



Educational, Environmental, and Disaster Preparedness Implications of “Purok” System: From the Lens of Secondary Learners in Liloan, Cebu, Philippines

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Abstract

This study examined the implications of the "purok" system regarding educational support, environmental management, and disaster preparedness as perceived by secondary learners in Liloan, Cebu, during the 2025–2026 academic year. Utilizing a descriptive-correlative research design, the study involved 100 secondary learners from public high schools selected through purposive sampling to assess implementation levels, outcome levels, and their underlying relationships. Findings revealed that the purok system was generally perceived as less implemented in promoting educational support and disaster preparedness programs, though environmental initiatives showed moderate-to-active integration. Despite limited grassroots implementation across certain areas, learners demonstrated high levels of educational engagement and discipline, environmental awareness and practices, and disaster preparedness knowledge and readiness, indicating that community-level frameworks positively influence holistic student development. Furthermore, a moderate significant correlation was established between implementation levels and learner outcomes, suggesting that structured optimization can further amplify these benefits. The study concludes that strengthening the purok system through a targeted, collaborative action plan can substantially enhance learner resilience and community-based development.

Keywords: Purok system, environmental management, disaster preparedness, educational engagement, secondary learners

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Introduction

Across every continent, secondary learners stood at the intersection of two defining challenges of their time: mounting environmental crises and rising natural disaster risks. From flood-prone villages in Southeast Asia to wildfire-affected towns in North America, millions of young people in secondary school were witnessing firsthand how pollution, climate change, and extreme weather could upend lives, disrupt education, and threaten their communities. These global realities had made education, environmental awareness, and disaster preparedness urgent priorities worldwide with schools and community-based systems recognized as critical pillars for preparing secondary learners to become responsible, aware, and resilient individuals. Education was no longer limited to classroom instruction; it also involved equipping secondary students to respond to real-life situations that might affect their safety, environment, and overall well-being. Secondary learners' awareness and preparedness for natural disasters improved when they were exposed to disaster related information, training, and activities (Calamba, 2024). This suggested that learning became more effective when secondary students could relate lessons to their daily experiences and surroundings. Community support systems played important emergencies. Their study highlighted that structured programs and organized activities were effective in developing secondary learners' disaster preparedness (Tyas et al., 2025; Dolunay Cuğ, 2026). This further supported the idea that schools must work closely with community systems to strengthen these initiatives for secondary students in the Philippines. Aside from disaster preparedness, environmental issues remained a challenge for secondary learners in many local communities across the country. Problems such as improper waste management and lack of environmental discipline were still evident, and schools played a vital role in addressing these concerns by promoting environmental awareness and encouraging secondary students to participate in environmental activities (Putranta et al., 2026; Anokye et al., 2024).

Environmental education was also a growing concern for secondary students worldwide. Environmental problems such as improper waste disposal, pollution, and climate change affected both developed and developing countries, and secondary learners play a key role in addressing these issues because their attitudes and practices influence future environmental conditions (Nguyen et al., 2023). When secondary students were actively involved in environmental programs, they developed a sense of responsibility and awareness toward their surroundings. This showed that education, environment, and disaster preparedness were interconnected and should be addressed together through coordinated efforts of schools and communities to support secondary learners. In the Philippines, these concerns were highly relevant for secondary learners. The country was considered one of the most disaster-prone nations in the world due to its geographical location (Rivera & Dela Vega, 2025; Haque et al., 2020). Typhoons, floods, earthquakes, and other natural hazards frequently affected communities and disrupted daily life, including the education of secondary students. As a result, disaster preparedness had become a priority in schools across the Philippines to ensure the safety of secondary learners. However, the level of preparedness among secondary students varied depending on the programs implemented in schools and their surrounding communities. Studies conducted in Philippine secondary schools emphasized the importance of disaster risk reduction practices for this group. (Molina & Catan, 2021) found that disaster awareness and preparedness practices in secondary schools helped improve students' readiness and participation during these efforts, secondary learners learned the importance of caring for the environment and developed values that contributed to sustainable living in the Philippines (Velásquez-Espinoza & Alcántara-Ayala, 2025; Nakano et al., 2020).

These concerns were highly relevant for secondary learners. The country was considered one of the most disaster-prone nations in the world due to its geographical location. Typhoons, floods, earthquakes, and other natural hazards frequently affected communities and disrupted daily life, including the education of secondary students. As a result, disaster preparedness had become a priority in schools the Philippines to ensure the safety of secondary learners (Hoffmann & Muttarak,

2017; Kawasaki et al., 2022). However, the level of preparedness among secondary students varied depending on the programs implemented in schools and their surrounding communities. Studies conducted in Philippine secondary schools emphasized the importance of disaster risk reduction practices for this group (Ghale et al., 2025; Cvetković et al., 2024). At the local and school level, the “purok” system served as a community-based structure that supported various programs related to education, environmental protection, and disaster preparedness for secondary learners in the Philippines (Yang et al., 2025); (Ner et al., 2022). The “purok” system in Liloan, Cebu helped organize community activities, promote cooperation, and encourage discipline among residents including secondary students, who were often involved in activities such as clean-up drives, information campaigns, and disaster drills. These engagements contributed to secondary learners’ learning experiences and personal development. However, despite the presence of the “purok” system, there were limited studies that focused on how secondary learners perceived its impact, particularly within the school setting in the Philippines. Most existing studies focused on institutional readiness or general community preparedness, but fewer examined secondary students’ perspectives (Fazeli et al., 2024; Samsiyah et al., 2026).

According to (Mir et al., 2024; Hargono et al., 2026), effective emergency preparedness in educational institutions requires proactive planning, institutional readiness, stakeholder collaboration, and the integration of disaster risk reduction mechanisms into existing systems. He further emphasized that fostering a culture of resilience and shared responsibility among administrators, faculty, and students is essential to ensure continuity of learning and effective disaster response. While the study focused on higher education institutions, these principles are likewise applicable to secondary schools and community-based structures. In this context, the “purok” system may function as a grassroots framework that promotes collective action, environmental awareness, and disaster preparedness among learners. Thus, this study assessed the educational, environmental, and disaster-preparedness implications of the “purok system” as perceived by the secondary learners at Liloan, Cebu during the school year 2025-2026 as basis for creating an action plan.

Methodology

This study employed a descriptive-correlative research design. Descriptive study designs are observational approaches used to describe the distribution of variables without testing causal relationships, providing foundational understanding of phenomena within a research context (Aggarwal & Ranganathan, 2019). Correlative research is a non-experimental quantitative design used to explore the strength and direction of relationships between variables without manipulating them (Curtis et al., 2016). The descriptive design documented the “purok” system’s implementation covering educational support programs, environmental initiatives, and disaster preparedness activities alongside secondary learners’ attitudes, knowledge, and behaviors in these areas. Data were gathered through structured questionnaires and open-ended questions to capture quantitative and qualitative patterns, characteristics, and trends. The correlative design then examined associations between the perceived implementation level of the “purok” system and perceived outcome level, which were measured across three dimensions: educational engagement and discipline, environmental awareness and discipline, and disaster preparedness knowledge and readiness. This approach explored whether better-organized and more accessible “Purok” initiatives linked to more positive learner outcomes, without determining causality, ultimately providing a comprehensive understanding of the system’s role in the research focus areas.

The research was conducted at Liloan National High School, a secondary educational institution that implemented the “purok system” as part of its community and student development programs during school year 2025–2026. The school served as the primary setting for the study, providing a structured environment where learners were organized into “puroks” (local community sub-unit) to engage in various activities across educational, environmental, and disaster preparedness

areas. The research environment encompassed both the physical campus where initiatives like cleanliness drives and preparedness drills took place and the social context of the “purok” system, which fostered collective responsibility among students. This setting was chosen because it allowed direct examination of how the system operated within a formal educational framework, with respondents consisting of secondary learners who actively participated in purok-related activities. The study was carried out in alignment with the school’s policies and schedules to ensure minimal disruption to regular operations. The respondents of the study were secondary learners at Liloan National High School who were members of the “puroks” in Liloan during school year 2025–2026. They ranged in age from 11 to 30 years old, covering grade 7 to 12. This included both traditional-age secondary students and learners in alternative or flexible learning pathways offered by the school. Purposive sampling was employed to select participants, with grade levels (Grades 7 to 12) serving as the strata. This ensured representation across all year levels and age groups, allowing the sample to reflect the school’s diverse student population and support valid conclusions about the “purok” system’s impact. Thus, a researcher-made questionnaire was employed as the primary data-gathering tool for this study, designed specifically to assess the implementation, outcomes, challenges, and action plan recommendations related to the “purok” system at Liloan National High School. The instrument was developed from scratch and was not adopted from any existing studies or questionnaires. However, the indicators provided were structured according to the nature of the constructs of the study.

To ensure the quality and accuracy of data collected, validity and reliability testing was conducted, including the use of Cronbach’s Alpha test to measure internal consistency. Based on the test the Cronbach’s alpha generated an acceptable value of 0.90. The questionnaire was structured to gather both quantitative and qualitative data. It first collects demographic information through a profile section, which includes an optional field for respondents’ names to maintain anonymity, alongside items for age (with response categories 11–15, 16–20, 21–25, and 26–30), sex (Male or Female), and grade level (Grades 7 to 12). Next, the instrument measured perceived implementation levels of the “purok” system across three domains, educational support, environmental programs, and disaster preparedness programs each containing 15 statements rated on a 4-point Likert scale (4 = Highly Implemented, 3 = Implemented, 2 = Less Implemented, 1 = Not Implemented). It then evaluated the system’s perceived outcome level through corresponding domains: educational engagement and discipline, environmental awareness and practices, and disaster preparedness knowledge and readiness each with 15 items rated on a 4-point scale (4 = Very High, 3 = High, 2 = Low, 1 = Very Low). Additionally, two open-ended sections are included: the first asks respondents to describe challenges encountered as participants in the “purok” system” while the second requests their input on developing an action plan for improving the program’s implementation across educational, environmental, and disaster preparedness areas, with an option to use separate sheets for detailed responses.

Results and Discussion

This part presents, analyzes, and interprets the data gathered on the implementation level and outcome level of the “purok” system from the perspective of secondary learners. Using a mixed-method approach, the study integrates quantitative findings and qualitative insights to provide a comprehensive understanding of how the “purok” system was implemented and how it influenced learners’ experiences and outcomes. It also examined the correlation between the level of implementation and the level of outcomes to determine whether effective implementation was significantly related to positive results among secondary learners.

Research Question# 1: What is the respondents’ perception of the implementation level of the “purok” system in terms of educational support?

Table 1. “Purok’s” implementation level in terms of educational support

Indicators	Weighted Mean	Interpretation
I attend school regularly because of the encouragement from my Purok.	2.19	Less Implemented
I feel that my parents and community leaders monitor my school attendance.	2.45	Less Implemented
I follow school rules because of the support of the Purok system.	2.39	Less Implemented
I feel motivated to focus on my studies because of my Purok.	2.40	Less Implemented
I receive guidance from my Purok regarding my school responsibilities.	2.28	Less Implemented
I feel supported by my parents and Purok leaders in my education.	2.48	Less Implemented
I develop good study habits because of the Purok system.	2.27	Less Implemented
I feel accountable for my actions because of the Purok system.	2.39	Less Implemented
I participate in community activities organized by the Purok that support my development.	2.40	Less Implemented
I value my education more because of the involvement of the Purok System	2.38	Less Implemented
I am able to solve some academic problems with the support of my Purok	2.27	Less Implemented
I feel that the Purok System positively affects my educational progress.	2.25	Less Implemented
I participate actively in school activities because of the encouragement from my Purok.	2.18	Less Implemented
I receive reminders from my Purok about my school assignments or responsibilities.	2.01	Less Implemented
I cooperate with parents, teachers, and peers more because of my Purok.	2.41	Less Implemented
Average Weighted Mean	2.32	Less Implemented

Table 1 presents the perceived implementation level of the “purok” system in terms of educational support among secondary learners. Scores across all indicators were generally rated as Less Implemented, with individual item means ranging from 2.01 (reminders about assignments) to 2.48 (perceived support from parents and “purok” leaders), resulting in an overall weighted mean of 2.32. This indicates that learners did not strongly perceive support in key academic functions such as attendance monitoring, guidance, motivation, and participation in school and community activities. The low ratings suggest limited influence of the “purok” system on learners’ educational engagement and school-related behaviors. Research shows that higher perceived social support from parents, teachers, and community members is positively linked to academic engagement and achievement, whereas insufficient support is associated with weaker involvement and performance (Rautanen et al., 2021); (F. Xu et al., 2025). These findings highlight a potential need for increased community–school collaboration and structured mechanisms to enhance learners’ motivation, attendance, and academic resilience.

Research Question # 2: What is the respondents’ perception of the implementation level of the “purok” system in terms of environmental initiatives?

Table 2. “Purok’s” implementation level in terms of environmental initiatives

Indicators	Weighted Mean	Interpretation
I help my community clean because of the Purok system.	2.76	Implemented
I practice proper waste segregation in my home and neighborhood.	2.97	Implemented
I follow environmental rules in my community.	2.93	Implemented
I participate in clean-up drives organized by my Purok.	2.56	Implemented
I take part in tree planting or other conservation activities.	2.43	Less Implemented
I understand the importance of protecting the environment because of my Purok.	2.64	Implemented
I see Purok leaders as role models for caring for the environment.	2.62	Implemented
I participate in environmental programs organized by the Purok regularly.	2.43	Less Implemented
I try to prevent littering and pollution in my community.	2.54	Implemented
I help keep my home and neighborhood clean.	2.67	Implemented
I cooperate with others in protecting the environment due to Purok initiatives.	2.61	Implemented
I feel more responsible for the environment because of the Purok System.	2.37	Less Implemented
I practice water and energy conservation in my daily life.	2.64	Implemented
I report environmental problems in my community to my Purok.	2.24	Less Implemented
I feel that my participation in environmental activities improves because of the Purok system.	2.40	Less Implemented
Average Weighted Mean	2.59	Implemented

The data in Table 2 present the respondents’ perceptions of the “purok” system’s implementation in environmental initiatives, with an overall weighted mean of 2.59, indicating that environmental practices were generally implemented. Learners reported helping clean their community (2.76), practicing proper waste segregation (2.97), and following environmental rules (2.93), showing strong engagement in basic environmental responsibilities. Moderate implementation was observed in behaviors such as seeing “purok” leaders as role models (2.62), preventing littering (2.54), keeping homes and neighborhoods clean (2.67), cooperating with others (2.61), and conserving water and energy (2.64). Lower ratings were noted for activities requiring sustained or structured engagement, such as tree planting (2.43), regular program participation (2.43), feeling responsible for the environment (2.37), reporting environmental problems (2.24), and perceiving improved participation due to the Purok (2.40). These results suggest that while the “purok” system encourages basic environmental practices, initiatives that involve leadership, reporting, or long-term commitment need strengthening (Masongsong, 2024); (Herrera, 2025).

Research Question # 3: What is the respondents’ perception of implementation level of the “purok” system of terms of disaster-preparedness programs?

Table 3. “Purok’s” Implementation Level in Terms of Disaster-Preparedness Programs

Indicators	Weighted Mean	Interpretation
1. I know about the disaster risks in my community because of the Purok System.	2.42	Less Implemented
2. I know to do before, during, and after a disaster.	2.87	Implemented
3. I participate in disaster preparedness orientations organized by my purok.	2.27	Less Implemented
4. I take part in evacuation drills conducted in my Purok.	2.37	Less Implemented
5. I feel confident about responding calmly in emergencies because of the Purok System.	2.37	Less Implemented
6. I know the safe areas and evacuation routes in my community.	2.51	Implemented
7. I follow the guidance from community leaders on safety measures during disasters.	2.58	Implemented
8. I participate in disaster preparedness programs integrated into Purok activities.	2.40	Less Implemented
9. I feel prepared and confident during emergencies because of the Purok System.	2.51	Implemented
10. I practice disaster preparedness measures with the help of my parents and community members.	2.50	Less Implemented
11. I feel that my safety is prioritized during disaster because of the Purok System.	2.47	Less Implemented
12. I understand the importance of disaster preparedness because of the Purok System.	2.47	Less Implemented
13. I know how to prepare an emergency kit for disaster.	2.70	Implemented
14. I participate in community disaster planning organized by my Purok.	2.40	Less Implemented
15. I cooperate with other learners and community members during emergencies because of the Purok System.	2.50	Less Implemented
Average Weighted Mean	2.49	Less Implemented

The data in Table 3 presents respondents’ perceptions of the “purok” system’s implementation in disaster-preparedness programs, with an overall weighted mean of 2.49, interpreted as Less Implemented. Learners showed awareness of disaster risks (2.42) and knowledge of what to do before, during, and after a disaster (2.87), but participation in practical activities was limited. Lower ratings were observed for attending orientations (2.27), participating in evacuation drills (2.37), practicing preparedness measures with parents and community members (2.50), engaging in community disaster planning (2.40), and confidence in responding calmly during emergencies (2.37). These results suggest that knowledge did not consistently translate into practical preparedness or behavioral competence. Prior research highlights that effective disaster preparedness requires structured training, repeated practice, and community participation to build both competence and confidence (Guo et al., 2025); (Rajeswari et al., 2025). Overall, the findings indicate that the Purok System moderately promotes knowledge of disaster risks but needs strengthened participatory and experiential activities to enhance learners’ readiness and resilience.

Research Question # 4: What is the respondents' perception of the outcome level of this "purok" system in terms of educational engagement and discipline?

Table 4: "Purok's" Outcome Level in Terms of Educational Engagement and Discipline

Indicators	Weighted Mean	Interpretation
1. I attend school regularly.	3.43	Very High
2. I arrive at school on time every day.	3.34	Very High
3. I complete my school assignments on time.	3.08	High
4. I participate actively in class discussions.	3.07	High
5. I follow school rules and regulations.	3.21	High
6. I respect my teachers and classmates.	3.32	Very High
7. I take responsibility for my academic performance.	3.36	Very High
8. I cooperate with my classmates during group activities.	3.26	Very High
9. I pay attention during lessons and instructions.	3.20	High
10. I ask questions when I do not understand something.	3.98	Very High
11. I am motivated to study because I value my education.	3.18	High
12. I participate in school programs and extra-curricular activities.	2.96	High
13. I manage my time effectively between schoolwork and other responsibilities.	2.96	High
14. I avoid behaviors that disrupts the class.	3.10	High
15. I strive to improve my academic performance every day.	3.16	High
Average Weighted Mean	3.17	High

The data in table 4 present the outcome level of the "purok" system in terms of educational engagement and discipline, with an overall weighted mean of 3.17, indicating High perception among secondary learners. Very high levels were observed in regular attendance, punctuality, respect for teachers and classmates, responsibility for academic performance, cooperation in group activities, and asking questions for clarification. Other indicators, such as completing assignments on time, class participation, adherence to school rules, attentiveness, motivation, extracurricular involvement, time management, avoidance of disruptive behaviors, and striving for improvement, were rated High, reflecting consistent engagement and disciplined behaviors. These results suggest that the Purok System contributed to a supportive and structured learning environment, fostering student responsibility and active involvement. Research supports this, showing that higher student engagement, particularly behavioral, emotional, and cognitive engagement, is linked to improved learning outcomes and academic success (X. Xu et al., 2023); (Turnquest et al., 2024).

Research Question # 5: What is the respondents' perception of the outcome level of the "purok" system in terms of environmental awareness and discipline?

Table 5. "Purok's" Outcome Level in Terms of Environmental Awareness and Discipline

Indicators	Weighted Mean	Interpretation
1. I separate waste into biodegradable and non-biodegradable materials.	3.08	High
2. I avoid littering in my community.	3.00	High

3. I participate in clean-up drives organized by my school community.	2.96	High
4. I conserve water and electricity at home and school or community.	3.00	High
5. I plant trees or take care of plants in my community.	2.82	High
6. I am aware of environmental problems in my community.	3.03	High
7. I encourage others to care for the environment.	2.87	High
8. I report environmental hazards or problems to authorities.	2.70	High
9. I understand the importance of protecting nature and wildlife.	3.04	High
10. I reduce, reuse, and recycle materials whenever possible.	2.88	High
11. I participate in discussions or programs about environmental protection.	2.86	High
12. I keep my school and home surroundings clean and organized.	2.97	High
13. I cooperate with others to maintain a clean and safe environment.	3.01	High
14. I avoid activities that harm the environment.	2.94	High
15. I feel responsible for maintaining a healthy environment.	2.97	High
Average Weighted Mean	2.94	High

The data in table 5 present the outcome level of the “purok” system in terms of environmental awareness and discipline, with an overall weighted mean of 2.94, indicating High perception among learners. Respondents reported strong engagement in waste segregation (3.08), avoiding littering (3.00), participating in clean-up drives (2.96), conserving water and electricity (3.00), and planting or caring for plants (2.82). Other behaviors, including awareness of environmental problems (3.03), understanding the importance of nature and wildlife protection (3.04), cooperating with others to maintain cleanliness (3.01), and keeping surroundings organized (2.97), were also rated High, reflecting broad adoption of environmentally responsible practices. These results suggest that the Purok System effectively promotes sustainable behaviors and environmental responsibility among learners, consistent with research showing that structured environmental programs enhance pro-environmental attitudes and engagement (Estrada-Araoz et al., 2023); (Fitri & Julianto, 2024).

Research Question # 6: What is the respondents’ perception of the outcome level of the purok system in terms of disaster-preparedness and knowledge?

Table 6. “Purok’s” Outcome Level in Terms of Disaster-Preparedness and Knowledge

Indicators	Weighted Mean	Interpretation
1. I know the types of disasters that can happen in my community.	2.91	High
2. I know what to do before, during, and after a disaster.	3.02	High
3. I participate in disaster preparedness drills in my school or community.	2.87	High
4. I know the location of safe evacuation areas.	2.80	High
5. I know emergency contact numbers for my community and family.	2.97	High

6. I am aware of how to make an emergency kit.	3.13	High
7. I understand the importance of preparing for disasters in advance.	3.10	High
8. I remain calm and alert during drills or actual emergencies.	3.00	High
9. I help others follow safety procedures during a disaster.	2.96	High
10. I know how to respond to common emergencies like fire, flood, or typhoon,	2.75	High
11. I discuss disaster preparedness with my family.	2.76	High
12. I take part in community planning for disaster response.	2.65	High
13. I practice first aid or basic safety skills during drills.	2.92	High
14. I check and prepare necessary supplies for emergencies.	3.01	High
15. I feel confident in my ability to stay safe during a disaster.	2.90	High
Average Weighted Mean	2.92	High

The data in Table 6 presents the outcome level of the “purok” system in terms of disaster-preparedness and knowledge, with an overall weighted mean of 2.92, interpreted as High. Learners reported strong awareness and knowledge of disasters (2.91), understanding of actions before, during, and after a disaster (3.02), and active participation in drills (2.87). They also demonstrated practical preparedness, including knowledge of safe evacuation areas (2.80), emergency contact numbers (2.97), preparing emergency kits (3.13), maintaining calm during emergencies (3.00), and helping others follow safety procedures (2.96). Other behaviors, such as discussing preparedness with family (2.76), participating in community planning (2.65), practicing first aid during drills (2.92), checking emergency supplies (3.01), and feeling confident in safety measures (2.90), were similarly rated High. These results suggest that the “purok” system effectively promote, and disaster preparedness and knowledge among learners, consistent with research showing that structured programs and supportive environments enhance student engagement, knowledge, confidence, and protective behaviors (Maxwell et al., 2017); (Torani et al., 2019).

Research Question # 7: What are the challenges encountered by the respondents under the purok system?

This section presents the analyzed responses from the qualitative study on challenges encountered by secondary learners under the Purok System. Using thematic analysis, four main themes emerged: (1) Academic–Community Role Conflict, (2) Communication and Information Gaps, (3) Limited Participation and Engagement, and (4) Leadership and Organizational Challenges. These themes provide insight into learners’ experiences and suggest areas for improving program implementation.

Theme 1: Academic–Community Role Conflict

Respondents frequently described challenges in balancing school responsibilities with “purok” activities. Scheduling conflicts, overlapping duties, and limited recognition for participation made it difficult for students to remain engaged while focusing on academics. Research indicates that civic involvement often competes with academic responsibilities, highlighting the need for structured support to manage dual roles (Korhonen et al., 2024); (Radzik-Maruszak et al., 2025). Recommendations include aligning “purok” activities with academic calendars, providing recognition for participation, and integrating community involvement into learning plans to reduce role strain.

Theme 2: Communication and Information Gaps

Poor communication and inconsistent updates about “purok” activities were reported by several respondents. Insufficient announcements and irregular information flow created confusion and prevented timely participation. Clear, reliable communication is essential to support active engagement in community programs (McKeown & Taylor, 2017). Suggested improvements include advance notifications, community bulletins, and designated student representatives to ensure information reaches participants effectively.

Theme 3: Limited Participation and Engagement

Respondents also highlighted limited opportunities for meaningful participation. Some students reported that activities were not suitable or relevant, which reduced motivation. Youth engagement is higher when programs offer opportunities to contribute to decisions and processes that resonate with their interests. Recommendations include designing flexible, interest-based participation formats and providing incentives such as recognition or academic linkage to promote consistent involvement.

Theme 4: Leadership and Organizational Challenges

Leadership and organizational issues were also evident. Respondents cited weak leadership, unclear role definitions, and limited resources, which affected program coordination and participation. Studies show that strong, accountable leadership promotes trust and engagement in civic programs (Hafnidah et al., 2025). Suggested improvements include leadership workshops, mentorship programs, and clearer role definitions for Purok leaders to strengthen participation and program effectiveness. Overall, the thematic analysis revealed that students under the “purok” system encounter challenges related to balancing academic and community roles, communication breakdowns, limited engagement, and leadership concerns. Addressing these barriers through coordinated efforts between schools and community structures can enhance civic participation and program outcomes.

Research Question # 8: What are the respondents' suggestions to improve the purok system?

The respondents provided several recommendations to enhance the Purok System. Thematic analysis identified four major themes: (5) Structured Time Management, (6) Communication and Information Enhancement, (7) Disaster Preparedness and Educational Integration, and (8) Community Development and Participation Support. These themes reflect students' insights on improving community engagement and program effectiveness.

Theme 5: Improved Time Management and Scheduling

Respondents emphasized structured schedules and effective time management to prevent conflicts between school and “purok” activities. Suggestions included establishing fixed schedules, aligning “purok” activities with the school calendar, and creating clearer boundaries to balance academic and community responsibilities. Research indicates that proper scheduling allows students to engage meaningfully in community programs while maintaining academic performance (Oubiña López & Gómez Baya, 2025); (Martini et al., 2023). Recommended actions include co-developing schedules with student input, avoiding overlap with school hours, and offering time management workshops.

Theme 6: Enhanced Communication and Coordination

Respondents highlighted the importance of clear and timely communication. Suggestions included early announcements, student representatives for coordination, and improved cooperation among residents. Transparent communication fosters trust and empowers students to participate effectively. Recommendations include digital platforms, community bulletin boards, and structured

reporting channels.

Theme 7: Education, Training, and Preparedness Integration

Respondents recommended integrating disaster preparedness into the “purok” system through school-community drills, emergency guides, and proactive alerts. Experiential learning and structured preparedness programs enhance students’ skills, confidence, and readiness to respond effectively. Schools and “purok” leaders can develop curriculum modules, organize joint drills, and provide accessible guidance.

Theme 8: Community Development and Participation Support

Respondents emphasized environmental and community engagement initiatives, including tree planting, waste segregation, clean-up drives, and family-inclusive programs. Integrating environmental responsibility and civic participation strengthens students’ agency and community resilience. Recommendations include organizing sustainable activities and promoting inclusive participation to enhance youth development and community well-being. Overall, respondents’ suggestions emphasize structured time management, transparent communication, practical disaster preparedness education, and opportunities for community development. Implementing these recommendations can enhance the “purok” system’s effectiveness, strengthen youth engagement, and cultivate responsible learners who actively contribute to their communities.

Conclusion

This study examined the implications of the "purok" system on educational support, environmental management, and disaster preparedness among 100 secondary learners in Liloan, Cebu. Utilizing a descriptive-correlative design, findings revealed that while the purok system was perceived as less implemented in education and disaster programs, learners consistently maintained high levels of academic engagement, environmental awareness, and disaster readiness. Furthermore, a moderate significant correlation between implementation and outcomes indicates that structured improvements can enhance community resilience. The study concludes by highlighting the need for a targeted action plan to address challenges such as role conflicts and communication gaps, while recommending future research to expand geographic scopes and incorporate multi-stakeholder perspectives.

Conflicts of interest

The authors declare no conflict of interest.

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Author contributions

M. C. S: Conceptualization, methodology, software, data curation.; **J. S. A:** writing-original draft preparation, visualization, investigation, supervision, software.; **S. G. L. G:** Validation, writing-reviewing, and editing. All authors have read and agreed to the published version of the manuscript.

Declaration of generative AI in scientific writing

The authors acknowledge the use of generative artificial intelligence (AI) tools exclusively for language editing, grammar refinement, and improving the academic phrasing of this manuscript.

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