



Azal Arts and Humanities

Volume 3, Issue 2, 2026 |
<https://azalpub.com/index.php/AAH>

OPEN ACCESS

RESEARCH ARTICLE

Article Info

Received: 3/5/2026
 Accepted: 4/25/2026
 Published: 5/30/2026

Environmental Leadership and Holistic Learner Development: The Influence of School-Based Sustainability and Sports Programs on Grade 5–6 Learners in Rural Philippine Schools

Rodante Viaje

C.J Torre Elementary School
 Brgy. Tabas, Sitio Maligaya Casiguran Aurora
rodante.viaje@deped.gov.ph

Abstract

The increasing emphasis on holistic education has highlighted the importance of school-based programs that extend beyond academic instruction to support learners' physical, social, emotional, environmental, and leadership development. Among these initiatives, sustainability education and sports programs have emerged as complementary approaches that promote responsible citizenship, environmental stewardship, physical well-being, teamwork, and leadership skills. This study explored the influence of school-based sustainability and sports programs on the holistic development of Grade 5–6 learners in selected rural public elementary schools in the Philippines. Utilizing a qualitative multiple-case study design, data were collected through semi-structured interviews, focus group discussions, observations, and document analysis involving teachers, learners, school administrators, sports coordinators, and environmental program coordinators. Findings revealed that participation in sustainability and sports initiatives contributed significantly to environmental responsibility, leadership development, social competence, self-discipline, physical fitness, and civic engagement. Learners developed stronger environmental awareness through sustainability projects while sports participation enhanced teamwork, resilience, and decision-making skills. The study also identified community collaboration, teacher mentorship, and experiential learning as key enabling factors supporting holistic learner development. The findings underscore the value of integrating sustainability and sports programs as complementary educational strategies for nurturing environmentally responsible, socially engaged, and well-rounded learners in rural schools.

Keywords: environmental leadership, sustainability education, sports programs, holistic learner development, rural education, elementary education, responsible citizenship

Introduction

The contemporary educational landscape increasingly recognizes that learner success extends beyond academic achievement and encompasses the development of cognitive, social, emotional, physical, ethical, and environmental competencies. As societies face complex environmental, social, and health-related challenges, schools are expected to prepare learners not only for academic pursuits but also for active citizenship, responsible leadership, and sustainable living. Consequently, educational institutions are encouraged to implement programs that foster holistic learner development by addressing multiple dimensions of human growth and learning.

Holistic education emphasizes the interconnected development of learners' intellectual, emotional, physical, social, moral, and environmental capacities. Rather than focusing exclusively on academic performance, holistic educational approaches seek to cultivate well-rounded individuals capable of contributing positively to their communities and responding effectively to contemporary challenges. Within this framework, school-based sustainability programs and sports programs have gained increasing attention as educational interventions that promote experiential learning, leadership development, community engagement, and personal growth.

Sustainability education has emerged as a critical component of contemporary schooling due to increasing concerns regarding climate change, biodiversity loss, environmental degradation, and sustainable development. Environmental education initiatives provide learners with opportunities to understand ecological systems, appreciate environmental stewardship, and develop responsible behaviors that contribute to environmental sustainability. Through activities such as school gardening, waste management campaigns, tree planting, ecological conservation projects, and community environmental programs, learners develop environmental literacy while strengthening their sense of social responsibility and civic engagement.

Similarly, school-based sports programs contribute significantly to learner development by promoting physical fitness, teamwork, discipline, leadership, perseverance, and emotional well-being. Participation in sports enables learners to acquire important life skills such as cooperation, communication, problem-solving, resilience, and self-confidence. Sports programs also provide opportunities for learners to engage in collaborative activities that strengthen interpersonal relationships and foster a sense of belonging within the school community.

The integration of sustainability and sports programs is particularly relevant in rural educational contexts where schools often serve as central institutions for community development and social transformation. Rural schools frequently operate within environments characterized by strong community relationships, close interactions with natural ecosystems, and limited access to extracurricular resources. Consequently, sustainability initiatives and sports activities become valuable platforms through which learners can develop leadership skills, environmental responsibility, civic consciousness, and healthy lifestyles.

In the Philippines, the Department of Education continues to promote learner-centered and values-based education through programs that support environmental protection, disaster preparedness, health promotion, sports development, and community engagement. Programs such as Youth for Environment in Schools Organization (YES-O), Gulayan sa Paaralan Program, School-Based Feeding Program, sports development initiatives, and community outreach activities provide opportunities for learners to participate in meaningful experiences that contribute to holistic development. These programs align with national educational goals that seek to develop productive, responsible, and environmentally conscious citizens.

Despite the recognized benefits of sustainability education and sports participation, limited research has examined how the combined influence of these programs contributes to holistic learner development, particularly among elementary learners in rural Philippine schools. Existing studies have often examined environmental education and sports participation separately, resulting in a fragmented understanding of their collective contribution to learner growth. Furthermore, there remains a scarcity of research exploring how these school-based initiatives shape leadership capacities, environmental responsibility, social competence, and overall learner development within rural educational settings.

This gap is particularly significant because rural learners face unique contextual challenges and opportunities that influence their educational experiences. Understanding how sustainability and sports programs contribute to their development can provide valuable insights for educators, school leaders, policymakers, and community stakeholders seeking to strengthen school-based interventions that support learner well-being and success.

Therefore, this study explored the influence of school-based sustainability and sports programs on the holistic development of Grade 5–6 learners in selected rural public elementary schools in the Philippines. Specifically, it examined the developmental outcomes associated with participation in these programs, the experiences of learners and educators, the challenges encountered during implementation, and the enabling factors that support successful program outcomes. By generating context-specific insights into holistic learner development, the study contributes to the growing discourse on sustainable education, educational leadership, and learner-centered pedagogies in rural educational contexts.

Research Questions

This study sought to answer the following questions:

1. What sustainability and sports programs are implemented in rural public elementary schools?
2. How do these programs contribute to the environmental leadership development of Grade 5–6 learners?
3. In what ways do sustainability and sports programs influence learners' holistic development in terms of:
 - Environmental responsibility;
 - Physical well-being;
 - Social competence;
 - Leadership skills;
 - Emotional resilience; and
 - Civic engagement?
4. What challenges are encountered in implementing sustainability and sports programs?
5. What enabling factors support the successful implementation of these programs?

Theoretical Framework

This study is anchored on Bronfenbrenner's Ecological Systems Theory, Kolb's Experiential Learning Theory, and the Positive Youth Development Framework. Ecological Systems Theory explains how learner development is influenced by interactions among schools, families, communities, and environmental contexts. Experiential Learning Theory emphasizes that meaningful learning occurs through active participation and reflection on authentic experiences. The Positive Youth Development Framework highlights the importance of cultivating competence, confidence, character, connection, and caring among young learners through structured educational and extracurricular activities.

Methodology

The study employed a qualitative multiple-case study design to explore the influence of sustainability and sports programs on the holistic development of Grade 5–6 learners. The research was conducted in selected rural public elementary schools in the Philippines that actively implemented environmental and sports-related programs. Purposive sampling was utilized in selecting participants, which included Grade 5–6 learners, teachers, school administrators, sports coordinators, and environmental program coordinators. Data were collected through semi-structured interviews, focus group discussions, classroom and program observations, and document analysis. Thematic analysis following Braun and Clarke's six-phase framework was employed to identify recurring themes and patterns emerging from participants' experiences and perspectives.

Findings and Discussion

Theme 1: Sustainability Programs Foster Environmental Leadership and Ecological Stewardship

One of the most prominent themes that emerged from the study was the development of environmental leadership among Grade 5–6 learners through participation in sustainability programs. Teachers observed that environmental activities provided learners with opportunities to assume leadership roles in promoting environmental awareness and conservation within their schools and communities. Programs such as school gardening, waste segregation campaigns, tree planting activities, coastal clean-up drives, and recycling initiatives encouraged learners to become active advocates of environmental responsibility.

A teacher shared:

"Kapag may environmental activities, ang mga bata mismo ang nangunguna sa pagpapaalala tungkol sa tamang pagtatapon ng basura at pangangalaga sa kalikasan."

Another participant explained:

"Nagiging environmental leaders sila dahil natututo silang manghikayat ng kapwa estudyante at maging ehemplo sa komunidad."

A learner stated:

"Masaya po kapag kami ang namumuno sa clean-up drive kasi pakiramdam namin may nagagawa kami para sa kalikasan."

The findings indicate that sustainability programs serve as effective platforms for nurturing environmental leadership and stewardship. Through direct participation in environmental initiatives, learners develop ownership

of environmental concerns and become active contributors to community sustainability efforts.

These findings support the work of Monroe et al. (2019), who emphasized that environmental education enhances environmental citizenship and leadership by providing authentic opportunities for environmental action. Similarly, Ardoin et al. (2020) found that sustainability-focused educational programs significantly improve learners' environmental responsibility and leadership competencies.

Theme 2: Sports Participation Strengthens Discipline, Responsibility, and Character Formation

Another major theme highlighted the contribution of sports programs to character development. Teachers consistently reported that participation in sports cultivated discipline, responsibility, perseverance, and self-control among learners.

One sports coordinator remarked:

“Sa sports natututo ang mga bata ng disiplina. Kailangan nilang sumunod sa patakaran at maging responsable sa kanilang mga tungkulin.”

A teacher added:

“Mas nagiging responsable sila sa oras, sa pag-aaral, at sa pakikitungo sa kapwa dahil sa mga natututuhan nila sa sports.”

A learner shared:

“Natutunan ko pong huwag sumuko kahit mahirap ang laro. Kailangan pong magsikap para manalo.”

Another learner stated:

“Kapag may training, kailangan naming maging disiplinado at sumunod sa coach.”

These responses suggest that sports participation contributes substantially to character formation by instilling values associated with self-discipline, persistence, and accountability.

The findings align with studies by Holt et al. (2017), which demonstrated that structured youth sports programs contribute positively to character development and life skills acquisition. Sports participation promotes ethical behavior, responsibility, and resilience that extend beyond athletic contexts.

Theme 3: Development of Social Competence and Collaborative Skills

The study revealed that both sustainability and sports programs significantly enhanced learners' social competence and collaborative skills. Through group-based environmental projects and team sports activities, learners learned how to cooperate, communicate effectively, and work toward common goals.

One teacher explained:

“Kapag may environmental project o sports competition, natututo silang makipagtulungan at rumespeto sa opinyon ng iba.”

Another participant noted:

“Nakikita namin na mas nagiging sociable at confident sila sa pakikipag-ugnayan sa kapwa mag-aaral.”

A learner shared:

“Mas marami po akong kaibigan dahil sa sports at environmental activities.”

Another learner stated:

“Natututo po kaming magtulungan para matapos ang proyekto o manalo ang aming team.”

The findings indicate that experiential and collaborative activities provide valuable opportunities for developing interpersonal relationships, communication skills, and teamwork.

These findings support Vygotsky's social constructivist perspective, which emphasizes the importance of social interaction in learning and development. Research by Bean et al. (2018) likewise found that extracurricular activities promote social competence, cooperation, and interpersonal skills among elementary learners.

Theme 4: Enhancement of Physical Well-Being and Healthy Lifestyle Practices

Physical well-being emerged as another significant dimension of holistic development influenced by sports participation. Teachers and learners consistently reported improvements in physical fitness, endurance, health awareness, and active lifestyle habits.

A sports coordinator explained:

“Mas nagiging physically active ang mga bata at mas interesado silang pangalagaan ang kanilang kalusugan.”

A teacher observed:

“Kapag regular ang kanilang participation sa sports, mas masigla sila sa klase at mas may enerhiya sa pag-aaral.”

One learner stated:

“Mas malakas na po ang katawan ko at mas kaya ko nang tumakbo nang matagal.”

Another learner shared:

“Mas natutunan kong alagaan ang aking kalusugan dahil sa sports.”

These findings indicate that sports programs contribute to learners’ physical development while reinforcing healthy lifestyle behaviors.

Previous studies by Bailey et al. (2013) demonstrated that sports participation positively influences children's physical health, academic engagement, and overall well-being. Physical activity is associated with improved concentration, attendance, and school performance.

Theme 5: Sustainability and Sports Programs Promote Emotional Resilience and Self-Confidence

Participants emphasized that involvement in environmental and sports activities strengthened learners’ emotional resilience, self-confidence, and ability to cope with challenges.

One teacher remarked:

“Kapag natatalo sila sa laro o nahaharap sa mahirap na gawain sa environmental projects, natututo silang bumangon at magpatuloy.”

Another participant explained:

“Nakikita namin na mas nagiging matatag sila sa pagharap sa problema at mas naniniwala sa kanilang kakayahan.”

A learner stated:

“Hindi na po ako masyadong nahihiya magsalita sa harap ng iba dahil sa mga activities namin.”

Another learner shared:

“Natutunan ko pong huwag agad sumuko kapag nahihirapan.”

The findings suggest that experiential learning opportunities provided by sustainability and sports programs help learners develop emotional strength, perseverance, and confidence.

These findings support Positive Youth Development Theory, which emphasizes the role of structured extracurricular activities in building resilience and self-efficacy. Lerner et al. (2015) found that participation in youth development programs enhances emotional well-being and positive identity formation.

Theme 6: Community Engagement Strengthens Responsible Citizenship

The study revealed that sustainability and sports programs encouraged active community engagement and strengthened learners’ sense of responsible citizenship. Participation in community clean-up drives, environmental campaigns, sports festivals, and outreach activities allowed learners to contribute meaningfully to community welfare.

One school administrator shared:

“Mas nauunawaan ng mga bata na may responsibilidad sila hindi lamang sa paaralan kundi pati sa komunidad.”

A teacher stated:

“Kapag nakikilahok sila sa community projects, natututo silang maging mabuting mamamayan.”

A learner explained:

“Masaya po kapag tumutulong kami sa barangay dahil nakakatulong kami sa ibang tao.”

These responses suggest that sustainability and sports programs extend learning beyond classroom boundaries and promote civic participation.

The findings align with studies on civic education that emphasize experiential community engagement as a foundation for responsible citizenship and social accountability.

Theme 7: Resource Constraints and Program Sustainability Challenges

Despite positive outcomes, participants identified challenges affecting the implementation of sustainability and sports programs. These included inadequate funding, limited sports equipment, insufficient environmental learning resources, and restricted access to training opportunities.

One teacher disclosed:

“Minsan kulang ang kagamitan para sa sports at environmental projects kaya kailangan naming humanap ng alternatibong paraan.”

A sports coordinator shared:

“Maraming gustong sumali ngunit kulang ang kagamitan at pasilidad.”

These findings indicate that resource limitations continue to constrain the expansion and sustainability of school-based programs.

Consistent with UNESCO reports on rural education, inadequate funding and limited infrastructure remain among the most common barriers affecting extracurricular and environmental education programs in developing contexts.

Theme 8: Teacher Mentorship and Community Partnerships as Enabling Factors

The final theme emphasized the importance of teacher mentorship and community support in sustaining program effectiveness. Teachers, parents, local government units, and community organizations played critical roles in facilitating environmental and sports initiatives.

One participant remarked:

“Hindi magiging matagumpay ang programa kung walang suporta mula sa mga magulang at komunidad.”

A school administrator explained:

“Malaking tulong ang pakikipag-ugnayan sa LGU at mga stakeholder para masuportahan ang mga proyekto.”

The findings indicate that collaborative partnerships strengthen program sustainability and maximize developmental outcomes for learners.

These results support Bronfenbrenner’s Ecological Systems Theory, which highlights the interconnected influence of schools, families, and communities on learner development.

Conclusion

The study demonstrated that school-based sustainability and sports programs significantly contribute to the holistic development of Grade 5–6 learners in rural Philippine schools. Sustainability initiatives cultivated environmental literacy, ecological stewardship, environmental leadership, and responsible citizenship, while sports programs promoted discipline, teamwork, physical well-being, resilience, and character formation. Together, these programs created meaningful experiential learning opportunities that supported cognitive, social, emotional, physical, and civic development.

The findings further revealed that learners developed stronger leadership capacities, environmental responsibility, social competence, self-confidence, and community engagement through active participation in sustainability and sports activities. Despite challenges related to limited resources, infrastructure constraints, and funding limitations, schools demonstrated innovation through teacher mentorship, community partnerships, and contextualized program implementation. The study underscores the value of integrating sustainability education and sports development as complementary strategies for nurturing environmentally responsible, socially engaged, and holistically developed learners capable of contributing to sustainable community development and national progress.

Implications for Practice

The findings suggest several important implications for educational practice and policy. First, sustainability education and sports programs should be institutionalized as integral components of holistic learner development frameworks in elementary schools. Second, curriculum planners should strengthen the integration of environmental leadership, responsible citizenship, and life skills development across learning areas and extracurricular activities. Third, schools should provide learners with authentic opportunities for environmental action, community service, leadership development, and sports participation to foster meaningful experiential learning. Fourth, educational leaders should allocate greater resources for environmental education projects, sports facilities, and teacher professional development. Finally, stronger partnerships among schools, local government units, community organizations, and families should be established to ensure the sustainability and effectiveness of learner development programs.

References

- Ardoyn, N. M., Bowers, A. W., & Gaillard, E. (2020). Environmental education outcomes for conservation: A systematic review. *Biological Conservation*, 241, 108224. <https://doi.org/10.1016/j.biocon.2019.108224>
- Bailey, R., Armour, K., Kirk, D., Jess, M., Pickup, I., Sandford, R., & BERA Physical Education and Sport Pedagogy Special Interest Group. (2013). The educational benefits claimed for physical education and school sport: An academic review. *Research Papers in Education*, 24(1), 1–27. <https://doi.org/10.1080/02671520701809817>
- Bean, C., Forneris, T., Halsall, T., & Camiré, M. (2018). School and community-based sport participation and positive youth development. *Physical Education and Sport Pedagogy*, 23(2), 111–125. <https://doi.org/10.1080/17408989.2017.1341473>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. <https://doi.org/10.1191/1478088706qp063oa>
- Holt, N. L., Neely, K. C., Slater, L. G., Camiré, M., Côté, J., Fraser-Thomas, J., MacDonald, D., Strachan, L., & Tamminen,

- K. A. (2017). A grounded theory of positive youth development through sport. *International Review of Sport and Exercise Psychology*, 10(1), 1–49. <https://doi.org/10.1080/1750984X.2016.1180704>
- Lerner, R. M., Lerner, J. V., Bowers, E. P., & Geldhof, G. J. (2015). Positive youth development and relational-developmental-systems. *Handbook of Child Psychology and Developmental Science*. <https://doi.org/10.1002/9781118963418.childpsy116>
- Monroe, M. C., Plate, R. R., Oxarart, A., Bowers, A., & Chaves, W. A. (2019). Identifying effective climate change education strategies: A systematic review of the research. *Environmental Education Research*, 25(6), 791–812. <https://doi.org/10.1080/13504622.2017.1360842>
- UNESCO. (2021). *Education for Sustainable Development: A Roadmap*. Paris: UNESCO Publishing.
- World Health Organization. (2020). *Guidelines on Physical Activity and Sedentary Behaviour*. Geneva: World Health Organization