ISSN No:-2456-2165

Teachers' Preparedness on Disaster Risk Reduction and Management Measures among Public Senior High Schools in the Division of Batangas City

ROSALIE B. RONQUILLO
Paharang Integrated School

Abstract:-

Research Title: Teachers' Preparedness On Disaster Risk Reduction And Management Measures Among Public Senior High Schools In The Division Of Batangas City

Purpose:This study aimed to evaluate teachers' preparedness on Disaster Risk Reduction and Management Measures among public senior high schools in the Division of Batangas City in terms of community risk assessment, communication system and capacity building with the desired outcome of developing DRRM Guide to sustain preparedness on DRRM to empower teachers to be more competent and create a more comprehensive DRRM Contingency Plan that the school community will need.

Design / Methodology / Approach: The researcher made use of the descriptive method of research which involved collecting of data in order to answer questions concerning the current status of preparedness. A total of 138 public senior high school teachers were the respondents of the study.

Findings: Based on the result of the stud, teachers in senior high schools made sure that they familiarize students with standard procedures, the do's and don'ts during the fire and earthquake drills, encouraged school personnel as well as the students to be consistently prepared even before the disaster occurs.

Research Limitations / Implication: This study was limited to all senior high school teachers among public senior high schools in the Division of Batangas City, SY 2018-2019. This was for the reason of convenience and accessibility.The study was delimited to Grade 7-10 teachers of junior high schools in the City division.

Originality/Value: The study provides a holistic result which is significant in evaluating the preparedness of teachers on DRRM and enhancing schools' DRRM preparedness.

Keywords*: Disaster, Risk, Reduction, Management, Capacity Building, Communication.*

I. INTRODUCTION

The Department of Education had prompted school authorities to practice disaster preparedness measures in their particular schools. Preparedness can mitigate the effects of disasters on school, teachers and most especially to the learners. Moreover, disaster risk reduction and management is not only about preventing the damages on property but mainly about the coordination of the people in order to save lives to prevent intrusion in the provision of education. Active participation in disaster preparedness of teachers, students, parents and their communities is also encouraged for this is an effective way of raising their awareness about risk reduction. Russell (2018) says that administrators, teachers, staff, parents and students can work together and maintain school-wide safety and minimize the effects of emergencies and other dangerous situations.

Disasters are unavoidable emergencies that will be difficult to handle by those affected especially without outside assistance. These are usually caused by natural or manmade events wherein communities experience severe danger and result in loss of lives and properties. With the unavoidable occurrences, they disrupt the social structure and to all or some of the affected communities' essential functions.

In particular, this study sought to investigate the level of preparedness of teachers of disaster risk reduction and management measures among public senior high schools in the Division of Batangas City, in order to address the concerns and determine the direction of the preparedness. The researcher believed that the output generated from this study will result in achieving the general objectives of disaster risk reduction and management. The evaluation through useful and valid tools will then guide the public senior high schools towards having a guided and well-prepared response team.

As the adage goes, there is strength in number. Hence, in disaster readiness, it is wise to apply the notion that everyone knows what to do. This present study may affirm the importance of self-preservation or survival. When people are faced with disastrous calamities, it is actually not the nature which is the enemy; it is themselves who are unprepared.

ISSN No:-2456-2165

➢ *Research Questions*

This study attempted to evaluate the teachers' level of preparedness on DRRM measures among Public Senior High Schools in the Division of Batangas City.

Specifically, the study aimed to answer the following questions:

1. What is the profile of the respondents in terms of:
1.1 sex;
1.2 age;
1.3 educational attainment?

2. What is the level of preparedness of teachers on DRRM measures in terms of:
2.1 community risk assessment
2.2 communication system
2.3 capacity building?
3. Is there significant difference on the assessment of the level of preparedness on DRRM measures when grouped according to their profile variables?

4. What DRRM Guide may be proposed to enhance preparedness of SHS teachers?

➢ *Hypothesis*

There is no significant difference on the assessment of the level of preparedness of the respondents on disaster risk reduction and management measures when grouped according to their profile variables.

II. KEY LITERATURE

Disasters can happen anytime, anywhere particularly to people and environments that are vulnerable. At times, they are human-induced or natural hazards-induced. In order to curtail, if not totally avoid losses and injuries to lives and damages to properties caused by hazards and disasters across countries and communities, the United Nations created the Hyogo Framework for Action (HFA). The Philippines being classified among the top ten hazardous countries in the world on account of the numerous natural hazard was one of the 168 signatory countries.

R.A. No. 10121 acknowledged then the need to "adopt a disaster risk reduction and management approach that is holistic, comprehensive, integrated and proactive in lessening the socio-economic and environmental impacts of disasters including climate change, and promote the involvement and participation of all sectors and all stakeholders concerned, at all levels, especially the local community." Disaster preparedness, being a multilevel system (global, regional, national, community, individual), became also multi-relational (physical, social, economic, environmental). Within the social system of the community, there are still various subsystems interdependent with each other.

Administrative Order No.1 directed the local government units, particularly provinces, to adopt and use in the planning activities the guidelines on mainstreaming Disaster Risk Reduction in subnational development and land use physical planning. The Philippines due to its location and geographic landscape, is considered as one of the most disaster prone countries in the world experiencing four (4) disasters per year or a total of 373 disaster events triggered by natural hazards from 1905 to 2006.

Executive Order No. 41, Series 2016, Beverly Rose A. Dimacuha-Marino, City Mayor of Batangas City, ordered and mandated the implementation of the pre-emptive and forced evacuation during emergency situation caused by natural or manmade disasters. This is to ensure the safety and security of its residents, to safeguard, preserve and protect the lives, livelihoods and properties of the residents of Batangas City from the adverse impacts of hazards and related emergencies and recessing mitigating measures should be employed.

An article of Monica Vidili(2018) said that according to several studies analysing the impact of disasters have revealed that women and children have greater risks to their survival and recovery in the aftermath of natural disasters. Women and girls are overwhelmingly tasked, personally and professionally, with caring for children, the elderly and people with disabilities so that simple life-saving decisions, like discerning whether to evacuate a disaster area, can become a difficult choice.

Based on the study conducted by Tabios (2010), the role of the community plays in disaster management related to preparedness, adaptation and mitigation. He claimed that there is a long list of what the community can do in disaster management. Every community should establish and organize planning and response teams during pre-disaster and emergent post-disaster phases. A basic requirement is to develop emergency or evacuation plans such as routes, protective shelters, and food provisions in case of disaster. The multi-hazard maps in particular are very useful for this purpose.

The findings of the study conducted by Kelly (2010) revealed that practice on drills and exercises should be conducted frequently. He recommended that practices drills should be taken seriously because through practices, the students and teachers will learn what to do and how to behave in an emergency. The escape route should be known and the assembly point is identified. Everyone is expected to remain calm and accountability of staff and students was done. Practice drill reduces time wastage during an actual evacuation.

ISSN No:-2456-2165

Ogunlade, et al. (2010) agreed that there must be identification and assessment of mitigation technologies and measures that are required to deviate from "business-as-usual" in the short term. This is done so in order to raise the level of resiliency – and not the tolerance – of nations and communities to all kinds of disaster. Thus, it is no longer unfamiliar to see on mass media people who refuse to evacuate their homes in the face of impending danger because they have misunderstood their sense of tolerance as a sense of security and resiliency.

Martires (2011) claimed that Filipino values also affect the communication process, especially in disaster preparedness. He explained that one's need to belong to a group is stronger than the need to assert one's individual identity. This was best displayed in behavior that showed pakikisama (togetherness), smooth interpersonal relationship (SIR), tayo-tayo (us and we-ness), and bayanihan (unity and cooperation). A go-between in the communication process facilitated the transaction for a positive feedback. Herein lays the value of community-based development project management in disaster management.

Communication may yet prove to be the enduring factor in any study of disaster preparedness efficiency. De Leon, (2010) stated that community-based development projects are participatory in nature. Thus, communication not only functions as the lifeblood of the organization, it is also its major linkage to the organization's environment. In terms of communication system as a DRRM strategy, Magunda (2010) explained that public awareness activities foster changes in behavior leading towards a culture of risk reduction. According to her, the over-all objective of the communication strategy is to widely disseminate information on disasters and risk reduction and its likely effects, in order to save lives and livelihood.

Finally, the management concept of leadership affected the triumvirate variables of disaster preparedness, namely, contingency planning, communication system and capacity-building. While contingency planning is considered in R.A. No. 10121 as a distinct management process replete with its own set of concepts and principles, and disaster communication is institutionalized as one of the powers and functions, Section 9 of the PDRRM Act of 2010 of the implementing arm of the NDRRMC, which is, the Office of Civil Defense (OCD), capacity involves collective attributes such as social relationships, leadership and management.

According to Siringan (2010), a Ph. D. Professor of Maritime Science Institute, U.P. Diliman, there are places that can be avoided, places where relocation might be necessary, or places where mitigation for certain hazards may still be possible. However, Olympia (2010), shares that risk reduction measures are community-specific. Countries with long coastlines such as the Philippines are considered naturally high-risk since exposure and vulnerabilities are high.

III. RESEARCH METHOD AND PROCEDURES

- *Research Design*

Descriptive method also involves collecting of data in order to test hypothesis or answer questions concerning the current status of the subject of the study (Zulueta, 2011). It is a fact-finding study that encompasses ample and accurate interpretation of findings.

- *Participants*

The respondents of the study were the public senior high school teachers in the Division of Batangas City. To produce reliable and accurate results, the researcher decided to take the entire population of Senior High School teachers in the Division of Batangas City. . Thus, the researcher has 138 as the total population of teachers in public senior high school in the Division of Batangas City.

- *Data Gathering Instrument Used*

The data in this study were all sourced from researcher research – based survey questionnaire for 138 senior high school teachers. This served as the main tool to generate factual information on assessing the teachers' preparedness in disaster risk reduction and management. The questionnaire is divided into 2 parts. The first section of the survey questionnaire covered the profile of the respondents.

To construct an appropriate questionnaire that was utilized for the collection of information, the researcher searched for books, magazines, newspapers, dissertations and other related resources that helped her to have an idea on the final output of her tool. After reading some related resources, the researcher carefully studied and analyzed the construction of questionnaire so that all items would be pertinent to the study. The researcher's actual experiences as a former school DRRM Coordinator was also used to enrich the content of the questionnaire.

The questionnaire were presented school DRRM Coordinators, DepEd DRRM Monitoring Officer in the Division of Batangas City and to the Chief of the City Disaster Risk Reduction and Management Office who have enough knowledge for validation of the research survey tool. The researcher integrated the corrections, comments and suggestions provided by the experts. After the second revision, the researcher sought an English teacher or grammarian for the appropriateness of grammar, clarity of each item and enrichment of the content. The questionnaire after the approval of the adviser, checking of the practitioners and editing of the grammarian, was encoded for the final draft and copy.

- *Data Gathering Procedure*

Permission to administer the questionnaire was sought from the Schools Division Superintendent and principals of the schools through a formal letter of request. The newly validated questionnaires were personally distributed to the senior high school teacher respondents. Details were explained to guide them in answering the indicators of the instrument.

The questionnaires answered by the respondents were retrieved immediately after they have completed their responses. The gathered data were then coded, tallied and tabulated for final analysis and interpretation.

IV. RESULTS AND DISCUSSION

1. Profile of the Respondent

Table 1:- Distribution of the Respondents According to Sex

Sex	Frequency	Percentage (%)
F	87	63.00
M	51	37.00
Total	138	100.00

Results showed that female respondents had the frequency of 87 or 63.00 percent and male respondents have frequency of 51 or 37.00 percent. This indicated that there is more need to prepare during disasters because of greater population of female. During times of disasters, men are usually stronger and faster than women in terms of strength and capacity.

Table 2:- Distribution of the Respondents According to Age

Age	Frequency	Percentage (%)
Below 31 years old	55	39.80
31- 40	51	37.00
41 – 50	27	19.60
Above 50 years old	5	3.60
Total	138	100.00

From the table above, age range of below 31 years old has a frequency of 55 or 39.90 percent. Frequencies of 51 or 37 percent, frequency of 27 or 19.60 percent and 5 or 3.60 percent were from the age group of 31-40, 41-50 and above 50 years old, respectively.

Table 3:- Distribution of the Respondents According to Educational Attainment

Educational Attainment	Frequency	Percentage (%)
Bachelor's Degree	26	18.80
With Master's Units	64	46.40
Master's Degree	28	20.30
With Doctorate's Units	16	11.60
Doctorate's Degree	4	2.90
Total	138	100.00

From the table above, respondents with Master's units have the frequency of 64 or 46.40 percent. Teachers with master's degree have the frequency of 28 or 20.30 percent while teachers with bachelor's degree have the frequency of 26 or 18.80 percent. Teachers with doctorate's units had the frequency of 16 or 11.60 percent while 2.90 percent teachers earned Doctorate's Degree with the frequency of 4.

2. Level of preparedness of teachers on disaster risk reduction and management.

Table 4:- Teachers' Level of Preparedness in Community Risk Assessment

COMMUNITY RISK ASSESSMENT	Weighted Mean	Verbal Interpretation	Rank
1. Provides relevant information on disaster risk and means of protection	3.04	Prepared	4
2. Promotes collaboration and cooperation among disaster experts	3.02	Prepared	5
3. Develops community based disaster risk management programs such as tree planting and clean-up drive	2.78	Prepared	9
4. Familiarizes students with standard procedures, the Do's and Don'ts during the fire and earthquake drills.	3.29	Prepared	1
5. Works with local media in disaster risk reduction awareness	2.77	Prepared	10
6. Establishes and maintains coordination with Barangay Disaster Council	2.88	Prepared	6
7. Conducts Student-LED, Hazard Mapping Activities, Risk identification and vulnerability assessment.	2.85	Prepared	7
8. Develops evacuation layout / plan to identify sufficient and safe evacuation area and accommodate evacuation route.	2.84	Prepared	8
9. Implements security and safety measures in the school premises	3..10	Prepared	3
10. Encourages school personnel and students to be consistently prepared	3.18	Prepared	2

ISSN No:-2456-2165

Composite Mean 2.97 Prepared

From the table above, the level of preparedness of teachers in Disaster Risk Reduction and management in terms of community risk assessment. Familiarization of the students with standard procedures such as the Do's and Don'ts during the fire and earthquake drills ranked first which have a weighted mean of 3.29 with verbal interpretation of prepared. The results also showed that they are encouraging school personnel and students to be constantly prepared in community risk assessment and in implementing security and safety measures in the school premises ranked second and third with weighted mean of 3.18 and 3.0, respectively. This was a manifestation that the school does the mandatory simultaneousearthquake drill every quarter of the year and they integrated the DRRM in curriculum.

However, respondents' preparedness in working with local media in disaster risk reduction awareness in disaster risk reduction awareness ranked the least as well as the developing community based disaster risk management programs such as tree planting and clean-up drive; and developing evacuation layout / plan to identify sufficient and safe evacuation area and accommodate evacuation route. The composite mean with the result of 2.97 with overall verbal interpretation of prepared.

The results showed that teachers were actively involved in identification and analysis of the disaster risks and participated directly in the planning, implementation, monitoring and evaluation of the disaster risks activities. These demonstrate that teachers communicate with the community and thus, are role models of good fellowship among community. However, based on the results, they need to work with local media in disaster risk reduction awareness because it played a very important role in disseminating information to the school community before, during and after a disaster as well as educating about the disasters. The schools need to enhance and provide a safe, detailed and orderly evacuation plan for the students, personnel and most especially to the visitors who are unfamiliar with the building.

Table 5:- Teachers' Level of Preparedness in Communication System

COMMUNICATION SYSTEM	Weighted Mean	Verbal Interpretation	Rank
1. Conducts information dissemination	3.16	Prepared	1
2. Establishes linkages with local agencies	2.86	Prepared	6
3. Involves the community in preparation, implementation, and monitoring of disaster risk reduction management programs	2.89	Prepared	4
4. Organizes unit assigned to give warning signs	2.88	Prepared	5
5. Provides communication equipment, tools and materials	2.85	Prepared	7
6. Disseminates risk reduction plan to whole school community such as signage and communication corner	2.80	Prepared	9
7. Identifies the persons and agencies to call for assistance and posting list of emergency telephone numbers	2.97	Prepared	3
8. Defines the roles of teachers and school members in cases of emergencies	3.05	Prepared	2
9. Understands the Incident Command System	2.82	Prepared	8
10. Attends Incident Command System Training/ Orientation	2.78	Prepared	10

Composite Mean 2.91Prepared

From the table above, conducting information dissemination, defining the roles of teachers and school members in cases of emergencies, and identifying the persons and agencies to call for assistance and posting list of emergency telephone numbers ranked 2 and 3 with weighted mean of 3.16, 3.05 and 2.97 respectively. However, attending an Incident Command System Training/ Orientation; disseminates risk reduction plan to whole school community such as signage and communication corner and Understands the Incident Command System ranked 10, 9 and 8 with weighted mean of 2.78, 2.80 and 2.82, respectively. The composite mean is 2.91 and the overall verbal interpretation is prepared. This only showed that teachers were important parcel of disaster preparedness especially in the dissemination of information.

ISSN No:-2456-2165

Table 6 Teachers' Level of Preparedness in Capacity Building

COMMUNICATION SYSTEM	Weighted Mean	Verbal Interpretation	Rank
1. Acquires knowledge about survival kits, equipment and tools	3.04	Prepared	1
2. Manages to use survival kits, tools and equipment through seminar/workshop	2.93	Prepared	2
3. Provides temporary learning space	2.83	Prepared	3.5
4. Conducts research study on enhancement of current DRRM programs of the school	2.52	Prepared	10
5. Organizes available transportation during emergencies	2.61	Prepared	9
6. Plans and regularly reviews school DRRM and Contingency Plan aligned with local plan	2.71	Prepared	8
7. Integrates risk reduction and Management in the curriculum and other informal education	2.82	Prepared	5
8. Coordinates operational activities being undertaken by relevant agencies such as NSED and Fire Drill	2.83	Prepared	3.5
9. Conducts capability training/ workshops for community members and regular meeting	2.72	Prepared	6.5
10. Ensures all concerned report and follow flow of activities during and after disaster by DRRM Team	2.72	Prepared	6.5

Composite Mean 2.77 Prepared

From the table above, it can be gleaned that acquiring knowledge about survival kits, equipment and tools ranked first with the weighted mean of 3.04 and verbal interpretation of prepared. It was followed by managing to use survival kits, tools and equipment through seminar / workshop; providing temporary learning space and Coordinates operational activities being undertaken by relevant agencies such as NSED and Fire Drill rank 2 and 3.5 with the weighted mean of 2.93 and 2.83, respectively. Both have verbal interpretation of prepared. It was manifest from the results that teachers attend seminars and workshops on DRRM and capacity building regularly manifested with obtained weighted mean.

Nevertheless, conducting research study on enhancement of current DRRM programs of the school ranked the least with the weighted mean of 2.52. Planning and regularly reviewing of school DRRM and Contingency Plan aligned with local plan and organizing available transportation during emergencies with verbal interpretation of prepared, ranked 8 and 9 with the weighted mean of 2.71 and 2.61, respectively. The composite mean result of 2.77 expresses the overall preparedness of teachers in capacity building.

Results showed that the teachers practiced the mandatory simultaneous drills that were done every quarter of the year. It was manifested by the overall readiness of teachers in capacity building which has a verbal interpretation of ready. These are due to the activities, training and mock drills that are carried out by the teachers together with the students.

3. **Difference on the assessment of their level of preparedness on DRRM Measures excluding the materials needed when grouped according to profile variables.**

Table 7:- Difference on Teachers' Level of Preparedness on DRRM Measures With Respect to Their Sex

Teachers' Readiness	t-value	P-value (2-tailed)	Interpretation	Decision
Community risk assessment	0.287	0.116	Not significant	Failed to Reject
Communication System	2.363	0.334	Not significant	Failed to Reject
Capacity Building	0.002	0.978	Not significant	Failed to Reject

Results revealed that all of the respondents regardless of their sex were prepared whenever disaster happens. Both male and female have specific vulnerabilities to risk and disaster in different way, but still both sexes know their roles and responsibilities during disaster occurrences.

ISSN No:-2456-2165

Table 8:- Difference on Teachers' Level of Preparedness on DRRM Measures With Respect to Their Age

Teachers' Readiness	F value	P value	Interpretation	Decision
Community risk assessment	2.383	0.072	Not significant	Failed to Reject
Communication System	2.241	0.086	Not significant	Failed to Reject
Capacity Building	4.931	0.030	significant	Rejected

Results only showed that teachers were prepared regardless of their age when it comes to community risk assessment and communication system. They were all more interested in participation and involvement in disaster risk reduction and management.

Nevertheless, there was significant difference on teachers' level of preparedness with respect to capacity building, thus null hypothesis was rejected. It only showed that most of the respondents were on the range of 21-30 years old. They were new to the institution and have not acquired enough trainings and workshops regarding disaster management.

Table 9:- Difference on Teachers' Level of Preparedness on DRRM Measures With Respect to Their Educational Attainment

Teachers' Readiness	F value	P value	Interpretation	Decision
Community risk assessment	2.123	0.081	Not significant	Failed to Reject
Communication System	1.588	0.181	Not significant	Failed to Reject
Capacity Building	2.383	0.055	Not significant	Failed to Rejected

Results indicated that, teachers were ready regardless of their educational status; they were all interested in participation and involvement in disaster risk reduction and management whenever given a chance. As they support Department of Education Memo 21, series of 2015 "Disaster Risk Reduction and Management Coordination and Information Management Protocol".

However, results showed that the P-value of the capacity building was nearly closed to 0.05 significance values which manifested that most of the teachers were in need of technical trainings regarding disaster preparedness.

4. What DRRM guide may be proposed to enhance preparedness of SHS teachers?

The proposed DRRM guide is aimed to enhance the preparedness of the SHS teachers. . A DRRM guide was created to innovate an example that could help the teachers in their school risk reduction management programs**.**

V. DISASTER RISK REDUCTION AND MANAGEMENT GUIDE

Safe Learning Facilities

1. Ensure fire safety through regular inspection of electrical system to prevent or reduce the likelihood of a fire.
2. Repair minor damages in the classroom such as broken windows, doors, board and roofs.
3. Mount fire extinguisher, water source and fire hydrant properly.
4. Free all areas in the school from all sharp bulging objects which may harm students.
5. Clean regularly all drainage canals to prevent clogging and to remove deposited mosquito eggs.
6. Post safety signage for on-going construction, damaged and condemned buildings.
7. Secure cabinets and drawers and ensure that heavy objects are below head level.
8. Post safety measures in laboratories and workshops
9. Prune trees to avoid entanglement.
10. Keep parents informed of emergency notification system.

School Disaster Management

1. Teachers participate in developing the school emergency plan.
2. Post a directory of emergency contact numbers of relevant government agencies and offices.in various areas of the school.
3. Equip school with first aid kits, flashlights, megaphone and other necessary supplies that are needed in times of disasters.
4. Maintain supply of drinking water within the school.
5. Everybody must participate in the execution of school emergency plan exercises, drills and trainings.
6. Coordinate with the barangay officials on pedestrian safety for students.
7. Investigate and report accidents happened within the school premises to determine the causes and eliminated.
8. Post emergency evacuation plan on every room of the building to ensure safety of the students and employees.
9. Identify evacuation areas and classrooms that can be used as temporary shelter during disaster and emergencies.
10. Require all the students to participate in emergency preparedness training, drills and exercises

ISSN No:-2456-2165

VI. CONCLUSIONS

Based on the findings of the study, the following conclusions were revealed,

1. Majority of the respondents were female as compared to males.. Bulk of the respondents belonged to the age range of 21 - 30 and maximum frequency of the respondents have earned master's unit.
2. The public senior high school teachers were prepared on disaster risk reduction and management measures in terms of community risk assessment, communication system and capacity building.
3. There are no significant differences on the level of teachers' preparedness on disaster risk reduction and management with respect to their sex and age, thus null hypothesis was accepted. But there is a significant difference in terms of capacity building therefore, the null hypothesis in this area is rejected.
4. Most of the senior high schools in the division quoted that insufficient space for evacuation area was their main problem thus it indicated that most of the schools is not yet prepared in disasters that requires evacuation which is an urgent escape of the teachers, students, and school personnel away from an area that has an imminent threat.
5. From the data gathered it is concluded that a DRRM guide was needed to propose to enhance the preparedness of the teachers.

RECOMMENDATIONS

From the findings and conclusions of the study, the following recommendations are offered.

1. Keep the community well prepared by disseminating knowledge on how to be prepared when catastrophe happens. Teachers can be equipped by attending seminars and symposium and incorporate the DRRM in teaching their subjects.
2. Extra training and disaster education must be provided to the School DRRM coordinators as well as to the teachers to raise disaster risk awareness and preparedness.
3. Involve barangay officials, parents, social workers, senior - taught citizens, parents and student representatives in earthquake drills, training and symposium. Teachers should coordinate to these persons and be a part of the team.
4. Conduct further study which focuses on developing other materials essential to DRRM and standard procedures like Fire Drill, Earthquake drill and evacuation drill. Students can be the respondents, too.

REFERENCES

[1]. Abas, A.R. (2011). Disaster Preparedness of Elementary Schools in Cotabato City. Bicol University Graduate School. Dissertation

[2]. Alejandro, Bernardo Rafaelito R. (2010). Disaster Management Preparedness of the Province of Albay. Thesis, University of the Philippines Diliman

[3]. Austin, D. W. (2012). Preparedness clusters: A research note on the disaster readiness of community-based organizations. Sociological Perspectives, 55(2), 383-393.

[4]. Canezo, Victor C, Jr. and Naval, Biliran. (2016) *Awareness, Preparedness and Needs of the K to 12 Senior High School Modeling Implementation.*

[5]. Cardenas, Kenneth. (2010). University of the Philippines. Department of Sociology.

[6]. City Disaster Risk Reduction and Management Council, (2017) *Batangas City Disaster Risk Reduction and Management Plan 2017-2019*

[7]. De Leon, Aldwin (2010). *ManagingCommunity Based Development Projects*. Equilibrium Publishing.

[8]. Department of Internal and Local Government of the Philippines, 2012.

[9]. De Vera, Ellalyn B, *Local Disaster Risk Reduction and Management Initiatives Cited in Global Forum*, Manila Bulletin, May 19, 2011.

[10]. Executive Order No.41, Series 2016. *An Enforcement of Pre-emptive and Forced Evacuation During Emergency Situations Caused by natural or Manmade Disaster.*

[11]. Frazier, A., Arendt, L., Cimellaro, G. P., Reinhorn, A. M., &Bruneau, M. (2010). A framework for defining and measuring resilience at the community scale: The PEOPLES resilience framework. MCEER.

[12]. Ginete, Ramil G. (2017). *Disaster Risk Reduction and Management Practices in the Division of Batangas.*

[13]. Kapoor, Mukesh. (2012). Disaster Managemenet:*New Delhi.* Saurabh Publishing House.

[14]. Kelly, M. (2010). *Fire Drills: How to be prepared and Lead During a Fire Drill*. New York Times company. New York.

[15]. Ogunlade,(2010). Climate Change 2007: Mitigation, Cambridge University Press.

[16]. Republic Act No. 10121. *Philippine Disaster Risk Reduction and Management Act of 2010" Fourteenth Congress of the Philippines, Third Regular Session. July 27, 2009, accessed April 18, 2015.*

[17]. Tabios, Guillermo (2010), Professor, Institute of Civil Engineering, and Director, National Hydraulic Research Center, U.P. Diliman. Retrieved from www. geocites.ws

[18]. Vidili, Monica,*(2018). Why We Must Engage Women and Children in Disaster Risk Management, World Bank Organization*