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Implementation of school disaster risk reduction in coastal schools: Basis for a plan of action

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Abstract

School Disaster Risk Reduction Management (SDRRM) plays a crucial role in ensuring that learners, teachers and other school personnel are safe on the school premises. This study evaluated how well coastal schools in Cluster VII of the Division of Pampanga, Philippines had implemented a school disaster risk reduction management system. This study used the descriptive research method. Respondents to the study were seventy-four (74) public school teachers during the school year 2020-2021. In this research, the following findings were obtained: The respondents assessed safe learning facilities, school disaster management, risk reduction and resilience education and coastal school safety procedures. However, among these categories "coastal school safety procedures" got the lowest overall mean score. Additional findings showed that there is no discernible variation in the degree of SDRRM implementation across the respondent schools. This means that these schools have uniformity in implementing school disaster risk reduction management. It is recommended that schools maintain uniformity in the implementation of DRR policies.

Keywords: Coastal school safety procedures, Coastal schools, Disaster risk reduction and resilience education, Disaster risk reduction management, Plan of action, Safe learning facilities, School disaster management.

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Contents

Contribution of this paper to the literature
The findings of the study indicate high assessments in the areas of SDRRM due to consistent DRR activities. Meanwhile, because of the insufficiency of resources, the area of coastal schools' safety procedure was evaluated the lowest considering that the respondents teach in coastal areas.

1. Introduction

The education sector had been greatly affected during and after disasters which eventually affected children's access to education (Tong, Shaw, & Takeuchi, 2012) and it was for this reason that Disaster Risk Reduction (DRR) education plays a critical role in minimizing its negative effects on learners' future (Bastidas & Petal, 2012).

The researchers who had been exposed to the different coastal schools for many years observed that during the monsoon season, many communities around the Philippines are experiencing flooding regularly but in some towns particularly Masantol and Macabebe Pampanga, Philippines, floods lasted for weeks or even months.

There are also certain schools in some areas that never ran out of flood water encroaching on their premises because of high tides which eventually harmed the academic performance of students.

Furthermore, schools that were not flooded and were conducting regular classes were forced to send learners to school despite the roads leading to their respective schools still being flooded.

In some schools, principals usually allowed the resumption of their respective classes through the pathways and school grounds which were still submerged in high tide water. Learners and teachers were exposed to health and safety hazards.

Moreover, coastal schools found it difficult to conduct the scheduled activities because most of the time the grounds which were supposed to be safe places in the school premises were encroached upon by knee-deep tide water brought about by small-scale flooding.

In the time of a pandemic, there is an increased need for teachers, learners and parents to always be safe in their homes which are now extensions of the school where virtual classes are held. Hospitals were already overburdened by people affected by the COVID- 19 virus bringing injured people caused by disasters to these medical facilities would overwhelm hospitals and escalate the global health crisis.

1.1. School Disaster Risk Reduction Management Implementation

The implementation of school disaster risk reduction management is composed of the following areas:

Safe learning facilities, school disaster management, risk reduction and resilience education and the added coastal school safety procedures.

1.2. Safe Learning Facilities

Safe learning facilities refer to the physical and other related structures of the schools.It also involves the establishment of temporary learning spaces that can be used by learners. (DepEd Order No. 37 s. 2015). According to Lim (2019), the key responsibilities of schools include safe school site selection and making sure that disaster-resilient design and construction are followed to assure that every new school is a safe school and the plans that prioritize retrofitting and replacement (including relocation) of unsafe schools are implemented.

School buildings' non-structural and infrastructural features must be free from risk and all their facilities have to be accessible to all people. All access roads to the school should be free from physical risks (pedestrian paths, roads and river crossings)and sanitation facilities should also be made available to learners and other personnel. The school should also have a plan for implementing climate-smart interventions like looking for ways to have renewable sources of energy (Lim, 2019).

1.3. School Disaster Management

School disaster management involves the collaboration of all authorities from the national level to the sub-national level of education and local communities to make sure that a safe and conducive learning environment and a plan of action for educational continuity are maintained even in disasters (Lim, 2019).

According to Selby and Kagawa (2012), a broad-based engagement among these players can be established through local school communities (including students and parents) and national and sub-national education authorities working together with their counterparts in disaster management at each jurisdiction to maintain safe learning environments and plan for educational continuity in accordance with international standards.

Selby and Kagawa (2012) further stress that efficient and effective school disaster management can be established if all stakeholders who have stakes in education work together and consolidate disaster risk reduction efforts to create a safe learning environment and plans of action for the continuation of education. In a nutshell, school disaster management encompasses strategic planning to maintain a safe learning environment and to ensure education continuity in the face of hazards through contingency planning, training, multi-hazard drilling and identification providing alternative learning delivery modality to learners and drawing stakeholders' engagement when disasters occur (Varchetta, 2019).

1.4. Disaster Risk Reduction and Resilience Education

Risk reduction and resilience education are designed in a way that will develop safety and resilient communities (Lim, 2019).

It also included responsibilities to provide teachers with need-based training on DRR curriculum, materials and approaches and how to integrate these into formal, non-formal and extracurricular education systems in partnership with the local communities (Lim, 2019).

The Philippine Department of Education (DepEd) refers to the incorporation of DRRM in the educational curriculum and extracurricular pursuits by providing support for the capacity and skills building of learners and teachers.

Tong et al. (2012) consider DRR management necessary to attain the education sector's resilience. Risk reduction and resilience education cover the national curriculum and curriculum review, teacher training, the making of learning material and key messaging campaigns to raise awareness and motivate the general public to build safety against human-induced and natural hazards (Varchetta, 2019).

1.5. Coastal Schools' Safety Procedure

Coastal schools' safety procedures are means that people residing in coastal areas should practice to protect themselves and their properties from the hazards brought about by small-scale and large-scale flooding including tsunamis and the sudden rise of tidewater.

Flood events including the rise of sea level, specifically, large-scale floods are caused by climate change (Cadag et al., 2017). The most considered destructive climate-related hazards in the world are floods and children dwelling and studying in schools located in the flooded areas (Ardales Jr, Espaldon, Lasco, Quimbo, & Zamora, 2016; Yousefi et al., 2020). These hazards can be caused by natural or human-induced activities including heavy rains, melting snow, modified drainage networks, failing dams and manipulation of water-absorbing forests (Yousefi et al., 2020).

After considering the premises cited above, it is just imperative to assess the implementation of disaster risk reduction in the coastal schools based on the globally accepted pillars of the Comprehensive School Safety Framework (CSSF) namely: (1) safe learning facilities, (2) school disaster management, (3) disaster risk reduction and resilience education and (4) coastal school safety procedures to come up with recommendations or intervention programs for effective instigation, sustainability and continuous improvement of school DRR implementation.

1.6. Purpose of the Research

The aim of this study is to examine the extent of implementation of school disaster risk reduction management in coastal schools in cluster VII. It is expected that the findings of this research will serve as the basis for the researchers to craft a plan of action that will enhance the implementation of school disaster risk reduction management (SDRRM) in the respondent- schools and among other coastal schools in the school division of Pampanga.

This research intends to investigate the level of SDRRM implementation among the respondents. Specifically, it aimed to answer the following questions:

1. What is the profile of the respondents in terms of school category?
2. What is the extent of implementation of School-Based Disaster Risk Reduction Management (SDRRM) as assessed by the teacher-respondents in terms of:
   2.1. Safe learning facilities.
   2.2. School disaster management.
   2.3. Disaster risk reduction and resilience education.
   2.4. Coastal school safety procedures.
3. Is there a significant difference in the level of implementation of school- based disaster risk reduction among the coastal schools in terms of school category?

2. Methodology

2.1. Research Design

The method used in the research is a descriptive method where questionnaires based on the literature gathered are used to collect detailed and factual data to examine the extent of implementation of school disaster risk reduction management in the schools.

2.2. Participants

The study is being conducted in the public secondary schools in Masantol and Macabebe, Pampanga, Philippines in the school year 2020-2021. The respondents of the study were the seventy-four (74) teachers who already had at least 3 years of teaching experience in the respondent schools.

Table 1. Respondents of the study.

Name of school	Number of respondents	Percentage	School category
A	9	64.290	Medium
B	12	85.710	Medium
C	8	66.670	Medium
D	11	76.470	Medium
E	13	91.670	Medium
F	21	61.760	Large
Total	74		

Table 1 shows the study's respondents and their school category. According to the table, five (5) out of six (6) schools are classified as medium while the remaining one (1) school is classified as large. This means that most respondents were from schools with fewer than 20 teachers in the municipalities of Masantol and Macabebe, Pampanga, Philippines.

2.3. Instrument

The instrument used in this research was a questionnaire to gather data to assess the extent of implementation of SDRRM in coastal schools which has two parts. Part I contains items from which the respondent names and categorizes his or her school while part II contains the assessment of the implementation of SDRRM. It has four categories namely: safe learning facilities, school disaster management, disaster risk reduction and resilience education and coastal school safety procedures where each category has 10 items for a total of 40 items, all of which

can be answered using the Likert scale.

The Likert scale has a point scale with a range of 1 to 4 where 4 is the highest and has a verbal interpretation of highly implemented followed by 3 with a verbal interpretation of implemented then 2 with a verbal interpretation of slightly implemented and the lowest is 1 with a verbal interpretation of not implemented.

For the interpretation of the findings, a weighted mean of 3.51 to 4.00 was given a verbal interpretation of highly implemented, a weighted mean of 2.51 to 3.50 was given a verbal interpretation, a weighted mean of 1.51 to 2.50 was given a verbal interpretation of slightly implemented and a weighted mean of 1.00 to 1.50 was given a verbal interpretation of not implemented.

The respondents were requested to check their assessment of the implementation of SDRRM in coastal schools provided for each statement in the survey questionnaire. The questionnaire consists of 40 statements.

2.4. Data Analysis Framework

The descriptive research method was used in this study. The study was carried out in the medium and large coastal schools in cluster VII of the division of Pampanga. Using simple random sampling, 74 teachers were chosen as respondents from a population of 103 teachers. The respondents have at least three years or more than three years of teaching experience in the coastal schools where they are assigned.

Related literature on SDRRM in coastal schools was reviewed and used to guide the selection of items. Google Form was used as a digital platform where the items were encoded and a link was extracted to be provided to the expert panel and the respondents. The experts' comments and suggestions were incorporated to improve the survey questionnaire. Then the tool was subjected to a reliability test using Cronbach's Alpha scaled at 0.97 interpreted as excellent and declared to be fit for the purpose; after it was pilot tested on elementary teachers with three years or more teaching experience in coastal schools where the study was carried out.

To facilitate the gathering of data, the researchers asked permission to conduct the study from the superintendent of the division of Pampanga, Philippines and from the school principal of each school-respondent. Survey questions were administered and retrieved from the respondents using Google Form. The data gathered were tabulated, interpreted and analyzed by Statistical Package for the Social Sciences (SPSS) software. The following statistical tools were used: Mean and standard deviation were used for the respondents' assessments on the extent of the implementation of SDRRM in their respective schools. The independent samples *t*-test was used to determine the significant difference in the implementation of SDRRM among the coastal schools in terms of school category.

3. Results and Discussions

This section discusses the data gathered, its analysis and its interpretation from questionnaires completed by educators about the extent of implementation of school disaster risk reduction management in coastal schools.

3.1. The extent of the Implementation of School Disaster Risk Reduction Management in Coastal Schools

Table 2 shows an overall mean of 3.4810 and a standard deviation of 0.613. The low standard deviation suggests the homogeneity of the respondents' responses which indicates that the safety learning facilities of the coastal school are being implemented.

Table 2. Assessment of the implementation of school disaster risk reduction management in coastal schools in terms of safe learning facilities.

Indicators **The school...**	**Mean**	**SD**	**Verbal interpretation**
Ensures the establishment of an early warning systemand communication (i.e. a bulletin board for weather advisories, bell or siren emergency signals among others).	3.510	0.646	Highly implemented
Is accessible to people with mobility impairments including its classrooms and ancillary facilities.	3.300	0.613	Implemented
Conducts student-led school watching and hazard mapping to identify risks on the school buildings andaccess routes towards the school.	3.470	0.744	Implemented
Receives support from the community, local government units (LGUS), department of public works and highways (DPWH) and bureau of fire and protection (BFP) for safe school building inspection annually and safe site selection before school-building construction.	3.650	0.535	Highly implemented
Establishes strong policies related to the proper use of school facilities, teaching equipment and materials when schools are used as temporary shelters to fast-track the resumption of classes.	3.580	0.597	Highly implemented
Makes school facilities accessible to all regardless ofphysical abilities.	3.610	0.544	Highly implemented
Encourages community participation for a safer school and learning environment regularly.	3.5800	0.597	Highly implemented
Ensures that adequate quantities of water for safe drinking and personal hygiene are available at the learning site.	3.450	0.644	Implemented
Designates a space for or installs temporary learning spaces (TLSs) in the result of a disaster and when school cannot be used for class resumption.	3.240	0.615	Implemented
Receives adequate funding for repair and retrofit of damaged school facilities regularly from theschools division office.	3.420	0.597	Implemented
Over-all Mean	3.481	0.613	Implemented

Table 3 shows the results of the respondents in terms of school disaster management in coastal schools. The results present that the indicator "conducts quarterly earthquake, fire, small and large- scale floods and other human-induced disasters with the participation of BFP, Medic, LGUs, Non-Government Organizations (NGOs), community people, parent- teachers association officers, alumni and others" got the highest mean score of 3.716 and a standard deviation of 0.454 and the indicator "has an existing contingency plan crafted by the school planning team, with an evacuation plan and procedures that are constantly reviewed, monitored" has the second highest mean of 3.61 with a standard of 0.492. These have a verbal interpretation of highly implemented while the indicator "assures that equipment for disasters and emergencies such as fire extinguishers, handheld/base radio, generator, etc. are available, regularly checked and functional" got the lowest mean score of 3.189 and a standard deviation of 0.788 and indicator "ensures that students and their families have a family preparedness plan together" was ranked second to the lowest with a mean of 3.216 and a standard deviation of 0.708. Hence, Table 3 has an overall mean score of 3.404 and a standard deviation of 0.615.

Table 3. Assessment on the implementation of school disaster risk reduction in coastal schools

Indicators The school...	Mean	SD	Verbal interpretation
Has an existing contingency plan implemented by the school planning team with an evacuation plan and procedures that are constantly reviewed, monitored and evaluated and is incorporated into the school improvement plan.	3.608	0.492	Highly implemented
Ensures that students and their families have a family preparation plan together.	3.216	0.706	Implemented
Has a tracking system or protocol for personnel and learners in disaster or emergency.	3.297	0.697	Implemented
Has posted or drawn hazard and evacuation maps located in conspicuous places inside the school premises.	3.541	0.554	Highly implemented
Clarifies the roles and functions of school personnel regarding school management when schools are used as evacuation centers.	3.432	0.526	Implemented
Assures that equipment for disasters and emergencies such as fire extinguishers, handheld or base radios, generator, etc. are available, regularly checked, and functional	3.189	0.788	Implemented
Conducts quarterly assessments of earthquake, fire, small and large-scale floods and other human-induced disasters with participation of BFP, Medic, LGUs, NGOs, communitypeople, PTA officers, alumni, and others.	3.716	0.454	Highly implemented
Has an established functional early warning system to inform students and personnel of hazards and emergencies.	3.432	0.599	Implemented
Utilizes resources to fund the disaster risk reduction program, projects and activities enumerated in the contingency plan	3.257	0.663	Implemented
Establishes a mechanism to digitalize all vital records of the school such as Google Drive.	3.351	0.671	Implemented
Over-all Mean	3.404	0.615	Implemented

Table 4. Assessment on the implementation of school disaster risk reduction in coastal schools in terms of disaster risk reduction and resilience education.

Indicators The school...	Mean	SD	Verbal interpretation
Ensures that teachers comply with integrating key concepts on DRR, climate change adaptation (CCA) and education in emergencies (EiE) in learning areas at all grade levels.	3.581	0.574	Highly implemented
Engages learners actively in the planning, monitoring, and assessment of DRR, CCA, and EiE activities.	3.365	0.632	Implemented
Coordinates with other DepEd offices for the capacity building of school personnel on DRR, CCA, EiE and psychological first aid and crisis counseling.	3.419	0.702	Implemented
Conducts seminars or training with the support of the regional or schools division office on how to developaDRRM/CCA/ EiE capacity building plan intended for all teachers and non-teaching personnel.	3.338	0.668	Implemented
Conducts capacity development with the support of the regional schools division office on how to implement self-learning modules for learners to be used in EiE.	3.243	0.718	Implemented
Receives varied and adequate DRRM/CCA/ EiE modules and materials for learners and manuals for teachers regularly.	3.095	0.814	Implemented
Receives enough funding from the national, regional and division offices regularly facilitate the integration of DRR, CCA and EiE across all learning subjects.	3.068	0.709	Implemented
Receives support from national, regional and division offices intended for teachers and school head on how exactly DRR, CCA, and EiE topics are integrated into the present basic education curriculum.	3.162	0.683	Implemented
Adopts co-curricular activities related to DRR i.e. World Environment Day (June), safe kids week (July),national disaster consciousness (July), clean and green (September).	3.378	0.635	Implemented
Utilizes the results of risk assessment to improve DRR preparation and mitigation plans.	3.270	0.647	Implemented
Over-all Mean	3.292	0.678	Implemented

Table 4 reveals the results in terms of risk reduction and resilience education in the coastal schools. The indicator "ensures that teachers comply in integrating key concepts on DRR, climate change adaptation (CCA) and Education in Emergencies (EiE) across the learning areas at all grade levels" obtained the highest and only mean

score who got a verbal interpretation of highly implemented with 3.581 mean scores and 0.574 standard deviation categorically, item 3 "coordinates with other DepEd offices for the capacity building of school personnel on DRR, CCA, EiE and psychological first aid and crisis counseling" with a mean of 3.419, a standard deviation of 0.702 and was interpreted while the indicator "receives enough funding from the national, regional, and division offices regularly facilitate the integration of DRR, CCA, and EiE across all learning subjects" got the lowest mean score of 3.068 and a standard deviation of 0.709 and indicator "receive varied and adequate DRRM/CCA/ EiE modules and materials for learners and manuals for teachers regularly" got the lowest mean 3.095, a standard deviation of 0.814, wherein both of these indicators were implemented. The overall mean score of 3.292 and standard deviation of 0.678 were obtained through verbal interpretation.

Table 5. Assessment on the implementation of school disaster risk reduction in coastal schools

Indicators The school...	Mean	SD	Verbal interpretation
Identifies the frequency of occurrence of large-scale and small-scale floods in the locality especially those that affect the school's area by establishing a data gathering system where several schools are affected by floods and other information needed for preparation and mitigation planning is readily available.	3.459	0.666	Implemented
Has an existing designated safe place and a system of quick evacuation plans for small- scale and large-scale floods during the actual and dry-run of small-scale and large-scale flood drills.	3.392	0.737	Implemented
Ensures that life-vests or life-jackets are provided to school personnel during boat travel to and from the school	2.905	1.088	Implemented
Orients students to avoid areas prone to flash flooding and be cautious of water-covered roads, bridges, creeks and stream banks and recently flooded areas.	3.365	0.713	Implemented
Receives regular funding from the government to retrofit school buildings and classrooms and upgrade school grounds.	3.108	0.713	Implemented
Digitizes school vital records and keeps teaching-learning materials and equipment in the upper level are unreachable by small and large-scale floods.	3.270	0.764	Implemented
Creates a culture of small-scale flood resilience for learners and personnel by conducting classes as long as theclassrooms are not encroached on by high tide waters.	3.216	0.745	Implemented
Maintains partnerships among the school's internal and external stakeholders, including LGUs in reducing the effects of small-scale and large-scale flooding.	3.487	0.579	Implemented
Ensures that the source of potable water at the school is not contaminated before use after flooding by the local government's health units.	3.243	0.658	Implemented
Receives regular funding from DepEd or other government agencies for small-scale and large-scaleflood protection of school grounds and or premises.	3.135	0.689	Implemented
Over-all mean	3.258	0.735	Implemented

Table 5 shows the results of the safety procedures in the coastal schools. The results present that all items got a verbal interpretation of being implemented. The indicator "maintains partnership among the school's internal and external stakeholders including LGUs in reducing the effects of small- and large-scale flooding" got the highest mean score of 3.487 and a standard deviation of 0.579 while the indicator "identifies the frequency of occurrence of large- and small- scale floods in the locality especially those that affect the school's area by establishing a data gathering system where several schools are affected by floods and other information needed for preparedness and mitigation planning is readily available" has a mean score of 3.459 and a standard deviation of 0.666. Meanwhile, the indicator "ensures that life-vests or life-jackets are provided to school personnel during boat travel to and from the school" got the lowest mean score of 2.91 and a standard deviation of 1.088 and the second lowest indicator "receives regular funding from the government to retrofit school buildings and classrooms and upgrade school grounds" with a mean of 3.108 and a standard deviation of 0.713. An overall mean score of 3.258 and a standard deviation of 0.735 with a verbal interpretation of being implemented. Results of mean and standard deviation indicate that most of the respondents were in agreement that the safety procedures of coastal schools are implemented.

Table 6. Summary of the assessment on the extent of implementation of school disaster risk disaster in coastal schools.

Level of implementation	Over-allmean	Verbal interpretation
A. Safe learning facilities	3.481	Implemented
B. School disaster management	3.404	Implemented
C. Disaster risk reduction and resilience education	3.292	Implemented
D. Coastal school safety procedures	3.258	Implemented
Over-all mean	3.359	Implemented

Table 6 presents the results of computing the overall mean and standard deviation from the data gathered from teachers' assessments of the implementations of disaster risk reduction management in coastal schools. The data shows that teachers valued safe learning facilities as the highest with an overall mean of 3.481 and a standard deviation of 0.613 followed by school disaster management as second highest with an overall mean of 3.404 and a standard deviation of 0.615 while risk reduction and resilience education was ranked third with an over-all mean of 3.292 and a standard deviation of 0.678 and coastal school safety procedures were rated the lowest with an over-all mean of 3.258 and a standard deviation of 0.735. Hence, all four categories were all rated as implemented with an overall mean of 3.3588 and a standard deviation of 0.660. Its low standard deviation suggests the homogeneousness of responses among the respondents.

This is due to the different disaster risk reduction management activities that respondents, learners and their stakeholders are doing to reduce the effects of disasters in their respective schools. However, the coastal school

safety procedures are rated the lowest which is caused by the non-availability of resources such as life- jackets and other life-saving equipment.

The difference in the level of implementation of school disaster risk reduction management among the coastal schools in terms of school category.

Table 7. Significant difference in the level of implementation of school disaster risk reduction management (safe learning facilities) in coastal schools.

Safe learningfacilities	School category	Mean	T-value	P-value	Decision	Remarks
	Medium	3.446	-1.087	0.281	Retain Ho	Not significant
	Large	3.576				

Table 7 shows the level of SDRRM implementation in terms of safe learning facilities which was measured using an independent sample t-test and had no significant differences because the p-value was greater than 0.05. As a result, the null hypothesis is retained and no significant remarks are made.

Table 8. Significant difference in the level of implementation of school disaster risk reduction management (school disaster management) in coastal schools in terms of school category.

School disaster management	School category	Mean	T-value	P-value	Decision	Remarks
	Medium	3.387	-0.622	0.536	Retain Ho	Not significant
	Large	3.462				

Table 8 presents the result of the level of implementation of SDRRM in relation to school disaster management grouped in medium and large school categories and measured in an independent sample t-test with no significant differences due to the p-value being greater than 0.05. As such, it retains the null hypothesis and no significant remarks were made.

Table 9. Significant differences in the level of implementation of school disaster risk reduction management (disaster risk reduction and resilience education) in coastal schools in terms of school category.

Risk reductionand resilience education	School category	Mean	T-value	P-value	Decision	Remarks
	Medium	3.293	-0.211	0.834	Retain Ho	Not significant
	Large	3.324				

Table 9 shows the level of implementation of SDRRM in relation to risk reduction and resilience education which was measured in an independent sample t-test and had no significant differences because the p-value was greater than 0.05. As a result, the null hypothesis is retained and no significant remarks are made.

Table 10. Significant differences in the level of implementation of school disaster risk reduction management (coastal school safety procedures) in terms of schoolcategory.

Coastal school safety procedures	School category	Mean	T-value	P-value	Decision	Remarks
	Medium	3.193	-1.803	0.075	Retain Ho	Not significant
	Large	3.452				

Table 10 presents the result in the level of implementation of SDRRM in connection with coastal school safety procedures grouped in medium and large school categories and measured in an independent sample t-test with no significant differences due to the p-value being greater than 0.05. As such, it retains the null hypothesis and no significant remarks were made.

Table 11. The difference in the level of implementation of school disaster risk reduction management among the coastal schools in terms of school category.

SDRRM implementation	School category	Mean	T-value	P-value	Decision	Remarks
Safe learningfacilities	Medium	3.446	-1.087	0.281	Retain Ho	Not Significant
	Large	3.576				
School disaster management	Medium	3.387	-0.622	0.536	Retain Ho	Not significant
	Large	3.462				
Risk reduction and resilience education	Medium	3.293	-0.211	0.834	Retain Ho	Not significant
	Large	3.324				
Coastal school safety procedures	Medium	3.193	-1.803	0.075	Retain Ho	Not Significant
	Large	3.452				

Table 11 summarizes the significant difference in the level of SDRRM implementation when respondents are grouped by school profile using an independent sample t-test. The table shows that there is no significant difference between the two school categories because all of their p-values are greater than 0.05 retaining the null hypothesis.

This means that the level of implementation of SDRRM in medium and large schools are statistically the same or do not have any significant differences. The result further reveals that the coastal schools where the respondents are teaching have uniformity in implementing the school disaster risk reduction management. This also suggests consistency in the implementation of SDRRM which indicates that all coastal schools adhered to the SDRRM policies laid down by the department of education. This scenario has served the purpose of why in the first place SDRRM was placed at the centre of the school system to prevent injuries and loss of lives and properties. This result affirms the contention of the International Finance Corporation (2010) that it is the responsibility of the entire school community to ensure that the school and its premises are safe. This needs leadership, coordination and involvement not only by school personnel but also the participation of all sectors of the school community and other concerned stakeholders.

4. Conclusion and Recommendations

Based on the study's findings, it can be said that (a) safe learning environments, (b) school disaster management, (c) risk reduction and resilience education and (d) coastal school safety procedures all fall under the category of SDRRM implementation in coastal schools. However, among these categories " coastal school safety procedures" got the lowest overall mean score considering that the schools where the respondents are teachers are in coastal areas. As such, the researcher would like to recommend that school heads and teachers sustain all the strong points reflected in the findings and find innovative and creative steps to further improve the implementation of SDRRM in terms of safe learning facilities, school disaster management, disaster risk reduction and resilience education from "implemented" onwards to being "well- implemented."

Similarly, it is also recommended that teachers and school heads create and adopt varied and contextualized DRR programs, projects and activities that would entice more active engagement among learners, teachers and stakeholders to intensify the implementation of the school-based DRR activities listed under the category of " coastal school safety procedures" which is rated the lowest among the four categories of SDRRM.

Based on the conclusion and findings, schools have uniformity in implementing school disaster risk reduction management. It is recommended that school heads and teachers sustain the uniformity of SDRRM implementation in their respective schools where consistency in the execution of SDRRM guidelines, policies, program and activities are always evident. Not all coastal schools in cluster VII will continue to have a uniform understanding of the implementation of SDRRM but all secondary schools in cluster VII regardless of category.

The researchers also suggest further study on the following: (a) identifying the challenges that interfere with the consistent and well-implemented school disaster risk reduction management among the coastal schools and (2) considering learners, parents and a representative from the office of the local chiefs as respondents on the same study to widen the scope of the evaluation of the extent of school wide disaster risk reduction in coastal schools.

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