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Perceptivity of UMPC on Disaster Programs: A Quantitative Inquiry

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Abstract: ***This study aims to evaluate the school's profile in terms of its current building structure, disaster preparedness plan, and safety facilities. It also seeks to determine how aware students and staff are of the school's current preparedness programs. Based on the study's findings, an action plan may be put into place. This study assesses the institution in question's preparedness for disasters using a quantitative, non-experimental descriptive evaluative research methodology. The study's findings demonstrated that while UM Panabo College's disaster preparedness program is regularly carried out, a lackluster choice of emergency vehicles emphasizes the importance of staff and students in times of catastrophe. The results showed that behavior related to preparing for disasters was predicted by risk perception and preparation intention.***

Keywords: ***Preparedness Programs, Inadequate, Assess, Disaster Preparedness Plans, Implemented.***

1. INTRODUCTION

As a country subject to a range of natural disasters such as earthquakes, volcanic eruptions, and tropical cyclones, the Philippines is situated in the western Pacific Ocean's typhoon zone. These disasters have the potential to kill people and destroy property, and they could be natural or man-made. The Philippines, whose risk score is highest among 193 countries, has the worst record for disaster management. In terms of danger, the Philippines is ranked first by the World danger Index 2022, which takes into account the likelihood of earthquakes, hurricanes/typhoons, and floods. Striving for greater resilience against climate-related calamities is the urgent 13th Sustainable Development Goal (Makwana, 2019).

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Moreover, communities can be severely disrupted by disasters, which can result in casualties as well as monetary, environmental, social, and economic damages. Five performance priorities are emphasized by Torani et al. (2019) in order to lower the danger of disaster. Using creativity, knowledge, and education to foster a culture of safety and resilience is the third role. People must be well conscious of the need to foster a culture of resilience and prevention in order to lessen the frequency of disasters. It is essential to give knowledge and information about risks, weaknesses, and capacities top priority, especially for those who are more vulnerable.

Mongar (2022) claim that teaching students about catastrophe preparedness empowers them to think creatively and with knowledge. Their enhanced awareness of our environment enables them to respond and offer optimal solutions to any eventuality. Students are exposed to a broader perspective of our world since disaster preparedness is a problem-based learning curriculum that incorporates scenarios that could occur in real life. Thus, it increases the pupils' awareness and resilience to disasters. The independent variable in this study is disaster preparedness, which is used to gauge students' knowledge and level of readiness before to, during, and following a disaster. Students are given knowledge and problem-solving skills using the problem-based learning approach of disaster preparedness. Students' perspectives are expanded and their catastrophe resilience is strengthened when they are exposed to real-life events. This study uses disaster preparedness as an independent variable to evaluate students' knowledge and readiness prior to, during, and following disasters (Hoffmann & Muttarak, 2017; Wijnia, Loyens, & Rikers, 2019).

Numerous natural disasters, such as typhoons, tropical cyclones, volcanic eruptions, earthquakes, and other calamities, are common in the Philippines. This is due to the country's location in the typhoon zone of the western Pacific Ocean, which is where around one-third of all tropical storms worldwide originate (Cantillas et al., 2023). There are two types of disasters: man-made and natural. Floods, natural disasters of geological origin, such as volcanic eruptions, earthquakes, and landslides, and natural disasters of climatic or meteorological origin are a few examples of naturally occurring disasters (Makwana, 2019).

Natural disasters are an inescapable part of life and a complicated worldwide issue. Disasters can happen anywhere, at any time, and have devastating consequences that might include everything from property destruction to fatalities. Their frequency is rapidly rising. The Philippines performs badly when it comes to disaster management, according to the 2014 Commission on Audit report (Cantillas et al., 2023). Climate change is already having an impact on the Philippines; out of 193 countries, the country was listed as having the highest risk in the world by the World Risk Index 2022. Floods, hurricanes/typhoons, and earthquakes are all included in the world risk index. Target 13 of the Sustainable Development Goals is to urgently strengthen resilience to climate-related disasters (Hoffmann & Muttarak, 2017).

This study aims to seek the answers to the following questions: (1) what is the profile of the school in terms of; existing safety facilities, disaster preparedness plan, and building

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structure? (2) What level of awareness of students and personnel have in terms of its existing preparedness programs implemented? (3) What extent is the implementation of the disaster preparedness program? (4) What is the degree of satisfaction of the respondents on the implementation of the program? (5) What action plan can be undertaken based on the findings of the study?

2. METHOD

This chapter discusses the techniques used to obtain data relevant to the research objectives. The research methods that were used to carry out the study, including the research design, participants, setting, research instrument, data analysis, and data collecting, are described in this chapter.

Research Respondents and Informants Selection and Sampling Procedure:
Participants

The research respondents of this study were the 1st year students and Personnel of UM Panabo City in particular the BSBA-FM students. With a confidence level of 95%, the population consist of BSBA-FM students of UM Panabo College, 74 students and the total UM Panabo College personnel is 28.

Research Instrument

A survey questionnaire which is derived from Tan (2019) entitled "Disaster Preparedness of National High Schools: An Assessment" was the main data gathering instrument. The provided instrument was designed to respond to the statement of the assessment of disaster preparedness of UM-Panabo College.

Design and Procedure

In order to evaluate the institution in question's preparedness for disasters, a quantitative non-experimental descriptive evaluative research approach was used in the creation of this study. According to Cañete (2020), the goal of an evaluation is to determine whether an institution is successful in relation to the objectives established for it or whether its original intended was successfully fulfilled. The researchers ask for permission to conduct a study on the University of Mindanao Panabo College's disaster preparedness in the area by sending a letter to the school director. The Records Admission Center was then contacted by letter to obtain the complete list of first-year BSBA-FM students. Another letter was sent addressed to the HRMD asking a total number of Personnel in UMPC. It was an evaluative research method because the collected data were summarized and interpreted and presented in percentage, frequency and weighted mean for the evaluation of the disaster preparedness of the students and personnel.

3. RESULTS AND DISCUSSION

This section presents the findings of the UM Panabo College's research on disaster preparedness, as well as an interpretation and analysis of the information acquired.

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Table 1. Profile of UM Panabo College, Student's response

Profile of the school in terms of:		**Frequency**	**Percentage**
1.1 Safety facilities:	fire hydrant	48	64.86%
	fire hose	61	82.43%
	fire extinguisher	71	95.95%
	medicine kit	66	89.19%
	alarming system	65	87.84%
	emergency vehicle	36	48.65%
	evacuation site	59	79.73%
	Floor plan showing the evacuation area	53	71.62%
	Building exits	58	78.38%
	Emergency communication system	51	68.92%
	Smoke alarms	54	72.97%
1.2 Disaster preparedness plan:	Fire drill	70	94.59%
	earthquake drill	71	95.95%
	first aid training	61	82.43%
	safety seminar	62	83.78%
1.3 Building structure:			
a. classification of the building:	wood	32	43.24%
	semi-concrete	58	78.38%
	concrete	38	51.35%
b. type of the building	single storey	57	77.03%
	progressive type	33	44.59%

Students' perspectives regarding UM Panabo College's safety amenities' accessibility are shown in Table 1. The poll was completed by 74 first-year financial management students. The preceding table presents the frequency of responses and the percentage of students who think that safety facilities are available, like fire hydrants, fire hoses, fire extinguishers, alarm systems, emergency vehicles, evacuation sites with floor plans that indicate the evacuation area, smoke alarms, building exits, and emergency communication systems (Mollel, 2020).

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Table 2. Profile of UM Panabo College, Personnel's response

Profile of the school in terms of:		**Frequency**	**Percentage**
1.1 Safety facilities:	fire hydrant	18	64.29%
	fire hose	22	78.57%
	fire extinguisher	27	96.43%
	medicine kit	25	89.29%
	alarming system	24	85.71%
	emergency vehicle	8	28.57%
	evacuation site	24	85.71%
n=74	Floor plan showing the evacuation area	24	85.71%
	Building exits	23	82.14%
	Emergency communication system	19	67.86%
	Smoke alarms	24	85.71%
1.2 Disaster preparedness plan:	Fire drill	27	96.43%
	earthquake drill	27	96.43%
	first aid training	23	82.14%
	safety seminar	25	89.29%
1.4 Building structure:			
a. classification of the building:	wood	16	57.14%
	semi-concrete	24	85.71%
	concrete	15	53.57%
b. type of the building	single storey	57	77.03%
	progressive type	33	44.59%

Table 2 above features a comparable selection to Table 1 but different responses. When asked about the school's safety infrastructure, disaster preparedness strategy, and building design, a poll of 28 UM Panabo College employees is conducted. Both Tables 1 and 2 have similar percentages of responses, showing that both UM Panabo College staff and its students share the same observations and perceptions about the school's safety facilities.

According to Miller & Spoolman (2015), teaching students about disaster preparedness encourages critical thinking and knowledge-based thinking. Their heightened sense of our surroundings allows them to react and provide the best possible solutions for any situation. Since disaster preparedness is a problem-based learning program that includes scenarios that could occur in real life, students are exposed to a wider view of our world. It thus raises the students' knowledge of and ability to withstand disasters.

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Table 3. Level of awareness in terms of existing preparedness programs implemented

	Students		Personnel	
	Mean	Descriptive Interpretation	Mean	Descriptive Interpretation
Conducting fire drill.	4.73	Very Much Aware	5.00	Very Much Aware
Conducting earthquake drill.	4.70	Very Much Aware	5.00	Very Much Aware
Conducting safety seminar.	4.62	Very Much Aware	4.64	Very Much Aware
Conducting first aid training.	4.72	Very Much Aware	4.96	Very Much Aware
Conducting orientation on safety.	4.72	Very Much Aware	4.93	Very Much Aware

n=28

Legend: 4.21-5.00 (Very Much Aware); 3.41-4.20 (Moderately aware); 2.61-3.40 (Aware); 1.81-2.60(Unaware); 1-1.80(Very Much Unaware) Tan, M. (2019). Disaster Preparedness of National High Schools: An Assessment

Table 3 displays the degree to which preparedness programs that are already in place are known. Programs like fire drills, earthquake drills, safety seminars, first aid training, and orientations on safety may help raise the general knowledge of UM Panabo College students and staff. The result in table 3 implies that students and personnel of UM Panabo College are very much aware in the level of awareness in terms of existing preparedness programs implemented.

Table 4 shows the extent to which the disaster preparedness program has been implemented as well as the level of risk management readiness, including the frequency of fire drills, first aid instruction, earthquake drills, and safety seminars.

The average answer score of 4.61 from students for the terms of implementation and preparedness risk management plan indicates that the school has a highly implemented disaster preparedness program. On the other hand, the staff at UM Panabo College responded with an average score of 4.79, suggesting that the institution is prepared for a variety of disasters, including fires and earthquakes, and that it has expertise with first aid training and safety, thereby limiting unneeded damages. from students was 4.62, which suggests that they are quite happy with how the school's readiness program has been implemented. The average response from the staff was 4.62, indicating that they are extremely satisfied with the management of the school's level of implementation.

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Table 4. Extent on the implementation of the disaster preparedness program

		Students			Personnel	
		Mean	Descriptive Equivalent		Mean	Descriptive Equivalent
Term of implementation	Quarterly	4.61	Highly Implemented	Quarterly	4.61	Highly Implemented
	Semi Annual	4.68	Highly Implemented	Semi Annual	4.68	Highly Implemented
	Annual	4.84	Highly Implemented	Annual	4.84	Highly Implemented
Preparedness of Risk Management Plan	Fire drill	4.93	Highly Implemented	Fire drill	4.93	Highly Implemented
	First aid training	4.70	Highly Implemented	First aid training	4.70	Highly Implemented
	Earthquake drill	4.86	Highly Implemented	Earthquake drill	4.86	Highly Implemented
	Safety seminar	4.89	Highly Implemented	Safety seminar	4.89	Highly Implemented

Legend: 4.21-5.00 (Highly Implemented); 3.41-4.20 (Moderately Implemented); 2.61-3.40 (Implemented); 1.81-2.60(Unimplemented); 1-1.80(Highly Unimplemented) Tan, M. (2019). Disaster Preparedness of National High Schools: An Assessment

Table 5. Degree of satisfaction on the implementation of the preparedness program

	Students		Personnel	
	Mean	Descriptive Equivalent	Mean	Descriptive Equivalent
Conduct of fire drill.	4.61	Strongly Satisfied	4.61	Strongly Satisfied
Conduct of earthquake drill.	4.68	Strongly Satisfied	4.68	Strongly Satisfied
Conduct of first aid training.	4.84	Strongly Satisfied	4.84	Strongly Satisfied

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Conduct of safety seminar.	4.93	Strongly Satisfied	4.93	Strongly Satisfied
Conduct of school orientation safety.	4.70	Strongly Satisfied	4.70	Strongly Satisfied
Conduct of fire drill.	4.86	Strongly Satisfied	4.86	Strongly Satisfied
Average	4.62	Strongly Satisfied	4.79	Strongly Satisfied

Table 5 displays the level of satisfaction with how the UM Panabo College's readiness program has been implemented. The average answer from students was 4.62, which suggests that they are quite happy with how the school's readiness program has been implemented. The average response from the staff was 4.62, indicating that they are extremely satisfied with the management of the school's level of implementation.

Disasters can cause significant disruptions to communities and result in financial, environmental, social, and economic consequences in addition to casualties. Torani et al. (2019) highlight five performance criteria to reduce the risk of disaster. The third responsibility is to cultivate a culture of safety and resilience via creativity, knowledge, and education. To reduce the frequency of disasters, people must be fully aware of the need to promote a culture of preventive and resilience. Prioritizing knowledge and information regarding risks, vulnerabilities, and capacities is crucial, particularly for individuals who are more susceptible (Makwana, 2019).

Furthermore, through the use of problem-based learning, students are equipped with information and problem-solving techniques related to disaster preparedness. When students are exposed to real-life experiences, their perspectives are broadened and their catastrophe resistance is reinforced. In order to assess students' knowledge and preparedness before,

Legend: 4.21-5.00 (Strongly Satisfied); 3.41-4.20 (Moderately Satisfied); 2.61-3.40 (Satisfied); 1.81-2.60(Unsatisfied); 1-1.80(Highly Unsatisfied) Tan, M. (2019). Disaster Preparedness of National High Schools: An Assessment

during, and after disasters, this study employs disaster preparedness as an independent variable (Mongar, 2022; Wijnia et al., 2019).

4. CONCLUSION

Based on the research conducted entitled Assessment of Disaster Preparedness of UM Panabo College, it is concluded that the UM Panabo College implementation of disaster preparedness program is consistent. However, the lacking of response in the emergency vehicle selection shows that emergency vehicle is needed to cater the needs of both students and personnel of UM Panabo College whenever disasters occur.

Recommendations

On the Assessment of Disaster Preparedness of UM Panabo College,
the researchers find out that students and UM Panabo College personnel respondents have the same concern, lack of percentage response in the emergency vehicle selection implicates that

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only small percentage of respondents observe that there is emergency vehicle in the school. The following recommendations to be made:

1. The school must provide an emergency vehicle that can be used during times of emergency
2. The school must remain consistent and committed in ensuring the safety of its students and personnel.

5. REFERENCES

1. Cantillas, R. G. B., & Viray, M. C. (2023). Public Administration and Disaster Management: Assessment on the Prevention, Preparedness, Response, and Recovery efforts of the Cebu City Government to Typhoon Odette.
2. Hoffmann, R., & Muttarak, R. (2017). Learn from the Past, Prepare for the Future: Impacts of Education and Experience on Disaster Preparedness in the Philippines and Thailand.
3. Makwana, N. (2019). Disaster and its impact on mental health: A narrative review. Journal of Family Medicine and Primary Care. 8(10):3090-3095. doi: 10.4103/jfmpc.jfmpc_893_19. PMID: 31742125; PMCID: PMC6857396.
4. Mongar, K. (2022). Alignment of the environmental science textbooks, examinations and curriculum framework to achieve the teaching objectives. Journal of Turkish Science Education, 19(1), 52-70. Retrieved from https://www.proquest.com/scholarly-journals/alignment-environmental-science-textbooks/docview/2641585757/se-2
5. Tan, M. (2019). Disaster Preparedness of National High Schools: An Assessment. A Graduate Thesis. Retrieved from https://www.researchgate.net/publication/340435417_DISASTER_PREPAREDNESS_OF_NATIONAL_HIGH_SCHOOLS_AN_ASSESSMENT_PANEL_OF_EVALUATORS_Approved_by_the_Committee_on_Oral_Examination_with_a_grade_of_PASSED
6. Torani, S., Majd, P. M., Maroufi, S. S., Dowlati, M., & Sheikhi, R. A. (2019). The importance of education on disasters and emergencies: A review article. Journal of education and health promotion, 8.
7. Wijnia, L., Loyens, S. M., & Rikers, R. M. (2019). The problem-based learning process: An overview of different models. The Wiley handbook of problem-based learning, 273-295.