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Less Is More: Proposed Home-School Disaster Risk Reduction Plan



Abstract: - Disaster happens anywhere and anytime. It hampers economic growth, undermines social stability, and changes geographical characteristics. This research focused on crafting a home-school DRR plan through the collaborative initiatives of the University of Batangas and its students and families, thus strengthening the home-school partnership. Just like what is mentioned in the title, the less that is done through a home-school partnership, the more meaningful the impact. Specifically, this research determined the respondents' DRR knowledge, practices, and strategies and measured the impact of the said strategies. The DRR plan and possible integration of DRR themes into the curriculum will improve the DRR efforts being made in every community where university students live. The target participants were 507 college students of the University of Batangas, selected via stratified random sampling with a 5% margin of error and a 95% confidence interval. Descriptive statistics were applied to analyze the gathered data, such as the weighted mean, percentage, frequency count, and standard deviation. The in-depth information gathered from the interview was integrated into the results. The findings were as follows: the DRR knowledge of the respondents and the DRR practices applied were observed to be of great extent. Meanwhile, the impact of such practices was evident for most items but strongly evident for items that concern family living and home routines. The DRR plan crafted out of the home-school partnership is intended to assist the barangay in the implementation of some identified initiatives. Of equal importance is the integration of DRR themes into the identified university courses (NSTP, STS, and PE).

Keywords: Disaster Preparedness, Disaster Prevention and Mitigation, Disaster Rehabilitation and Recovery, Disaster Response, DRR Awareness, DRR Practices, Curriculum Integration, Disaster Risk Reduction, Home-School DRR Plan, Home-School Partnership

1.0 Introduction

Environmental change is inevitable yet predictable, and its impact on life is enormous. People all over the world witness different disasters, from flooding to landslides to volcanic eruptions and the like. All these bring pain to all kinds of living organisms. Families, communities, and societies are so much threatened by these alarming environmental problems. The economic stability of every country remains negatively affected by these environmental hazards. Given the emphasis by Burke, Cascio, Costa, Deener, Fontaine, Fulk, Jackson, Munns, Orme-Zavaleta, Slimak, and Zartarian (2017), these environmental challenges are changing, thus they need more complex tools and new scientific approaches.

The Philippines, being an archipelago, is prone to environmental challenges. Its rich nature is the source of livelihood for the majority of Filipinos. The vast land, rich mountains, and vast seas are God's gifts to all its inhabitants, plants, and animals. The food consumed comes from plants and animals. But misuse and detrimental practices are threats that should be addressed now, not soon or tomorrow, for tomorrow all these creations may be gone. The researchers, having been teachers for years, rely mostly on government initiatives

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and programs on sustainability and disaster reduction. Different agencies providing guidelines on how to help save the earth by maintaining a healthy environment are followed, yet serious damage to life and property is still experienced all over the country. With this, it's about time that higher education institutions like the University of Batangas show active involvement in helping the communities with their disaster risk reduction practices and related project implementation. Although the sustainability initiatives of CHED and DEPED are considered and based on the memorandum policies, they are being implemented; the threat of disasters is still alarming. The disasters, natural and man-made, are happening, and lives are at risk, anytime, anywhere. Relative to this is the research output of Shaw, Sakurai, and Oikawa (2021) that centered on the role of schools in providing appropriate information about disaster prevention for the community and family. In addition, Kitagawa (2020), recommended that topics related to risk reduction be integrated into the school curriculum.

The role of higher education institutions, colleges and universities in particular, is crucial in strengthening local institutional capacity for disaster risk reduction. As elaborated by Pano Abao, and Boholano (2015), schools have taken measures of emergency preparedness, but an efficient, comprehensive, concerted, and dynamic effort in managing disasters is very much needed. It was recommended that a comprehensive, efficient disaster risk reduction management plan needs to be crafted by HEIs to instill a culture of safety. This should be planned, implemented, and evaluated, and must undergo a cyclical process of execution. Given emphasis was having a disaster risk reduction plan which may better prepare the school and community in time of disaster. A safer environment is the utmost desire of the school, parents, and community. Relative to this, awareness on the part of the school can be considered the ability to perceive, feel, or directly become aware of any events, according to Nifa, Lin, Ran, and Wei (2018). Contrary to the expected outcome of every DRR plan, failure can happen. In the study of Muddavanhu, Sakala, Manjeru and Matsvange, (2021), unpreparedness can lead to distraction as well as limited human resources. Implementation must be seriously adopted. As emphasized by Santiago and Casimiro (2021), mainstreaming disaster risk reduction and climate change adaptation into the community development planning process is considered the first line of defense to avoid damages and loss of lives. Wedawatta & Ginige (2021) recommended continuous training programs for practitioners and communities for sustained disaster knowledge and awareness, thus the role of schools may come in. In addition, Pasion (2020) mentioned that the level of awareness on disaster Risk reduction is extremely important in order to escape or reduce the risk driven by any disasters.

The efforts expected from schools can in no way solve the problem 100 percent. The role of the families and communities is another factor, and it can seal the partnership, leading to positive results. In Batangas and other nearby provinces where University of Batangas students reside, this partnership must be tried out to contribute to the government's efforts to prevent disasters and to help the students and their families reshape their lives after the saddening experience. This combination of efforts may seem insufficient, but with the little things done and in time, a tremendous impact leading to better life situations can be felt. The study of Kawasaki et.al (2020) concluded that a collaboration among parents, teachers, and other stakeholders is important concern with regard to disaster reduction to ensure school and community safety. Relative to this is the support of the Local Government Unit (LGU) by implementing the needed strategies. The study of Patungan (2019) suggested that it is important to build ongoing programs encouraging local participation in disaster risk reduction and climate change adaptation. The implementation of community-based disaster risk reduction management will provide citizens with the chance to acquire the information and abilities necessary to be adaptable and disaster resilient.

This research focused on crafting a home-school disaster risk reduction plan that hopefully will help lessen, if not totally minimize the problems in case of emergency situations before, during and after a disaster. Through the simplest initiatives presented, the researchers believe that a huge impact will be felt when seriously applied or practiced.

This research sought to:

1. measure the respondents' level of knowledge about DRR;
2. determine the DRR practices used within the family and community;

3. describe the perceived impact of the commonly-applied DRR practices within the family and community;
4. design a home-based DRR plan that can be considered for the effective implementation of projects for disaster reduction; and
5. integrate the DRR strategies in selected subjects

This research was anchored on R.A. 10121, or the Philippine Disaster Risk Reduction and Management Act of 2010. Section 2 values the people's rights to life and property by addressing root causes of vulnerabilities, strengthening the country's institutional capacity for disaster risk reduction and management, and building the resilience of local communities, including those affected by climate change. Relative to the aforementioned are important concepts from the theory of structural functionalism, which give emphasis to the roles played by families in the achievement of goals. In the context of this research, the students' roles are given focus; however, the family, being a system, has more to contribute. The family as a unit can accomplish a lot compared to what an individual member can do. The family being a part of the community makes sense when provided guidelines on how things should be done. This is where the role of the University of Batangas, as the higher institution collaborating with families and communities, is being looked into in the assumption of its leadership initiatives in helping the local government units improve their DRR plan of actions. With the intended output, the DRR plan out of home-school collaboration can help the local government units implement the DRR strategies from national to local levels.

2.0 Methodology

This research was quantitative in nature, with a self-made questionnaire as the main instrument for gathering data. DRRM experts helped with its validation and provided related information. The participants were 507 college students of the University of Batangas, selected via stratified random sampling with a 5% margin of error and a 95% confidence interval. The researchers sought approval from the different colleges to allow the dissemination of electronic surveys. The researchers complied with the requisites of the University Research Ethics Committee for review and approval. Participants' identities were kept confidential and remained anonymous throughout the study. To analyze the gathered data, it utilized descriptive statistics, such as the weighted mean, percentage, frequency count, and standard deviation. To gather additional but related information, a group interview was facilitated. As expected, with the prepared questions, the interviewees, who were student government officers acting as student representatives from the different colleges, were able to share valuable input needed to make the study substantial and relevant.

3.0 RESULTS AND DISCUSSION

This part of the paper presents, analyzes, and interprets the data gathered through a survey conducted by the researchers. For clarity and consistency, the data are presented according to the research objectives.

Respondents' Level of Knowledge on Disaster Risk Reduction

Table 1 shows that the respondents have an extensive knowledge of disaster risk reduction ($M = 3.36$, $SD = 0.54$). On a personal level, respondents are equipped with enough knowledge to respond to different types of disasters ($M = 3.50$, $SD = 0.57$). The results also indicated a varied level of knowledge on DRR, as shown by the high standard deviation for each indicator and category. This may be attributed to the efforts of the school and other agencies assigned for disaster concerns, as well as to the interest, awareness and understanding of the respondents on this matter.

On the level of family, the result ($M = 3.42$; 0.60) as revealed from the given indicators was interpreted great extent. The parents showed care for their household, including plants and animals ($M = 3.53$; $SD = 0.71$). The item that turned out to be the lowest ($M = 3.28$; $SD = 0.78$) was the family's response to the preparation of emergency kits. As observed in every household, there is the presence of an emergency kit, usually placed in a common area, but the items in the kit have not changed or improved since the day the kit was prepared. From the interview, it was revealed that most of the families find no more time to see and check what they need in

case of emergency yet they know that a well-prepared emergency kit or go bag is valuable. A bag of essentials may support self-sufficiency and ensure that the needs of people in a household are met while services are recovering from disruptions, according to Pickering, Schluter, Morris, Mark, McQuirk, Chan, Guy, Chan, Reddin, Throp, Tsuzuki, Yeung, and Murray (2018). In a similar study, it was concluded that “grab bags” are recognized as an important strategy to support disaster risk reduction efforts.

Table 1. Respondents’ Knowledge about Disaster

Indicators	Mean	SD	VI
Personal	3.5	0.57	VGE
I know that environmental hazards can lead to disasters.	3.6	0.68	VGE
I am informed that school announcement about any form of calamity is helpful.	3.6	0.66	VGE
I am informed about the possible risks when disasters happen.	3.51	0.67	VGE
I know that not following the DRR plan may lead to problems like sickness and death.	3.43	0.77	GE
I know where and when to ask help in times of crisis.	3.39	0.7	GE
Family	3.42	0.6	GE
My parents care about our house holds including plants and animals.	3.53	0.71	VGE
We need to have the list of telephone numbers of the government agencies assigned for disaster reduction.	3.5	0.7	VGE
My family is informed of what to do in case of emergency.	3.47	0.67	GE
We are aware of some mitigation strategies to be applied when needed.	3.34	0.71	GE
Every member of the family always gets the emergency kit ready.	3.28	0.78	GE
Barangay	3.15	0.7	GE
Our Barangay has DRR plan to be implemented when needed.	3.25	0.75	GE
There is regular announcement about the occurrence of possible calamity such as volcanic eruption, flooding etc. from Barangay	3.22	0.77	GE
The barangay officials assure the residents of their presence during the time of any disaster.	3.19	0.77	GE
Our barangay makes the residents informed by distributing infographics, flyers etc. on disaster risk reduction	3.06	0.84	GE
Our barangay explains the disaster prevention and mitigation strategies regularly.	3.05	0.83	GE
Composite Mean	3.36	0.54	GE

Legend: 2.50-3.49, Great Extent (GE), 3.50-4.00 Very Great Extent (VGE)

The barangay level obviously shows a lower weighted mean compared to the two categories, but it was still interpreted as having a great extent. The respondents know that there is a DRR plan available for implementation in case of disaster ($M = 3.25$; $SD = 0.75$). This can be justified by the item on the regular announcement about the disaster in the barangay ($M = 3.22$; $SD = 0.77$). This may mean that the residents in general have enough knowledge about the possibility of the coming problem as well as what to do in case a disaster strikes. The item on the regularity of explaining disaster prevention and mitigation received the lowest mean, though it was still interpreted as having great extent. Respondents mentioned that though there were announcements made, in terms of the period and people involved, regularity was not observed. One even mentioned in a jerk that they only give reminders and announcements after a problem has occurred or just before one comes, for instance a typhoon. The barangay officials would go around the area with a megaphone, telling about the possibility of flooding in low-lying areas or landslides in mountainous places. After the disaster happens, announcements fade like bubbles in water. As mentioned in the study by Alqahtany (2020), even though public awareness can help lessen the harmful effects of disasters, people’s cultural misconceptions and incorrect beliefs and attitudes could cause inadequate public behavior in disaster preparedness and response. In addition, capacity building can augment community responses to the different forms of disasters that may happen in the area. Trainings are needed to implement their functions and achieve the goals, Pramono,

Kusumastuti, Sekarwangi, and Choerudin (2020). In a related study by Manalo (2018), it was recommended that the LGU should set up local councils for disaster risk reduction and management. In the first place it is the duty of the government to capacitate the people for them to know what to do during and after the disastrous event.

Disaster Risk Reduction Practices within the Family and Community

The DRR practices of the respondents and their families/relatives were grouped based on the DRR themes such as disaster prevention and mitigation, disaster preparedness, disaster response, and disaster rehabilitation and recovery. Among these themes, the DRR practices under Theme Area 3 (Disaster Response) and Theme Area 4 (Disaster Rehabilitation) were observed and interpreted as being of great extent ($M = 3.38$; $SD = 0.57$; and $M = 3.38$; $SD = 0.60$). This result can be attributed to some of the Filipino characteristics of showing concern for one another after experiencing a problem, in this case, a disaster affecting oneself, family, and society. It is evident from the results that the respondents used DRR practices to a great extent. It can also be noted that these practices vary, as evidenced by the high standard deviation result per thematic area. This may be attributed to the differences on how the LGU through the Barangay level implements the DRR strategies in the localities where they belong. This can be in terms of mechanisms, time and the people directly involved in the act. As emphasized and recommended by Merino, Agustín, López, Pérez, Pérez, and Manchón (2019), to be able to achieve the DRR aim, vertical communication between LGUs and other concerned sectors will be a key element.

Table 2. Disaster Risk Reduction Practices

Indicators	Mean	SD	VI
Thematic Area 1: Disaster Prevention and Mitigation	3.25	0.59	GE
We have our gas stove properly turned off when not in use	3.6	0.62	VGE
We conserve food, water and electricity.	3.51	0.64	VGE
My family makes sure that electrical connection at home is regularly checked by the certified electrician.	3.23	0.77	GE
We participate in the community clean up drive and tree planting program	3.23	0.8	GE
We help in the home de-clogging strategies for the canals	3.16	0.75	GE
We regularly have the electrician check the wirings in the house	3.02	0.88	GE
The home maintenance personnel (engineer, carpenter) regularly inspect the building/house.	3.00	0.88	GE
Thematic Area 2: Disaster Preparedness	3.37	0.59	GE
We make sure that all members of the family are aware of the emergency exits of the house	3.49	0.63	GE
We try to be updated about what to do first when disaster strikes.	3.47	0.64	GE
We share information like DRR handouts to our family members.	3.46	0.69	GE
We make sure to have available foods and other necessities ready	3.4	0.74	GE
We make sure we have the list of important phone numbers needed during emergencies.	3.36	0.72	GE
We make sure each of us has a "Go Bag" which is placed strategically at home.	3.23	0.81	GE
We regularly check on our first aid kit to see if everything is available if needed.	3.22	0.78	GE
Thematic Area 3: Disaster Response	3.38	0.57	GE
We have open communication to all members of the family especially to younger sibling and old relatives	3.51	0.63	VGE
We make sure all house pets and other animals that belong to the family are properly taken cared of	3.51	0.66	VGE
We make sure to give advises to my younger siblings regarding safety practices after a calamity or disaster.	3.46	0.66	GE
We save food, water and basic needs and share to others	3.45	0.68	GE
We apply the principle of recycling to lessen the waste and to conserve.	3.41	0.69	GE

We let the community doctors and other medical professionals act on our needs	3.26	0.77	GE
We have open communication to the LGU especially in terms of requests and the likes	3.23	0.77	GE
We seek help from the experts and professional in the aspect of socio-emotional	3.22	0.8	GE
Thematic Area 4: Disaster Rehabilitation and Recovery	3.38	0.6	GE
We follow the advice of the LGU after the disaster	3.47	0.68	GE
We help each other to stay resilient and focus after the disaster	3.47	0.64	GE
We extend help to other victims of disaster	3.45	0.66	GE
We share safety practices during calamity and disaster.	3.43	0.67	GE
We help the LGU in encouraging other community members to prepare and be ready in the next disaster of whatever type comes	3.34	0.72	GE
We entertain socio-emotional help coming from the authorities in the field	3.28	0.77	GE
We show willingness to attend seminars and trainings on DRR	3.26	0.8	GE

Legend: 2.50-3.49, Great Extent (GE), 3.50-4.00 Very Great Extent (VGE)

Looking at the result closely, under thematic area 1, the item on properly turning off the gas stove is the highest ($M = 3.60$; $SD = 0.62$). Among the chores at home, cooking with the use of a gas stove is one of the most observed. Parents, children who are able to cook, and other family members love to cook at least three times or more in a day. With the respondents regularly turning off the stove, this means they know the possible damage this may cause to the household and to their lives when not done. Another item that shows a high result in terms of mean is conserving food, water, and electricity ($M = 3.51$; $SD = 0.64$). This may be related to the respondent's knowledge of the value of saving; therefore, this practice can lead to wise use of the family budget. One student interviewee pointed out that their parents always remind them to cut off their consumption of water and electricity and save the food leftovers for the next meal. On the other hand, the item on the regularity of home maintenance from the professional personnel got the lowest results ($M = 3.00$; $SD = 0.88$). Most respondents nowadays do the do it yourself (DIY) practice up to the point of meeting their home needs. They rely on video tutorials and advice from others, with or without experience in the field. This may also be about the fees asked by the personnel.

Thematic Area 3 is Disaster Response. Looking at the core of this area is equally important as the other areas. Two items were interpreted as being of very great importance: having open communication with family members and valuing the family's animals. These results ($M = 3.51$; $SD = 0.63$) and ($M = 3.51$; $SD = 0.66$) showed the respondents characteristics, which are very Filipino. It is known that "Pinoys" value family, and having open communication is one way to show this. The study of Seyedin, Samadipour, and Salmani (2019), gave considerations to the roles of men and women in the performance of their roles in the family especially if they concern disaster preparedness and reduction. In another item, house pets are also common among households. The respondents emphasized that, at times of life's issues and challenges, they like to be with their pets more than with their friends and relatives. This explains that regular vet visits are done to ensure the health and growth of their pets, not to mention how much budget is allocated to the choice of food as advised. On the aspect of seeking help on the socio-emotional, the result showed it was also applied, yet got the lowest results ($M = 3.22$; $SD = 0.80$). Much as they wanted assistance from the professionals catering to this aspect, most of them find a little hesitancy due to some items enumerated below: financial constraints of the family, readiness to undergo emotional help, and proper referral, which sometimes does not push through due to the unavailability of a common schedule.

Thematic Area 4, or Disaster Rehabilitation and Recovery, focused on what to do best after the disaster takes place, especially with the affected and badly injured community members. Two items highlighted this area: The respondents follow the advice of the LGU through the barangay, and they help each other stay resilient and focused after the disaster ($M = 3.47$; $SD = 0.64$). This only showed two Filipino values that are evident after the disaster. As can be observed, many Filipinos are good followers. They always listen to the instructions of the barangay officials and people in uniform. They are also ready to assist those who have been negatively affected by the disaster. One interviewee affirmed that these values are still observed to this day. The item about willingness to attend seminars and trainings on DRR, though interpreted as having great extent, got the lowest

results ($M = 3.26$; $SD = 0.80$). This may be attributed to life's priority based on needs. As mentioned in the interview, a busy schedule at school and chores to be attended at home for the family members were possible reasons for this. The importance of attending seminars on this concern was emphasized by Fatmah (2022). She particularly mentioned that even during calamities like floods, disaster training affects families' knowledge, especially those with older people. In general, however, under this thematic area, the DRR practices included in this survey were used. Moreover, as pointed out by Catedral, Vargas, and Son (2017), disaster education aims to increase the resiliency of students on disaster risks by solidifying knowledge about disasters, developing skills that can be used to prepare, adapt, mitigate, and respond to the damaging effects of disasters, and elevating awareness that widens the scope of understanding on DRR.

Perceived Impact of the Commonly-applied DRR Practices within the Family and Community

This study revealed the impact of the DRR practices of the respondents. It was shown that the items on home cleanliness and organization, caring for pet animals, cleanliness of the immediate home environment, taking care of properties, observing food security practices, and allowing fresh air to flow in the house had high results, interpreted as strongly evident. This only speaks to the respondents' understanding that the little things done at home can have a big impact on other people, families, and the community. From the small acts done, positive effects can happen, as another respondent noted.

In addition, it was agreed that everything starts at home. In support to what the home can do during emergency situations, Tomio, Sato, Matsuda, Koga, and Mizumura (2014) in a related study suggested that local authorities should be encouraged to develop programs that promote preparedness behaviors based on sound disaster risk awareness. Moreover, each community should be required to identify publicly key community members, such as social workers, who could provide support to neighbors in the event of a disaster.

On the other hand, of the items interpreted as evident, the one that got the lowest results was about the family's focus on DRR events, neglecting the value of togetherness and family bonding. This revealed that they need to give more time to DRR concerns over family bonding. For Filipinos, family togetherness, especially on school breaks like holidays and during weekends, is significant. Since this got the lowest ($M = 3.11$; $SD = 0.89$), they still prioritize bonding over DRR concerns. Though family matters to majority of the respondents, it is still their families that will be affected the most in case DRR concerns are not taken seriously. Like what one respondent mentioned that it's about time to fully understand DRR concerns, including its impact, before it is too late. In a related study of Napallaton and Antone, (2019), it was recommended that the LGU, school personnel, even policemen should continuously conduct disaster reduction trainings for the communities including schools to lessen if not totally prevent the effect of any disaster.

Table 3. Impact of Commonly-applied DRR Strategies/Practices

Indicators	Mean	SD	VI
Plants and animals are well taken-cared of.	3.57	0.62	SE
The home area is clean and organized most often.	3.57	0.58	SE
Properties are well taken-cared of and secured.	3.56	0.59	SE
Immediate home environment is kept clean and safe.	3.56	0.63	SE
Family members start to value money and use it wisely.	3.55	0.63	SE
Time is given importance by each member.	3.53	0.64	SE
Food security is observed at home.	3.52	0.66	SE
Fresh air flows inside the house.	3.52	0.63	SE
Collaboration among family members is observed.	3.5	0.63	SE
Good relationship with other community members is also achieved.	3.47	0.67	E
Saving money is now in place at home	3.47	0.65	E
Family members follow DRR strategies.	3.42	0.69	E
Sensitivity to other's feeling is observed.	3.42	0.7	E
Emotional security among family members is felt.	3.41	0.68	E
Coordination with government agencies is now considered.	3.4	0.71	E
Building/house maintenance is now considered.	3.39	0.7	E

The families now support the programs and activities lead by the officials of the barangay.	3.39	0.67	E
Community dwellers listens to the advises of the LGU through the barangay officials.	3.36	0.68	E
Future plans like migrating and having investments are now entertained at home	3.35	0.72	E
Drainage does not emit foul odor.	3.34	0.74	E
Families become too-time-conscious.	3.3	0.73	E
Families focus on DRR practices and forget bonding activities.	3.11	0.89	E

Legend: 2.50-3.49, Evident (E) 3.50-4.00 Strongly Evident (SE)

Another item that was rated low was on family’s being time-conscious. This revealed that with a lot of things to do and with the demands of time, the respondents can still work within the time required, with no worries about deadlines and schedules. One interviewee clarified that one culture of Filipinos that has been observed to have improved overtime especially during emergency is the value of time. From preparedness to handling emergency concerns, it seems that no time is wasted and that life at risk is their single most concern.

A Home-based DRR plan for the Effective Implementation of Projects for Disaster Risk Reduction

To prevent loss of lives in times of disasters and emergencies, home and school partnership can be of help. The efforts may not be much but when taken out of cooperation and strong belief, this can lead to significant impact and eventually save lives and properties. This research is hoped to add new ways of looking at disaster prevention by designing a home-based DRR plan that can be considered for the effective implementation of projects for disaster reduction. Through home-school partnership with the University of Batangas as the implementing agency in this study, this DRR plan can protect the family and community in case of disaster. It contains strategies descriptions and procedures, date of implementation and expected outcome. Being the lead agency, the University will do its best to assist the students and their families to keep them safe before, during and after a disaster.

Objectives	Strategy	Description & Procedures	Date of Implementat ion	Expected Outcome
Provide opportunity for family members to share significant information related to DRR	Regular Family Meeting	All family members are present and they discuss DRR thematic areas such as prevention and mitigation, preparedness, disaster response, and disaster rehabilitation and recovery. Informative readings in booklets and pamphlets are to be requested from the DRR office in charge to assure the validity and reliability of the information. In addition, simple home techniques like a family evacuation plan can also be emphasized in the discussion to involve not only the older members of the household but also the children. From the little things done, the lives of many can be saved	Last Saturday of each month	Collaboratio n and openness among family members
Facilitate seminar and training for family members to ensure safety during calamities and other forms of disasters	Attending Seminars & Training on Emergency Kit Preparation	It has been proven that seminars and training have increased awareness about DRR. The seminars and training described here are initiated by the University of Batangas. This is a home-school collaboration that will attempt to provide DRR strategies particularly in preparing	Summer Vacation	Improved understandi ng about DRR concerns

		emergency kit. This is a one-day seminar or training involving students and their families.		
Encourage family members to take part in making the household safe and secured	Keeping the Home Safe and Secured	This specifies the important role of the students and their families in caring for the entire household. Repair and related concerns about home security are covered here. The family headed by the parents must always remind the other members about simple yet valuable security measures such as turning off appliances after being used, keeping the entire house clean and free from disaster hazards, etc. Food security is also included here. Saving food can save lives.	Daily	Well-managed household with observed cleanliness and security
Provide free counseling service to the University students and their families who may need help after the disaster	Counseling Sessions after the Disaster	This is to be initiated by the University of Batangas with the help of the Guidance and Counseling Office. The said office provides counseling services (individual and group), particularly on emotional aspects. This can lessen the disaster's negative impact and prepare them for future occurrences. With this as part of the plan, the family and the community can feel they are not alone in times of difficulty.	After the disaster	Regained social and emotional stability after the disaster
Assist University students and their families through distributing leaflets/pamphlets on DRR	Getting Connected	The University of Batangas distributes pamphlets that contain important telephone numbers for the following: the City DRR Office, the University of Batangas Guidance and Counseling Office, the PNP, the LGU, the Bureau of Fire Protection Office, the Animal Welfare Office, etc. With this information, the family and community will feel secured and ready in times of need. The University of Batangas regularly updates the said informative pamphlet. Each college will distribute them to its own students.	August	More updated & connected families

Integrating DRR strategies to the Selected Subjects in the College Curriculum

Description: The role of the school does not end after information dissemination and the conduct of training and seminars. Lessons on DRR strategies are much better understood if they are part of the curriculum. This can be done by integrating them into the subjects with related contents. The teachers handling the subjects must be informed of this intent to get their syllabus ready at the start of the school year or when it is needed.

Enhancing students' understanding and awareness of disasters through the integration of disaster risk reduction (DRR) techniques into academic subjects will enable them to contribute to the creation of safer and more resilient communities. The following actions can be taken to incorporate DRR techniques into academic content:

1. Emphasize DRR key tenets, including knowledge of hazards, vulnerability and capacity assessment, disaster preparedness, response, and recovery, to better understand this concept.
2. Determine subjects where DRR strategies can be effectively incorporated. Geography, STS, social studies, physics, mathematics, language arts, and even art and physical education are some of the subjects that can have DRR integration.
3. Examine the learning objectives and curricula requirements for each topic to find areas where DRR strategies can be logically included. Seek out chances to incorporate DRR-related case studies, themes, and activities into the current structure.
4. Discuss the significance of DRR integration and the potential advantages for students with the professors. Encourage them to participate and get their advice on how DRR strategies can be successfully incorporated into each of their specific subjects.
5. Create or modify educational resources and materials that are in line with the curriculum and subject matter. This can entail creating lesson plans, worksheets, visual aids, multimedia materials, and practical exercises that incorporate DRR concepts.
6. Include examples of actual disasters and their effects in the lessons. Use case studies from regional, global, or local contexts to illustrate the applicability of DRR concepts and techniques.
7. Integrate activities that engage students to assess, evaluate, and suggest solutions to DRR difficulties to foster critical thinking and problem-solving. By posing open-ended questions, promoting debates, and urging pupils to consider many viewpoints, you may help kids develop critical thinking abilities.
8. Give students the chance to practice actual DRR skills like first aid basics, emergency response planning, hazard mapping, and risk assessments. Include practical exercises and simulations to improve students' comprehension and readiness.
9. Encourage students to get involved in their community and spread the word about DRR. This can be accomplished through initiatives, projects, or presentations that engage local government officials, disaster risk reduction professionals, and members of the community.
10. Evaluate the success of DRR integration activities on a regular basis. To pinpoint areas for improvement and make the required modifications to improve the learning experience, consider input from teachers, students, and parents.

Identified Courses in the Colleges that will have DRR integration are Physical Education (PE), Science Technology and Society (STS) and (NSTP). The topics and strategies below may be considered.

A. NSTP Topic: Disaster Management						
DRR Theme: Disaster Prevention & Mitigation						
Topic Learning Outcomes	Domains C-A-P (Cognitive, Affective, Psychomotor)	Topic	Time Allotment (hr.)	Activities/Strategies	Performance Indicators/Assessment Tools	Learning Resources
Discuss the procedures concerning disaster prevention and mitigation Share researches	C/P C/A	DRR Thematic Area 1: Disaster Prevention and Mitigation	1.5hrs	The students will do advanced research to prepare for a mini-lecture to be done in the	A rubric for mini-lecture will be used to assess the performance of the groups assigned.	https://www.facebook.com/watch/?v=614920976602219 https://www.facebook.com/civildefensePH/videos/428923242275562

found to be doable for DRR Thematic Area 1				class. The teacher facilitates the activity, gives topic summary and provides additional information. Class discussion led by teacher will follow the mini-lecture.		Teacher's prepared Ppt. Presentation
B. PE Topic: Introduction to Training Principles DRR Theme to be Integrated: Disaster Preparedness						
Assess disaster preparedness among students and their family members Explain the importance of being ready at the times of disasters	C C/A	DRR Thematic Area 2: Disaster Preparedness	1.5hrs	Interview with students and family members. The data gathered from the interview will be used as basis in assessing the preparedness of the students and their family. Group-to-Group exchange will follow to highlight the importance of DRR Thematic Area 2.	The interview questions were prepared in the class prior to the schedule of interview. The summary of the input taken from the presentation of interview results will be required from each group.	Library Materials which contain DRR topics. https://www.youtube.com/watch?v=FVwvBS-0q18 https://www.youtube.com/watch?v=pXkOscAY8zk
C. STS Topic: Biodiversity DRR Theme: Disaster Response						
Discuss how disaster response by the LGU and NGOs save lives and properties Demonstrate positive actions toward helping others during and after a disaster	C A	DRR Thematic Area 3: Disaster Response	1.5hrs	The students will learn disaster response through Experiential Learning . The teacher will ask permission from the DRR office near the University for a possible Local Trip with	Note taking must be done by the students while seeing the demonstration of DRR response. The summary must be submitted as individual output. A rubric will be used to check their level of understanding	Pamphlets and additional readings maybe requested from the local DRR office. Teacher's prepared additional information on Disaster Response will also be provided to students.

				demonstration from the DRR personnel/experts.	this Thematic Area.	
D. STS Topic: Climate Change & Mitigation						
DRR Theme: Disaster Rehabilitation & Recovery						
Describe the disaster rehabilitation in the Philippines Share information on how this thematic area can be improved Display willingness to assist the LGU through the Barangay by helping family members and other residents after the disaster	C C/P A	DRR Thematic Area 4: Disaster Rehabilitation and Recovery	3 hrs	The teacher presents sample case studies on DRR rehabilitation. Class discussion will follow with important inputs coming from the teacher.	Case study critiquing will be done by small groups. Their output will be based from the prepared rubric. Reflection writing will also be used.	https://muse.jhu.edu/pub/1/article/670091/summary Teacher's Ppt will be used in presenting the

4.0 CONCLUSIONS AND DIRECTIONS FOR FUTURE USE

The study concludes that the DRR knowledge of the respondents in three categories, such as personal, family, and barangay levels, is extensive with the personal level interpreted as having a very great extent. The results however, indicated a varied level of knowledge on DRR, as shown by the high standard deviation for each indicator and category. This is attributed to the efforts of the government agencies assigned to disaster concerns and the ways they are accepted and understood by the students and their families.

The DRR practices under the four DRR thematic areas, such as disaster prevention and mitigation, disaster preparedness, disaster response, and disaster rehabilitation and recovery, were greatly observed. The practices under Disaster Response and Disaster Rehabilitation had a slight increase in mean results, considering that Filipinos value communication among family members and accord the most care to family animals and pets.

The impact of the DRR strategies was felt, thus interpreted to be strongly evident, particularly on having the home area clean and organized, plants and animals that are well-taken care of, and on the aspect of open communication among family members as well as on the idea of saving for future use. These results showed that family concerns were the ones affected first by the DRR strategies applied, among others. Most items were rated evident.

The aforementioned results are the basis of the DRR plan, which will be implemented in the near future. The strategies that were specially crafted can be considered by the government in its DRR initiatives and similar projects. The integration of the DRR topics into courses such as NSTP, STS, and PE will eventually enhance the students' knowledge and skills and prepare them for emergency situations. The researchers believe that the important role of the University of Batangas through curriculum integration is a sure way to lessen, if not totally prevent, the negative impact of any type of disaster that will happen. A well-written syllabus for the university with DRR integration, when properly implemented in the classroom through the facilitation of the subject teacher, is expected to inform the students and their families about DRR concerns. This research also highlighted the home-school partnership, which was conceptualized to produce a positive impact on the challenges and problems brought about by any form of disaster that is experienced in the Philippines,

particularly in places where the students of the University of Batangas reside. As part of the research title, (Less is More" means that every single effort done by one can be doubled or tripled in time, and with the collaboration of school and home, meaningful and positive impact will be experienced, hence life and properties will not be at stake.

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