INTERNATIONAL JOURNAL OF RESEARCH AND INNOVATION IN APPLIED SCIENCE (IJRIAS)
ISSN No. 2454-6194 | DOI: 10.51584/IJRIAS |Volume XI Issue VI June 2026

Umayanig: Cracking College Students' Understanding of Earthquake Terminology

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DOI: https://doi.org/10.51584/IJRIAS.2026.11060293

Received: 01 July 2026; Accepted: 06 July 2026; Published: 20 July 2026

ABSTRACT

This study determined the level of understanding of earthquake terminology among Bachelor of Secondary Education majors in English students at UM Panabo College. This study aimed to identify the earthquake terms students understood most and least, and to provide intervention materials for difficult terms. The study followed a quantitative descriptive research approach, using a checklist of earthquake terminology evaluated by professionals to ensure clarity and reliability. A total of 161 respondents took part in the survey by indicating whether they understood the selected earthquake terms. The acquired data were analyzed using statistical techniques, including frequency counts, percentage distributions, and standard deviations. The results showed that students understood commonly used earthquake terms better than technical and scientific terminology. Therefore, the study recommended improving the integration of disaster education and developing intervention resources to increase students' understanding of earthquake-related terminology and concepts.

Keywords: Earthquake Terminology, Disaster Education, Level of Understanding, Seismology, Hazard Awareness

SDG# 13 Climate Action

INTRODUCTION

Earthquakes are unpredictable catastrophes that can destroy communities and cause large-scale economic damage (Iacoletti, 2023). Beyond economic damage, these seismic events also cause physical injuries. Research shows that earthquakes account for nearly 30 percent of global disaster losses each year (Kishore, 2025). Countries such as Japan, China, Indonesia, the Philippines, Iran, Turkey, Peru, the USA, Italy, and Mexico are among the most earthquake-prone nations in the world, underscoring the importance of awareness of seismic activity and preparedness in the event of an earthquake (Veroutsos, 2025).

Misinterpreting the elements of Early Earthquake Warning (EEW) and failure to receive alert notifications lead to delayed responses and an inability to take protective action during an earthquake (Cooper et al., 2024). For example, the Philippines, located along the Pacific Ring of Fire, a region that is prone to earthquakes and volcanic eruptions due to its active tectonic boundaries (Manalang, 2024). This underscores the need for effective disaster preparedness, which can be improved through effective communication and language skills to promote safety and informed decision-making (Uekusa & Matthewman, 2023).

Understanding earthquake-related terminology is essential for survival and rescue efforts during disasters. Because earthquakes occur suddenly, it is critical for affected populations to receive clear, concise information and aid to stay safe (Tavil et al., 2025). Recent research suggested that a person's knowledge and perception of earthquakes significantly influence their response to these events; thus, implementing systematic measures to study and manage disasters can help lessen their negative effects (Dagatan et al., 2024). Moreover, Tavil et al. (2025) found that language components, including health-related vocabulary, earthquake terminology, and functions for giving directions, describing locations, and reporting, were the most needed to overcome communication barriers in crisis areas. To address these issues, participants emphasized the need to develop an emergency English-language program for K-12 students nationwide. Including earthquake safety in the curriculum also promotes a culture of preparedness that extends beyond the classroom. In addition, students can act as safety ambassadors within their families and communities. Therefore, disseminating critical knowledge and encouraging proactive measures were important for reducing earthquake risk (Bongon, 2024).

Interpreting earthquake terms effectively is vital for improving student safety and preparedness, ensuring appropriate actions occur during the actual shaking (Ao et al., 2021). Furthermore, integrating mitigation and preparedness into educational planning can minimize the impact of disasters on learning and infrastructure. Also, disaster risk reduction efforts can enhance students' and teachers' understanding of emergency response, thereby saving lives in times of crises. These efforts include hazard education, evacuation drills, and awareness campaigns to strengthen preparedness and response capacity. Hence, disaster risk reduction in the education sector is a key step toward building a more resilient society (Tyas et al., 2025).

Students' understanding of earthquake-related subjects frequently extends beyond memorizing terminology to include how they mentally generate meaning from real-world experiences. A study published in Frontiers in Earth Science examined students living in Chile's high-risk seismic areas and found that, while most participants understood basic earthquake terms, many lacked an integrated understanding of the causes and effects described. As per Caballo (2022), several conceptual gaps emerged, especially when scientific terms were not linked to real-world applications in local contexts. These misunderstandings can make it more challenging to respond appropriately in emergencies and drills, highlighting significant gaps in college populations' disaster literacy (Genç et al., 2025).

The Philippines' National Disaster Risk Reduction and Management Plan (NDRRMP) 2020–2030 emphasized the importance of integrating disaster-related concepts in educational settings in a clear and consistent manner, as stated by the National Disaster Risk Reduction and Management Council (NDRRMC) (2020). Further research showed that risk communication strategies, including institutional programs and animations, had a major influence on how people understood technical disaster language (Crayne et al., 2023). These findings suggested that both formal education and institutional communication strategies influenced students' understanding of earthquake terminology. Moreover, studying UM Panabo College (UMPC) students' understanding of earthquake terminology provides essential insights into localized preparedness and disaster awareness.

Understanding earthquake terminology is also important within the broader context of disaster education, as disaster-related concepts are essential for promoting preparedness and hazard awareness. Furthermore, educational institutions play a significant role in helping students develop an accurate understanding and practical knowledge about disasters. In this regard, disaster education serves as a foundation for strengthening students' comprehension of earthquake-related concepts and improving their readiness during emergencies. The core purpose of disaster education is to recognize hazards and potential hazards and to prepare for disasters to reduce their impact. It is typically carried out in pre-disaster circumstances during normal occurrences.

The following theoretical lenses supported this study: first, schema theory, as explained by Smith (2019). This theory provided a cognitive framework that illustrates how individuals organize and integrate new information with existing knowledge. It guides learners' expectations and interpretations by activating schemata, mental structures representing related concepts. Second, sociocultural theory, as described by Cherry (2025), emphasizes the interaction between societal and cultural influences with individual factors in shaping a person's development, thoughts, emotions, and behaviors, and highlights how learning and interpretation are situated within social and cultural contexts. Third, the General Theory of Terminology, as presented by Packeiser (2009), highlights the significance of concepts and their distinctions, focusing on the nature of concepts, their interrelationships, and the connections between terms and concepts, including the process by which terms are assigned to concepts.

While other studies have examined disaster preparedness, public awareness, and risk communication, few have specifically assessed students' understanding of earthquake-related terminology, such as "magnitude," "intensity," and "aftershock," which are commonly used in hazard reports and public advisories.

Understanding disaster-related terms is important, as these terms are used to communicate hazard information and disaster severity to the public (Caldera & Wirasinghe, 2021). However, limited research examines the level of understanding of earthquake-related terms, particularly among college students.

In the Philippine context, recent studies have focused more on levels of preparedness and risk communication among students; however, they did not specifically assess their understanding of earthquake-related terms. For instance, the study by De Guzman et al. (2023) examined earthquake preparedness among students at Bulacan State University, while Dagatan et al. (2024) examined how teacher-education students at the University of Mindanao received earthquake risk information. Although these studies contributed to the disaster education literature, their focus was on awareness and communication and did not specifically assess college students' level of understanding of earthquake-related terminology. Furthermore, there is a limited study conducted in Panabo City, Davao del Norte, particularly among college students. This paper highlighted the need to examine college students' understanding of earthquake-related terminology at UMPC, which could help improve disaster communication and awareness programs.

To keep the study aligned, this quantitative study was guided by three objectives to maintain its focus. First, to determine the level of students’ understanding of earthquake terminology in terms of frequency and percentage. Second, to identify the earthquake terms that students understand most and least. Lastly, to propose intervention programs that enhance students’ understanding of earthquake terminology.

To improve disaster education and preparedness, it is essential to understand college students’ understanding of earthquake terminology, as their perceptions affect not only individual safety but also the broader culture of preparedness within academic institutions. Research showed that the most important factors in reducing vulnerability and enhancing resilience in earthquake-prone areas are students’ knowledge of and readiness for earthquake-related hazards. To identify knowledge gaps and improve institutional disaster response strategies, De Guzman et al. (2023) emphasized the importance of assessing students’ awareness and preparedness for earthquakes such as “The Big One.”

Investigating how students interpret earthquake terminology contributed to broader disaster preparedness efforts by addressing how communication and comprehension influence readiness during seismic events. Students' earthquake preparedness is greatly enhanced by effective risk communication, underscoring the importance of instructional practices in fostering accurate comprehension and emergency response. These findings highlighted that strengthening students’ interpretive skills was not only beneficial for individual safety but also critical in cultivating a more resilient society in earthquake-prone regions.

The results of this study provided insight into how BSEd English students at UMPC perceived earthquake terminologies and highlighted knowledge gaps, so they stand to gain directly from the findings. This study provided evidence-based insights that enhanced the school's development of targeted disaster education initiatives by focusing on this academic community. By accomplishing this, this study not only provides UMPC students with accurate information and readiness skills but also cultivates a resilient culture that can be carried into their homes and communities outside the campus.

METHOD

This chapter presented the quantitative research methodology utilized in this study. First, the research respondents were identified, and their selection criteria were specified. Second, the materials and instruments that will be used in gathering the data. Third, the research design and procedure outlined the processes of data collection, data analysis, and adherence to ethical standards in conducting the study.

Respondents

The respondents in this study were Bachelor of Secondary Education (BSEd) majors in English at UMPC. This population was selected because they share common attributes, such as enrollment in the same program and exposure to a similar academic environment. The sample size was determined using the Raosoft Sample Size Calculator, which applied statistical formulas to estimate the required sample size for research studies

(Nantiza, 2026), categorizing participants by year level. One hundred sixty-one (161) BSEd English students were selected, including 46 first-year students, 35 second-year students, 46 third-year students, and 34 fourth-year students.

To ensure representation from first-year to fourth-year students, the study employed stratified sampling, grouping respondents by year level. As discussed by Bisht (2024), stratified sampling improves the reliability and precision of the findings by ensuring that each subgroup (stratum) within the population is accurately represented in the sample. Furthermore, to conduct research of the highest standard, it is essential to establish inclusion and exclusion criteria for subjects (Connelly, 2020). Only BSEd English students in all year levels who were officially enrolled at UMPC for the 2025-2026 school year, second semester, were included as respondents in the study. Thus, students who were not enrolled in the program or were unwilling to participate were excluded. Moreover, respondents were given the freedom to withdraw at any time without penalty or any consequences, as discussed by Edwards (2005).

The study was conducted at UMPC, located at Arguelles Street, Panabo City, Davao del Norte, Philippines. UMPC is a private, higher-education, non-sectarian institution. The institution provides opportunities for diverse students from different communities, which is ideal for examining students' levels of understanding of earthquake-related terminology. The locale was selected since it is home to a broad population of college students with varying degrees of exposure to earthquake terminology and disaster-related information. In addition, the Philippines is situated in the Pacific Ring of Fire, a geologically active region, making it prone to experiencing natural disasters, such as earthquakes (Asian Disaster Risk Reduction Center, n.d.). For this reason, the study locale was considered suitable for examining students' understanding of earthquake-related terminology.

Materials and Instruments

This study used a checklist of earthquake terminology as its primary data-collection tool. The instrument is composed of a tabular style with 3 columns; the first column lists the 20 earthquake terms, and the second and third columns indicate whether respondents might understand each term, with yes/no options. Additionally, the respondent’s understanding of earthquake terminology was interpreted using the descriptive equivalents obtained from the checklist. The following scale was used: (84.01 – 100.00) interpreted as Very High or well exposed to earthquake terminology, (68.01 – 84.00) interpreted as High or highly exposed to earthquake terminology, (52.01 – 68.00) interpreted as Moderate or moderately exposed to earthquake terminology, (36.01 – 52.00) interpreted as Low or less exposed to earthquake terminology, and (20.00 – 36.00) interpreted as Very Low or not exposed to earthquake terminology. Furthermore, the instrument underwent pilot testing to ensure clarity, relevance, and appropriateness, with the Cronbach’s alpha result of 82%. This validation ensured the accuracy, validity, and reliability of the results obtained from the data collected to measure respondents’ understanding of earthquake terminology.

Design and Procedure

This study used a quantitative descriptive research methodology to identify the earthquake terms most and least known to UMPC BSEd-English students, and to suggest potential treatments for the least understood terms. Quantitative descriptive research collects numerical data and presents results using statistical tools, such as frequency and percentage, to describe patterns and levels of comprehension among respondents. According to McCombes (2019), quantitative descriptive research involves the systematic collection of numerical data to explain respondents’ characteristics, patterns, and levels of comprehension.

The researchers administered a checklist of earthquake terminology in a tabular style. The instrument comprised selected earthquake-related terms, and respondents indicated whether each term was “familiar” or “not familiar” by placing a check mark in the relevant column. In addition, experts verified the questionnaire to ensure it was clear, reliable, and appropriate for the study. Following the administration of the instrument, the respondents’ responses were gathered, verified, arranged, and tallied. The respondents’ most and least understood earthquake terms were determined using frequency counts and percentage distributions.

To examine the collected data, a frequency count was used to determine the number of students who understood each term for earthquakes. In contrast, the percentage distribution was used to classify and interpret students' understanding of each earthquake-related term, using the established descriptive equivalents. Using these statistical tools, the researchers determined which earthquake terms were most and least understood by the respondents, which provided the foundation for the proposed intervention materials to meet the students' learning needs. As George (2023) stated, frequency and percentage distributions are useful descriptive methods for summarizing and interpreting quantitative data.

The study started after receiving approval from the School Director and the BSEd English program administrator. The researchers personally administered the earthquake terminology test to the participating BSEd English students in a classroom environment during the second semester of the academic year. After administering the instrument, the results were gathered, verified, organized, and tabulated for statistical analysis. The collected data showed that respondents had varying levels of familiarity with earthquake terminology, particularly scientific and technical terms not typically used in regular classroom discussions.

The researchers strictly adhered to the ethical norms required for conducting the study. Prior to data collection, the researcher sought approval to conduct the study from the institutional heads and the relevant program coordinator. The respondents were fully informed about the study's goal and procedures, and their participation was entirely voluntary. They are also aware of their right to refuse to participate or withdraw from the study at any time, with no consequences. The study protected participants' data privacy and confidentiality. The researchers complied with the Data Privacy Act of 2012 (Republic Act No. 10173) and ensured that participants' identities remained strictly confidential, enabling them to participate without fear or hesitation. Any identifiable information gathered throughout the study remained confidential and was disclosed only when necessary to protect participants' rights and welfare.

RESULTS AND DISCUSSIONS

Table 1 Level of Students' Understanding of Earthquake Terminology in terms of Frequency and Percentage.

TERMS	*Frequency* YES	*Standard deviation*	Percentage (YES)	Descriptive Equivalent
Most Understood Earthquake Terminology				
T1 - Earthquake	161	0.00	100	Very High
T12 - Magnitude	161	0.00	100	Very High
T13 - Intensity	159	1.41	99	Very High
T6 - Aftershock	158	1.73	98	Very High
T5 - Fault	157	2.00	98	Very High
T18 - Tsunami	157	2.00	98	Very High
T3 - Epicenter	156	2.24	97	Very High
T20 - Plate Tectonics	153	2.83	95	Very High
T2 - Seismic Waves	139	4.69	86	Very High
Highly Understood Earthquake Terminology				
T16 - Surface Waves	129	5.66	80	High
T14 - P-Waves	126	5.92	78	High
T15 - S-Waves	125	6.00	78	High
T19 - Ground Rupture	119	6.48	74	High
T8 - Mainshock	118	6.56	73	High
T9 - Seismology	115	6.78	71	High
T4 - Focus	112	7.00	70	High
Moderately Understood Earthquake Terminology				
T10 - Seismograph	88	8.54	55	Moderate
T7 - Foreshock	87	8.60	54	Moderate
Less Understood Earthquake Terminology				
T11 - Seismogram	64	9.85	40	Low
Least Understood Earthquake Terminology				
T17 - Liquefaction	32	11.36	20	Very Low

Note. SD = Standard Deviation.

Scale: 84.01 – 100.00 = Very High; 68.01 – 84.00 = High; 52.01 – 68.00 = Moderate; 36.01 – 52.00 = Low; 20.00 – 36.00 = Very Low.

Table 1 shows the order of understanding of earthquake terminology, from Very High to Very Low, based on respondents' data. As observed in the table, terms 1, 12, 13, 6, 5, 18, 3, 20, and 2 were classified as Very High, indicating that the respondents were well exposed to the earthquake terms presented in this category. Meanwhile, terms 16, 14, 15, 19, 8, 9, and 4 were classified as high-level, indicating that the respondents were highly exposed to the earthquake, as these terms were included in this category. In addition, terms 10 and 7 were categorized as Moderate, indicating that respondents were moderately exposed to the earthquake-related terms in these categories. Furthermore, term 11 was classified as Low, indicating that respondents were less exposed to it. Finally, term 17 was categorized as Very Low, indicating that the respondents were not exposed to it.

Overall, the findings revealed that the respondents demonstrated a generally high level of understanding of earthquake terminology. Most of the terms were classified as Very High or High, indicating that the respondents were familiar with a wide range of earthquake-related concepts. Only a few terms fell into the Moderate, Low, and Very Low categories, suggesting variations in respondents' familiarity with specific terminology. These results showed that the respondents possessed a substantial understanding of earthquake terminology, as evidenced by the predominance of terms classified under the higher levels of understanding.

Table 2 Level of Understanding of Most and Least Understood Earthquake Terms by Students.

TERMS	Frequency YES	Standard deviation	Percentage (YES)	Descriptive Equivalent
Most Understood Earthquake Terminology				
T1 - Earthquake	161	0.00	100	Very High
T12 - Magnitude	161	0.00	100	Very High
T13 - Intensity	159	1.41	99	Very High
T6 - Aftershock	158	1.73	98	Very High
T5 - Fault	157	2.00	98	Very High
T18 - Tsunami	157	2.00	98	Very High
T3 - Epicenter	156	2.24	97	Very High
T20 - Plate Tectonics	153	2.83	95	Very High
T2 - Seismic Waves	139	4.69	86	Very High
Less Understood Earthquake Terminology				
T11 - Seismogram	64	9.85	40	Low
Least Understood Earthquake Terminology				
T17 - Liquefaction	32	11.36	20	Very Low
Remaining Earthquake Terminology				
T16 - Surface Waves	129	5.66	80	High
T14 - P-Waves	126	5.92	78	High
T15 - S-Waves	125	6.00	78	High
T19 - Ground Rupture	119	6.48	74	High
T8 - Mainshock	118	6.56	73	High
T9 - Seismology	115	6.78	71	High
T4 - Focus	112	7.00	70	High
T10 - Seismograph	88	8.54	55	Moderate
T7 - Foreshock	87	8.60	54	Moderate

Note. *Very High = Most Understood; High = Highly Understood; Moderate = Moderately Understood; Low = Less Understood; Very Low = Least Understood.*

Table 2 highlights the most and least understood earthquake terms among the respondents. The findings with a Very High level of understanding indicated that the respondents were well-versed in earthquake terminology; this supported the study by Cabello (2022), which found that students with a stronger understanding of earthquake concepts provided clearer explanations and demonstrated greater conceptual understanding. In addition, when the terms were correctly interpreted, students performed appropriate actions during actual shaking (Ao et al., 2021). On the other hand, the terms received a Low level of understanding, indicating that the respondents had limited exposure to the earthquake terms. Furthermore, the study by Çalışkan and Üner (2021) found that those with limited exposure to disaster literacy are less likely to understand and interpret disaster-related information effectively. Likewise, the term received a Very Low level of understanding, indicating that respondents had no exposure to the term presented. This happens when disaster terminology is often misunderstood or difficult to interpret, especially for individuals unfamiliar with technical disaster language.

Moreover, for the terms that received a High and Moderate level of understanding, this implied that there was still a lack of understanding; one reason for this is the unavailability of publicly released information. The study explained that research on the public's preferences for disaster information acquisition content and channels can help improve information supply. Hence, if a communication channel motivates the public to respond proactively to risk information but uses it sparingly, its effectiveness is limited (Li et al., 2021).

Such findings were anchored in the Schema Theory of Frederic Bartlett, as explained by Smith (2019), who argued that individuals organize and relate new information to their existing knowledge and prior experiences. The Very High, High, and Moderate understanding levels observed for the commonly used earthquake terms suggested that students have already built an existing schema through repeated exposure to earthquake drills, classroom discussions, public information, and disaster preparedness activities. In contrast, the Low and Very Low understanding levels observed for the technical and less frequently used earthquake terms indicate limited exposure and weaker cognitive associations with such vocabulary. This implies that students' understanding of earthquake terminology is strongly influenced by the extent of their prior experience and exposure to earthquake-related information and preparedness initiatives.

Furthermore, Bongon (2024) stated the significant role of students acting as safety ambassadors within their families and communities. These results lend credence to the assertions made by the numerous researchers highlighted in the study. As Tavil et al. (2025) noted, mitigating language barriers in health-related vocabulary, earthquake terminology, and emergency English for K-12 students nationwide helps overcome communication barriers during disasters. Other studies by the National Disaster Risk Reduction and Management Council (2020) and Tyas et al. (2025) also reinforced the same solution: integrating earthquake-related education into the school curriculum to better prepare students for emergencies.

Moreover, the variability in respondents' results underscored the significant need for effective educational strategies and communication, as noted by Uekusa and Matthewman (2023). In addition, this helped strengthen the implementation of risk communication and language skills for informed decision-making in crises. As Manalang (2024) emphasized, given the Philippines's earthquake-prone region, such solutions were essential for equipping students with the knowledge and skills needed for safety during seismic events.

The study found that, in general, college students demonstrated a high level of understanding of earthquake-related terminology. A majority of terms earned "high" to "very high" understanding results, indicating that commonly used terms related to earthquakes are understood among students. However, the study also identified several technical terms with "low" and "very low" levels of understanding, such as "seismogram" and "liquefaction." These results imply that although students' general understanding of earthquake-related terminology is high, there are still gaps in their understanding of specific terms, especially technical terms related to earthquakes. Thus, an intervention program is proposed to enhance college students' understanding of earthquake-related terminology, broaden their knowledge about disasters, and encourage increased preparedness and awareness.

Objectives

1. To improve college students' understanding of earthquake-related terms.
2. To encourage the practical application of earthquake-related terms in preparedness and disaster awareness efforts.

Intervention Activities

Based on the study's findings, several interventions are proposed to improve college students' understanding of earthquake terminology, particularly the terms they find challenging or unfamiliar.

Seminars and workshops on earthquake-related terminology are proposed to enhance college students' understanding of earthquake terms, from the most common to the least understood and technical. There will be six sessions, each with an expert-led discussion. To reinforce learning, the intended participants in the activities, who are college students, will engage in group activities and be required to apply their knowledge in disaster situations. Furthermore, to support students in making connections between earthquake terminology, simulation activities, and preparedness planning exercises, proper disaster risk reduction and preparedness methods may also be included. Through these activities, students are expected to acquire a deeper understanding of earthquake-related concepts and improve their ability to apply that knowledge, fostering preparedness and awareness for disasters such as earthquakes.

In addition, it is also proposed that earthquake-related terminology be incorporated into classroom instruction using the topic and learning competencies identified in the course syllabus. Instructors may include earthquake concepts and technical terminology whenever relevant to the subject matter and desired learning outcomes. Using interactive learning activities, situational examples, and visual presentations, the instructor can provide students with meaningful learning experiences that enhance their understanding of earthquake-related subject matter. These activities are expected to improve students' understanding of earthquake-related technical terms and raise awareness of earthquake preparedness and **Expected Outcomes**

College students are expected to show increased understanding of both common and technical earthquake-related terms following the implementation of the proposed intervention program. With that, they are also expected to demonstrate an improved ability to accurately interpret and apply the concepts in earthquake-related situations and in conversations. Additionally, incorporating earthquake concepts into seminars, workshops, and classroom instruction would effectively improve students' understanding of earthquake threats, disaster risk reduction, and preparedness measures. The intervention aims to help students become better informed and prepared for emergencies, especially earthquakes.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

The study revealed that college students demonstrated a high level of understanding of earthquake-related terminology. Based on the table's findings, most of the terms obtained have *high* to *very high* descriptive equivalents, indicating that students are equipped with common earthquake-related concepts. Specifically, T1 and T12 had the highest frequency and percentage, with 161 responses (100%), followed by T13 with 99% and T6, T5, and T18 with 98%. Moreover, T3 and T20 also received *very high* descriptive equivalents with 97% and 95%, respectively. However, some terms were found to be less well-known to the respondents. T11 obtained 40% and was interpreted as *low,* whereas T17 obtained the lowest percentage at 20% and had a *very low* descriptive equivalent. These results showed that while students mostly understand and frequently encounter terminology related to earthquakes, certain technical terms still require further explanation and reinforcement. Moreover, the study's results supported Frederic Bartlett's schema theory, which explains how individuals' prior knowledge and experiences help them organize and make sense of new information.

Recommendations

Based on the study's findings and the proposed intervention program, it is recommended that higher education institutions implement seminar-workshops and educational activities focused on earthquake-related terminologies to strengthen students' understanding of both common and technical earthquake concepts. To facilitate the conduct of these learning activities and make them easier to implement, school administrators may collaborate with disaster risk reduction and management offices and subject-matter experts to ensure they are carried out effectively.

Additionally, instructors are encouraged to incorporate earthquake-related terminology into classroom instruction whenever it aligns with the course syllabus's topics, learning competencies, and intended outcomes. Students' understanding and recall of earthquake-related terms can be further improved through interactive learning strategies, visual aids, and contextualized examples.

Lastly, to learn more about students' understanding of earthquake-related concepts, future researchers are encouraged to broaden the study's scope by not only examining students' level of understanding of earthquake-related terminology but also their ability to apply these ideas in real-life situations. Moreover, future studies may employ qualitative methods. Future researchers may also assess the effectiveness of the intervention program and explore additional activities or strategies that can further strengthen students' comprehension and preparedness for earthquake-related hazards.

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