

Hiking as an Educational Activity for Young People: Experiences in Cienfuegos

El senderismo como actividad formativa en los jóvenes: experiencias en cienfuegos



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Abstract

Hiking has gained popularity as a recreational activity, but its educational potential for young people remains largely unexplored. The objective of this study was to develop a methodological framework for promoting hiking as an educational activity, based on the systematization of the educational experiences from the “La Viña” project with young people in Cienfuegos. A qualitative methodology with a critical-social approach was employed, based on the systematization of experiences and documentary analysis. The results show that hiking, when planned with pedagogical intent, promotes the development of decision-making skills, teamwork, leadership, and environmental awareness. The study concludes with a methodological proposal structured in three phases (preparation, implementation, and evaluation) that can be replicated in both formal and non-formal educational contexts.

Keywords: Hiking, youth, education, nature, leadership

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Resumen

El senderismo ha ganado popularidad como actividad recreativa, pero su potencial formativo en jóvenes aún es poco explorado. Este estudio tuvo como objetivo elaborar un proceder metodológico para el desarrollo del senderismo como actividad educativa, a partir de la sistematización de las experiencias formativas del proyecto "La Viña" con jóvenes en Cienfuegos. Se empleó una metodología cualitativa con enfoque crítico-social, basada en la sistematización de experiencias y el análisis documental. Los resultados evidencian que el senderismo, cuando se planifica con intencionalidad pedagógica, favorece el desarrollo de habilidades para la toma de decisiones, el trabajo en equipo, el liderazgo y la conciencia ambiental. Se concluye con una propuesta metodológica estructurada en tres fases (previa, ejecución y evaluación) que puede ser replicada en contextos educativos formales y no formales.

Palabras clave: Senderismo, jóvenes, formación, naturaleza, liderazgo

Introduction

Hiking, understood as the organized practice of outings and activities in nature, generally tends to be a recreational experience that can become a comprehensive educational experience, especially for young people. By its very nature, hiking consists of walking through nature along trails (hence its name) to reach a predetermined destination that, for whatever reason, may be of interest to those who practice it (Rodríguez-Cortés & Jiménez-Gutiérrez, 2022).

According to Muele and Backman (2019), the reasons for hiking go beyond the mere pursuit of physical exercise. They include connecting with nature, personal challenge, escaping the urban routine, and socializing, making it a holistic physical activity that integrates physical and mental well-being.

Hiking has established itself as the central physical activity in nature tourism. Its accessibility and adaptability make it an economic driver for rural areas, while also promoting active lifestyles among its practitioners (Pomfret & Doran, 2022).

First and foremost are the benefits of hiking for mental and physical health. Its impact on mental health is linked to the potential that outdoor activities offer to reconnect with feelings of wonder and admiration, while also helping to reduce anxiety and depression. From a physical standpoint, it improves cardiovascular health,

enhances balance and coordination, and offers the potential to manage the risks of hypertension, diabetes, and obesity; therefore, fostering these benefits from an early age helps prevent these potential diseases.

Hiking, defined as the activity of walking along trails in natural environments (Fondón, Linares, and Cárdenas, 2018), transcends its basic function of getting from one place to another to establish itself as a recreational practice of profound value. Its essence lies in the unique combination of accessible physical exercise, direct contact with the natural environment, and opportunities for personal and geographical exploration. Far from being a mere walk, hiking stands as a holistic experience that promotes well-being across multiple dimensions.

In the economic sphere, hiking acts as a catalyst for economic growth, particularly in rural and remote communities; above all, it fosters conditions for the development of family farming, agribusiness, local commerce, and gastronomy (López-Sanz et al. (2021) and redefines the potential of the tourism sector, both in terms of the locations where the activity takes place and the conditions this type of activity generates in those areas. It should be noted that hiking is practiced in rural areas, but also in natural parks, protected natural areas, heritage sites, coastal zones, the desert, and even in areas considered semi-urban.

Hiking is much more than just a simple walk outdoors. It is a multifaceted recreational activity that uniquely combines improved physical health, psychological well-being, exploration of the environment, and personal growth. Its adaptable nature and minimal equipment requirements make it a democratic and powerful tool for counteracting the effects of a sedentary lifestyle and the stress of modern life, inviting people to become explorers of both the external and internal landscapes.

In general, all trails serve several functions, such as: providing access and recreational routes for visitors; facilitating educational activities; and protecting natural areas. Therefore, the construction and use of trails are essential. However, the key to hiking lies in the planning of the trails; they must be viewed as a means to raise awareness, foster appreciation, and encourage a shift in perception and mindset regarding natural conditions and resources, while also promoting well-being.

Well-designed, constructed, and maintained trails serve different purposes. This explains why trails are classified according to their

purpose, difficulty, setting, and type; there are mountain, coastal, and urban trails, as well as short- and long-distance, circular, linear, and themed trails, among others. Knowing the type of trail helps to better plan the activity and adjust expectations.

In some cases, there are interpretive trails in protected areas, which are generally linked to visitor centers and campgrounds. Their objective is to showcase the area's flora, fauna, and other natural features in a way that is engaging for visitors. In some instances, these trails require a guide or interpreter to explain what can be observed, thereby facilitating environmental interpretation (Watson et al., 2021). In other cases, they are self-guided, as the routes rely on signs, posters, or brochures that help interpret the trail's attractions.

Also included are hiking trails that are longer in length and offer scenic or ecological value; these are designed based on their technical characteristics and marked in a way that ensures safety and minimizes negative impacts on the environment. There are also restricted-access trails that use environmental interpretation as a way to stimulate visitors' interest in learning about and understanding the relationship between humans and the environment—in an engaging manner and through a process of reflection that leads them to their own conclusions.

In this context, there are also cultural or historical trails—which connect heritage sites, ruins, or monuments—and transit trails, traditionally used to connect communities or rural areas. Additionally, there are educational/interpretive trails, which include informational panels on flora, fauna, or geology.

In any case, hiking offers a simple way to experience and engage with the landscapes of national parks, heritage sites, and protected areas; it contributes to the protection of natural resources and provides recreational opportunities for the general public. Therefore, when establishing these trails, it is essential to ensure that they provide a safe alternative for reaching remote locations with tourist and recreational attractions (Serrano-Barquín & Osorio-García, 2022).

In Cuba, hiking has established itself as a leading tourist and recreational activity, characterized by sustained growth in nature trails, cultural integration, and the promotion of ecotourism—all of which strengthen a deep connection between nature, history, and sustainability, particularly in regions such as Viñales, the Sierra Maestra, and the Escambray. In general, the identification of trails

recognizes progressive accessibility and the appreciation of biodiversity as basic criteria: this reinforces ecological identity and positions community-based ecotourism as an opportunity to incorporate into the trails a combination of unique natural landscapes with historical, tourist, and sociocultural elements, transforming each activity into an attractive, comprehensive, and distinctive experience.

In Cienfuegos, hiking experiences are concentrated in the Sierra del Escambray, the Topes de Collante Natural Park, and the Southern Circuit along the road to Trinidad, with trails that combine waterfalls, mountains, crystal-clear rivers, coves, coastline, and panoramic viewpoints. Notable trails include El Nicho, Guanayara Park, the Centinelas del Río Melodioso Trail, and hikes to Charco Azul, Nengoa, and El Brazo—ideal for those seeking nature, adventure, and interaction with local communities.

However, when it comes to hiking, the participation of young Cubans stands out notably, especially in activities linked to both domestic tourism and community and educational programs that promote projects by groups or individual initiatives focused on connecting with nature and environmental conservation. However, projects organized by associations, educational institutions, and youth movements tend to take priority, where youth groups combine sports, ecotourism, environmental conservation, and healthy recreation. Through these experiences, local and visiting youth share their experiences on platforms that promote hiking as a social and recreational activity, including birdwatching and nature photography, among other engaging activities.

The systematization of these formal experiences serves as inspiration for individual or group initiatives, such as the group La Viña, which began its activities in Cienfuegos in 2022. The empirical nature that formed the basis of the experience served as a reference point for delving deeper into the theoretical and methodological study of this type of activity, with the aim of developing a project focused on creating an educational tool to contribute to the development of young people through the practice of hiking.

These objectives defined the research problem, framed as a question regarding the contribution of the La Viña project's experience to the holistic development of young people. The following objective was established: To develop a methodological approach for promoting hiking as an educational activity, based on the systematization of the

educational experiences of the La Viña project with young people in Cienfuegos.

Materials and methods

This study is classified as qualitative research, characterized by addressing the scientific problem from a critical-social epistemological perspective, through description and intervention aimed at transforming reality. According to Palacio (2021), the dialogical rationality of interdisciplinarity demonstrates how the critical and dialectical approach articulates levels of knowledge and the transformation of reality in educational contexts. According to Martínez et al. (2019), socio-formative research entails a commitment to social transformation through the critical identification of problems in the classroom and the proposal of contextualized local solutions.

We employed Jara's (2018) systematization of experiences, which consists of five stages: starting point, initial questions, process review, analysis and interpretation, and conclusions. During the research process, various theoretical and empirical methods were employed in accordance with the task at hand. First, to outline a theoretical framework for justifying and substantiating the experiences, grounded theory was used, based on a content analysis of various academic and research findings shared in academic networks and in the main databases of Scopus and Scielo.

Initially, a documentary and descriptive study was conducted, based on a systematic review of the scientific literature using criteria related to the pedagogical concept of hiking and its contribution to the holistic development of young people's personalities. The selection of sources through purposive sampling adhered to criteria aligned with the topic and the Ibero-American geographical context, particularly in Latin America. The selection of sources included academic articles published between 2020 and 2025, theses, and organizational documents.

The analyses, inferences, and conclusions were based on the relevance of the available sources in Spanish-language publications included in journals ranked by Scimago JR. In this case, the sample included 21 articles from Spain (4), Mexico (3), Venezuela (2), Colombia (2), Peru (3), Chile (1), and Cuba (6).

Key competencies were identified, and the group dynamics observed during field activities were analyzed, prioritizing the perspective of the young participants themselves.

In a second phase, the experience of the La Viña project was systematized through group discussions, interviews, participant observation, reports, and online debates regarding the pedagogical practices implemented, the logistical and emotional challenges faced by the young people, and their perception of the impact on their personal and group development.

In a final stage, the authors consolidated and brought coherence to the body of previous reflections, weaving together a logical framework that crystallized into a defined methodological approach. This design is not merely a sequence of steps, but an integrative structure that harmonizes diverse educational objectives—ranging from cognitive to attitudinal. Its true power lies in how this framework synergistically stimulates the development of technical skills, practical abilities, resilient attitudes, and values of cooperation and respect for the environment. The result is a pedagogical approach that, beyond teaching hiking, genuinely empowers young people, equipping them with the comprehensive tools necessary to tackle, understand, and enjoy the activity with autonomy, safety, and a deep awareness of their experience in nature.

Results

The emergence of hiking is linked to the fulfillment of survival needs, but it evolved into a cultural, spiritual, and ultimately sporting practice. From nomadic travel, medieval pilgrimages, scientific expeditions, and romantic mountain walks in Europe, the institutionalization of hiking as a recreational activity dates back to the 19th century.

Within this context, hiking became a way to revalue natural and cultural heritage, integrating walking with historical and artistic exploration, while also serving as the genesis of the environmental movement and environmental awareness, as its purpose was promoted as a form of respectful contact with nature and a means of fostering physical health, psychological well-being, and positive socialization among participants.

In general, the physical and mental health benefits of hiking are perhaps among its most widely recognized aspects (Páramo et al., 2023; Ramírez-Valverde & Reyes-García, 2025). Recent research by

López-Fernández et al. (2021); Martínez-González et al. (2022); and González-Jurado & Naranjo-Orellana (2023) asserts that hiking improves cardiovascular health, reduces the risk of developing cancer, and promotes longevity; it can also help with weight management and improve balance, posture, and coordination. Likewise, the mental health benefits of hiking include reduced anxiety and depression, as well as improved cognition, memory function, and problem-solving skills.

In fact, sharing a hiking experience creates opportunities to strengthen social bonds, develop new friendships, and improve interpersonal trust. Furthermore, the shared experience in a natural setting fosters the creation of positive memories and a sense of belonging to a group, while generating a meaningful form of social interaction that can reduce feelings of loneliness and isolation (Martínez-López, Rodríguez-Piñero, & Sánchez-Gómez, 2022), as people feel accompanied and supported during this experience, which contributes to their emotional and psychological well-being.

In this context, group activities in natural settings become an educational opportunity, as outdoor activities offer numerous benefits for young people's personal and social development; they help them integrate better into society, facilitate the acquisition of diverse knowledge, and stimulate the development of social skills, enabling them to feel like an active part of a community. Authors such as Chawla (2020) and Goldenberg, McAvoy, and Klenosky (2022) support these claims:

- Young people take on leadership roles in planning and carrying out activities, which strengthens their ability to make decisions and solve problems in real-life situations. During a hike, young people face various situations that require quick and effective decision-making, such as choosing which route to take or resolving unexpected problems. This ability to make decisions under pressure is crucial for leadership, where leaders must be able to assess the situation, consider different options, and act with determination.
- The collaborative nature of hiking trips requires coordination, dialogue, and empathy, fostering social skills essential for effective leadership. Hiking fosters collaboration and teamwork, as young people must coordinate with one another to achieve their goals and overcome the challenges that arise during the hike. This skill is essential for leadership, as a good leader knows how to delegate tasks, motivate their team, and work together to achieve common goals.

- Contact with nature and group interaction foster values of respect, solidarity, and commitment to the community and the environment.
- Facing challenges in changing contexts stimulates reflection and creativity—skills aligned with transformational leadership.
- Hiking presents constant challenges, such as difficult terrain or sudden weather changes, which require problem-solving skills to overcome them successfully. Young people who go hiking learn to adapt to changing situations, seek creative solutions, and remain calm in the face of adversity—valuable skills for leadership.
- During a hike, clear and effective communication among group members is crucial to ensuring everyone’s safety and well-being. Hiking fosters interpersonal communication skills, active listening, and empathy—fundamental aspects of leadership, where the ability to convey ideas, motivate others, and resolve conflicts is essential.
- Hiking gives young people the opportunity to face physical and mental challenges, push their own limits, and discover their strengths and weaknesses. This experience builds self-confidence, fosters autonomy and independence, promotes personal leadership, and teaches them to take responsibility for their actions—qualities that are essential for leading others.
- It fosters a connection with, understanding of, and respect for the natural environment, as well as a desire to improve and enjoy it. This should be reinforced by developing a critical awareness of environmental issues.

These findings align with previous research highlighting the need for educational practices that allow young people to exercise leadership in an active and meaningful way. Hiking, by offering a safe yet challenging environment, serves as an ideal setting for training leaders capable of making an impact in their social, family, work, and school environments.

Systematization of Experiences in Cienfuegos

In 2022, individuals interested in exploring and taking advantage of the physical and geographical conditions of Cienfuegos and the country to expand their knowledge and utilize outdoor activities as a recreational opportunity organized the La Viña project. The project was composed of various young students and working professionals with different specializations, who held various roles across different sectors.

The initial experiences focused on the value of the landscape and the attractions of the coast in south-central Cuba: the beautiful views of Bolsa Bay (Jagua Bay); the vast plains stretching to the north, the beautiful valleys, and the mountainous portion of the Guamuhaia Massif—home to the highest peak in the country's central region, Pico San Juan—as well as sites of archaeological significance and lush flora and fauna, all of which make up the territory's natural heritage.

Any of these destinations offers the opportunity to interact with the people who make their lives in these environments, whether living alone or in settlements. Local residents and hikers share their knowledge of nature and local history, and help protect and promote the territory's cultural heritage.

The project, which began informally, gradually took shape with each activity. Initially, the outings took place quarterly, but the intervals between them gradually shortened and the destinations diversified, transforming the experience from recreational hiking to exploratory hiking.

From the very first outings, priority was given to activities in rugged terrain where the group's progress carved out the path and fostered an appreciation for natural beauty and the development of survival skills; yet at every step, there was an opportunity to share experiences that fostered values of solidarity and sensitivity. Organizing, planning, and ensuring the success of the activities required collaborative decision-making and the equitable distribution of tasks in each instance.

As the project continued, it began to involve young people from provinces such as Havana, Mayabeque, Artemisa, Sancti Spiritus, Ciego de Ávila, and Villa Clara, creating spaces for socialization, emotional connection, and the exchange of knowledge. These encounters, based on participants' educational backgrounds, experiences, and daily routines, fostered the deepening of friendships, cultural exchange, and shared perspectives.

Throughout each experience, it was deemed necessary to systematize the lessons learned and emotional states. Reflection was linked to processes of self-evaluation and self-discovery on each route. This gave rise to an interest in documenting these experiences, which amplified the impact of what was experienced through the publication of the activities on forums and social media. As part of this process, the reflections were also transformed into journalistic

reports that reinforced the educational nature of the experiences and expanded opportunities for other young people to participate.

A re-examination and pedagogical analysis of the notes from each expedition revealed the potential to validate a methodological approach that could be used in organizing other hiking groups, particularly in the university setting. In this case, it was determined that, in general, the proposal to be shared should become a flexible and contextualized framework, open to new adjustments and interpretations by the groups as needed.

However, as knowledge generated through practice, the educational intent of the hiking activities should align with the requirements of any pedagogical experience. This involves conceiving them as a process, planning them around learning objectives and content with practical value, and selecting routes according to the participants' characteristics. The coordinator or facilitator of the experience takes on a leadership role in the educational process but must ensure that all participants are engaged and share their experiences with others, creating networks of collaborative and emotionally supportive learning.

Therefore, the plan of action should follow the stages outlined below.

Table 1. *Sequence of Hiking as an Educational Activity*

Etapa	Previa	Ejecución	Evaluación
Objetivo	Asegurar el proceso formativo.	Desarrollo de capacidades, habilidades y hábitos.	Valoración y proyección futura de la experiencia.
Acciones	Caracterización y diagnóstico de necesidades y posibilidades de los participantes Determinación de objetivo y contenidos. Investigación sobre flora, fauna, geología o historia del lugar. Diseño de la ruta: elaboración de mapas, fichas de observación y cuadernos de campo. Socialización de conceptos básicos según el objetivo de la actividad Aseguramiento logístico.	Acceso a la ruta y retroalimentación de expectativas condiciones Distribuir misiones (fotógrafo, anotador, explorador, servicios, guías) Registro de observación guiada (identificar especies, analizar paisajes, reconocer huellas humanas en el entorno). Desarrollo de actividades en grupo: juegos, reflexiones, talleres, iniciativas) Reflexión y análisis posterior Comunicación de resultados en exposición oral, mural o presentación digital. Análisis metacognitivo de los aprendizajes y valor formativo.	Convocatoria al taller de valoración. Elaboración y socialización de rúbricas. Determinación de aciertos y desaciertos organizativos y formativos. Identificar posibles usos de los aprendizajes. Elaboración de propuestas de continuidad: integración del senderismo como hábito saludable y educativo. Elaboración de productos de comunicación y socialización de aprendizaje.
Resultados Formativos	Sensibilización y motivación con la actividad.	Construcción de la experiencia de aprendizaje y convivencia.	Desarrollo metacognitivo y proyectivo del proceso formativo.

(Author's own work)

To implement this proposal, the following psycho-pedagogical requirements must be met:

First: Ensure an interdisciplinary approach with an emphasis on curriculum areas, promoting comprehensive and contextualized learning.

Second: Prioritize direct experience in the natural environment, encouraging the use of active and experiential methodologies such as observation, exploration, and critical reflection.

Third: Promote challenges appropriate to the students' age and level, fostering autonomy, resilience, and teamwork while accommodating diversity.

Fourth: Take into account the physical, cognitive, and emotional abilities of the participants, ensuring inclusion and safety.

Fifth: Foster socio-emotional development through cooperation, coexistence, and mutual respect, while reinforcing and expanding the connection with nature, environmental awareness, and sustainability as a value.

In any case, those involved must recognize the developmental nature of the activities without losing sight of their intended purpose and holistic orientation, thereby transforming the natural environment into an open classroom. The responsibility for achieving these results lies with educators, who must, above all, be nature lovers and become advocates for education for sustainable development, which facilitates the motivation and educational focus of the activities.

Discussion

The study confirmed that hiking, beyond its widely documented physical and recreational benefits, is an activity of high educational value. When planned with educational intent, it fosters the development of socio-emotional skills (leadership, teamwork, decision-making), cognitive skills (problem-solving, critical thinking, environmental awareness), and attitudinal skills (respect, solidarity, social responsibility). This evidence supports its consideration as a holistic learning experience rather than a mere recreational activity.

A critical analysis of the process experienced by the group of young people allowed us to identify the essential educational components that any educational hiking experience should include: participant assessment, definition of objectives and content, design of routes with educational value, assignment of roles, reflective journaling of the experience, and metacognitive evaluation. It became evident that the voluntary and self-managed nature of the project did not limit its educational potential but rather enhanced the participants' involvement and commitment.

As the main outcome of the research, a methodological procedure was developed, structured into three phases—preparation, implementation, and evaluation—that integrates specific actions, expected learning outcomes, and psychopedagogical requirements. Its flexible and context-specific design allows it to be adapted to different age groups, geographic settings, and educational purposes. It therefore constitutes a tool that can be transferred to both formal contexts (universities, educational institutions) and non-formal contexts (community projects, associations, youth organizations).

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