office of safe and Drug-free schools www.Ncef.org
- [15] Osburn, T (2008). *Hazard mitigation and Disaster Preparedness Planning at American Coastal University: Seeking the disaster-resistant unveet*. From <http://digital.Lubarary.unt.edu/ark67531>
- [16] Pajayon – Berse, Pilar, *Establishing Disaster Education in the School System*, Political Science Department, Ateneo de Manila University: *Business World On – line*, Retrieved November 10, 2015, <http://www.bworldonline.com/content.php?section=Opinion&title=establishing-disaster-education-in-school-systems&id=118342>
- [17] Typhoon Haiyan, Retrieved November 10, 2015, https://en.wikipedia.org/wiki/Typhoon_Haiyan
- [18] United Nations Office for Disaster Risk Reduction (2007), *Towards a Culture of Prevention: Disaster Risk Reduction Begins at School, Good Practices and Lessons Learned*, Retrieved November 10, 2015, <https://www.unisdr.org/we/inform/publications/761>
- [19] Kelly, M. *Fire Drills: How to be prepared and lead during a fire drill*. New York Times Company; New York, 2010.
- [20] Munyasi, A.W. *Introduction to Disaster Management*. Institute of open learning module Kenyatta University, 2002.
- [21] Niekerk, K.D. USAID: *Introduction to Disaster Risk Reduction*. South Africa; ACDSI, 2011.
- [22] UNISDR, *Disaster Prevention for Schools Guidance for Education Sector Decision- Makers: Consultation version*, November 2008, Thematic Platform for Knowledge and Education. Geneva, Switzerland, 2008.
- [23] Republic Act (RA) No. 10121 entitled *The Philippine Disaster Risk Reduction and Management Act of 2010*.
- [24] DepEd Order Number 37 s. 2015
- [25] DepEd Order Number 48 s. 2012
- [26] DepEd Order Number 55 s. 2007
- [27] DepEd Order Number 83 s. 2011
- [28] DepEd Memorandum 320 s. 2008
- [29] Abas, A.R., “*Disaster Preparedness of Elementary Schools in Cotabato City*”, Bicol University Graduate School, 2011.
- [30] Alejandro, R., “*Disaster Management Preparedness of the Province of Albay*”, Bicol University Graduate School, 2010.
- [31] Asim, M., “*Disaster Risk Reduction Planning and Management Models for Institutionalism Linkages*”, Baguio City, Philippines, 2006.
- [32] Casis, Jr., Bienvenido Gerardo C., “*Enhancement of the Philippines Disaster Response Capability*”, U.S. Army War College, Carlisle Barracks, PA 17013-5050, 2008.
- [33] Guevarra, J., Ancheta, C., “*Assessment of Disaster Preparedness in Selected Public Schools in Luzon, Philippines*”, 2007.
- [34] Robles, M., “*Economic Consequences of Community Relocation as Disaster Management Strategy*”, 2010.
- [35] Molina, J., “*Participation of Private Voluntary Organizations on Disaster Management in Davao City*”, 2004.
- [36] Mamogale, Hellen Mamosegare, “*Assessing Disaster Preparedness of Learners and Educators in Soshanguve North Schools*”, *Disaster Management Training and Education Center for Africa*, University of the Free State, 2011
- [37] Rago, Maria Lovella M., “*Emergency Preparedness of the City – Government of Calapan, Oriental Mindoro*”, Unpublished Master’s Thesis, Bicol University Graduate School.
- [38] Roque, Arnold S., MD., *Emergency Management Capacity of Selected Barangays in the City of Manila*”, Unpublished Master’s Thesis, Bicol University Graduate School.