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Disaster Risk Reduction and Management Strategies of Selected State Universities in Region III, Philippines

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ABSTRACT

This study assessed the level of implementation and problems met on the disaster risk reduction (DRR) and management strategies of selected State Universities (SUs) in Region III. The DRR and management strategies focused in four thematic areas such as prevention and mitigation, preparedness, response and rehabilitation and recovery. The descriptive- correlational method of research and the quota sampling were utilized. There were 425 faculty members and 375 student organization officers as respondents from the 5 SUs. The study is anchored on the Philippine DRR and Management Act of 2010 and Hyogo Framework for Action. The faculty and student organization officers perceived that the DRR and management strategies in terms of four thematic areas were Sometimes Implemented in their respective institution. Both groups of respondents perceived that the implementation of DRR and management strategies in terms of organization, planning, utilization of resources, and training needs were Sometimes a Problem. Findings revealed further that there was a highly significant difference between the responses of the two group of respondents on the level of implementation of DRR and management strategies and the problems met on its implementation. There was a very low positive but no significant correlation between the perceptions of the faculty on the level of implementation and the problems met in the implementation of DRR and management strategies. There was a strong positive highly significant correlation between the perceptions of the student organization officer on the level of implementation and the problems met in the implementation of DRR and management strategies.
KEYWORDS: Disaster, Prevention, Mitigation, Preparedness, Response, Rehabilitation, Recovery

INTRODUCTION

The Philippines is inherently a disaster-prone owing to its geographical location. It lies on the western rim of the Pacific and along the circum-Pacific seismic belt, subjecting it to typhoons, earthquakes, floods, volcanic eruptions, droughts, and other natural hazards. In fact, the country is ranked eighth by the World Bank's Natural Disaster Hotspot list of countries most exposed to multiple hazards, with 268 recorded disasters over the last three decades. In addition, 60 percent of the country's total land area is exposed to multiple hazards and as a result, 74 percent of Filipinos are at risk.

Disaster is a sudden adverse or unfortunate extreme event which causes great damage to human beings as well as plants and animals. Disasters occur rapidly, instantaneously and indiscriminately. These disasters which are caused by climate change and man –made activities result in significant losses in property and lives. These events which occur aggravate natural environmental processes to cause disasters to human society such as sudden tectonic movements leading to earthquake and volcanic eruptions, continued dry conditions leading to prolonged droughts, floods, atmospheric disturbances, collision of celestial bodies and others[1].

Schools especially the higher education institutions in the Philippines play a significant role in the disaster management. Since higher education institutions are conducting the planning, organizing, monitoring, and evaluation of the implementation of the program or school activities with appropriate procedures, as well as follow-up plans, they may also be participating in the disaster implementation [2]. When disasters strike, the stakeholders of the university and college campuses are greatly affected. Disasters might cause death and injuries, monetary losses, interruption of the classes, research and extension and student services. Damage to buildings and infrastructure and interruption to the institutional mission result in significant losses that can be measured by faculty and student

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departures and decreases in research funding. These impacts may be reduced or eliminated through comprehensive disaster risk deduction and management strategies of the stakeholders in the higher educational institutions both public and private. Disaster management or mitigation by correct planning is important to reduce damage in property and loss of lives [3].

Indeed, it is imperative to assess the level of the implementation on disaster risk reduction and management strategies of selected State Universities (SUs) in Region III. The study will determine what measures to improve the present institutional strategies on disaster risk reduction and management. Thus, this study will empower and reinforce the capacity of the State Universities at all levels to ensure a coherent, integrated, proficient and responsive emergency management system in Region III.

RESEARCH METHODS

A descriptive correlation design employed in this study to describe the level of the implementation of the disaster risk reduction and management strategies and the problems met in the existing disaster risk reduction and management strategies of selected state universities in Region III among the faculty and student organization officers. This designed examined the relationship between those variables.

The study utilized the quota sampling technique. Quota sampling is popular in the field of opinion research because it is done by merely looking for individuals with the requisite characteristics. An average of 85 questionnaires for faculty and 75 questionnaires for student organization officers should was given from the total of 5 state universities from Region III. There were two groups of respondents for a total of eight hundred (800). It included the four hundred twenty five (425) faculty members and three hundred seventy five (375) student organization officers randomly selected from the State Universities in Region III. The selected five (5) state universities are as follows: Bataan Peninsula State University, Bulacan State University, Central Luzon State University, Don Honorio Ventura Technological State University and Ramon Magsaysay Technological University (Figure 1).

Figure 1. Map of Region 3 with Locations of Selected State Universities

The validated questionnaire is the main instrument in data gathering relevant to this study. The questionnaire is patterned from other similar researchers, [4]and in accordance with the Republic Act No. 10121 which was used in the assessment of the level of the disaster risk reduction and management strategies. The questionnaire is composed of two parts. Part 1 contains the respondent's profile of the respondents. Part 2 comprises the level of the implementation on disaster risk reduction and management strategies. Frequency distribution, percentage, weighted mean and T- Test were the statistical tools employed in the data analysis in the study.

RESULTS AND DISCUSSION

Profile of Faculty and Student Respondents

There were 102 or 24.00 % faculty respondents who belong to the age group of 25-29 years with mean age of 34.75 and there were only 15 (3.53 %) who belong to the age group of 55 and above. Data revealed that the majority of the respondents were in their early adulthood which extends from 20-35 years. Strength in early adulthood comes through care of others and production of something that contributes to the betterment of society [5].

Majority of the respondents are female (257 or 60.47 %) while 168 or 39.53% are male. Majority are married (268 or 63.06 %) while 157 or 39.64 %) are single. The study of Casupanan[6] also had this finding; there are more women compared to men in the field of teaching. This implies that women represent a significant majority of the teaching workforce as confirmed by the claim of Feria [7] that teaching, female teachers prevailed in number. Teaching most of the faculty get married as they have a family of their own whom they can rely and lean on in the latte years of life.

There were 211 (or 49.65%) permanent, 157 (or 39.64%), contract of service and 57 (or 13.41%) are temporary as to their status of employment. The result was probably due to their mean age of 34.75 years which signifies that the faculty respondents have been in the service for quite long.

More than half of the faculty respondents (218 or 51.29%) are Instructor I compared to 28 (6.59%) Assistant Professor I, 24 (or 5.65%) Associate Professor I, 12 (2.82%) Professor I. Most (155 or 36.50%) faculty have rendered 1-5 compared to 23 (5.40%) who have rendered 26 and above years of service, with a mean of 11 years. According to the Position Classification and Compensation Scheme for Faculty Positions in State Universities and Colleges in Chapter 7.2.2.2 Point Allocation Under NBC No. 461 that the Instructor I with Salary Grade 12 and 65 points and below. This is the entry level position in teaching. CHED Memorandum Order (CMO) No. 40, series 2008 requires academics to have at least a master's degree and to be fully implemented in AY 2011- 2012. Since then, there are Higher Education Institutions which award tenure (or permanent status) at the assistant professor level [8].

There were 148 (or 39.47 %) who belonged to the age group 22 and above compared to 36 (or 9.60 %) in the age group 18-19, with a mean age of 20.36 years old. The student organization officers are in their early adulthood.

More than half are female (221 or 58.93 %) while 154 (41.07 %) are male student organization officers. Based from the result of the present study, there are more female who are involved in the school organization compared to the figure obtained among male respondents. Accordingly, early leadership allows female law school students to lay the groundwork to run for political office in the future. Women in law school can start this process of self-selecting as political leaders through openly considering a career in politics, attending formal leadership programs, becoming involved in student government, volunteering on political campaigns, and interning for elected officials [9].

As to the result of the year level profile of the student organization officers, there were more 4th Year (129 or 34.40 %) compared to 36 (or 9.60 %) 1st Year officers. Most of the officers (75 or 20.00 %) handled the position of the President compared to 1 (or 0.27 %) who handled the position of Escort. More than half of the respondents (212 or 56.53 %) are members of academic type of organization and 163 (43.47 %) are members of non-academic type of organizations. Student organization officers are responsible for providing all aspects of leadership for the student organization and are responsible for their own actions as well as the actions of all student organization n members [10]. Moreover, the enhancement of student learning with activities outside the classroom is consistent with the initial goals of student affairs work; to develop the student [11].

There were more student organization officers enrolled in the Bachelor of Technical Teacher Education course (44 or 11.73 %), followed by those enrolled in BS Business Administration (38 or 10.13 %), BS Industrial Technology (37 or 9.87 %), BS Information Technology (31 or 8.27%), BS Elementary Education (25 or 6.66 %)and the least comes from the BS Public Administration (1 or 0.27 %). Most bachelor degrees are for four years and students are usually from 17 to 20 years old. In general, females are more susceptible and have more exposure to disaster risk and calamities[12]. Students were grouped into different categories of student organizations based on their goals and interests in order to facilitate communication between organizations that may share similar philosophical underpinnings [13].The study explores their participation in the decision- making, their roles and what value they add to the university and to themselves in the process of their engagement. According to UNISDR [14] the priority courses are aligned to the Medium-Term Philippine Development Plan, the country's economic blueprint which adopts a framework of inclusive growth. Teacher education courses are include in the new priority list as stated in CHED Memorandum Order No.01, Series of 2014[15].

The summary on the level of implementation of strategies on disaster risk reduction and management as perceived by the faculty and student respondents is shown in Table 1.

Table 1: Level of Implementation on Disaster Risk Reduction and Management Strategies as Perceived by the Respondents

	Teachers		Students	
Disaster Risk Reduction and Management Strategies	**Weighted Mean**	**Qualitative Interpretation**	**Weighted Mean**	**Qualitative Interpretation**
Prevention and Mitigation	3.04	Sometimes Implemented	3.35	Sometimes Implemented
Disaster Preparedness	3.01	Sometimes Implemented	3.37	Sometimes Implemented
Disaster Response	3.01	Sometimes Implemented	3.41	Often Implemented
Rehabilitation and Recovery	2.98	Sometimes Implemented	3.41	Often Implemented
Grand Mean	3.01	Sometimes Implemented	339	Sometimes Implemented

Among the four strategies on Disaster Risk Reduction and Management, Prevention and Mitigation teachers and students both perceived the overall implementation as Sometimes Implemented with a rating of 3.01 and 3.39 respectively. However, students gave higher rating than the teachers. Results further indicate that prevention and mitigation was the strategy with the highest rank which was most occasionally implemented. The premier Philippine academic institutions, in the face of these challenges, should initiate action toward building a highly skilled workforce keenly aware of disaster risk reduction and management principles and multi-disciplinary approaches necessary for managing complex institutional and operational systems, encompassing policy formulations, strategic planning, good governance, risk assessment, and the conduct of field investigations, research, training and community services. Leading higher education institutions should support leadership development — to produce a cadre of professionals and civil servants with high-level competencies in resilience systems development, implementation and management, relevant to supporting national and local government and whole-of-community stakeholder capacities[16].

Among the Disaster Risk Reduction and Management Strategies, the most often implemented as perceived by the student organization officers of SUs in Region 3 were the Disaster Response and Rehabilitation and Recovery. This could also mean that the safety of students and employees from all types of hazards and risks while in school is probably the utmost desire of parents and school administrators.

Disaster Preparedness was defined by law as the knowledge and capacities developed by governments, professional response and recovery organizations, communities and individuals to effectively anticipate, respond to, and recover from, the impacts of likely, imminent or current hazards events or condition. HEI's in this aspect will be examined based on strengthened capacities of communities to anticipate, cope and recover from the negative impacts of emergency situations and disasters. Further, activities revolving around community awareness and understanding, contingency planning; and conduct of local drills were also considered[17]. Disaster Response focuses on actual disaster response operations from needs assessment to search and rescue to relief operations to early recovery activities. Its main target is to have a successful disaster response operations and its smooth transition towards early and long term recovery work [17]. Rehabilitation and Recovery is the ability of the institution to restore normal conditions in the school community [18].Scaffolding emergency skills in disaster risk reduction which will eventually lead to the avoidance of moral panic)[19].

The difference among the responses of the two groups of respondents on their perceptions on the level of implementation of disaster risk reduction and management strategies is shown in Table 2.

Table 2
Difference Between the Responses of the Faculty and Student Respondents on Their Perceptions on the Level of Implementation of Disaster Risk Reduction and Management Strategies

Df	T	Sig. (2-tailed)
798	24.93	0.00

The computed significance value (0.00) is less than the 0.01 alpha level of significance, therefore the null hypothesis if rejected. There is a highly significant difference in the responses of the faculty-respondents and student organization officer-respondents on the level of implementation of disaster risk reduction and management

strategies. The significant differences on the perception of the two groups of respondents as regard to DRR aspects such as Prevention and Mitigation, Disaster Preparedness, Disaster Response and Rehabilitation and Recovery could be attributed to the differences in the respondents' profile, their status in their respective university and personal purpose and plans as employee and as student. The faculty respondents compared to student organization respondents could be directly involved in the implementation of the DRR and management strategies. The faculty members as employee could have the technical know-how on the different aspects of the Program. The students may have a minimal participation in the implementation of the Program most especially in the policy formulation. Moreover, these two groups of respondents do have varying degree of contribution and implementation of the Program and varying level of how they can benefit from the Program. UNSDR[14] stated that school together with its employees can be a locus for change, not only in increasing institutional capacity in building resilience itself, but also in mobilizing and delivering an authentic DRR message at an operational level. This therefore makes the work of the employees more critical and vital.

CONCLUSION

Based from the findings of the study, the faculty- respondents perceived that the disaster risk reduction and management strategies in terms of prevention and mitigation, disaster preparedness, disaster response and rehabilitation and recovery were Sometimes Implemented in their respective institution. The student organization officers-respondents perceived that the disaster risk reduction and management strategies in terms of prevention and mitigation, disaster preparedness, disaster response and rehabilitation and recovery were Sometimes Implemented in their respective institution. The faculty and students -respondents perceived that the implementation of disaster risk reduction and management strategies in terms of institution's organization, planning, utilization of resources, and training needs were Sometimes a Problem. There was a highly significant difference between the responses of the two group of respondents on the level of implementation of disaster risk reduction and management strategies.

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