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LSPU-SCC'S PREPAREDNESS AGAINST DISASTERS AND EMERGENCY: INPUT TO CAMPUS DISASTER RISK REDUCTION AND MANAGEMENT CONTINGENCY PLAN

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ABSTRACT

This study was conducted to assess the level of implementation of Disaster Risk Reduction and Management Programs in Laguna State Polytechnic University – Santa Cruz Campus necessary for the formulation of a Campus Disaster Risk Reduction and Management Plan. A survey was carried out among 84 respondents from employees and students of Laguna State Polytechnic University – Santa Cruz Campus. Most of the respondents are students of CHMT,CBAA, CSS, and Engineering, with some LSPU Personnel/Employee. The study measures the relationship of demographic profile of the respondents and extent of implementation and practice and the related variables (Disaster Prevention and Mitigation Programs, Disaster Preparedness programs, Disaster Response and Early Recovery programs, Rehabilitation and Recovery programs, DRR Trainings, Susceptibility of LSPU to Hazards, School Building Basic Emergency and Safety Requirements). With the help of a Statistician, the researcher utilized and analyzed the data. Frequency and Percentage, Mean and Standard Deviation are used to analyze and assess the level of implementation as well as the demographic profile used in the study

Findings revealed that the respondents relatively agree on the extent of implementation, while they practice DRR with moderate extent and moderately agree on the difficulties encountered that affects the implementation.

The result of the study may provide evidence-based data that can be utilized in the development of a Contingency plan against top hazard.

KEYWORDS: ***Disaster Preparedness programs, Disaster Prevention and Mitigation Programs, Disaster Response and Early Recovery programs, Rehabilitation and Recovery programs***

INTRODUCTION

The World Risk Report 2022 (Atwii, 2022) posted the Philippines as the riskiest country with regards to disaster, vulnerability, exposure and susceptibility. This is due to the geographical and geological characteristic of the country. Our country lies along the Pacific Ring of Fire unfortunately boasts of volcanoes that is seem connected to each other by a line. The Philippines alone has 300 volcanoes of which 20-24 are active. Two of these is close to the Province of Laguna, Mt. Banahaw, and Taal Volcano.

As to hydrometeorological characteristics, the Philippines has been considered as "typhoon country" because of the country receiving around 20-26 typhoons a year, of which 1-3 traverse along the province of Laguna and pose threat to the community within.

On the other hand, (Department, 2018) Statista research shows that 74.5% of the whole province of Laguna, particularly Santa Cruz was susceptible to ground-shaking that may cause soil liquefaction or the loosening of the ground soil. This is due to the fact that the whole province, as well as the National Capital Region, is susceptible to a Magnitude 7 Earthquake (Intensity VII-VIII) (Aguirre, 2013), (Concha, 2021), which can wreak havoc in case it truly happens.

At this juncture, the researcher introduces salient features of Republic Act 10121 or the Philippine Disaster Risk Reduction and Management Act of 2010 to mitigate and counter the effects of decades of erroneous human activity that enormously effected negatively on the environment.

One of the essentials of this act is the mainstreaming of disaster risk reduction and management in physical planning, infrastructure, health, budget, environment, education, and many others.

RA 10121 also promotes decentralization of plans and programs to further conduct localized approaches in DRRM. It encourages the participation of NGOs, private sectors, community-based organizations, and community members in disaster management.

In this fast-paced generation, technology advancement in industrialization and other sectors, and a steady increase in population, there is also an increase in hazards and other threats to all members of the community. Thus, the need to promote disaster preparedness and response is one of the main thrusts of RA 10121 in this point in time.

In this juncture, we acknowledge the importance of the education sector in the disaster risk reduction and management concept. The education sector has a massive population capable of learning disaster risk reduction, train and produce a large number of volunteer rescuers and emergency response personnel, increase the level of the school's capability to respond, and contribute to the growth of disaster resilience in the school and the community.

According to (Vatteri, 2022), school buildings that are exposed to both flood and earthquake poses a significant and greater risk to vulnerable students, teachers and personnel.

On the other hand, learning institutions have been the topmost support mechanism of every family in academic and

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social development of every school-going individual. According to (Kapur, 2021) (*see Appendix B*) (The Role of Schools in Youth Development), schools have the opportunity and power to transform lives. They change the process of steering students towards benchmark success into a life-changing learning experience that helps young people plan a path for a bright future. Also, it is a shared responsibility between the parents and the schools to develop the students' character (DfEE, Excellence in Schools, 1997). Countries like the United States of America expressed their strong support in the school's character building as shown by a 85% poll survey approval (DfEE, Schools: Building on Success). Moreover, Briony Towers and Annette Gough cited in their publication (Towers, 2019) (*see appendix C*) that children of this generation are growing up in a world of proportionally increasing disaster risks. Change in climate, continuous population growth, rapid urbanization, and ever-growing social and economic inequality are all gearing greater numbers of people to losses and damage and leaving the children as among the most vulnerable. Fortunately, children are also can be a means of change and may have specific capacities to reduce disaster risk in their own home, in the schools, and communities. A key process for channeling those capacities is school-based disaster risk reduction and resilience education (DRRRE).

Based on the publication of (Wang, 2021), schools are essential avenue and setting for the conduct of DRR education. Wang also stated that the mindset of the school personnel is vital to the success of DRR implementation in schools. Moreover, (Nakano, 2021) disclosed in his publication that we have to address the gap of DRR Knowledge between the students and the school personnel. There is a need to balance the level of DRR knowledge between people in schools. Further, disaster resilience is everybody's accountability and responsibility. Everyone is considered as vulnerable and prone to hazard based on their exposure and capacity.

With these, the researcher considered the Laguna State Polytechnic University Santa Cruz Campus as the main benefactor of the study mainly because of the following considerations: firstly, the Laguna State Polytechnic University Santa Cruz Campus is the current school of the researcher; secondly, LSPU-Santa Cruz is one of the frontiers of exemplary academic excellence in Santa Cruz, Laguna; and lastly, LSPU-Santa Cruz is within the area of jurisdiction of the researcher who is a Local Disaster Risk Reduction and Management Officer of Santa Cruz.

OBJECTIVE OF THE STUDY

Given that schools are continuously expanding in terms of academic thrust and infrastructure development, still the threat of an impending hazards are not far. In the recent years, disasters have claimed lives and has wreak damages in our infrastructure because of our limited capacity. And schools are not excluded in these mishaps. As one of the forerunners of character development and academic excellence, learning institutions are vital parts in nation building and economic development.

The researcher intends to affirm that the study on the level of preparedness of LSPU-SCC as well as its over-all implementation of DRR Programs and Projects is important in upholding safety and security within the school and the improvement of disaster resilience and management of the campus. This study will provide factual data and statistical analysis that can be utilized in the formulation of contingency plans against the top hazards that threaten the lives of the people within the campus as well as the general campus infrastructure itself. The results of the study can provide information on the aspects of disaster risk reduction that needs priority actions.

MATERIALS AND METHODS

The researcher aims to conduct a "Descriptive Research" to the study and will be utilizing the following characteristics: quantitative research – to collect demographic information and analyze it statistically; and nature of variables – to observe uncontrolled/independent variables as well as the behavior of the respondents under study. Such method aims to obtain the individual perception of the respondents to the independent variables presented in the conceptual framework and use this data to analyze and determine the level of implementation of the school with regards to DRRM.

This methodology will enable the researcher to come up with the analysis of the current implementation of DRRM in the school and in the end, provide recommendations for the formulation of DRRM Contingency Plan for the school.

Population and Sampling Technique

The respondents will be randomly selected from the students and personnel of the Laguna State Polytechnic University-Santa Cruz Campus from the College of Business Administration and Accountancy, Computer Science Studies, Hospitality Management and Tourism, and Engineering.

Data Collection Procedure

The primary instrument that was used for gathering the needed data for this study was a set of questionnaires uploaded online through Google Forms which help to gather required information. The data gathering procedure will be divided into five stages. The first stage involves formulation of questions in congruence with the statement of the problem and the proposed theoretical framework. Next is review and approval of the thesis adviser and the college dean, followed by submission of request letter to the school president requesting approval to conduct an online survey to the students and/or school personnel. And second to the last is uploading the file and sending of link to students, teachers, and personnel of LSPU-SCC. And finally, is the data collection and encoding to specified matrix for statistical analysis.

To describe the demographic profile of the respondents (age, sex/gender, employment status, year level), the frequency and percentage were used. The susceptibility level of LSPU-Santa Cruz to current hazards were determined using frequency and percentage; the levels being none, low, moderate, and high. The frequency and percentage were used to ascertain the current level of assessment of the School Building and its readiness against hazards in the availability or presence of evacuation and emergency preparedness basic requirements.

On the other hand, the mean and standard deviation was used to assess the level of the school's current capacity (reflection of vulnerability) based on the respondent's perspective with respect to; Disaster Prevention and Mitigation,

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Disaster Preparedness, Disaster Response, Incident Management and Early Response, Rehabilitation and Recovery.

A low standard deviation means there was a lot of agreement about the answers in the online questionnaire survey. High standard deviation means there was a wide range of answers, indicating disagreement in the perceptions of the LSPU-SCC respondents.

As to the number of reported and responded emergency incidents, frequency and percentage was used to determine the substantial results. The mean and standard deviation were used to determine level of respondents' reflection of vulnerability on LSPU-SCC's current capacity in disaster risk reduction and management.

RESULTS AND DISCUSSION

Socio-Demographic Profile of the Respondents

The profile of the students and school personnel covered their age and gender. The students' year level was also included to describe the profile of the students while the length of service was for the school personnel. The socio-demographic profile of the respondents is presented in Table 1.

It can be gleaned from the table in page 36 that three of the school personnel were still in their young adulthood (33.3%), four of them in their middle adulthood (44.4%), and two of them were in their late adulthood (22.2%). Eight of the school personnel were female (88.9%). Three of the school personnel had been in the service in less than five years (33.3%), two of them had been in the service for 6 to 10 years (22.2%), and one of them had served LSPU for 11 to 20 years (11.1%). The rest of the school personnel did not disclose their length of stay in the service. With regards to DRRM-related trainings, one of them attended the Basic Life Support and Standard First Aid (11.1%), two of them attended the Fire Suppression and Prevention Techniques (22.2%), and six of them revealed that they did not attend any of the DRRM-related trainings (66.7%).

This means that most of the school personnel were in their young or middle adulthood and still has the capacity to act appropriately in times of disasters or emergencies. However, majority of them had not attended any of the DRRM-related trainings. Since LSPU-SCC may have personnel with different level of skill and learning inclinations, exposing them to DRRM-related trainings may increase their capacity and may contribute to the over-all capacity LSPU-SCC in all thematic areas of the DRRM. It is very essential for the school personnel to be highly prepared in case of disasters or emergencies since they are the main pool of resources that the school will depend upon.

The data also support the national and local governments' call to encourage all sectors of the society to embrace DRRM as stated in Republic Act 10121 (RA10121) or:

> *"An Act Strengthening the Philippine Disaster Risk Reduction and Management Framework and Institutionalizing the National Disaster Risk Reduction and Management Plan, Appropriating Funds Therefor and for other purposes states in Section 2: Declaration of Policy, to; (d) Adopt a disaster risk reduction and management approach that is holistic, comprehensive, integrated, and proactive in lessening the socioeconomic 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"; (g) Mainstream disaster risk reduction and climate change in development processes such as policy formulation, socioeconomic development planning, budgeting, and governance, particularly in the areas of environment, agriculture, water, energy, health, education, poverty reduction, land-use and urban planning; (I) Recognize and strengthen the capacities of LGUs and communities in mitigating and preparing for, responding to, and recovering from the impact of disasters; (n) Develop and strengthen the capacities of vulnerable and marginalized groups to mitigate, prepare for, respond to, and recover from the effects of disasters; (RA 10121, The Philippine Disaster Risk Reduction and Management Act of 2010, p. 2-4)."*

Table 1 Frequency and Percentage Distribution on the Demographic Profile of the Respondents

Demographic Profile	Personnel		Students	
	f	%	f	%
Age (in years)				
20 & below	0	0.0%	10	13.2%
21 - 30	3	33.3%	59	77.6%
31 - 45	4	44.4%	4	5.3%
46 - 60	2	22.2%	3	3.9%
Gender				
Male	1	11.1%	13	17.1%
Female	8	88.9%	62	81.6%
Preferred not to mention	0	0.0%	1	1.3%
Students' Year Level				
First Year	-	-	2	2.7%
Second Year	-	-	7	9.6%
Third Year	-	-	4	5.5%
Fourth Year & above			54	74.0%
Graduate Studies			9	12.3%
Length of Service			-	-

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0 to 5 years	3	33.3%	-	-
6 to 10 years	2	22.2%	-	-
11 to 20 years	1	11.1%		
DRRM-Related Trainings Attended				
Basic Life Support and Standard First Aid	1	11.1%	26	34.2%
Fire Suppression and Prevention Techniques	2	22.2%	9	11.8%
Water Safety and Rescue	0	0.0%	1	1.3%
Collapsed Structure Search and Rescue	0	0.0%	0	0.0%
High Angle Rope Rescue	0	0.0%	0	0.0%
No trainings at all	6	66.7%	38	50.0%
Others	0	0.0%	2	2.8%

The data show the probable effect of proactive DRRM measures that may negate the effect of disasters because as mentioned by Bangay (2013), the impact of natural disasters goes beyond the tragic loss of life, the disruption of schooling and psychological trauma of survivors, it is vital for every individual within the campus of LSPU-Santa Cruz to immerse themselves in the DRR pool of knowledge thru participating in and conducting DRR-related programs and activities.

The data also show the wide range of variations and complexity of the respondents' perspective on the implementation of DRRM in the school. Carvalho (2014) recommends DRR measures for improving risk communication: promoting information sessions on rules of conduct in emergency situations for teaching staff and technical and operational assistants in the schools; giving preference to curricular contents related to the hazards, risks and vulnerabilities that affect populations; encouraging greater transmission of prevention measures and appropriate behaviors in emergencies.

As for the students' profile, 77.6% (59 students) were between the age range of 21-30 years old, 13.2% (10) were 20 years old and below, 5.3% (4) were between 31-45 years of age, and 3.9% (3) were 46-60 years old when this study was conducted.

As to their sex/gender classification, 17.1% (13) were male, 81.6% (52) were female, while 1.3% (1) preferred not to mention their gender preference.

Majority of the students who responded were in their fourth yearth and above at (74% (54 students), 12.3% (9 students) were taking graduate studies, 9.6% (7) were in their second year, 5.5% (4) of the students were in their third year, and 2.7% (2) were in their first year of academic study.

Current DRRM-related Trainings

It is very notable that 50%, or 38 students admitted that they have not acquired any DRRM-related trainings at all. Out of the total student respondents, 34.2% (26 students) have undergone Basic Life Support and Standard First Aid Training, 11.8% (9) were trained with Fire Suppression and Prevention Techniques, 2.8% (2) took other trainings like % (2) took other trainings like DRRM on Health, Hospital Safe From Disasters, Workshop on Mainstreaming DRRM-H on LGUs, Rapid Damage And Needs Assessment, Basic Incident Command System, Camp Management, Basic orientation on Disaster management, 1.3% (1) took Water Safety and Rescue Training, while none have undergone advance rescue skills training such as Collapsed Structure Search and Rescue and High Angle Rope Rescue training.

Susceptibility level of LSPU-Santa Cruz to current hazards

The respondents were asked on the susceptibility level of LSPU Sta. Cruz Campus to hazards as floods, earthquakes, fire, volcano eruption, accidents, civil disturbance, and public health emergency. These variables were presented based on the hazards assessed for the municipality of Santa Cruz. The results were presented in Table 2.

Table 2 Frequency and Percentage Distribution on the Susceptibility Level of LSPU Sta. Cruz Campus to Hazards

Hazard(s) that pose threat to LPSU-Santa Cruz Campus	None		Low		Moderate		High	
	f	%	f	%	f	%	f	%
Flooding - occurrence within the school compound	43	50.6	30	35.3	10	11.8	2	2.4
Earthquake - level of ground shaking that affected the school	37	43.5	33	38.8	12	14.1	3	3.5
Fire - incidents caused by fire that affected the school	62	72.9	9	10.6	9	10.6	5	5.9
Volcano - ash fall, volcanic eruption that affected the school	60	70.6	14	16.5	7	8.2	4	4.7
Accident - Falling, Road Crash, Slip, Chemical Spill, Explosion, etc.	51	60.0	19	22.4	11	12.9	4	4.7
Civil Disturbance - Incidents of Brawl, Stampede, Frat/Gang wars, etc. that resulted to human injury or property destruction or damage	59	69.4	16	18.8	8	9.4	2	2.4
Public Health Emergency - Virus Outbreak, Covid-19, etc.	26	30.6	28	32.9	22	25.9	9	10.6

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Majority of the respondents perceived that the occurrence of flooding within the school compound ranged from none to low (85.9%) as well as the incidence of earthquake (82.3%). The incidence of fire was believed to happen from none to low as attested by the respondents (83.5%) as well as the occurrence of volcano eruption (87.1%). As the school personnel and students constantly move within the campus, they perceived those accidents like falling, slip, or chemical spill rarely occur (82.4%). The respondents believed that civil disturbance rarely occurred within in the campus (88.2%), regardless of its form that resulted to human injury or destruction of the school property. With regard to public health emergency, the respondents gave varied responses. More than half of them perceived that public health emergency were most likely to occur from none to low (63.5%) while some of them verbalized that this hazard might occur in the campus from moderate to high level (36.5%).

The presence of hazards in schools, whether caused by natural processes or human activities, cannot be ignored. Even the slightest and slimmest chance of occurrence of a hazard must be dealt with careful analysis. Although the school authorities and other agencies were aware of such hazards because of its physical, educational, economic and psychosocial impacts to people, such must be compensated with proper DRR programs and activities. To lessen the perceived impact, the need for a roll-out of programs related to disaster preparedness must be mainstreamed in the school as indicated in the School Disaster Risk Reduction and Management (DRRM) Manual (Bayangos, 2015).

Level of Assessment of the School Building based on its readiness against hazards

The researcher included this assessment in the survey to obtain information regarding the personal assessment of the respondents and their level of awareness regarding the basic emergency requirements, warning signals and evacuation guides that may be available in the buildings they frequent.

Table 3 Respondents' Assessment on School Building Integrity as to Building Evacuation and Emergency Basic Requirements

Building Evacuation and Emergency Basic Requirements	**Frequency**	**Percentage**
Fire Exit	66	77.6%
Fire Window Ladder	19	22.4%
First Aid Box	38	44.7%
Siren/Alarm/Bell	44	51.8%
Fire Hose	22	25.9%
Evacuation Guide	27	31.8%
I do not know	13	15.3%

Table 3 shows, 66 respondents (77.6%) were aware that there were fire exits in the buildings, 19 (22.4%) were knowledgeable of the structures' fire window ladder, and 38 respondents (44.7%) know of the location of the first aid boxes. Moreover, 44 who took the survey were aware of the siren/alarm bell that is used in the buildings; as to availability of fire hoses in the facility, 22 (25.9%) respondents identified the location; 27 respondents (31.8%) has read and noticed the presence of evacuation guide and finally, 13 respondents (15.3%) were not aware of the availability of these basic emergency and safety requirements in their facility.

(Jansury, 2014) states in her publication that the "investment in disaster risk reduction and preparedness can be cost-effective and efficient because it can promote better planning, improved coordination, and efficient response by education authorities and DRR partners. Investment in prevention, mitigation and preparedness may also mean investing less on reactive approaches that may be required during emergencies". Engaging all stakeholders, including children, in the planning processes for DRR and the provision of education after a disaster, will engage the community (in this case, the school) preparedness.

Level of the school's current capacity (reflection of vulnerability) based on the respondent's perspective under the Four (4) DRRM Thematic Areas

The researcher included this part of assessment since the respondents' own perspective regarding the LSPU-SCC's Current Capacity in Disaster Risk Reduction and Management may provide the basis of the school's capacity and readiness against disasters.

Disaster Prevention and Mitigation

The assessment shown in Table 4 reflected the respondents' own perception of the school or campus' level of implementation of programs and activities under Disaster Prevention and Mitigation Thematic Area which include installation of early warning systems, and signals, hazard mapping, engineering and non-engineering measures, and policy formulation.

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Table 4 Level of Respondents' Reflection of Vulnerability on LSPU-SCC's Current Capacity in DRRM as to Disaster Prevention and Mitigation

Disaster Prevention and Mitigation	**Mean**	**Std. Dev.**	**QI**
1. Presence of Early Warning System, Posters and Signages	4.42	0.81	Highly capable
2. Availability of Hazard and Risk Maps, Evacuation Routes	4.45	0.75	Highly capable
3. Conduct of Weather Forecast Monitoring	4.19	0.98	Capable
4. Installed Structural Interventions (Flood Mitigation, Engineering Measures, etc.)	4.20	0.94	Highly capable
5. Non-Structural Interventions (Policies, Electricity Conservation, Recycling Program, Waste Management/Segregation, etc.)	4.38	0.77	Highly capable
Overall Mean	***4.33***	***Highly Capable***	

Legend:
4.20 - 5.00 Highly Capable (HC)
3.40 - 4.19 Capable (C)
2.60 - 3.39 Moderately Capable (MC)
1.80 - 2.59 Slightly Capable (SC)
1.00 - 1.79 Not at all Capable (NACI)

The respondents perceived that LSPU Sta. Cruz campus was highly capable to reflect vulnerability on disaster prevention and mitigation since hazard and risk maps and evacuation routes were available (M=4.45, SD=0.75) as well early warning system posters and signages were present (M=4.42, SD=0.81). The campus was highly capable to reflect vulnerability on disaster prevention and mitigation because policies like electricity conservation, waste segregation, recycling program were in place as non-structural interventions (M=4.38, SD=0.77) and there were installed structural interventions (M=4.20, SD=0.94). The respondents disclosed that the campus was capable to reflect vulnerability on disaster prevention and mitigation in terms of the conduct of weather forecast monitoring (M=4.19, SD=0.98). The computed standard deviations denoted that there was a very small variance in the ratings of the respondents.

The overall mean of 4.33 indicated that the LSPU Sta. Cruz campus was highly capable to reflect vulnerability on disaster prevention and mitigation because of the presence of structural and non-structural interventions. With these results, the school is highly capable of this DRR thematic area.

Disaster Preparedness

Table 5 Level of Respondents' Reflection of Vulnerability on LSPU-SCC's Current Capacity in DRRM as to Disaster Preparedness

Disaster Preparedness	**Mean**	**Std. Dev.**	**QI**
1. Conducted DRR-related Trainings, Seminars, Orientations, Workshops	4.36	0.77	Highly capable
2. Has approved Contingency Plans, Evacuation Plans and the like	4.35	0.72	Highly capable
3. Has group of Trained Responders (certified)	4.27	0.85	Highly capable
4. Conducted Earthquake/Fire Drills and Simulation Exercises	4.34	0.73	Highly capable
5. Has adequate Response and Rescue Gears and Equipment	4.21	0.85	Highly capable
6. Has Available Emergency Response Vehicle	4.15	0.92	Capable
Overall Mean	***4.28***	***Highly Capable***	

Legend:
4.20 - 5.00 Highly Capable (HC)
3.40 - 4.19 Capable (C)
2.60 - 3.39 Moderately Capable (MC)
1.80 - 2.59 Slightly Capable (SC)
1.00 - 1.79 Not at all Capable (NACI)

The second assessment is shown in Table 5 included in this segment is the respondents' own perception of the university or campus' level of implementation of programs and activities under Disaster Preparedness.

The respondents perceived that LSPU Sta. Cruz campus was highly capable to reflect vulnerability on disaster preparedness since DRR-related trainings and orientations, seminars and workshops were regularly conducted (M=4.36, SD=0.77) as well as approved Contingency Plans and Evacuation Plans were available (M=4.35, SD=0.72). The campus was highly capable on the availability of Trained Responders (certified) (M=4.27, SD=0.85) and there were regular conducts of Earthquake Drills, Fire Drills, and Simulation Exercises (M=4.34, SD=0.73). The respondents disclosed that the campus was highly capable as to number of adequate Response and Rescue Gears and Equipment (M=4.21,

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SD=0.85). With regards to availability of emergency response vehicle, the respondents claimed that the campus is highly capable (M=4.15, SD=0.92). The computed standard deviations denoted that there was a very small variance in the ratings of the respondents.

The overall mean of 4.28 indicated that the LSPU Sta. Cruz campus was highly capable to reflect vulnerability on disaster preparedness because of the implemented trainings and orientations, conduct of drills and exercise, availability of rescue gears and equipment and vehicle, and approved plans all related to DRRM. With these results, the campus' programs under disaster preparedness were very well implemented and as such, the school is highly capable of this DRR thematic area.

Disaster Response, Incident Management and Early Response

The third assessment listed in Table 6 included in this segment is the respondents' own perception of the school or campus' level of implementation of programs and activities under Disaster Response. This assessment show how capable is the school in handling complex emergencies that may pose threat within the campus.

Table 6 Level of Respondents' Reflection of Vulnerability on LSPU-SCC's Current Capacity in DRRM as to Disaster Response

Disaster Response	Mean	Std. Dev.	QI
1. Deployment of Emergency Response Teams	4.28	0.73	Highly capable
2. Capable of Evacuation Measures and Management	4.36	0.69	Highly capable
3. Conduct of Proper Event Management and Emergency Coordination	4.28	0.72	Highly capable
4. Communication Team in Action	4.31	0.71	Highly capable
5. Availability of Transportation Team for response operations and logistic mobilization	4.27	0.75	Highly capable
Overall Mean		***4.30***	***Highly Capable***

Legend:
4.20 - 5.00 Highly Capable (HC)
3.40 - 4.19 Capable (C)
2.60 - 3.39 Moderately Capable (MC)
1.80 - 2.59 Slightly Capable (SC)
1.00 - 1.79 Not at all Capable (NACI)

The respondents perceived that LSPU Sta. Cruz campus was highly capable to reflect vulnerability on disaster response since the capacity to deploy emergency response teams show that it is highly capable (M=4.28, SD=0.73) as well as the implementation of Evacuation Measures and Evacuation Management (M=4.36, SD=0.69). The campus was highly capable on the conduct of Proper Event Management and Emergency Coordination (M=4.28, SD=0.72) and there is a Communication Team in Action which is highly capable (M=4.31, SD=0.71). The respondents disclosed that the campus was highly capable as to availability of Transportation Team that can be immediately deployed for relief and emergency response operations and logistic mobilization (transport of response-related materials and equipment) (M=4.27, SD=0.75). The computed standard deviations denoted that there was a very small variance in the ratings of the respondents.

The overall mean of 4.30 indicated that the LSPU Sta. Cruz campus was highly capable to reflect vulnerability on disaster response because of the capacity to deploy ER teams, implement safe evacuation procedures, conduct management on pre-planned and untoward events, provide communication for proper coordination and response, and response and logistics mobilization. With these results, the campus' programs under disaster response were very well implemented and as such, the school is highly capable of implementation of projects, programs and activities necessary for the success of this DRR thematic area.

The next table, Table 7, is on the respondents' responses on the assessment of the school's Rehabilitation and Recovery capacity.

Rehabilitation and Recovery

The fourth assessment reflected in Table 7 included in this segment is the respondents' own perception of the school or campus' level of capacity and implementation of programs under Disaster Rehabilitation and Recovery. This assessment will show how capable is the school in handling complex emergencies that may pose threat within the campus.

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Table 7 Level of Respondents' Reflection of Vulnerability on LSPU-SCC's Current Capacity in DRRM as to Rehabilitation and Recovery

Rehabilitation and Recovery	Mean	Std. Dev.	QI
1. Conduct of Post-Disaster Damage and Needs Assessment	4.22	0.84	Highly capable
2. Service Continuity Capability (campus' service able to function in 24-48 hours)	4.18	0.82	Capable
3. Conducts Review and Reformulation of Policies and Plans	4.18	0.80	Capable
4. Provision of Assistance to affected LSPU Personnel and Students	4.28	0.87	Highly capable
5. Conduct Rehabilitation/Renovation of Facility damaged by disaster	4.25	0.89	Highly capable
Overall Mean.	***4.22***	***Highly Capable***	

Legend:
4.20 - 5.00 Highly Capable (HC)
3.40 - 4.19 Capable (C)
2.60 - 3.39 Moderately Capable (MC)
1.80 - 2.59 Slightly Capable (SC)
1.00 - 1.79 Not at all Capable (NACI)

The respondents perceived that LSPU Sta. Cruz campus was highly capable to reflect vulnerability on disaster rehabilitation and recovery since it implements conduct of Post-Disaster Damage and Needs Assessment (M=4.22, SD=0.84) as well as the capacity to implement Service Continuity within 24-48 hours shows that the campus is capable (M=4.18, SD=0.82). The campus was capable on the conduct of Review and Reformulation of Policies and Plans (M=4.18, SD=0.80) and there is a program for Provision of Assistance to affected LSPU Personnel and Students which is highly capable (M=4.28, SD=0.87). The respondents disclosed that the campus was highly capable as to Conduct of Rehabilitation/Renovation of Facility damaged by disaster (M=4.28, SD=0.89). The computed standard deviations denoted that there was a very small variance in the ratings of the respondents.

The overall mean of 4.22 indicated that the LSPU Sta. Cruz campus was highly capable to reflect vulnerability on disaster rehabilitation and recovery because of the capacity to various post-disaster activities necessary to achieve immediate recovery and return to normalcy of the school functions. With these results, the campus' programs under disaster rehabilitation and recovery were very well implemented and as such, the school is highly capable of this DRR thematic area.

Number of Reported and Responded Emergency Incidents

Table 8 Frequency Distribution on the Number of Reported and Recorded Emergency Incidents

Number of Emergency Incidents	1 to 5		6 to 10		10 & above	
	f	%	f	%	f	%
Reported	9	100%	0	0.0%	0	0.0%
Recorded	9	100%	0	0.0%	0	0.0%

The fifth assessment in Table 8 included in this segment is the respondents' perception of whether the school has a record of incidents reported and if these reports were immediately responded. This assessed the frequency per month of emergency incidents within the campus.

The respondents perceived that LSPU Sta. Cruz campus was receiving reports and calls of emergency situations 1-5 months per month and was able to respond to 1-5 incidents per month.

CONCLUSION AND RECOMMENDATION

The data presented show that, as an over-all view, the Laguna State Polytechnic University Santa Cruz Campus, performs well in the implementation of DRRM Programs and Activities in all four Thematic Areas. However, there were slight lower statistical results in some areas like "availability of emergency response vehicles", service continuity capability", and "review and reformulation of policies and plans". This shows that disaster preparedness mechanisms and the rehabilitation and recovery programs of the campus, although both has a high and satisfactory rating, still were the lowest of the four thematic areas.

Most of the respondents were students 95% and 78% were between the ages of 21-30 years old, 83% were female, 74% were in their fourth-year level when the study was conducted. On the average, 20-30% of the respondents stated that hazards pose a low to high susceptibility impact to the school; 15% of the respondents were not aware of the building safety measures installed; The school posed a "highly capable" status to their programs in Disaster Prevention and Mitigation and Disaster Response; while although "highly capable", the programs in Disaster Preparedness and in Rehabilitation and Recovery scored a little lower than the other two thematic areas. There were 1-5 incidents reported and responded every month based on the respondents' answers.

Based on the findings of the study, it is concluded that:

1. That the "Disaster Preparedness Thematic Area" of LSPU-SCC DRRM implementation is feasibly the

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most tangible solution to increase the disaster resilience of the campus.

2. That improvement to this area will contribute to greater Disaster Response Mechanism and save greater number of lives and decrease areas of concern during the implementation of Rehabilitation and Recovery programs.
3. That the Laguna State Polytechnic University - Santa Cruz Campus nevertheless is required to formulate or possess, through this thesis, a school disaster risk reduction and management – Contingency plan for Earthquake and Civil Disturbance (separate contingency plan for each hazard) that they can utilize during emergencies, daily school activities and conduct of pre-planned events (of which the campus has many activities to conduct every school year) to achieve utmost safety and order, increase disaster resilience and promote DRRM discipline to the LSPU students and personnel.

Based on the findings and conclusions formulated, the following recommendations are advanced:

a. Propose to formulate a Campus Disaster Risk Reduction and Management Contingency Plan for Top Natural and Human-Induced Hazards that will be utilized to minimize gap of DRR Knowledge and implementation between student and personnel;
b. The DRR Prevention and Mitigation Measures needs to formulated to maximize installation of building safety and emergency preparedness requirements;
c. Decrease the level of susceptibility to current risks and hazards thru enhanced Disaster Preparedness programs particularly in capability building and equipping both students and personnel;
d. Improve the conduct of Disaster Response operations with fully-capable Emergency Response Team(s) through established Standard Operation Protocols; and,
e. Well-planned program under Rehabilitation and Recovery has to be formulated all to guarantee the lessening of untoward incidents within the campus and increase its disaster resilience.

REFERENCES

1. *Aguirre, J. J. (2013). Probabilistic seismic hazard analysis of Laguna, Philippines.*
2. *Ajzen. (1991). Theory of planned behavior.*
3. *Alcantara, J. (2019, September). Overview of the Societal Impacts of.*
4. *Atwii, F. (2022). World Risk Report 2022.*
5. *Bakke, H. (2017). First-aid training in school: amount, content and hindrances.*
6. *Bangay, C. (2013). Natural Hazards in India: Forewarned is Forearmed.*
7. *Barnes, J. (2017). Comprehensive School Safety Policy: Case Studies.*
8. *Bayangos, M. C. (2015). School Disaster Risk Reduction and Management.*
9. *Bazarragchaa, S. (2012). Community Participation in Disaster Risk Mitigation: A comparative study of Mongolia and Japan.*
10. *Bello, N. R. (2020). Disaster Preparedness Of Schools In Region 8, Philippines After Super Typhoon Haiyan .*
11. *Bhatia, S. (2017). Designing and Building Earthquake-Safe Schools in Uttar Pradesh.*
12. *Bollettino, V. (2018). Perception of disaster resilience and preparedness in the Philippines.*
13. *Buchanan, M. (2020, May). Forewarned is forearmed.*
14. *Cadag, J. R. (2017). Hidden disasters: Recurrent flooding impacts on educational continuity in the Philippines.*
15. *Carvalho, L. (2014). The Importance of Schools in Disaster Risk Reduction.*
16. *Cataluña, J. (2021). Areas that are High Risk of Flooding in Santa Cruz, Laguna.*
17. *Chaudhary, M. T. (2021, October). Natural Disasters—Origins, Impacts, Management.*
18. *Concha, N. (2021). Development of Earthquake Liquefaction Maps of Laguna, Philippines.*
19. *Cubillas, A. (2018). The Implementation of the School Disaster Risk Reduction and Management Program Components of the Disaster-prone Elementary Schools.*
20. *David, C. (2018). School hazard vulnerability and student learning.*
21. *D'Ayala, D. (2021). PRISMH: Philippines Resilience of Schools to Multi-Hazard.*
22. *Department, S. R. (2018). Earthquake hazards in Laguna Philippines 2018.*
23. *DfEE. (1997). Excellence in Schools.*
24. *DfEE. (n.d.). Schools: Building on Success. 2001.*
25. *Gibb, N. (2016). Getting Climate Ready: A Guide for Schools on Climate Action.*
26. *IFRC. (2023). IFRC. Retrieved from International Federation of Red Cross and Red Crescent Societies (IFRC): https://www.ifrc.org/our-work/disasters-climate-and-crises/what-disaster*
27. *Izadkhah, Y. O. (2017). Nationwide Schools Earthquake Drills in Iran.*
28. *Jansury, L. (2014). Issues in Education in Emergencies.*
29. *K.Gomathy, D. (2021). A STUDY ON EMPLOYEE SAFETY AND HEALTH MANAGEMENT.*
30. *Kanyasan, K. (2018, December). Implementation of disaster risk reduction and management policies in a school setting in Lao PDR: a case study.*
31. *Kapur, I. (2021, June). The Role of Schools in Youth Development.*
32. *LaMorte, W. W. (2022). Behavioral Change Models.*
33. *Lapada, A. (2022). DISASTER RISK REDUCTION KNOWLEDGE AMONG FILIPINO SENIOR HIGH SCHOOL STUDENTS.*
34. *LGU, S. C. (2019). Local Disaster Risk Reduction and Management Plan 2019-2022.*
35. *Liu, Y. (2021). Evaluation of College Students' Emergency Response Capability Based on Questionnaire-TOPSIS Innovative Algorithm.*
36. *Mamon, M. A. (2018). Disaster risk reduction knowledge of Grade 11 students: Impact of senior high school disaster education in the Philippines.*
37. *Manalo, R. G. (2020). Exploring the Gap in Implementing the Philippine Disaster Risk Reduction and Management Law (RA 10121) in the K-12 Senior High School.*
38. *McCombes, S. (2022, October). Descriptive Research | Definition, Types, Methods & Examples.*
39. *Miscolta, A. (2016). Guiding Local Governments Strengthen Unsafe Schools in Japan.*
40. *Miscolta, A. (2017). Assessing and Implementing Structural Interventions for Schools in China.*
41. *Mojtahedi, S. M. (2009). Theoretical Framework for Stakeholders' Disaster Response Index in the Built Environment .*

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42. *Nakano, G. (2021). Disaster risk reduction education that enhances the proactive attitudes of learners: A bridge between knowledge and behavior.*
43. *Perez, J. (2023). Impacts and causative fault of the 2022 magnitude (Mw) 7.0 Northwestern Luzon earthquake, Philippines.*
44. *Soriano, G. (2019). DRR Knowledge among local people in a selected community in the Philippines.*
45. *Tolentino, K. (2021). Education in Emergency-The School Managers' Practices on RiskReduction and Management of Disaster.*
46. *Towers, B. (2019, July). New School: A Modern Approach to Disaster Risk Reduction and Resilience Education for Children.*
47. *Vatteri, A. P. (2022). Bayesian networks for assessment of disruption to school systems under combined hazards.*
48. *Victoria, L. P. (2009). Community based approaches to disaster mitigation.*
49. *Wang, J.-J. (2021). Factors affecting elementary and junior high school teachers' behavioral intentions to school disaster preparedness based on the theory of planned behavior.*
50. *Zutshi, B. (2020). Community Participation and Preparedness for Integrating Disaster Risk Reduction (DRR) in Managing Disasters A Study of Srinagar Floods (2014), India.*