

Disaster Preparedness of Maritime Students

Alduine Garret R. Driz, Bryan Jeff Carmelo M. Casao, Frank Wilmar B. Concepcion, Jhon Carlo A. Concepcion, Jay Malvin G. Manguiat, Beverly T. Caiga, Edwin M. Agena

Marine Engineering Department, Lyceum International Maritime Academy, Lyceum of the Philippines University, Batangas City, Philippines

Asia Pacific Journal of Maritime Education

Vol. 4 No. 29-37

June 2018

P-ISSN: 2423-2033

E-ISSN: 2467-513X

apjme@lpubatangas.edu.ph

www.apjme.apjmr.com

Abstract - This research was conducted in order to provide insights and knowledge about the disaster preparedness of maritime students. Specifically, it sought to describe the profile of respondents in terms of age, gender, year level and program; determine the disaster preparedness of maritime students. Test the significant difference of responses when grouped according to profile variable and propose plan of action based on the results of the study. This utilized a descriptive research method with (205) maritime students that were chosen on the basis of random sampling. Survey questionnaire was used as the main data gathering instrument with frequency distribution, percentage, weighted mean, composite mean, and ANOVA as statistical tools. The results showed that the majority of the respondents are male 16-18 years old and BS Marine Transportation 3rd year students. The respondents know that it is important to perform regular drills in the university appeared to be fully aware on disaster preparedness of maritime students. There is no significant difference on disaster preparedness of maritime students when grouped according to profile variables such as age, gender program and year level. This indicates that the age, gender, program and current year level of an individual does not influence their awareness as to disaster preparedness. It is recommended that the Maritime Education Department may post emergency hot line numbers on every building and bulletin board for the students to call it during emergency.

Keywords - Disaster Preparedness, drills, awareness

INTRODUCTION

Disaster preparedness refers to measures taken to plan for and decrease the impacts of catastrophes, that is, to predict and prevent possible catastrophe, lessen their effect on vulnerable community, and react to and successfully adapt to their results. It gives a platform to outline effective, practical and coordinated planning, lessens duplication of efforts and increase the general effectiveness of national societies, family unit and individual disaster preparedness and response production. The disaster preparedness exercises inserted with lessening measures that can avoid disaster circumstances and furthermore can save lives and jobs during any catastrophe, enabling the affected community to get back to normal within a short time period (ifrc.org,2017).

Tropical storms, earthquakes volcanic eruptions, avalanches and different types of disasters are exceptionally basic in the Philippines so the community needs to be prepared at all times. Disasters happen not only because of incidents in nature but can also be human caused. It can happen any time so everyone needs to be prepared especially the students who are in the buildings during this dangerous situation. The researchers believe that it is important to understand the

different types of disasters to think a strategy in case of a disaster. Standard operating procedures are also important to know what to do in case of emergency.

The Philippine Disaster Risk Reduction and Management (DRRM) Act of 2010 or the Republic Act No. 10121, is a demonstration ordered to strengthen the disaster preparedness in the Philippines, a nation inclined to natural catastrophe. Mandated on May 27, 2010, it intends to make a plan and to provides resources that will help the local government units, the national government, and different organizations to build community that can survive catastrophes (Rey, 2015).

It is necessary to have disaster management because disasters are inevitable but their effects can be partially or completely prevented by preparation, early warning and decisive responses. Disaster management aims to minimize the occurrence of disasters and to reduce the impact of those that cannot be prevented. Disaster management forces come into action as soon as a disaster strikes and helps out in relief, rescue and rehabilitation process. These are trained individuals, and are given training to perform in the event of a disaster or natural calamity they work as a team to reduce the loss of life and helping the locals getting

back to life. In 2011 alone, almost 30,000 people were killed in 302 disasters, and 206 million people were affected. The costs of disasters were estimated at more than US\$ 2 trillion over the last two decades. It shows that it is important to come up with disaster management to be well prepared in disaster, to reduce casualties and destruction of properties (Clark, 2012).

Study of Tuladhar et al. (2013) confirmed that initiatives taken for disaster education in Nepal are not enough and a major challenge for DRR in a school community for a country like Nepal is implementing methods, especially at the individual level. Likewise, the disaster education should not only be confined within the school students, but it must also be promoted to families and communities, which is very essential to elaborate knowledge of DRR and to contribute to a disaster safe society in the country.

Stanford University (2017) stated that it is the responsibility of the school to plan activities and drills that can promote the personal safety of the staff, faculty and specially students. Apparently United Educators (2017) confirmed that regular drills in the university can promote and improve the safety among the students.

Guno (2017) stated that disaster preparedness is an outlook that should be passed on to the people to come. People experience the negative effect of a disaster in our life now, given the danger of disaster in the nation, our kids are probably going to encounter it so the first thing to do is to teach them to be aware and to be prepared at all times. This event can call disaster when those influenced cannot adapt with the hazards.

According to Roces (2001) people need to adapt to natural catastrophes. Every year the Philippines experienced many catastrophes that destroy the homes and livelihoods of many Filipinos so it is important to be prepared when the disaster strikes. Roces added that the government must bring back the Reserve Officers Training Course or the ROTC program because the military training will surely teach the college students or the community to prepare themselves for natural disasters or program on the conservation and improvement of our environment. The school graduates must take some military training to help and guide the community when disaster occurs. Catastrophe has a positive side. Experiencing disasters gives the person a chance to see and know themselves and their companions.

For Glantz (2013), media is an "interpreter" of science, which allows to translate disaster risks brought by environmental change to community. Science-based data is the product of forecasting and no community is

safe on the effect of climate change and natural disasters. In a post-confab discussion with manila notice, Glantz shared that over the previous decades, calamity chance awareness has been significantly improving around the world, because of United Nations International Strategy for Disaster Reduction (UNISDR). The primary thing that you must do if you want the community to be prepared and make them understand the danger around them is to have a disaster risk awareness program (Anny, 2013).

Luz (2017) said that avoidance is better than the solution and having a plan on disaster preparedness and prevention is better than to focus on disaster response and recovery. She added that interests in preparedness can save assets in reconstruction and relief costs. About 20-25 different disasters hit the Philippines every year. Regardless, strengthening focus on preparation and reduction by both the governing body and the private part has realized less numbers of casualties during disaster. Society is prepared enough to cope quickly after a disaster and the outcomes are clear that disaster preparedness spares lives of many people.

The Philippines is prone to catastrophic events due to its geographical location. This setting is complicated by different economical, ecological and political problems which is the root of poverty. The Philippines has an established and legitimate institution for disaster management. The government and different NGOs work hand in hand to ensure disaster preparedness of citizens. Some organizations function admirably with local government and there is an expanding pattern for collective work in disaster reduction and readiness. They engage more in different programs promoting catastrophe reduction and improving ways of associations since group assembly is believed to be necessary (Luna, 2001).

Philippines experienced various natural events from tremors, tsunamis and tropical storms. The function of the broad communication is to spread the information to help the community. So the Department of Science and Technology (DOST) with the partnership in Philippine Atmospheric, Geophysical and Astronomic Services Administration (PAGASA) make the Project NOAH or Nationwide Operational Assessment of Hazards that will give a reliable source of information and analysis that can be available to the community for their preparation on disasters. The objective of the Project NOAH is to lessen the effects of hazards and to help the community in disaster risk reduction and administration, adjustment to climate change and reduction efforts related to exercises through study, improvement and services (Bartolome, 2017).

According to Mindanao Times (2015) aside from strengthening structures of our houses the people must prepare also the broadcast communications systems that offer basic data that can warn the community to be ready. In spite of the fact that the community can never completely set themselves prepared for the impact of disaster, it is important to know what to do when disaster occurs and not simply wait for the authority to do all the work.

According to De la Cruz (2015) it is essential to ensure that the place of the evacuation center is far from the risk of natural hazards. Government must consider putting resources in funding the construction of permanent evacuation center in the Philippines. Schools become the shelter of evacuees every time a disaster strikes, because the school is the only accessible structures that can accommodate many families. It affects the operation of school when the disaster occurs and the schools are used as evacuation center. Because of the absence of appropriate sanitation some evacuees got ill, or worse death inside this kind of evacuation center because they were not designed for residence for a long time.

Jose Luis Fernandez of Food and Agriculture Organization (FAO, 2016) claimed that getting through stream in advanced technologies can aid the community to prepare for possible disasters, as for instance, the use of automatons or unmanned elevated vehicles (UAVs), can develop a better hazard and damage computation, and take improvements on the way we plan for and react to disaster that influence the jobs of vulnerable fishers and farmers and the nation's food security. With the use of AUV Mission, the collection of data which helps the agriculturists and fisher folks in preparing farm level advisories and early signal to ensure that the stability of their occupations become easier. The planning exercises of the government also becomes more efficient. In addition, he said that through AUV, with the group and experts can accomplish 600 hectares surveyed in one day, making the operation of foreseeing the harm that an approaching danger may bring in the farming regions and estimating the damage after the disaster becomes faster (Regala, 2016).

April 4, 2017 when strong earthquake occurred in Batangas, Since then earthquakes become often in this province and because of this Lyceum of the Philippines University - Batangas conducted a School-based Disaster Response and Safety Skills Training that held on October 12, 2017 at the LPU Main Campus. This activity participated by student leaders and employees was thru the initiative of the LPU Batangas Risk

Management Committee chaired by Mrs. Escolastica Boniel. Facilitated by Rescue 177 a CHED and Office of the Civil Defense recognized training center; this training aims to equip the participants with the technical knowledge, practical skills, and information for emergency and disaster preparedness. Participants were taught immediate first aid, emergency rescue and transfer procedure, basic life support, earthquake drill and basic firefighting (LPU Batangas, 2017).

Each building in Lyceum International Maritime Academy had a signboard of fire action. Despite of this sort of disaster is not only a simple fire, it can cause harm to property or worst casualty. The school has the following activity methods. To start with, do not panic. If at any time that there is a fire, remain calm. Second, if accessible, call the firefighters. Third, leave the place through the closest fire exit. Fourth, do not stop to bring personal materials. Fifth, elevators are not recommended to use, instead use the stairways. Sixth, go to your designated assembly point. Seventh, do not come back to the building unless to do so. Eighth, follow the guidelines at the assembly point. These eight methods can help the students to know about on the most proficient method to abandon the building if at any time there is a fire occurrence (Fire Action, n.d.).

The LIMA campus has posters of standard operating procedures for earthquake preparedness and there include keys to powerful catastrophe counteractive action design, know the quake hazard in your vicinity, take after auxiliary outline of the building and while developing a building check the integrity of the structures: improve if essential. Set up your working environment in the college, tie huge furniture. Check the steadiness of hanging object like lighting installations and roof fans. Fragile items, unsafe chemicals and combustible materials that has to be put away properly in the secured cabinets. You must be aware on the nearest fire exits. You should know where fire extinguisher, emergency treatment pack, alarms and nearest facilities for communication. Figure out how to utilize them beforehand. Set up a helpful crisis supply pack with radio and flashlights that has additional batteries. Plan and cooperate always during earthquake drills.

The Lyceum International Maritime Academy (LIMA) ensures the safety of the students by conducting different types of drills such as earthquake and fire drills at least twice every academic year. The Lyceum of the Philippines University - Batangas (LPU-B) has a emergency and disaster response team in LIMA, main and riverside campus. Each campus has its incident commander, who is in charge of reporting

any incidents that happened in their assigned campus ensuring the safety of the students. Every year the LPU-B conducted safety seminar to all faculty to improve their knowledge about disaster preparedness to help and guide the students during incidents.

The researchers believe that this study will help the students to be more aware especially on earthquakes and fire incidents that might happen inside the school. This study aimed to raise the level of disaster preparedness of the maritime students in Lyceum International Maritime Academy. The researchers conducted this study to formulate programs that will guide the maritime students and what they must do during the disaster. This study of the researchers aimed to determine the preparedness of maritime students in different disasters and to reduce the effect of the disaster. The researchers also believe that the result of the study will be beneficial to maintain safety of the student in the university. The LIMA as an institution will benefit to this study and may refer to the plan of actions of the researchers.

OBJECTIVES OF THE STUDY

This study aimed to determine preparedness of LIMA students in time of disaster. Specifically, it sought to describe the profile of respondents in terms of age, gender, year level and program; determine the disaster preparedness of maritime students, test the significant difference of responses when grouped according to profile variable and propose plan of action based on the results of the study.

METHODS

Research Design

This research applied the descriptive method of research that is used to describe characteristics of phenomenon being studied. It does not answer the why/when/how questions but rather it addresses the “what” question as stated by Rangarjan and Shields (2013). In this particular study, descriptive method was used to determine the disaster preparedness of maritime students in LIMA.

Participants

The sample of the study consists of two hundred five (205) maritime students; one hundred seventy-one (171) BSMT and thirty-four (34) BSMarE. This was computed with an effect size of 30% and a power size of 95% using G* Power 3.1.9. The sample of the study was randomly selected and proportionally allocated per program and per year.

Instruments

Self-made questionnaire is the instrument used in collecting data. This questionnaire is divided into two parts, the first part included the respondent's demographic profile such as age, gender, year level and program. While the second part of the questionnaire has 25 items that determined the preparedness indicators of maritime students in times of disaster. The questionnaire is validated by an expert Engr. Conrad Dotong the executive director of Physical Management and Facilities Office in Lyceum International Maritime Academy.

Procedure

The questionnaires were personally distributed to two hundred five (205) maritime students in LIMA. The content of the questionnaires was explained first to the respondents before answering. Accomplished questionnaires were collected; answered tallied and interpreted. The researchers retrieved 100% of the questionnaires answered by the respondents.

Data Analysis

The needed data were tallied, encoded and interpreted using different statistical tools such as frequency distribution, weighted mean and Analysis of Variance (ANOVA). These statistical tools were used based on the objectives of the study. In addition, all obtained data were treated using a statistical software, PASW version 18 to further analyze the results of the study.

Ethical Consideration

When planning for emergencies, whether related to terrorism, epidemics, hurricanes, earthquakes, fires, floods or any other man made or natural cause, the quality of the planning process will contribute markedly to the degree of preparedness and response success. Given that preparedness planning is complex and must involve all layers of public institutions and private citizenry, there will be disagreements about how best to organize, plan, and implement emergency response strategies. Any disagreement that arises will spring, in large part, from differences in ethical judgments. Clear awareness that disagreement involves moral disputes is a requisite starting point for resolving ethical differences in ways acceptable to the needs of planners and citizens (Roberts & Renzo, 2011).

RESULTS AND DISCUSSION

Table 1. Frequency Distribution of Respondent's Profile

Demographic Profile	f	%
Age		
16 - 18 yrs old	110	53.70 %
19 – 21 yrs old	86	42.00 %
22 yrs old and above	9	4.40 %
Gender		
Male	194	94.60 %
Female	11	5.40 %
Year Level		
2 nd year	32	15.60 %
3 rd year	173	84.40 %
Program		
BS Marine Transportation	171	83.40 %
BS Marine Engineering	34	16.60 %

Results presented on table 1 revealed that majority of the respondents are under the age group of 16 to 18 years old with a frequency of 110 and a percentage of 53.70%. The age group of 22 years old and above got the lowest frequency of 9 with a percentage of 5.40%. This shows that there are many teenage maritime students in the Lyceum International Maritime Academy than the adults ranging from 22 years old and above.

In terms of program mostly are taking up the BS Marine Transportation with a frequency of 171 and a percentage of 83.40% than BS Marine Engineering with a frequency of 34 and a percentage of 16.60%. It shows that most of the students in LIMA wants to be a captain someday than to be a chief engineer.

In terms of year level many students in LIMA are currently on third year level with a frequency of 173 and a percentage of 84.40% and the lowest is currently enrolled on second year level with a frequency of 32 and a percentage of 15.60%. This shows that there are many graduating students than the undergraduate students in LIMA.

Most of the respondents were males composed of 94.60% or 194 of the sample population and the lowest is female with only 5.40% or 11 of the sample population. This shows that LIMA being a maritime institution is dominated by the male population. People thinks that maritime industry is only for men because of the physical and technical job on-board so there are only few women taking this course (Mukherjee, 2017).

The data presented in Table 2 shows that the respondents are aware of the disaster preparedness as proven by the overall computed mean of 3.41. Among

the items listed, highest in rank is that the respondents know that it is important to perform regular drills in the university with a computed mean of 3.59. This implies that the respondents look after the implementation of the drill in the university for everyone's safety. This is relevant to the study of the Stanford University (2017) that it is responsibility of the school to plan activities and drills that can promote the personal safety of the staff, faculty and specially the students. Apparently United Educators (2017) confirmed that regular drills in the university can promote and improve the safety among the students.

The respondents are also aware that in case of earthquake or fire they must get out of the building as soon as possible and head out to an open area and aware that earthquakes can happen anytime. These statements ranked second and third highest with computed means of 3.57 and 3.56 respectively. This shows that the respondents know the standard operating procedure of the school when the disaster occurs. According to (PHIVOLCS, 2017) when the shaking stops, take the easiest and most secure way out of the building and use the stairways, do not go back to the buildings and stay calm. The result is congruent on (Safety.com, 2017) when the earthquake stops go out from the building and go to the designated assembly point.

The respondents are also aware where the nearest fire exit of every building in LIMA campus and aware where the smoke and fire detector and sprinkler system in the LIMA campus. These statements ranked fourth and fifth highest with computed means of 3.53 and 3.51 respectively. This is due to the fact that the signage of fire exits and different kind of detectors are visible in the LIMA Campus. Earlywine (2013) mentioned that emergency exit is very important in a building because it serves as a clear and safe way in going outside or open area, fire rescuers can also use this as a way to rescue and to put out fire. As stated by the (Industry safe, 2013) that the best way to guarantee that your working environment is protected is to have a good emergency plan. It means to have a emergency exits that helps the people to go out easily from the building and go to safe area without hindrance.

On the other hand the emergency numbers that maritime students must call in case of emergency appeared to be in the lowest rank with the weighted mean of 3.15 and rated as aware. This implies that maritime students need to be informed with the emergency numbers being used by the school. Kent State University (2017) stated that it is important for the university or other institution to come up with the list of emergency numbers for the students to call it

during emergency. Bartolome (2017) said that the function of the broad communication is to help the community to spread the information easily. Ranked second and third to the last include seminars and conferences are conducted to raise the level of disaster preparedness of students at school and the four classes of fire extinguishers (A,B,C and D) that can put out different types of fire, with computed means of 3.53 and 3.51 and rated as aware. This shows that maritime students may be looking for some activities that can familiarize them in different kinds of fire extinguishers and fires. According to Fuoss (2013) it is important to

know and use properly the fire extinguishers and understand how it works. It is important to be educated in different kinds of fire extinguishers because utilizing the wrong fire extinguisher on a fire can make the fire to spread rapidly or become bigger. This was strengthened by O'Donnell (2013) when he said that it is important to come up with programs and activities that educate the community about the source of fire, types of fire and their corresponding fire extinguishers, and identifying and assessing the fire situation.

Table 2. Disaster Preparedness of Maritime Students

	WM	VI	Rank
1. I know that it is necessary to perform regular drill in the university.	3.59	Fully Aware	1
2. I know what to do during emergency in the university.	3.44	Aware	11
3. I know the nearest fire exit of every building in the LIMA campus.	3.53	Fully Aware	4
4. I should practice the dock, cover and hold position during an earthquake.	3.46	Aware	10
5. If there is a fire and/or earthquake I must get out of the building as soon as possible and go to an open area	3.57	Fully Aware	2
6. I know the assembly point in case of general alarm evacuation.	3.37	Aware	19
7. I know that I must follow the instruction of designated marshal/instructor during disaster.	3.49	Aware	6.5
8. I know that I should not panic and keep calm during disaster.	3.43	Aware	12.5
9. I know that the plans related to the stages of a prospective disaster (before, during and after) are well disseminated at all concerned.	3.38	Aware	16.5
10. I know that earthquake can occur at any time.	3.56	Fully Aware	3
11. I know that there are disaster preparedness guide posters in all buildings in LIMA campus.	3.47	Aware	8.5
12. I know that most of the injuries that occur in earthquakes are caused by people being hit by or stumbling over fallen objects such as furniture, glassware, appliances and pictures on the walls.	3.43	Aware	12.5
13. I know that preparing for different disasters like fire and earthquake are important thing I can do for the safety of all.	3.49	Aware	6.5
14. I know that there are smoke and fire detector and sprinkler system in LIMA campus.	3.51	Fully Aware	5
15. I know that earthquakes can spark a fire.	3.37	Aware	19
16. I know that broken gas pipes, plugged in appliances candles or matches can cause fire during earthquakes.	3.29	Aware	22
17. I can identify the sound of the fire and/or earthquake alarm.	3.37	Aware	19
18. When the fire or earthquake alarm signal is activated I know what to do.	3.38	Aware	16.5
19. I know how to use fire extinguisher in case of emergency.	3.47	Aware	8.5
20. I know the four classes of fire extinguishers (A,B,C and D) and each class can put out a different type of fire.	3.27	Aware	23
21. I should know the location of fire in case of fire alarm.	3.40	Aware	14
22. I know that every building has a fire extinguisher and fire hose that I can use in case of emergency.	3.39	Aware	15
23. I know that the smoke and poisonous gases produced by a fire can also kill me. Only small amounts are enough to leave me drowsy, disoriented, and grasping.	3.31	Aware	21
24. I know the emergency numbers that I must call in case of emergency.	3.15	Aware	25
25. I know that some activities such as seminars and conferences are conducted to raise the level of disaster preparedness of students at school and school environment.	3.22	Aware	24
Composite Mean	3.41	Aware	

Ranked fourth and fifth to the last was the broken gas pipes, plugged in appliances candles or matches can cause fire during earthquakes and the smoke and poisonous gases produced by a fire can also kill me. Only small amounts are enough to leave the person drowsy, disoriented, and gasping for breath with computed means of 3.29 and 3.31 and rated as aware. This shows that maritime students need to be informed in the danger and effect of fire in their health. New York State (2017) stated that exposure in smoke from fire can cause serious cardiovascular disease. Too much intake of carbon monoxide produced by fire decreases the oxygen in the human body that results headaches, decrease attentiveness and a discomfort in the chest also called the angina. Exposure in heavy smoke can affect the lungs or respiratory tract which results difficulty and shortness in breathing. Strengthen by the Environmental Protection Agency (2017) stated that inhaling a smoke from fire can cause asthma attacks or other respiratory infections. It is important to be familiarized in the effect of smoke in our health to limit the exposure and reduce the risk from it.

As presented on Table 3, the computed p-value for the differences on the disaster preparedness of maritime students when grouped according to profile (age, gender program, year level) were all above the alpha level 0.05 signifying that the mean differences of the

scores is not statistically significant. This indicates that an individual's age, gender, program and current year level does not influence their awareness as to disaster preparedness. It shows that all maritime students in LIMA are well prepared in the disaster.

Table 3. Difference on the Disaster Preparedness of Maritime Students when Grouped According to Profile Variables

Profile Variables	F-value	P-value	Interpretation
Age	.764	.467	Not Significant
Gender	-.591	.555	Not Significant
Program	1.426	.155	Not Significant
Year level	.750	.454	Not Significant

Mean difference is significant at 0.05 alpha level

Tyler, Fairbrother and Philips (2012) stated that gender has no role in disaster preparedness. Gender does not affect the preparedness and response of an individual. As stated by Companion and Chaiken (2016) that in terms of gender there is no variation of preparedness between male and female. Based on the study of reliefweb.int (2016) all genders have equality in preparedness and response. Being a female or male together with other factors such as age, religion, disability and marital status amongst others does not affect their participation in preparation for disasters.

Table 4. Proposed Plan of Action to Enhance the Disaster Preparedness of Maritime Students

Key Results Area	Strategy	Outcome	Persons Involved
1. Keeping the students aware of the emergency numbers that LIMA students may call in case of emergency.	Post emergency hot line numbers on every building and bulletin board on LIMA.	Students became more aware and familiarized with emergency numbers.	LIMA Secretary, LIMA Department, Physical Facilities and Management Office (PFMO) Students
2. Conducting seminars and conferences to raise the level of disaster preparedness of students at school and school environment.	Integrate emergency drills and seminar on Aptitude for Service subject. Have a collaboration with NDRRMC to conduct seminars in LIMA about disaster preparedness	Students became more aware and prepared in disaster	LIMA Department, OCC (Office of the Crew of Cadets) National Disaster Risk Reduction and Management Council (NDRRMC), Students
3. Enhancing the actual usage of the four classes of fire extinguishers (A,B,C, and D)	Conduct training about fire prevention with the collaboration of Bureau of Fire Protection Conduct enhanced training about familiarization of four classes of fire extinguishers	Students are well practiced in using different fire extinguishers	LIMA Department, Bureau of Fire Protection (BFP) Students
4. Familiarizing about the effect of earthquakes in the gas pipes, plugged in appliances, candles or matches.	Coordinate with the risk reduction management council and conduct seminars about the effects of earthquake	Students are well informed in the effects of earthquake	LIMA Department, National Disaster Risk Reduction and Management Council (NDRRMC), LIMA Department. Students

CONCLUSIONS AND RECOMMENDATION

Majority of the respondents are males, 16 to 18 years old, taking BS Marine Transportation students and currently on the third-year level. Maritime students have found to be prepared in the occurrence of disasters. 3. There is no significant difference on the disaster preparedness of maritime students when grouped according to profile. A plan of action was proposed to enhance the disaster preparedness of maritime students in case of disaster.

It is recommended that LIMA department may include/incorporate in the syllabus - disaster training to ensure 100% awareness of maritime students. The LMTC may incorporate the actual drill of firefighting to enhance the skill of maritime students. LIMA department may post the emergency numbers in every building to help the maritime students to be more aware as who they must call in case of disaster. LIMA department may produce a handbook about disaster management including mitigation, preparedness and response plan for maritime students. A plan of action may be adopted to improve the preparedness of maritime students in case of disaster.

REFERENCES

- Anny (2013). Disaster (un)covered. Manila Bulletin, p.B8.
- Bagayas, S. (2017) WATCH: Filipino firefighters teach young kids how to be safe. Rappler. Retrieved from <https://goo.gl/4QiKJw>
- Bartolome, T. (2017) OPINION: Disaster preparedness and politics. ABS-CBN News Retrieved from <https://goo.gl/EjJ1T8>
- Basicplanet (2017) Natural Disasters Retrieved from <https://goo.gl/LgfSYy>
- Belleza, K. E. (2017) 7 regional evacuation centers rising soon in C. Visayas, Manila Bulletin. Retrieved from <https://goo.gl/Z3GhtM>
- Center for Disaster Preparedness, (2017) The Philippines: Disaster Situation Retrieved from <https://www.cdp.org.ph/>
- Center of Research and Epidemiology Disasters (2010) Statistical Survey in Disaster. Manila Bulletin, p.6.
- Clark, H. (2012) Building resilience: The importance of disaster risk reduction. Retrieved from <https://goo.gl/gHTguP>
- Companion M. and Chaiken M. (2016) Responses to Disasters and Climate Change: Understanding Vulnerability and Fostering Resilience Retrieved from <https://goo.gl/vxfr2z>
- Cuevas, C. (2010) RP world's most disaster-prone - study. Manila Bulletin, p.6.
- De la Cruz, G. (2015) Should government build permanent evacuation centers? Rappler. Retrieved from <https://goo.gl/K8Fygk>
- Disasterprepare.com (2017). Man-Made Retrieved from <https://goo.gl/GQ6smd>
- Earlywine, R. (2013) The Importance of Emergency Exits Retrieved from <https://goo.gl/n6ei9H>
- Environmental Protection Agency (2017) Wood Smoke and Your Health Retrieved from <https://goo.gl/At4fi8>
- Fire Action (n.d.) What to do in case of a fire. Retrieved from <https://goo.gl/mjdeKD>
- Food and Agriculture Organization (2016) Advance Technologies that help the Community. Manila Bulletin. Retrieved from: <https://goo.gl/13V6j3>
- Fuoss W. (2013) Importance of Fire Extinguisher Training Retrieved from <https://goo.gl/t3ogY4>
- Glantz (2013) Contribution of Media in Disaster Preparation. Manila Bulletin, p. B8.
- Guno N. V., 2017. Breaking 6 myths on disaster preparedness and making every Filipino even more resilient. Inquirer.net Retrieeved from <https://goo.gl/ZZcHvj>
- Ifrc.org, (2017) Preparing for disasters. International Federation of Red Cross and Red Crescent Societies. Retrieved from <https://goo.gl/XkND1Q>
- Industry safe (2013) Understanding the importance of emergency exit routes Retrieved from <https://goo.gl/hTfSME>
- John B. Lacson Foundation Maritime University-Molo (2014) Response to Global Environment Education for Disaster Risk Management: A Response of JBLFMU-MOLO to Global Environment Education Retrieved from <https://goo.gl/Ge9WBR>
- Kent State University (2017) Emergency Phone Numbers Retrieved from <https://goo.gl/4ogc14>
- LPU Batangas (2017) Rescue 177 Conducts School based disaster response and safety skills training. Retrieved from <https://goo.gl/juvxZP>
- Luna, E. M. (2001), Disaster Mitigation and Preparedness: The Case of NGOs in the Philippines. Disaster.
- Luz, G. M. (2017) Why disaster preparedness is important. Philippine Daily Inquirer Retrieved from <https://goo.gl/bvdFMe>
- Mindano Times (2015) Disaster preparedness is key Retrieved from <https://goo.gl/AQq4dv>
- Mukherjee, P. (2017) 7 Main Reasons There Are Fewer Women Seafarers In The Maritime Industry Retrieved from <https://goo.gl/3PnNCT>
- New York State (2017) Exposure to Smoke from Fires Retrieved from <https://goo.gl/mFGdBN>
- O'Donnell R. (2013) Fire Extinguisher Training: Best Practices Retrieved from <https://goo.gl/KTUovm>
- PHIVOLCS (2017) Earth Quake Preparedness Guide Retrieved from www.phivolcs.dost.gov.ph
- Rangarjan, N. and Shields, P. (2013). A Playbook for Research Methods: Integrating Conceptual Frameworks and Project Management. Retrieved from <https://goo.gl/ao7aVZ>

- Regala, F. G. (2016) Drones to be used for disaster risk reduction in Pampanga. Manila Bulletin. Retrieved from: <https://goo.gl/13V6j3>
- Reliefweb.int (2016) Mainstreaming Gender Equality in Preparedness and Response in Nepal: A Resource Guide. Retrieved from <https://goo.gl/uLSVzPv>
- Rey, A. (2015) RA 10121: The PH's disaster management law is up for review. Rappler. Retrieved from <https://goo.gl/gu7xAn>
- Roberts, M. and Renzo, E. (2011) Chapter 2. Ethical Considerations in Community Disaster Planning. Retrieved from <https://goo.gl/1X8czc>
- Roces A. R., (2001). Philippines always tops in natural disasters. The philippine star. Retrieved From <https://goo.gl/SKmrtk>
- Safety.com (2017) Keeping Your Family Safe During an Earthquake
Retrieved from <https://goo.gl/ZPHn5D>
- Stanford University (2017) 7.2 Health and Safety: Principles, Responsibilities and Practices Retrieved from <https://goo.gl/pvYY3K>
- Tuladhar, G. et.al. (2013) Knowledge of disaster risk reduction among school students in Nepal. Retrieved from <https://goo.gl/QFu5fZ>
- Tyler M., Fairbrother P. and Philips R. (2012) Gender and Bushfire, Fire Note Retrieved from <https://goo.gl/3iGdyu>
- United Educators (2017) Keeping Schools Safe for Learning
Retrieved from <https://goo.gl/KUP3r>