A Single-Case Analysis on Preparing Students for Disaster Risk Management

Gilanie Rose L. Alfeche[1], Ma. Veronica A. Imbo[1], Loudette D. Nuñez[1], Jeanilyn T. Muico[2]

[1]Student, Department of Teacher Education, UM Panabo College,Panabo City, Philippines

[2]Faculty, Department of Teacher Education, UM Panabo College, Panabo City, Philippines

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ABSTRACT

This single-case study investigates the effectiveness of disaster risk preparedness programs at UM Panabo College, with particular emphasis on the role of the Safety and Security Office (SSO) and other personnel. The study examines how organized safety training, resource availability, and inclusive education contribute to students' resilience and readiness for disasters. Key findings reveal that training selected participants in safety drills equips them to assist their peers, fostering a culture of safety and shared responsibility. The presence of disaster preparedness resources, including comprehensive emergency equipment, CCTV systems, and fire alarms, enhances the school's capacity to respond effectively during crises. The program emphasizes practical experience, enabling students to apply theoretical knowledge in real-world emergency scenarios. Designated safety personnel, such as the SSO, PPMGS, and Red Cross Youth, play critical roles in mentoring and leading students, with more experienced individuals demonstrating greater confidence and decision-making ability during emergencies. Emergency preparedness education in schools equips students with vital life-saving skills that can be applied both within the school environment and in their families and communities. Hands-on involvement of trained responders provides students with realistic, experiential learning opportunities, reinforcing knowledge through practice. Collectively, these findings highlight that collaboration, consistent and clear training, and ongoing improvement efforts are essential for cultivating a safe, resilient, and prepared learning environment.

Keywords: Disaster risk management, safety training, resource availability, single-case study, Philippines

INTRODUCTION

In an era marked by increasing natural disasters and climate-related challenges, disaster preparedness has become more urgent than ever. According to the United Nations Office for Disaster Risk Reduction (UNDRR, 2020), over 200 million people are affected by disasters annually, with vulnerable populations—particularly students—among the most impacted. As fundamental social institutions, schools possess enormous potential to transform students into proactive agents of disaster risk reduction. The Sendai Framework for Disaster Risk Reduction 2015–2030 emphasizes education as a key strategy in building resilience. However, despite this global recognition, its principles are not consistently applied in classroom settings. Studies reveal a significant gap between the framework's goals and their actual implementation in schools (Labaria et al., 2020). Common barriers include inadequate teacher training, limited integration of disaster education into curricula, and insufficient resources. Consequently, these challenges hinder the effective integration of DRR principles, underscoring the need for targeted improvements to better prepare students for disasters (Seddighi et al., 2021).

Beyond policy gaps, strengthening school preparedness and crisis education remains a critical concern. An in-depth study conducted in China involving over 3,600 students found that effective disaster education programs significantly enhanced both school-level and student-level readiness (Wang et al., 2023). Similarly, teaching college students the fundamentals of Disaster Risk Management (DRM) equips them with essential knowledge and skills to confront climate-related challenges. Integrating DRM into academic curricula enables students to respond confidently and make informed decisions during emergencies. Research further indicates that DRM

instruction improves students' ability to manage crises effectively, benefiting not only individuals but also society as a whole (Seddighi et al., 2020). Additionally, disaster risk reduction (DRR) education plays a vital role in shaping students' attitudes and understanding of risk management. When students actively engage in disaster education programs, they develop greater confidence and a clearer understanding of appropriate emergency responses (Loremia & Alcover, 2020). However, DRR education continues to face challenges, including limited institutional support and inconsistent curriculum integration. Despite these constraints, schools remain essential platforms for teaching life-saving skills and promoting community resilience, particularly in disaster-prone areas where strengthening DRR education significantly enhances long-term preparedness and adaptive capacity (Alkalash et al., 2023).

In the Philippine context, the importance of Disaster Risk Management (DRM) education is even more pronounced. Given the country's vulnerability to typhoons, earthquakes, and other hazards, schools play a crucial role in fostering a culture of safety. Research shows that students who participate in hands-on preparedness activities and real-world simulations are better equipped to understand and respond to emergencies. This practical approach not only builds self-confidence but also encourages students to disseminate knowledge within their communities, thereby promoting collective readiness (Ventura & Madrigal, 2020). Nevertheless, despite these positive outcomes, studies highlight a concerning gap in disaster preparedness education within higher education institutions. Tabangcura et al. (2023) found that many students in private higher education institutions lacked a comprehensive understanding of emergency response protocols and institutional disaster policies. Similarly, Patel et al. (2023) emphasized that disaster risk management is frequently overlooked in university curricula, despite its critical role in shaping students' capacity to cope with disasters. Correspondingly, Ketankumar et al. (2023) asserted that integrating DRR into academic programs significantly enhances students' knowledge and preparedness. Collectively, these findings underscore the urgent need to strengthen DRR education at the tertiary level.

Local studies further demonstrate the positive impact of structured DRRM integration. Research conducted in Augustinian Recollect Schools on Negros Island, Philippines, revealed that incorporating DRRM principles and conducting practice drills significantly improved students' understanding and preparedness. Students became more familiar with evacuation protocols and early warning systems, thereby gaining practical skills essential for effective disaster response (Sumbillo & Madrigal, 2020). These findings reinforce the importance of experiential learning in disaster education. More broadly, integrating DRR into school curricula strengthens global disaster resilience. When DRR concepts are embedded across educational levels, students acquire the necessary knowledge and competencies to participate actively in preparedness and mitigation initiatives (Masocha et al., 2025). Additionally, effective DRR education fosters both individual and collective preparedness, contributing to a comprehensive approach to disaster risk management (Fu & Zhang, 2024). Preparedness drills incorporated into academic programs enhance immediate safety and extend resilience beyond the classroom, benefiting entire communities (DeVincenzo & Mazzuca, 2021).

To better understand student behavior in disaster contexts, several theoretical frameworks provide valuable insights. Tina Launiala's (2009) Knowledge, Attitudes, and Practices (KAP) model explains how knowledge influences attitudes and ultimately behavior. Applied to UM Panabo students, gaps in knowledge about emergency procedures may lead to negative attitudes and inadequate responses during disasters. Identifying deficiencies in knowledge, attitudes, and practices is therefore essential for improving preparedness. Similarly, Rogers' Protection Motivation Theory (1975) explains how individuals respond to perceived threats by evaluating both the severity of the risk and their coping abilities. In disaster education, enhancing students' awareness of risks while strengthening their response skills can significantly increase preparedness. Moreover, Bandura's Social Cognitive Theory (1986) highlights the role of social interaction and observational learning in behavior development. Through peer collaboration, role modeling, and guided practice, students can build confidence and cultivate proactive disaster response behaviors. Ajzen's Theory of Planned Behavior (1985) further emphasizes the influence of attitudes, social norms, and perceived behavioral control on intentions and actions. When students receive proper training and social support from peers and teachers, they are more likely to develop positive intentions toward disaster preparedness.

Despite global and national efforts, a significant gap in Disaster Risk Reduction and Management (DRRM) education remains at the tertiary level, particularly at UM Panabo College. Although disasters are increasing in frequency and intensity, many students continue to rely primarily on the basic "duck, cover, and hold" technique, which is insufficient for addressing diverse disaster scenarios. Furthermore, the absence of formal DRRM courses or structured programs leaves students inadequately prepared. This situation contradicts the Philippine Disaster Risk Reduction and Management Act of 2010 (Republic Act 10121), which mandates the integration of DRRM into educational curricula. While studies such as Lapada (2022) demonstrate the effectiveness of DRRM education at the high school level, research focusing on its implementation in higher education institutions remains limited. Therefore, exploring strategies for integrating DRRM education at UM Panabo College was both timely and necessary.

This study assessed Disaster Risk Management (DRM) practices at UM Panabo College. Specifically, it identified gaps in students' knowledge beyond basic emergency techniques and explored strategies for integrating DRM education into the university curriculum. Ultimately, the study aimed to cultivate a culture of safety and resilience within the university community. The significance of this research is multifaceted. First, it strengthens disaster preparedness by identifying knowledge gaps and proposing actionable recommendations. Second, it fosters a culture of proactive safety within the university. Third, it supports national objectives under the Philippine Disaster Risk Reduction and Management Act of 2010. Finally, the findings contribute to broader national and international disaster education initiatives by promoting stronger DRM integration. The study addressed the following research questions;(1) What current practices are implemented by the school to prepare students for disaster risk management?;(2) How do these practices contribute to the development of students' readiness for emergencies?;(3) What recommendations can be proposed to improve the school's disaster preparedness efforts and enhance students' disaster risk management skills?

METHOD

This study employed a qualitative research design to explore participants' experiences and perspectives, with a focus on understanding how and why events occur within the context of disaster risk management (Tenny, 2022). Specifically, a single-case analysis was conducted, centering on the Chief of the Security and Safety Office (SSO) at UM Panabo College. Single-case studies allow for an in-depth examination of a single individual, group, organization, or phenomenon (Team, 2025), providing rich insights into the participant's roles, responsibilities, challenges, and practices. A one-on-one interview was conducted with the SSO Chief and recorded with their consent to ensure accurate data collection and transcription.

To enhance the credibility and depth of the findings, supplementary perspectives were gathered from teachers and students with over three years of experience who had observed disaster risk management practices. Four key informants were consulted: two personnel (one teaching and one non-teaching) and two students (one from the Department of Teacher Education and one from the Department of Business Administration Education). These informants verified the accuracy of the SSO Chief's responses and helped identify any discrepancies, providing a triangulated approach that strengthened the validity and reliability of the data.

Data collection was guided by multiple instruments and procedures. A Semi-Structured Interview Guide facilitated the exploration of the SSO Chief's perspectives, practices, and recommendations, with open-ended questions allowing participants to express their insights freely while aligning with the study's objectives (Adams, 2020). An Audio Recording Device captured responses accurately, enabling researchers to focus on the interview interaction and preserve the richness of qualitative data (Silverman, 2020). Field Notes were recorded during each session to document observations and contextual details, supporting triangulation and providing additional depth (Ravitch & Carl, 2021). Iterative Questions were also employed to probe emerging themes and expand on initial responses, ensuring a nuanced understanding of participants' experiences (Srivastava & Hopwood, 2009). Data were analyzed using a Thematic Analysis Framework**,** systematically identifying patterns and themes to produce findings that were coherent, organized, and grounded in participants' perspectives (Braun & Clarke, 2021).

Ethical considerations were rigorously observed. Permission was obtained from the college director, and informed consent was secured from all participants. Participants were provided with detailed information regarding the study's objectives, potential risks and benefits, withdrawal options, and ethical safeguards. Compliance with the 2012 Data Privacy Act (RA 10173) ensured that all data were handled securely, responsibly, and legally, with participants informed of their rights to access, modify, or request deletion of their personal information.

Trustworthiness was ensured through Ahmed's (2024) criteria of credibility, dependability, confirmability, and transferability. Credibility was achieved through face-to-face interviews, confidentiality assurances, and verification of participants' firsthand experience. Confirmability was ensured by clearly documenting each stage of the data analysis process. Dependability was addressed by aligning findings with raw data, allowing for replication and similar interpretations by other researchers. Transferability was supported through detailed contextual descriptions and rich narratives of participants' experiences, enabling readers to assess the applicability of findings to other settings and educational contexts.

RESULTS AND DISCUSSION

A. Current Practices Implemented by the School to Prepare Students for Disaster Risk Management

Major Themes	**Core Ideas**
Strengthening Disaster Preparedness in Schools	Training selected participants in safety drills equips them with vital knowledge to assist peers and enhances emergency readiness Schools foster safety and resilience through structured disaster drills and student-led training initiatives Efforts are underway to ensure comprehensive emergency response drills, with plans to include diverse school personnel
Availability of Disaster Preparedness Resources	Complete equipment supports emergency readiness Effective disaster response requires both well-equipped resources and hands-on experience for students to apply their knowledge in real-life situations Modern safety technologies, including CCTV and fire alarms, enhance response and accountability during emergencies
Designated Personnel for School Safety Management	SSO and PPMGS oversee safety operations The School Safety Officer and Red Cross Youth play vital roles in ensuring students are prepared and supported during emergencies. Experienced individuals exhibit greater confidence and preparedness during emergencies, emphasizing the need for mentorship and guidance for those with less training.

The analysis of participant responses revealed three major themes concerning the current disaster preparedness practices implemented by the school: strengthening disaster preparedness in schools, availability of disaster preparedness resources, and designated personnel for school safety management. These themes collectively

illustrate a comprehensive approach to institutionalizing disaster risk reduction and management within the academic setting.

Strengthening Disaster Preparedness in Schools. The first theme underscores the proactive efforts of educational institutions to enhance disaster preparedness through systematic safety drills, including earthquake and fire drills. While logistical constraints prevent the participation of all students, selected teaching and non-teaching staff, along with student assistants, receive specialized training in safety procedures and protocols. These trained individuals serve as force multipliers who can assist their peers during actual emergencies. As one participant articulated, "Selected participants are chosen, including teaching and non-teaching staff, and a few STAs students. These participants are trained in the proper safety procedures and protocols to ensure they can assist their peers in a real emergency." The participant further elaborated that earthquake drills are conducted quarterly in alignment with the National Simultaneous Earthquake Drill, with active involvement from the College Red Cross Youth, who undergo first aid training and conduct assessments during school events. Despite these efforts, the participant acknowledged that only two of the four required drills had been completed within six months, prompting plans to initiate fire drills through formal requests involving teaching staff, non-teaching personnel, and security guards. This finding aligns with the work of Kamil, Utaya, and Utomo (2020), who emphasized that enhancing disaster resilience requires educating students about preparedness and proactive safety measures. The correlation between awareness and practice highlights the vital role of education in building student resilience (Ventura & Madrigal, 2020). Furthermore, this approach resonates with the student-centered paradigm of Disaster Risk Reduction, which empowers learners through education to actively contribute to disaster resilience (Withana et al., 2020).

Availability of Disaster Preparedness Resources. The second theme examines the extent to which schools are equipped with essential disaster preparedness resources. Evidence indicates that the institution maintains complete personal protective equipment, including hard hats, fire suits, whistles, fully stocked first aid kits, spine boards, and fire extinguishers. Additionally, the school has established documented manuals that guide disaster preparedness protocols. A participant confirmed, "We have PPE such as hard hats and a manual that we follow for disaster preparedness. We also have a fire suit, fire extinguisher, first aid kit, spine board, and other necessary equipment—our resources are complete." However, the participant also identified a critical gap: despite students' theoretical knowledge gained from NSTP 1 courses, there remains insufficient hands-on experience in operating emergency equipment. The participant suggested that during drills, students should receive practical instruction on proper fire extinguisher usage. The integration of modern safety technologies further strengthens the school's response capacity. The participant noted, "The fire alarm system and smoke detectors, along with other systems like the fire hose, are visible and part of the safety technology we have. The CCTV footage can be reviewed to check if someone got trapped or covered during the incident." Key informants corroborated that the school is well-equipped with fire extinguishers, first aid kits, alarms, smoke detectors, and CCTV systems, complemented by student orientations and training sessions conducted before drills. This comprehensive resource allocation demonstrates the school's commitment to disaster preparedness. Nevertheless, Mugo, Karuku, and Sitati (2025) assert that prioritizing resources for school safety policies and programs necessitates the active involvement of all stakeholders. The imperative of disaster preparedness extends beyond educational institutions, as Aruru, Truong, and Clark (2020) emphasize its essential role in minimizing adverse effects and guaranteeing appropriate responses across community institutions. Moreover, Rohani and Rahmawati (2025) contend that the value of these preparations is further enhanced when emergency responders employ integrated simulation optimization tools to maximize resource utilization during disasters.

Designated Personnel for School Safety Management. The third theme illuminates the critical roles of specific personnel in managing school safety. The Security and Safety Officers and the Physical Plant and Management General Services emerge as primary responders responsible for implementing disaster protocols and managing emergency situations. A participant affirmed, "When it comes to disaster response, the School Safety Officer really plays an effective role because they help students know what to do, for Basic Life Support, if there are injured people, the Red Cross Youth is there to respond." Significantly, the findings reveal that preparedness levels correlate positively with age, training, and experience. Students in higher academic levels, having accumulated more training and practical exposure, demonstrate greater confidence and competence during emergencies. Conversely, less experienced students may exhibit confusion or fear when confronted with crisis

situations. As one participant observed, "Those in higher levels are usually more prepared because they have already undergone training and have gained experience in school; those who have already experienced training tend to be more confident and know what to do, while those who haven't might feel confused or scared. So, age and experience have a big impact on students' preparedness." Key informants confirmed that the Security and Safety Officers, Physical Plant and Management General Services, school clinic, and Red Cross Youth constitute the core team responsible for disaster risk management, safety protocols, emergency response, and medical aid during drills and actual emergencies. These designated personnel also provide essential guidance to students on proper response procedures, including first aid administration. This finding resonates with Jurs (2022), who documented that school safety facilitators and officers leverage their experiential knowledge to develop and enforce effective safety protocols. Furthermore, Cvetkovic, Nikolic, and Lukic (2024) assert that students possess an inherent right to be informed about disaster risks, safety measures, and protection procedures. The collaborative efforts of educators and staff have demonstrably strengthened the implementation of school safety protocols (Jurs, 2022), reinforcing the importance of designated, well-trained personnel in creating resilient educational environments

B. Practices Contributing to the Development of Students' Readiness for Emergencies

Major Themes	**Core Ideas**
Inclusive Emergency Preparedness Education	Empower students with essential knowledge of safety procedures and life-saving techniques. Readiness and informed individuals can mitigate the impact of foreseeable crises.
Practical Application of Safety Beyond the Classroom	Equipping individuals with essential life-saving skills both within and beyond the school setting Preparedness reduces panic and benefits both individuals and their families.
Collaborative Disaster Response and Guidance	Safety and Red Cross Officials ensure students are prepared and supported during emergencies. Exhibit greater confidence and preparedness in emergencies, emphasizing the need for mentorship and guidance.

The second research objective examined how specific practices contribute to developing students' emergency readiness. Three major themes emerged from the analysis: inclusive emergency preparedness education, practical application of safety beyond the classroom, and collaborative disaster response and guidance. These themes collectively demonstrate the multidimensional nature of disaster preparedness education and its far-reaching implications for student development.

Inclusive Emergency Preparedness Education. The first theme addresses the foundational role of comprehensive and accessible emergency education. The findings indicate that emergency preparedness education achieves optimal effectiveness and inclusivity when it equips students not only with formal knowledge but also with practical skills and the psychological confidence to act decisively in real-life situations. This conceptualization aligns with Hoffmann and Blecha's (2020) distinction between explicit knowledge—comprising structured instructions and theoretical concepts and tacit knowledge, which encompasses intuitive understanding and experience-based practical skills. A participant explained the mechanisms through which this education is delivered: *"This contributes to students' development by giving them ideas on how to be ready

during emergencies. Since all students need this knowledge, it should be accessible to everyone. Through NSTP, teachers give orientations, and first-year students attend seminars on what to do during an earthquake, like the 'duck, cover, and hold' technique. They are also taught how to use a fire extinguisher in case of fire. NSTP 1 also introduces topics about disasters and Basic Life Support."* The tangible impact of this educational approach was vividly illustrated through a participant's account of an actual earthquake: "When I stepped out of the office, I saw that students and teachers had already evacuated and knew exactly what to do. If they hadn't been informed or trained, they would have just stayed in their rooms, unsure of what to do in such a situation." Key informants validated that NSTP orientations, disaster response seminars, practical training in fire extinguisher operation, and Basic Life Support instruction collectively enhance students' emergency preparedness capabilities. These initiatives provide students with vital knowledge and life-saving competencies essential for effective emergency response. Sarwono et al. (2025) asserted that disaster losses diminish substantially when populations are knowledgeable and adequately prepared to prevent, detect, and respond to hazards. The integration of disaster education into formal curricula strengthens both individual and community resilience. Similarly, Wang, Han, and Li (2023) observed that embedding disaster risk education within school systems cultivates stronger, more adaptable communities capable of confronting and recovering from adverse events.

Practical Application of Safety Beyond the Classroom. The second theme examines how students transfer and apply safety knowledge acquired in formal educational settings to real-world scenarios extending beyond school boundaries. The findings demonstrate that learners develop the capacity to act swiftly and effectively during actual disasters through sustained training and cumulative practical experiences. This underscores the significance of preparedness as a transferable competency applicable both within and beyond the school environment. A participant articulated this phenomenon: "Just like what I mentioned earlier, when the earthquake happened here, the students were really able to apply what they learned from the NSED simulation by doing the 'duck, cover, and hold' technique. The school also has signage showing where the evacuation areas are. In situations like this, students can apply what they learned not only in school but also outside, especially in their homes and in their daily lives." The participant further emphasized the developmental trajectory of preparedness: "Based on what I observed, those in higher levels are usually more prepared because they have already undergone training and have gained experience in school. Meanwhile, freshmen or junior students who are in the lower levels need more guidance from those who are more knowledgeable, since they are just starting to learn the basics." Key informants confirmed that during a genuine seismic event, students successfully executed the "duck, cover, and hold" technique, providing empirical validation of the effectiveness of NSED drills and simulations. The safety competencies acquired through these experiences benefit students not only within academic settings but also in their domestic environments and daily routines. Higher-level students consistently demonstrated greater preparedness attributable to accumulated training and experiential learning, whereas younger learners required additional guidance and supervised practice to develop emergency response confidence. This finding substantiates the assertion of Cvetkovic, Nikolic, and Lukic (2024) that preparedness may mitigate the likelihood of post-traumatic mental health concerns, including anxiety, by instilling a sense of control and stability, particularly in children and adolescents. Sarwono et al. (2025) further emphasized that teachers fulfill an indispensable function in disaster education, serving as critical human resources in educational planning, knowledge dissemination, skills development, and character formation that extends beyond traditional instructional paradigms to substantially enhance disaster preparedness outcomes.

Collaborative Disaster Response and Guidance. The third theme elucidates the essential contribution of coordinated collaboration, structured support systems, and directed leadership in developing students' emergency response capabilities. The findings highlight the pivotal roles played by School Safety Officers, Red Cross Youth, and the broader school community in this collaborative endeavor. A participant described this collaborative framework: "I have not tried evaluating the students yet since I've only been here for 6 months. When it comes to disaster response, the School Safety Officer really plays an effective role because they help students know what to do. For example, during a fire, students know that the fire extinguisher is the first thing to grab. For Basic Life Support, if there are injured people, the Red Cross Youth is there to respond." However, the participant also identified persistent challenges: "One of the common challenges that some students complain about is the heat during drills. Also, when an actual situation happens, some students easily panic. Even if they attended seminars about disasters—especially earthquakes—when the real thing happens, they forget what to do and panic right away. There are also students who don't care because they feel like it's not important. But if you

really understand disaster preparedness, one of the biggest benefits is that it helps not only you but also your family." Key informants confirmed that while formal evaluations of disaster preparedness practices have not yet been conducted, the School Safety Officer and Red Cross Youth fulfill indispensable functions in guiding effective student responses during fires, injuries, and other emergencies. These designated personnel serve as frontline advisors during both drills and actual crises, reinforcing appropriate actions for high-risk scenarios. This finding substantiates Allaire's (2019) observation that readiness can reduce the likelihood of post-traumatic mental health issues, including anxiety, that frequently affect students and community members following traumatic experiences. Wang (2023) further expanded this conceptualization by characterizing emergency collaboration as encompassing multilevel inter-organizational relationships and the mobilization of individuals, resources, knowledge, and information. This integrated approach strengthens collective response systems both within and beyond the school community, creating resilient networks capable of addressing complex emergency situations through coordinated action.

C. Recommendations to Improve the School's Disaster Preparedness Efforts and Enhance Students' Disaster Risk Management Skills

Themes	**Core ideas**
Emergency Response Vehicle	Modern safety vehicles to enhance responses and accountability during emergencies.
More Exposure in Emergency Response	Requires hands-on experience for students to apply their knowledge in real-life situations
Additional Group of Responders	Established trained responders to assist or respond every time there are school activities.

The third research objective solicited recommendations for strengthening the school's disaster preparedness initiatives and improving students' disaster risk management competencies. Three principal themes emerged from participant responses: acquisition of an emergency response vehicle, provision of more extensive exposure to emergency response through hands-on training, and establishment of an additional group of trained responders.

Emergency Response Vehicle. The first recommendation centers on acquiring a dedicated emergency response vehicle to enhance the school's capacity for immediate intervention during crises. A participant explicitly identified this resource gap: "One thing we see as missing is the L300 vehicle, which could be very useful in other emergencies." Key informants corroborated that the School Safety Officer had formally suggested the acquisition of an L300 vehicle to address various emergency scenarios. This initiative would substantially strengthen the institution's capacity for rapid emergency response. While acknowledging that the school's existing Disaster Risk Management infrastructure is robust and characterized by comprehensive emergency equipment availability, participants emphasized that adding an L300 vehicle would significantly improve response capabilities for larger-scale or more complex emergencies. Muir et al. (2019) contextualized this recommendation within the broader framework of emergency services, noting that these services fulfill an integral function in public health and safety. Their research further highlighted that emergency service responses operate under conditions of elevated operational risk and sustained demand, necessitating adequate vehicular resources to ensure effective service delivery.

More Exposure in Emergency Response. The second recommendation addresses the critical gap between theoretical knowledge and practical application in disaster response training. While NSTP 1 courses provide students with foundational knowledge of disaster response principles and procedures, participants strongly advocated for expanded hands-on experiential learning opportunities. A participant articulated this need: *"We noticed is that even though students are already prepared because of their NSTP 1 class, where they learn about disaster response, it would be better if they were given more hands-on experience. Their class shouldn't just focus on theories and reporting. It would be more effective if students were given opportunities to practice real-

life scenarios. For example, during drills, they could be shown how to properly use a fire extinguisher. This would really help ensure that students are not only knowledgeable in theory but are also ready and capable of taking action when a real emergency occurs."* Key informants confirmed that despite the school's well-established Disaster Risk Management procedures and complete inventory of Personal Protective Equipment, a substantial need persists for more practical, scenario-based training engagements. The findings indicate that the school demonstrates excellence in Disaster Risk Management resource maintenance, including hard hats, fire suits, whistles, first aid kits, and spine boards. However, participants consistently emphasized that beyond the elementary concepts conveyed in NSTP 1, students require immersive, realistic training experiences that simulate actual emergency conditions. This recommendation aligns with Son's (2020) assertion that such experiential training cultivates resilience and proactive planning orientations. Svellingen (2020) further cautioned that educators must systematically evaluate how simulation-based training methodologies develop authentic real-world competence, ensuring that educational investments translate into measurable performance improvements during actual crisis situations.

Additional Group of Responders. The third recommendation proposes expanding the school's response capacity through the recruitment and training of additional responder groups. While acknowledging that the school's existing personnel and equipment provide a solid foundation for disaster preparedness, participants emphasized that augmenting this capacity with formally trained responder teams would substantially enhance overall emergency response effectiveness. A participant provided a compelling comparative example: *"Based on what I know, it's not from another school but still within UM, specifically UM Tagum. What's great about them is that they have their responders who are really trained by their School Safety Officer, who is either a leader or maybe a volunteer. He created a group of responders who are always present during events. I also noticed that the Red Cross in their area is very active. They're like volunteers who are always present at events like intramurals, and they always have complete equipment. Here in our campus, we're still small compared to UM Tagum, which has a larger population. Maybe someday, if UM Panabo grows, more courses are offered, and the student population reaches around 5,000, then we might be able to adopt the system used by the other branch. In UM Main, for example, there's an organization called FACOM that handles the fire drills and other safety-related activities because the campus is really big. As for us here in Panabo, we can't fully implement that kind of setup yet because our campus and the number of stakeholders is still small."* Key informants unanimously concurred with the School Safety Officer's assessment that establishing additional trained responder groups represents the most effective strategy for enhancing the school's disaster preparedness and response capabilities. This expansion would complement and reinforce existing response mechanisms, positioning the institution to manage diverse emergency scenarios more effectively. Hazinski et al. (2004) provided important context for this recommendation, observing that school medical emergencies can involve both students and adults. Their research emphasized that all educational institutions employ adult faculty and staff, and most schools host substantial numbers of adults during extracurricular activities, including sports events, drama productions, and community meetings. This demographic reality underscores the necessity of maintaining adequate numbers of trained responders capable of addressing medical emergencies across diverse population segments and activity contexts. The proposed expansion of responder groups thus represents not merely an enhancement of existing capacity but a fundamental investment in comprehensive institutional resilience and community health protection.

CONCLUSION

This study comprehensively examined the current state of disaster preparedness among students and evaluated the effectiveness of Disaster Risk Management (DRM) practices at UM Panabo College. Findings indicate that while the institution has established a structured DRM framework and maintains essential Personal Protective Equipment (PPE) and emergency resources, the presence of these structural components alone does not ensure actual preparedness. A critical gap exists between institutional readiness and students' functional capacity to respond effectively during real emergencies. Although disaster-related concepts are introduced through academic programs such as the National Service Training Program (NSTP), theoretical exposure without consistent practical application limits students' confidence, decision-making ability, and situational awareness during crisis events.

Disaster preparedness extends beyond the possession of tools, written plans, or policy documents; it is reflected in behavioral competence, procedural familiarity, and psychological readiness. The study revealed that students lacking active engagement in drills, simulations, and scenario-based exercises often demonstrate hesitation and uncertainty when confronted with emergency scenarios. Without repeated experiential learning opportunities, emergency procedures remain abstract concepts rather than practiced skills. These findings reinforce existing literature emphasizing that disaster resilience is cultivated through continuous behavioral reinforcement, immersive training, and realistic simulations that mirror actual disaster conditions.

Moreover, the study underscores the importance of institutional culture in shaping preparedness outcomes. Schools that treat disaster preparedness as a routine and shared responsibility foster stronger collective resilience compared to those that approach it as a compliance-based requirement. When preparedness becomes embedded in daily school life through regular drills, visible safety protocols, and participatory training, students are more likely to internalize safety behaviors and develop automatic, appropriate responses during emergencies. Consequently, effective DRM practices must move beyond policy formulation and resource acquisition toward sustained engagement and institutional commitment.

The implications of these findings are substantial for educational leaders, policymakers, and disaster management practitioners. First, curriculum enhancement is essential. Disaster preparedness must be integrated across disciplines, rather than confined to a single subject or program. Embedding applied disaster concepts in science, social studies, health education, and community engagement activities can deepen understanding and contextual relevance. Structured simulations, mock disaster exercises, and collaborative problem-solving tasks should become routine instructional components to ensure that students translate theoretical knowledge into practical action.

Second, investment in emergency infrastructure including dedicated emergency response vehicles represents a strategic reinforcement of institutional response capacity. Such vehicles can function as mobile coordination units, facilitate rapid evacuation or medical transport, and enhance accountability during disaster response operations, thereby strengthening institutional credibility and operational efficiency.

Third, deploying additional trained emergency responders within the campus environment is vital. Qualified personnel present during large gatherings, school programs, and peak activity periods ensure rapid, organized, and technically sound intervention. Beyond reactive response, these responders can lead preventive education sessions, monitor safety compliance, and mentor student volunteers in emergency protocols.

Fourth, systematic evaluation and optimization of emergency resources must be institutionalized. Equipment availability is insufficient if stakeholders lack the competence or confidence to use it effectively. Regular hands-on orientations, refresher workshops, and skill demonstrations should accompany resource procurement to ensure operational readiness. Clear signage, accessible storage, and routine inspection schedules are equally important in maintaining reliability.

Fifth, inclusivity must be central to disaster preparedness planning. Students with physical disabilities, sensory impairments, or learning differences may face heightened vulnerability during emergencies. Tailored instructional strategies, adaptive drills, assistive devices, and personalized evacuation plans are necessary to ensure equitable protection. Inclusive preparedness not only safeguards vulnerable populations but also strengthens overall community resilience.

Finally, stronger collaboration between the institution and external emergency agencies enhances coordinated response mechanisms. Partnerships with local disaster risk reduction offices, fire departments, health services, and community responders provide technical expertise, joint training opportunities, and synchronized communication systems. Such collaboration bridges school-based initiatives with broader community disaster frameworks, ensuring continuity of response before, during, and after crisis events.

In conclusion, this study demonstrates that true disaster preparedness extends beyond compliance and equipment provision. It requires a sustained, experiential, inclusive, and collaborative approach. By institutionalizing practical training, optimizing resource utilization, deploying trained responders, and embedding preparedness

into school culture, educational institutions can significantly reduce vulnerability, minimize disaster impact, and promote faster, more organized recovery within the academic community.

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