DISASTER PREPAREDNESS OF BOSTON DISTRICT

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ABSTRACT

This study aimed to determine the level of disaster preparedness of teachers in Boston District in terms of enabling environment, safe learning facilities, disaster risk management, and risk reduction and resilience education. It was conducted in Boston, Davao Oriental, across eight schools in Boston District. Results showed that all eight schools in Boston District were prepared based on the four indicators of disaster preparedness. Furthermore, this study revealed a significant difference between Carmen Elementary School & Boston Central Elementary School in their disaster preparedness when grouped in terms of school assignment. It further implies a significant difference among schools in their disaster preparedness when grouped in terms of their monthly MOOE. Based on the degree of relationship between disaster preparedness and the profile of respondents, it implies that the level of preparedness and school assignment are moderately related. Still, this relationship cannot be attributed to the entire schools of Boston. Moreover, the study revealed that the level of preparedness and monthly MOOE are moderately related, but this relationship cannot be attributed to the entire schools in Boston.

Keyword: *Disaster preparedness, enabling environment, safe learning, resilience education, disaster management*

1. INTRODUCTION

Disasters are unavoidable events that will be difficult for individuals impacted to deal with. These are frequently brought on by natural or man-made disasters that put communities in grave danger and result in the loss of lives and property (Ronquillo, 2020). In December 2021, Typhoon Odette, which flattened six Philippine regions, had inflicted the second-biggest number of fatalities among the world's natural disasters in 2021. In a January 10 report, global reinsurer Munich Re listed the strong August 14, 2021 earthquake in Haiti as last year's deadliest natural catastrophe with 2,248 deaths. It was followed by the onslaught of Odette (international name: Rai), which killed 408 people (De Vera, 2022). Moreover, Tiu (2022) added that this Super Typhoon has caused enormous devastation, destroying or damaging more homes than any storm in recent decades. Compared with 2013's Super Typhoon Haiyan, which left more than 6,000 people dead, Rai left a much wider path of destruction, hitting several major islands including Bohol, Cebu, Negros, and Palawan.

Floods, tropical cyclones, and major earthquakes, though not always as destructive, are the deadliest and costliest of hazards. The most terrible consequences are deaths and injuries in schools (Disaster Risk Reduction and Management, 2018). The School officials had been encouraged by the Department of Education authority to put disaster preparedness measures into practice in their schools. Preparedness can lessen the impact of calamities on schools, teachers, and, most importantly, students. Furthermore, disaster risk reduction and management are more than just minimizing property damage; it is also about getting people to work together to save lives and keep education from being disrupted. Teachers, students, parents, and communities are encouraged to participate actively in disaster preparedness since it is an excellent way to boost their risk awareness (Ronquillo, 2020).

In particular, this study sought to measure the level of preparedness of teachers in disaster risk reduction and management among eight schools in the Boston District.

2. REVIEW OF RELATED LITERATURE

This chapter discusses the disaster risk reduction and management, importance of disaster preparedness and response, disasters around the world, including the disasters in the Philippines, and disaster awareness in school.

2.1 Disaster Risk Reduction Management

Disasters can strike anytime and place, especially among vulnerable people and situations. They are sometimes caused by humans or natural disasters. The United Nations devised the Hyogo Framework for Actions (HFA) to reduce, if not eliminate, losses and injuries to people and property caused by hazards and disasters across the countries and communities. The Philippines was one of the 168 signatory countries and was ranked among the top ten most hazardous countries in the world due to several natural hazards (Ronquillo, 2020). R.A. No. 10121 recognized the need to "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. Moreover, Das & Malaviya (2014) added that disaster management in schools plays a significant role in educating and developing the basic skill to face any disaster. The disaster management not only makes the students aware but also inculcates the

right attitude to respond to disasters. Training and capacity building enhance the ability of the students and school communities to take the right decision during any emergency. The school disaster management team not only ensures the school, students and its various amenities safety. The capacity and their role play important role in the effective execution disaster management plan (Sanchez et al., 2019).

According to Monica Vidili's article from 2018, women and children have larger risks of survival and rehabilitation in the aftermath of natural disasters, according to various studies examining the impact of disasters. She added that women and girls are disproportionately responsible for caring for children, the elderly and persons with disabilities on a personal and professional level, making simple life-saving decisions like deciding whether to evacuate a disaster area, can become a difficult choice. Based on the study conducted by Kelly (2010), drills and exercises should be practiced on a regular basis. He recommended that practice drills be taken seriously because they allow the players to improve their skills in an emergency, kids and teacher will learn what to do and how act. It is necessary to be aware of the escape path and the location of the assembly is determined. Everyone is required to remain cool, and the staff and kids are held accountable. Having a practice drill deceases the amount of time wasted during an actual evacuation. According to Comighud (2020), contingency planning is a key instrument, but a solid plan cannot stand alone without an empowered citizenry, infrastructures, emergency response procedures, rehabilitation, and other important requirements. The bottom line of the aforementioned would be queries concerning the governments or local government units' (to be exact) financial capacities, as well as schools, universities, and/or organizations. According to the study of Cubillas (2016) that the appointment of DRRM coordinators are emphasized so that the DRRM program will be implemented successfully.

2.2 Importance of Disaster Preparedness and Response

Preparedness plans, according to UNESCO (2010), are dynamic endeavors that must be evaluated, amended updated, and tested on a regular basis. Moreover, active disaster preparedness entails creating detailed response plans, monitoring dangers, training emergency workers, and training residents of vulnerable communities to ensure the prompt, appropriate, and effective delivery of relief.

Disaster preparedness can help speed and efficiency of recovery efforts by reducing possible damage and saving live. The process of disaster planning and preparation is an ongoing process. Although it is not a simple process, planning ahead is required to produce favorable results, and it is growing more morally and economically important with each event (King & Tarrant, 2013). Furthermore, Abdunnazar (2018) added that the awareness and the skill of teachers to practice disaster management activities are highly important in relation to ensure the safety and security of school students. When it comes to disaster preparedness and response, Brooks (2012) and Cutter (2013) argue that taking responsibility requires a top-down and bottom-up approach that includes everyone from the national level all the way down to the grassroots setting. As a result, disaster planning and readiness are a shared duty, and collaborating toward a common goal can help uncover requirements and gaps in disaster education and preparedness.

2.3 Disaster Awareness in School

In response to all disasters, the Philippines implemented Republic Act 10121 otherwise known as the Philippine Disaster Risk Reduction and Management Act of 2010, was formulated to guide DRRM efforts in the basic education sector towards resilience-building in offices and schools, and to ensure that quality education is continuously provided and prioritized even during disasters and/or emergencies. According to the DEpEd order No. 37, s. 2015, also known as the Comprehensive Disaster Risk Reduction and Management (DRRM) in Education Framework hereby establishes to guide the implementation of DRRM for education practitioners, partners planning and programming at all levels of Department. (DO No. 37, s. 2015).

According to the DRRM Manual, the Department of Education, as the entity in charge of schools, recognizes that in addition to delivering primary education, it is also responsible for creating safe teaching-learning and enabling environments. It is also in responsibility of providing a safe enabling environment for school children (DepEd, 2008; DepEd nos. 87, and 120, 2015; DepEd nos.50, 2011). In a study done by Donnell (2019), he states that by thinking in terms of having an enabled environment in school, it may potentially even produce the best version of an enabling environment. As stated by Merchant (2019), disaster awareness in schools can be implemented by strategically posting safety instructions, providing firefighting equipment, having evacuation exits, and maintaining structures, among other things. Moreover, Catanus (2018) and Mamhot (2019) emphasize the need of having fire extinguishers, supplies, and appropriate learning/teacher/school equipment on hand. Furthermore, according to the United States Federal Emergency Management Agency (FEMA, 2013), schools are an appropriate setting for the distribution of risk-based instructional programs. Students can learn and carry readiness abilities into adulthood if they are taught the correct skills. It is necessary to determine whether students and educators are aware of the safety protocols and are well prepared in the event of a disaster (Comighud, 2020). Moreover, Ocal and Topkaya (2011) states that the school's preparation level is determined by the type of school and its location.

3. METHODOLOGY

3.1 Research Design

In this study, the researcher used quantitative research to obtain accurate data about the level of disaster preparedness of Boston District teachers across eight schools in Boston, Davao Oriental.

3.2 Research Instrument

The study was conducted as a basis to determine the level of disaster preparedness of Boston District teachers. The research instrument used to collect data is a survey questionnaire. The researcher did the survey to get the level of preparedness of teachers in Boston District.

3.3 Respondents of the Study

The respondents were elementary teachers from eight schools in Boston District. The overall total of respondents is eighty consisting of 61 females and 19 males. The grade range of the survey is from kindergarten up to grade six. The table below shows the total respondents of Boston District across eight schools and the participants of each school.

Table 1. Distribution of Boston District respondents

Schools	Total Teachers	Participants
1. Carmen Elementary School	13	13
2. San Jose Elementary School	9	8
3. Cabasagan Elementary School	10	9
4. Simulao Elementary School	11	7
5. Caatijan Elementary School	11	10
6. Sibajay Elementary School	10	7
7. Cauwayanan Elementary School	5	4
8. Boston Central Elementary School	29	22
Total	98	80

4. RESULTS AND DISCUSSION

This chapter presents the interpretation of the study. Furthermore, this chapter discusses the results and the discussions of the study based on the analyzed data with a supporting review of related literature.

4.1 Profile of the Respondents

Table 2. Profile of respondents

Profile Factor	Category	Frequency	Percentage
School Assignment	Carmen Elementary School	13	16.3
	San Jose Elementary School	8	10.0
	Cabasagan Elementary School	9	11.3
	Simulao Elementary School	7	8.8
	Caatijan Elementary School	10	12.5
	Sibajay Elementary School	7	8.8
	Cauwayanan Elementary School	4	5.0
	Boston Central Elementary School	22	27.5
Monthly MOOEE	Below Php 40,000	54	67.5
	Php 40,000 and above	26	32.5
	TOTAL	160	200.00

Based on the table, the profile of the respondents has an overall total percentage of 200.00. In school assignment, Boston Central Elementary School got the highest percentage of 27.5. It was then followed by Carmen Elementary School with a percentage of 16.3. Then followed by Caatijan Elementary School with a percentage of 12.5, Cabasagan Elementary School with a percentage of 11.3, and San Jose Elementary School with a percentage of 10.0. Simulao Elementary School and Cabasagan Elementary School was then followed with the same percentage of 8.8. Lastly, Cauwayanan Elementary School got the lowest percentage of 5.0.

4.2 Disaster Preparedness

This section presented the level of disaster preparedness in Boston District in terms of enabling environment, safe learning facilities, disaster risk management and risk reduction, and resilience education.

Table 3. Disaster preparedness in terms of enabling environment

	Descriptors	Standard Deviation	Mean	Interpretation
1.	Adapted localized existing policies relating to DRRM in education	.00	1.00	Prepared
2.	Has a designated DRRM Focal Person	.00	1.00	Prepared
3.	Formed School DRRM Team consisting of personnel from different offices	.11	.99	Prepared
4.	Has a comprehensive School DRRM Plan, which includes CCA and EiE measures	.22	.95	Prepared
5.	Students participated in the planning process	.3	.85	Prepared
6.	Integrated DRRM into the School Improvement Plan (SIP)	.16	.98	Prepared
7.	Regular DRRM activities are supported by school budget	.38	.83	Prepared
8.	Funding sources for interventions in the aftermath of a disaster can easily be tapped	.40	.80	Prepared
9.	Has partnerships that could be tapped to support its DRRM programs	.19	.96	Prepared
10.	Conducted student-led watching and hazard mapping	.35	.86	Prepared
11.	Incorporated results of student-led school watching in the school DRRM Plan	.30	.90	Prepared
12.	Data collection of DRRM programs, covering the 3 Pillars, to monitor results	.33	.88	Prepared
	Average	.14	.92	Prepared

Based from the data shown in Table 3, the level of disaster preparedness in terms of enabling environment is prepared. Therefore, all eight schools in Boston District have a great extent of implementation in the area of enabling environment.

The result in Table 3 is in line with the study of Cubillas (2016). The appointment of DRRM coordinators are emphasized so that the DRRM program will be implemented successfully. Furthermore, the support for children's participation is found in social and health-care (e.g. shared decision making) movements; in the recognition of children's social contributions; in evidence that children, including very young children, can contribute actively to their social environment through observation, inquiry, evaluation, and decision making; and in findings that their involvement in advance social and democratic processes, inform and improve decision making, reinforce children's connections and commitment to their communities, and increase awareness of their needs and desires (Pfefferbaum et al., 2018).

Regional and sub-regional partnerships have proven especially effective in spurring progress in school safety (International Strategy for Disaster Reduction, 2012). In addition, ISDR (2012) states that school continuity and contingency planning involves consideration of the many possible factors that could impede educational continuity. Moreover, Martinez et.al states that it is necessary that the entire school community-students, teachers, non-teaching personnel, and administrators are involved in processes of assessment, planning, implementation, monitoring, evaluation and reporting. Students, particularly, are the core of each process. They must participate from the assessment stage (hazard mapping), planning stage (creation of work plan), and implementation of the capacity-building programs of the SDRRM Team so as to educate them on disaster awareness and preparedness.

Table 4. Disaster preparedness in terms of safe learning facilities

Descriptors	Standard Deviation	Mean	Interpretation
1. School buildings has been inventoried	.11	.99	Prepared
2. School buildings have risk assessment	.16	.98	Prepared
3. Unsafe school buildings are identified	.19	.96	Prepared
4. Systems for monitoring and quality assurance of school building construction exist	.28	.91	Prepared
5. Financial resources are allocated for completion of needed action	.44	.75	Prepared
6. Regular school inspection and maintenance of facilities are conducted	.27	.93	Prepared
7. Regular repair of minor classroom (including facilities) damages are done	.24	.94	Prepared
8. Roles and responsibilities for maintenance are defined, documented and assigned	.19	.96	Prepared
9. School Heads have allotted budget for routine maintenance of school facilities	.28	.91	Prepared
10. School Heads have identified those classrooms that are expected to be used as temporary evacuation centers for disasters	.30	.90	Prepared
11. School Heads are clear with the roles and functions of the school in camp management	.28	.91	Prepared
12. Guidance and regulations on resilient design are followed	.27	.93	Prepared
13. New classroom construction is monitored	.28	.91	Prepared
Average	.13	.92	Prepared

It can be gleaned from the table that the level of disaster preparedness in terms of safe learning facilities is prepared. Therefore, all eight schools in Boston District have a great extent of implementation in the area of safe learning facilities.

Table 4 reveals that the participants are knowledgeable about school building inventories as one way of securing safety and carrying out every school year since it is national mandate from the central office. However, they do not totally assume that they can make budget to address unsafe buildings. This may be due to non-dissemination of budget allocation in the schools or may be due to teachers' showing less interest in knowing the school funding (Aviles et al., 2020). In contrary, the study of Dampson and Broni (2015) suggested that the participation of teacher in all forms of decision making as well as resource expenditure to improve educational outcomes.

Furthermore, schools have been normally used as evacuation centers during and after a disaster. In 2016, RA 10821 was enacted, limiting the use of schools as evacuation centers. The law, otherwise known as the Children's Emergency Relief and Protection Before, During, and After Disasters and Emergencies, strengthens the mandate of the local government units to provide/ construct adequate evacuation centers for community members. This direction has been repeatedly instructed by the President in various coordination meetings conducted in the aftermath of a disaster (Disaster Risk Reduction and Management Service, 2020).

Table 5 below shows that the level of disaster preparedness in terms of disaster risk management is prepared based on the results shown in the table. This implied that all eight schools in Boston District has a great extent of implementation in the area of disaster risk management. As shown in the results, the participants are very much aware of the conducted of Brigada Eskwela with the presence of the stakeholders. DepEd order no. 24, series of 2008 institutionalized Brigada Eskwela to help maintain schools, engaging all education stakeholders to contribute their time, efforts and resources in ensuring that public schools are all set in times of class opening (Cubillas et al., 2020). In contrary, Loots et al., (2015) suggested that the teachers must undergo training to promote resilience and support in high-risk schools. In addition, a comprehensive School Disaster Risk Reduction Management Team Contingency Plan was crafted to address the foreseen natural and human-induced risks in the school, and to strengthen the awareness, preparedness and participation of the school community in disaster capacity-building initiatives (Martinez et al., 2019). Johnson, et al., (2018) added that most schools internationally have conducted regular school hazard drills. These began specifically to help students and staff to learn and practice safe building evacuation and safe assembly.

Table 5. Disaster preparedness in terms of disaster risk management

Descriptors	Standard Deviation	Mean	Interpretation
1. Has Contingency Plan	.19	.96	Prepared
2. Has accessible, and adequate first aid kit in every classroom	.16	.98	Prepared
3. Has at least 2 necessary and functioning equipment in case of disaster	.48	.65	Prepared
4. Has pre-identified spaces for putting up Temporary Learning Shelters	.27	.92	Prepared
5. Has ready resumption strategies	.24	.94	Prepared
6. Has established a school personnel tracking system	.30	.90	Prepared
7. Has personnel to administer first aid to students and personnel	.16	.98	Prepared
8. Has trained teachers and other personnel	.40	.80	Prepared
9. School DRRM Plan and SIP with DRRM integration are reviewed annually	.27	.93	Prepared
10. Conducted Brigada Eskwela	.00	1.00	Prepared
11. Stakeholders participated in Brigada Eskwela	.11	.99	Prepared
12. Has established functional early warning system	.16	.98	Prepared
13. School conducted hazard drills	.19	.96	Prepared
14. Students participated in drills	.22	.95	Prepared
15. Has an evacuation plan	.24	.94	Prepared
16. School Head has received DRRM training from division or region or partners	.36	.85	Prepared
17. School DRRM Team has received DRRM training from division or region or partners	.35	.86	Prepared
18. Has conducted awareness and capacity building for families and learners	.33	.88	Prepared
Average	.14	.91	Prepared

Additionally, Shaw et al. (2014) state in their study that integrating the culture of disaster preparedness in students encourages them to make the right decisions as they encounter such a situation. Also, Muttarak et al. (2013) discovered that formal education could increase the individual's preparedness sin disasters and reduce the vulnerability to disaster. Furthermore, findings show that the schools created a mitigating measure to minimize the impact of any particular disaster by creating a systematic contingency plan for the school safety and the safety of its whole community (Santoyo, 2019).

Table 6. Disaster preparedness in terms of risk reduction and resilience education

Descriptors	Standard Deviation	Mean	Interpretation
1. Has integrated key DRR and CCA concepts in the curriculum based on the National Curriculum Guide	.24	.94	Prepared
Skills and competencies of students are assessed through measurable learning and risk reduction (RR outcomes	.22	.95	Prepared
2. Has a DRRM capacity building plan for teachers and school personnel	.36	.85	Prepared
3. Personnel trained on DRRM and/or CCA	.28	.91	Prepared
4. Has available and accessible quality and up-to-date DRRM materials	.44	.75	Prepared

5. Presence of DRRM corner with updated IEC materials posted in it, in every classroom	.11	.99	Prepared
6. School carries out monitoring and evaluation to assess sustainable implementation	.22	.95	Prepared
Average	.17	.91	Prepared

As presented in Table 6, the level of disaster preparedness in terms of risk reduction and resilience education is prepared which implied that all eight schools in Boston District has a great extent of implementation in the area of risk reduction and resilience education.

In a study by Sinha et al. (2010), it was mentioned that to develop the interest ofthe learners and to improve their knowledge and awareness, students must be exposed to different workshops, orientations, drills, and other practical exercises. Furthermore, the study conducted by Rambau et al., (2012) acknowledged the role of education in encouraging the addition of disaster risk reduction and preparedness in school curricula in countries to lessen the numbers of mortality and can be a guide for the safe construction and renovation of the school buildings that can resist natural disasters. In addition, targeted and competency-based capacity building programs on DRRM and CCA should be developed and conducted in order to be effective and responsive to the needs of peoples, communities and institutions. These capacity building activities will help build understanding and skills with the end in view of really applying DRRM and CCA principles, concepts, and concrete action steps towards building their resilience (NDRRMP, 2011).

Table 7. Disaster preparedness across all factors

Factors	Standard Deviation	Mean	Interpretation
A. Enabling Environment	.14	.92	Prepared
B. Safe Learning Facilities	.13	.92	Prepared
C. Disaster Risk Management	.14	.91	Prepared
D. Risk Reduction and Resilience Education	.17	.91	Prepared
Overall	.12	.91	Prepared

Based on the findings, it clearly stated that the four factors are "prepared" in terms of disaster preparedness. Therefore, all eight schools in Boston District were prepared in terms of enabling environment, safe learning facilities, disaster risk management, and risk reduction and resilience education.

Disaster preparedness can help speed and efficiency of recovery efforts by reducing possible damage and saving live. The process of disaster planning and preparation is an ongoing process. Although it is not a simple process, planning ahead is required to produce favorable results, and it is growing more morally and economically important with each event (King & Tarrant, 2013). Furthermore, Abdunnazar (2018) added that the awareness and the skill of teachers to practice disaster management activities are highly important in relation to ensure the safety and security of school students. Moreover, Das & Malaviya (2014) added that disaster management in schools plays a significant role in educating and developing the basic skill to face any disaster. The disaster management not only makes the students aware but also inculcates the right attitude to respond to disasters. Training and capacity building enhance the ability of the students and school communities to take the right decision during any emergency. The school disaster management team not only ensures the the school, students and its various amenities safety. The capacity and their role play important role in the effective execution disaster management plan (Sanchez et.al., 2019).

4.3 Significant Difference Based on Profile

This section presented the difference based on profile of Boston District in terms of enabling environment, safe learning facilities, disaster risk management and reduction and resilience education.

Table 8 presented the data in identifying the significant difference on the level of preparedness when respondents are grouped in terms of their school assignment. Based on the data, the mean difference is significant if the level is at 0.5. Therefore, Cabasagan & Sibajay, Sibajay & Cauwayanan, Sibajay & Boston Central Elementary School differ significantly in their disaster preparedness in terms of enabling environment. Furthermore, it showed that schools do not differ significantly in their disaster preparedness in terms of safe learning facilities. The table also revealed that Carmen & Cabasagan, and Carmen & Boston Central Elementary School differ significantly in their disaster preparedness in terms of disaster risk management. In addition, Carmen & Cabasagan and Carmen & Boston Central Elementary School differ significantly in their disaster preparedness in terms of risk reduction and resilience education. This further implies that Carmen & Boston Central Elementary School differ significantly in their disaster preparedness.

Table 8. ANOVA result on level of preparedness when respondents are grouped in terms of their school assignment

Factors	F-value	p-value	Interpretation
A. Enabling Environment	2.527	0.022	School differ significantly in their disaster preparedness. Post hoc analysis reveals that the following school are the one exhibiting this: ➢ Cabasagan & Sibajay ➢ Sibajay & Cauwayanan ➢ Sibajay & Boston Central
B. Safe Learning Facilities	1.297	0.264	Schools do not differ significantly in their disaster preparedness.
C. Disaster Risk Management	3.339	0.004	School differ significantly in their disaster preparedness. Post hoc analysis reveals that the following school are the one exhibiting this: ➢ Carmen & Cabasagan ➢ Carmen & Boston Central
D. Disaster Risk Reduction and Resilience Education	3.104	0.006	School differ significantly in their disaster preparedness. Post hoc analysis reveals that the following school are the one exhibiting this: ➢ Carmen & Cabasagan ➢ Carmen & Boston Central
E. Overall	2.703	0.015	School differ significantly in their disaster preparedness. Post hoc analysis reveals that Carmen & Boston Central are the one exhibiting this.

In a study done by Kano (2016), he highlighted that there was some indication that districts and schools in rural locations and those with students of lower socioeconomic status are less prepared. The factors that had the greatest positive effects on disaster preparedness were the level perceived commitment among school authorities and parent involvement. Borque (2016) added that districts that have had more experience with emergencies and disasters in the past tended to be better prepared for future emergencies, although prior experience did not have an effect on current levels of preparedness among schools.

Table 9. ANOVA result on level of preparedness when respondents are grouped in terms of their monthly MOOE

Factors	F-value	p-value	Interpretation
A. Enabling Environment	1.789	0.185	Schools with varying monthly MOEE do not differ significantly in their level of disaster preparedness in terms of enabling environment.
B. Safe Learning Facilities	4.341	0.040	Schools with varying monthly MOEE differ significantly in their level of disaster preparedness in terms of safe learning facilities.
C. Disaster Risk Management	7.110	0.009	Schools with varying monthly MOEE differ significantly in their level of disaster preparedness in terms of disaster risk management.

D. Risk Reduction and Resilience Education	9.144	0.003	Schools with varying monthly MOEE differ significantly in their level of disaster preparedness in terms of risk reduction and resilience education.
E. Overall	8.422	0.005	Schools with varying monthly MOEE differ significantly in their level of disaster preparedness.

Table 9 presents the data in identifying the significant difference on the level of preparedness when respondents are grouped in terms of their monthly MOOE. Based on the table, the utilization and management of MOOE in terms of safe learning facilities, disaster risk management, and risk reduction and resilience education differ significantly in their level of disaster preparedness. In addition, schools in enabling environment do not differ significantly in their level of disaster preparedness. Therefore, the overall interpretation to this is that schools with varying monthly MOEE differ significantly in their level of disaster preparedness.

Based on the study by Arevalo et al. (2020), proper allocation, implementation, and utilization of MOOE funds by the school heads should promote transparency, and involvement of teachers in financial planning should also be observed. In the contrary, Cubillas (2020) states in her study that the implementation of the four indicators lacks transparency, particularly on fund sources and budget allocation, since the DRRM program in their school focuses only on fire and earthquake which is contrary to the fact that the school location is flood prone.

4.5 Significant Relationship Between Level of Disaster Preparedness and Profile of Respondents

This section presented the degree of relationship between disaster preparedness and profile of respondents.

Table 10. Degree of relationship between disaster preparedness and profile of respondents

Profile	Phi Coefficient	p-value	Interpretation
School Assignment	0.300	0.340	Level of preparedness and school assignment are moderately related but this relationship cannot be attributed to the entire schools of Boston.
Monthly MOOE	0.111	0.320	Level of preparedness and monthly MOOE are moderately related but this relationship cannot be attributed to the entire schools of Boston.

Shown in Table 10 is the degree of relationship between disaster preparedness and profile of respondents. Table 11 showed that the level of preparedness and school assignment are moderately related but this relationship cannot be attributed to the entire schools of Boston. Moreover, the level of preparedness and monthly MOOE are moderately related but this relationship cannot be attributed to the entire schools of Boston.

The result is aligned with the study by Kano (2016), which states that no data show the extent to which schools are prepared for emergency planning, training, conducting drills and training exercises, and maintaining proper equipment and supplies. Thus, we cannot differentiate those schools that are more prepared from those that are less prepared.

4.6 Proposed Intervention: DisasTEACHnology

When emergencies happen at school, student and staff safety is the priority. Learn how to prepare, address and recover from different emergencies at school. DisasTEACHnology is the abbreviation for Disaster Teaching using Technology. Disas*TEACHnology* is intended to raise awareness in school using technology. It is a strategy to teach students about disaster preparedness and spread awareness through video presentations, PowerPoint presentations, slideshows, and any platforms such as Facebook, YouTube, Tiktok, etc. It is limited in educating teachers and students in school about disaster preparedness. DisasTEACHnology is incorporated as one of the activities in each Grade level to spread awareness and serve as a practice for everyone in emergencies. Here are some examples of activities that teachers can use inside the classroom.

Grade 1- Health

Competency: Follows rules during fire and other disaster drills (H1IS-IVe-6)

Topic: Safety rules in school, including fire and other disaster drills

Procedure: The teacher will play an animated video containing safety rules with time orientation before, during, and after a disaster.

Grade 2- Health

Competency: Identifies safe and unsafe practices and conditions in the school (H2IS-IVi-18)

Topic: Hazards in the school

Procedure: The teacher will present slides about signage for hazards and will let the students identify what signage is being presented.

Grade 3- Health

Competency: Explains road safety practices (H3IS-IVab-19)

Topic: Road safety

Procedure: The teacher will play a video about road safety practices and let the students explain what they learned from the video.

Grade 4- Health

Competency: Recognizes disasters or other emergency situations (H4IS-IVa-28).

Topic: Safety guidelines for other situations or events that may lead to injury or emergency

Procedure: The teacher will play a video and let the students identify the do's and dont's in safety guidelines during disasters and other emergencies.

Grade 5- Health

Competency: Explains the nature and objectives of first aid (H5IS-IVa-34)

Topic: First Aid

Procedure: The teacher will play a video regarding first aid; afterward, the teacher will demonstrate the first aid, including how to prolong life, alleviate suffering/lessen the pain and prevent further injury. Then let the students perform the first aid and let them explain.

Grade 6- Health

Competency: Demonstrates ways to build and keep school and community environments healthy (H6CMH-IIa-1)

Topic: Ways of Building and Maintaining Healthy School

Procedure: The teacher will divide the class into two groups. Every group will be given different situations related to disaster preparedness. Group 1 (earthquake), Group 2(fire), Group 3 (tsunami), and Group 4 (Road Safety). Every group will present their output through a video presentation.

5. CONCLUSION

Based on the findings of the study, it can be concluded that in terms of profile, most of the respondents were from Boston Central, majority with MOOE of below 40,000.

Moreover, the result of this study stated that the level of disaster preparedness of Boston District in terms of enabling environment, safe learning facilities, disaster risk management, and risk reduction and resilience education is prepared.

Furthermore, this study revealed that there is a significant difference between Carmen Elementary School & Boston Central Elementary School in their disaster preparedness when grouped in terms of school assignment. This study further implies that there is a significant difference among schools in their disaster preparedness when grouped in terms of their monthly MOOE.

Based on the degree of relationship between disaster preparedness and profile of respondents, it implies that the level of preparedness and school assignment are moderately related but this relationship cannot be attributed to the entire schools of Boston. Moreover, the study revealed that the level of preparedness and monthly MOOE are moderately related but this relationship cannot be attributed to the entire schools of Boston. Furthermore, the results revealed that disaster risk management and risk reduction and resilience education got the lowest mean, with that, the proposed intervention is "DisasTEACHnology".

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