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From awareness to action: Assessing the level of disaster preparedness among teachers and students of Bitlang National High School

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ABSTRACT

This study assesses the level of disaster preparedness among teachers and students of Bitlang National High School, SDO Cebu City. It focuses on their awareness, readiness, and participation in disaster risk reduction and management (DRRM) activities within the school. As natural hazards increasingly threaten education continuity in the Philippines, understanding the preparedness level of school stakeholders is vital. Using a descriptive-survey design, the study gathered data through questionnaires and interviews to evaluate knowledge, attitudes, and practices related to disaster readiness. Results indicate that while awareness of disaster protocols is generally high, gaps exist in practical application, simulation participation, and resource mobilization. The study recommends enhanced DRRM training, community-linked drills, and integration of DRRM education across subjects to transform awareness into concrete action for a resilient learning environment.

Keywords: disaster preparedness, DRRM in education, school safety, teacher and student awareness, disaster resilience, Bitlang National High School

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INTRODUCTION

Disaster Risk Reduction and Management (DRRM) in education has emerged as a critical priority in the Philippines, one of the most disaster-prone countries in the world. The archipelagic location of the Philippines exposes it to numerous natural hazards, including typhoons, earthquakes, floods, volcanic eruptions, and landslides. According to the National Disaster Risk Reduction and Management Council (NDRRMC, 2011), these recurring hazards not only disrupt daily life but also severely impact the education sector, causing class suspensions, infrastructure

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damage, psychological distress, and loss of instructional time. Schools are among the most vulnerable institutions, as they often serve as both learning centers and temporary evacuation shelters during calamities. Thus, strengthening school-based DRRM systems has become an essential element in promoting educational continuity, safety, and resilience.

The Department of Education (DepEd), through DepEd Order No. 22, s. 2024, institutionalized the Comprehensive Disaster Risk Reduction and Management in Basic Education Framework to ensure that schools integrate DRRM principles into all aspects of governance, operations, and instruction. The framework emphasizes four thematic areas prevention and mitigation, preparedness, response, and recovery and rehabilitation anchored on the principles of safety, resiliency, and education continuity (DepEd, 2024). Under this framework, every school is mandated to develop its School DRRM Plan, conduct regular earthquake and fire drills, prepare contingency plans, and build the capacities of school personnel and learners through awareness and training programs.

Despite these policy directives, the extent of actual preparedness among schools varies, particularly in geographically isolated and high-risk areas such as the upland barangays of Cebu City. Bitlang National High School, located in Barangay Sudlon I, Cebu City, is geographically exposed to multiple hazards including landslides, typhoons, and earthquakes due to its mountainous terrain and topographical vulnerabilities. These conditions necessitate a robust DRRM framework that ensures both the physical safety of learners and the continuity of education during and after emergencies. Teachers and students serve as the front liners in any school-based disaster response; hence, their level of awareness, readiness, and participation directly determines the school's capacity to respond effectively to crises.

While Bitlang National High School has conducted orientations, earthquake drills, and community-based disaster preparedness activities in compliance with DepEd directives, the translation of awareness into concrete action remains uncertain. There is a growing need to evaluate whether the knowledge gained from these activities has developed into actual preparedness and responsive behavior among teachers and students. This evaluation becomes more relevant as global frameworks such as the Sendai Framework for Disaster Risk Reduction 2015–2030 and the Comprehensive School Safety Framework 2019–2030 emphasize the importance of education as both a means and an end to disaster resilience (UNICEF, 2019; UNESCO, 2017).

This study, titled "From Awareness to Action: Assessing the Level of Disaster Preparedness among Teachers and Students of Bitlang National High School," aims to determine how far the school community has progressed from awareness-building to active preparedness and response. It examines the extent of disaster knowledge, participation in drills, resource readiness, and the overall functionality of the school's DRRM system. By assessing both teachers and students, the research provides a holistic view of school-based disaster preparedness and identifies existing gaps that may hinder the development of a safe and resilient learning environment.

Furthermore, the study seeks to contribute to the enhancement of DRRM implementation in schools under the Schools Division Office (SDO) of Cebu City by providing data-driven insights that can guide future policies, capacity-building initiatives, and local collaborations. Strengthening the DRRM culture in schools not only safeguards the lives of learners and personnel but also supports the continuity of quality education amidst the growing frequency and intensity of disasters in the country.

In sum, this research underscores that disaster preparedness in education is not merely about awareness it is about transforming that awareness into proactive, sustained, and community-supported action. Through this study, Bitlang National High School serves as a microcosm for examining how schools can evolve from being vulnerable institutions into pillars of resilience, safety, and preparedness within their communities.

Statement of the problem

Although DRRM initiatives are implemented in schools, there remains a need to measure their actual effectiveness and stakeholder engagement. In the context of Bitlang National High School, situated in a high-risk area, the central research problem is:

To what extent are teachers and students of Bitlang National High School aware of, prepared for, and engaged in disaster risk reduction and management activities?

Sub-problems include:

1. What is the level of awareness of teachers and students on school disaster policies and procedures?
2. How prepared are they in responding to different hazard scenarios?
3. What DRRM programs are currently practiced in the school?
4. What are the barriers to effective implementation and participation?

METHODOLOGY

This study utilized a descriptive-survey research design that integrated both quantitative and qualitative approaches to comprehensively assess the levels of awareness, preparedness, and participation in disaster risk reduction and management (DRRM). This design was deemed appropriate for obtaining a holistic understanding of the respondents' knowledge and practices related to disaster readiness while allowing for both statistical description and interpretive analysis of qualitative insights.

The respondents of the study comprised 13 teachers and 150 students from Bitlang National High School. The participants were selected through stratified random sampling to ensure equitable representation across all grade levels, thereby capturing varied perspectives and experiences relevant to disaster preparedness within the school community.

Data collection employed a structured questionnaire that was designed to assess three key dimensions: the respondents' level of disaster awareness, which covered their knowledge of hazards, safety procedures, and relevant policies; preparedness measures, which included their participation in drills, availability of emergency kits, and familiarity with evacuation plans; and attitudes and participation, which explored their involvement and commitment to DRRM-related activities. To enrich the quantitative findings, qualitative data were also gathered through key informant interviews with the School DRRM Coordinator and a document review of the School DRRM Plan, hazard maps, and records of previous DRRM activities.

The gathered data were analyzed using a combination of descriptive and thematic techniques. Quantitative data were subjected to descriptive statistical analysis, including the computation of means, frequencies, and percentages, to determine levels of awareness and

preparedness among respondents. Meanwhile, qualitative data were analyzed through thematic analysis to extract meaningful patterns and insights from the interviews and document reviews. This combination of analytical methods ensured a comprehensive and nuanced understanding of the school community's disaster readiness.

RESULTS AND DISCUSSION

The study involved 13 teachers and 150 students from Bitlang National High School and aimed to assess their levels of disaster awareness, preparedness, and participation in disaster risk reduction and management (DRRM) initiatives. Using structured questionnaires, interviews, and document reviews, the research provided both quantitative and qualitative insights into the school's readiness for emergencies. The following sections discuss the findings according to the main indicators of awareness, preparedness, program implementation, and identified challenges.

Level of disaster awareness

Survey results indicated that 92% of teachers and 85% of students could identify common hazards such as earthquakes, typhoons, landslides, and fires that pose risks to the school community. However, only 58% of the respondents demonstrated awareness of specific emergency exits or designated assembly points within the campus. This finding suggests that while the school's regular orientations have successfully increased general hazard awareness, procedural understanding—such as evacuation routes, contact persons, and role assignments during emergencies—remains limited. Many students admitted relying heavily on teachers' guidance during drills, highlighting the need for independent readiness training. Strengthening role-based and scenario-specific exercises could help students develop confidence and autonomy in emergency response.

Preparedness and participation

All teachers reported active participation in at least one DRRM seminar or drill within the past year, reflecting strong compliance with institutional safety requirements. In contrast, only 62% of students stated that they had fully participated in school-wide drills, and merely 40% reported having prepared personal emergency kits. These figures reveal a discrepancy between teacher and student engagement, indicating moderate preparedness levels among students despite teachers' high involvement. This difference may stem from the lack of student-centered disaster education activities and limited integration of DRRM concepts in classroom instruction. Encouraging students to take a more proactive role through peer-led drills, classroom simulations, and home-based preparedness projects could help foster personal responsibility and strengthen overall school readiness.

Implementation of DRRM programs

A review of school documents revealed that Bitlang National High School has established a School DRRM Team and maintains an updated School Safety Plan. The school also participates

regularly in nationwide earthquake and fire drills, demonstrating institutional commitment to disaster risk management. However, the findings also showed that resource constraints hinder full implementation of the contingency plans. The school lacks sufficient communication tools and first-aid equipment, which are critical during actual emergencies. Additionally, the school's mountainous location poses accessibility challenges for both evacuation and rescue operations. These contextual limitations emphasize the importance of strengthening partnerships with the local DRR council and barangay officials to ensure timely coordination and external support during emergencies.

Challenges and gaps

Interviews with key informants identified several operational and instructional challenges that hinder the full effectiveness of the school's DRRM initiatives. These include inconsistent student participation in drills, limited integration of DRRM topics across different subject areas, insufficient first-aid and communication supplies, and the absence of regular refresher training for newly hired staff. While awareness among both teachers and students is relatively high, these systemic gaps prevent the translation of awareness into consistent and effective preparedness actions. To sustain DRRM efforts, the school must institutionalize its disaster-related activities within the School Improvement Plan (SIP) and maintain active coordination with the City DRRMO for continuous training, resource support, and evaluation.

Summary of findings

Overall, the study revealed that both teachers and students demonstrate high awareness of disaster risks but exhibit moderate levels of actual readiness. Teacher participation in DRRM activities remains stronger than student engagement, suggesting that disaster preparedness is still perceived more as an administrative requirement than a shared community responsibility. Limited equipment, communication tools, and training opportunities constrain the school's capacity to respond effectively to emergencies. Furthermore, DRRM education tends to be treated as a co-curricular activity rather than an integrated component of the curriculum. Strengthening community linkages with the barangay and City DRRMO will be crucial for enhancing the school's contextual preparedness and ensuring the long-term sustainability of its disaster management initiatives.

CONCLUSION

The results of this study demonstrate that disaster preparedness in Bitlang National High School is in a transitional phase—progressing from mere awareness toward sustained and actionable readiness. With a total of 13 teachers and 150 students participating in the research, findings revealed that while the school has laid down the groundwork for disaster management through orientations, regular drills, and an operational School Disaster Risk Reduction and Management (DRRM) Team in compliance with DepEd Order No. 22, s. 2024, these measures have not yet fully translated into consistent, behavior-based preparedness practices. Both teachers

and students exhibit high levels of awareness regarding disaster risks and safety protocols, but actual readiness—evidenced by participation rates, resource sufficiency, and self-initiated preparedness—remains at a moderate level.

Teachers showed greater preparedness and active involvement in DRRM activities compared to students, indicating that most preparedness initiatives are still top-down in nature. This pattern reflects a system where teachers and administrators drive DRRM compliance, while students play largely passive roles during drills and simulations. Such a dynamic underscores the need to transform students from recipients of information into empowered participants capable of independent and collective action during emergencies. Encouraging learner-centered participation through peer-led training, student DRRM clubs, and integration of disaster awareness into classroom activities would cultivate self-reliance and shared responsibility within the school community.

The study also found that institutional limitations continue to impede the full implementation of disaster preparedness measures. The lack of first-aid supplies, limited communication devices, and the absence of continuous refresher training for new staff members pose significant barriers to an effective response system. Furthermore, the school's mountainous location exacerbates accessibility challenges during emergencies, highlighting the urgency of stronger collaboration with local entities such as the Barangay Disaster Risk Reduction and Management Council (BDRRMC) and the Cebu City DRRMO. To address these issues, DRRM should not only remain a co-curricular concern but should be systematically integrated into the school's governance, curriculum, and improvement plans. Embedding disaster education into core subjects like Science, Araling Panlipunan, and Values Education can help institutionalize preparedness as a collective norm rather than a periodic compliance activity.

Ultimately, the study concludes that awareness alone is insufficient in building disaster-resilient schools. Real preparedness necessitates behavioral change, practical training, and a culture of cooperation that extends beyond drills and policies. Bitlang National High School is now at a critical juncture where its established structures can evolve into a holistic culture of safety, provided that DRRM programs become participatory, adequately resourced, and continuously evaluated. Strengthening school-community linkages, ensuring the availability of essential emergency equipment, and maintaining regular scenario-based simulations will transform preparedness from a procedural requirement into a lived practice.

To sustain and deepen this progress, the school must institutionalize DRRM education across all subject areas and co-curricular programs, conduct regular and varied simulation exercises, and enhance coordination with the BDRRMC and City DRRMO. Equally important is the need for ongoing capacity-building initiatives for both teachers and student DRRM leaders, alongside the inclusion of DRRM goals within the School Improvement Plan and school-based management framework. By taking these steps, Bitlang National High School can fully embody the principles of a safe, resilient, and responsive learning institution—one capable of safeguarding its community and ensuring educational continuity amid any adversity.

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