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Enhancing Life Skills Among Secondary School Students in Kerala: Need of Integrating Environmental and Climate Change Perspectives

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ABSTRACT

It is imperative that life skills instruction be combined with environmental and climate change knowledge for a promising future. As future citizens and decision-makers, secondary school students need a wide range of skills in addition to academic knowledge to successfully navigate, adapt and respond to environmental concerns, which is an imminent issue today. Teachers can cultivate a generation that is both empowered and environmentally conscious by providing students with pertinent life skills and climate awareness. In general, life skills are defined as the capacity for good and adaptable behaviour that is essential for managing the rigors and difficulties of daily life which include communication, interpersonal, problem-solving, critical thinking and decision-making. Students' awareness of their individual responsibilities to the environment and their readiness to tackle environmental issues can both be improved by incorporating environmental and climatic perspectives into life skills instruction. In Kerala, where the region's delicate ecosystems are greatly impacted by both anthropogenic activity and climatic fluctuation, this integration is especially important. In this context, it becomes critical to have an informed youth population that can act in an environmentally responsible manner. Sustainable habits and a closer bond with nature can be fostered *via* a curriculum that integrates environmental awareness with life skills. Thus, the paper is an attempt to study the pressing need to embed environmental and climate-related perspectives within the life skills curriculum for secondary school students in Kerala. It should be noted that by promoting a generation that is more conscious, accountable and equipped to handle environmental issues, improving life skills instruction with environmental and climate change views can greatly benefit Kerala's secondary school students. This method prepares students to live balanced, environmentally conscious lives and is in tune with the larger objectives of sustainable development. Thus, by addressing the intersections of life skills and environmental education, the paper contributes to the discourse on developing education systems that equip school students for the demands of the 21st century, where climate resilience and environmental stewardship are crucial to personal and societal well-being.

Key words: Life skills, Climate change, Environmental Education, Kerala, Sustainable Habits

Introduction

Life skills are critical competencies that help people

successfully navigate the demands and obstacles of daily life (Prajapati *et al.*, 2016). A vital component of secondary school students' overall development is

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the acquisition of life skills, which provide them the capacity to think critically, solve problems, communicate clearly and make wise judgments (Prajapati *et al.*, 2017). The necessity of incorporating life skills instruction into the school curriculum is becoming increasingly apparent in Kerala, a state known for its high literacy rate and progressive educational practices. However, it is now more important than ever to incorporate environmental and climate change perspectives into life skills education due to the growing environmental issues and the global climate crisis. Kerala is especially susceptible to climate change vagaries because of its distinct geographical and ecological characteristics. The ecosystem and means of subsistence in the state are seriously threatened by recurring landslips, floods and shifting weather patterns (Hunt and Menon, 2020). In this background, it is critical to give the next generation the information and abilities they need to comprehend, prepare for and lessen the effects of climate change. Students can be empowered to become proactive change agents and support resilience and sustainable development in their communities by combining environmental education with life skills training. Thus, the paper is an attempt to evaluate the need of integrating environmental and climate change perspectives among the secondary school students in Kerala for enhancing life skills.

The importance of life skills education

The goal of life skills education is to help people develop a variety of interpersonal and psychosocial skills that will enable them to live successful and satisfying lives. Critical thinking, decision-making, emotional resilience, interpersonal communication and stress management are all essential life skills (UNICEF, n.d.). These abilities are especially crucial for teenagers as they negotiate the challenges of social relationships, scholastic demands and personal growth. Kerala education has historically placed a strong emphasis on academic achievement (Jaswal, 2016); hence, it is necessary to change this to promote comprehensive learning that incorporates life skills. Students who receive a life skills education are better equipped to handle obstacles in the real world by developing their empathy, problem-solving skills and self-confidence. These competencies are also essential for fostering active citizenship and social responsibility, enabling students to contribute meaningfully to their families, communities and society at large. Bindu and Saravanakumar (2023) has

critically evaluated the life skills education and its enhancing competencies for adaptive living recently. Fig 1 portrays the essential life skills.

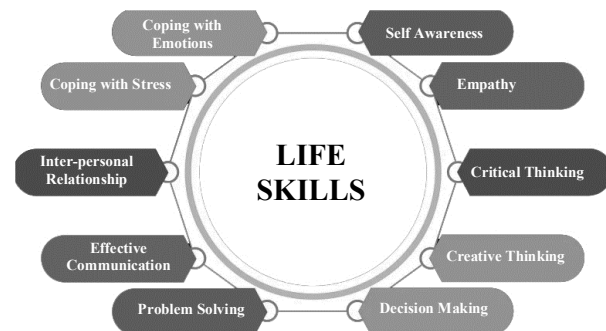


Fig. 1. Essential life skills

Environment and climate change: Kerala Context

Kerala, nestled on the foothills of Western Ghats, is uniquely positioned in the global discourse on environment and climate change due to its geographical features, rich biodiversity and socio-economic dynamics. As a state with a predominantly tropical climate, Kerala experiences heavy monsoons and humid conditions, making it highly susceptible to the impacts of global warming and changing weather patterns (DoECC, 2022). Rising temperatures, more frequent floods and increasingly unpredictable monsoon patterns have all affected the state in recently, discomfiting ecosystems, agriculture and human livelihoods gravely (Varghese, 2024; Sreelakshmi, 2024). The devastating floods that struck Kerala in 2018 and 2019 highlighted the state's susceptibility to natural disasters brought on by climate change. These occurrences underscore the pressing need for preventative actions to reduce climate risks and adjust to shifting environmental conditions, especially in light of the persistent problems of sea-level rise, coastal erosion and saline water intrusion (DoECC, 2022). Kerala's natural resources are now under much more stress due to population growth and urbanization. The state is more vulnerable to landslips and soil erosion as a result of the disruption of ecological balance caused by the expansion of infrastructure projects, quarrying and mining in vulnerable and sensitive areas. All these issues are made worse by climate change, which affects water availability and agricultural output through rising temperatures and erratic rainfall patterns. Kerala's agrarian economy is especially

susceptible to these climate swings because of its reliance on rain-fed crops.

Integrating environmental and climate change perspectives into life skills education

Addressing the issues brought on by environmental degradation and a changing climate requires incorporating environmental and climate change viewpoints into life skills instruction. Students that possess life skills are better able to handle the challenges of contemporary life (Parmar, 2022). According to Arora (2023) life skill abilities enable students to comprehend, adjust to and lessen the effects of climate change when paired with environmental education, producing a generation of knowledgeable and accountable citizens. In Kerala, a state that is severely impacted by climate-related disasters including floods, landslides, and coastline erosion, it is especially important to incorporate life skills as part of education. Concerns about the environment and climate change have a profound effect on livelihoods, ecosystems, and the general well-being of society. As the next generation of leaders, they need to be ready to tackle these issues with creative answers and eco-friendly methods. Students' knowledge of their ecological surroundings is increased and they are encouraged to adopt environmentally conscientious behaviours when environmental topics are incorporated into life skills instruction (Erhabora and Dona, 2016). Students can apply their life skills to actual environmental challenges through programs like waste management campaigns, community-based conservation projects and experiential learning. These methods foster leadership, teamwork, problem-solving skills and an awareness of environmental responsibility.

One essential life skill that is especially pertinent in light of climate change is emotional resilience. Because of the obvious effects of environmental degradation, young people frequently feel anxious and uncertain about the future. By learning coping strategies and stress-reduction tactics, students can face these obstacles with assurance and hope. Students can continue to be proactive in solving problems and motivating others to take group action by developing emotional resilience. When it comes to incorporating environmental considerations into life skills instruction, teachers and educational institutions have pivotal role. To effectively teach courses that link environmental challenges to life skills, educators need to be prepared with the necessary infor-

mation, resources and tools. Vemula and Lalramthari (2024) recorded insightful information about life skills awareness among higher secondary students and noted that by emphasizing the importance of life skills, educational institutions can empower students to navigate the challenges of the 21st century and lead successful, fulfilling lives.

There are long-term advantages for individuals, society and the world when environmental and climate change viewpoints are incorporated into life skills education. It prepares students for professions in sustainability and green technologies by fostering critical thinking embedded with environmental knowledge. It benefits society by producing a generation of ecologically aware individuals who can tackle climate-related issues and promote sustainable growth. Education and environmental governance stakeholders must work together to overcome obstacles like curriculum gaps, resource shortages and legislative restrictions. Incorporating these viewpoints into life skills instruction is essential for ensuring a sustainable future and goes beyond simple educational reform. By empowering students to think critically, act responsibly and engage with their communities, Kerala can lead the way in building a resilient society capable of adapting to environmental and climate challenges. This approach ensures that the younger generation is equipped to safeguard the planet and inspire collective action towards a sustainable and equitable future. To enhance life skills education in Kerala, it is crucial to incorporate environmental and climate change themes into the curriculum *via* the following components

Experiential learning: When students actively participate in the learning process, they learn the most. Climate change simulations, biodiversity assessments and nature walks are examples of experiential learning activities that can deepen students' awareness of environmental challenges (Shutaleva, 2023). Additionally, these exercises foster problem-solving, collaboration and critical thinking - all of which are essential elements of life skills instruction.

Project-based learning: Including environmental projects in the curriculum helps motivate students to use what they've learned to solve practical issues. Students can focus on projects pertaining to renewable energy, water conservation, or trash management, for instance (Nguyen, 2017). These projects encourage creativity, invention, and teamwork in

addition to improving students comprehension of environmental challenges.

Integrating climate change into subjects: Science, social studies, geography and other existing areas can all easily incorporate environmental and climate change concerns in curricula. Students can study the science of climate change, its effects on society and the economy and adaptation and mitigation techniques, for example. Thus, students will have a comprehensive grasp of the problem via an interdisciplinary lens (GED, 2021; Gomez Echeverri *et al.*, 2024).

Developing emotional resilience: Environmental deterioration and climate change can make individuals feel anxious and powerless, especially young people. Students who receive life skills instruction can become more emotionally resilient, which will help them deal with these difficulties and keep a positive attitude (Easton-Gomez *et al.*, 2022). To promote students' mental health, the school curriculum can include mindfulness exercises, stress-reduction strategies and counselling services.

Promoting community engagement: Students can gain a feeling of social responsibility and environmental stewardship by being encouraged to get involved with their local communities (Mebane *et al.*, 2023). Tree planting, community cleanups and awareness campaigns are a few examples of activities that might encourage students to take action and motivate others to follow suit. Students' leadership and interpersonal skills are also improved by these activities.

Role of teachers and educational institutions

When it comes to incorporating environmental and climate change viewpoints into life skills instruction, teachers are essential. They must possess the information, abilities, and materials required to conduct successful lessons. Teachers can stay up to date on the most recent advancements in environmental science and pedagogy by participating in training programs and workshops. Additionally, by implementing eco-friendly procedures like cutting back on trash, boosting sustainable transportation, and lowering energy usage, educational institutions may cultivate a culture of sustainability. The efficiency of teaching life skills can be further increased by cooperation between educational institutions, governmental bodies, non-governmental organizations, and neighborhood associations. Schools can gain

access to funds, resources, and experience for sustainability projects through partnerships with environmental organizations. Government policies and programs can also support the integration of environmental education into the school curriculum, ensuring that it becomes a core component of students' learning experiences.

To promote holistic growth, information sharing, and societal advancement, educators and educational institutions play a critical role in forming people and society. In addition to teaching academic content, teachers also foster critical thinking, moral principles, and emotional intelligence, making them the main agents of learning. Their impact goes beyond textbooks to shape students' personalities, goals, and life skills. Teachers serve as role models who encourage students to discover their own potential, challenge social norms, and make significant contributions to their communities. As organized venues for the production and exchange of information, educational institutions offer the conditions required for the success of both educators and learners. These establishments promote inclusivity and diversity while serving as forums for creative expression, intellectual debate, and innovation.

Teachers play a central role in addressing the unique learning needs of students by identifying their strengths, weaknesses, and individual aspirations. The pedagogical approaches employed by teachers determine the quality of education and the extent to which students are equipped to tackle real-world challenges. Through mentorship, teachers help students develop skills such as communication, problem-solving, and leadership, which are critical for professional success. Simultaneously, educational institutions create policies and infrastructure that allow for equitable access to quality education. They emphasize teacher training programs, capacity building, and continuous professional development, ensuring that teachers are equipped to meet contemporary educational demands. In conclusion, the role of teachers and educational institutions is integral to building knowledge-driven, empathetic, and resilient societies. By fostering academic excellence, personal growth, and social responsibility, they empower individuals to become agents of positive change. Recognizing and supporting their contributions is essential for achieving sustainable development, equity, and progress in an increasingly interconnected world.

Benefits of integrating environmental and climate change perspectives

Integrating environmental and climate change perspectives into decision-making and development planning offers a multitude of benefits across social, economic and ecological dimensions. As climate change increasingly manifests in the form of extreme weather events, rising global temperatures and biodiversity loss, adopting a holistic approach that incorporates environmental considerations has become essential for fostering long-term sustainability and resilience. By embedding climate-conscious strategies into governance, societies can mitigate adverse impacts, safeguard natural resources and create a more equitable and prosperous future for all. One of the primary benefits of integrating environmental perspectives is the preservation and enhancement of natural ecosystems, which provide critical services such as clean air, fresh water and fertile soil. Healthy ecosystems act as carbon sinks, absorb greenhouse gases and regulate weather patterns, playing a crucial role in mitigating climate change (Epple *et al.*, 2016). In terms of economics, taking into account environmental and climate change viewpoints aids in the shift to resource-efficient, low-carbon economies. Countries may lessen their reliance on fossil fuels, generate employment in developing sectors and boost economic growth by investing in renewable energy, green technologies and sustainable infrastructure. Circular economies, intelligent transportation systems and energy-efficient structures all support resource optimization and long-term cost reductions. Additionally, companies that use eco-friendly procedures improve their brand and competitiveness, attracting an increasing number of customers who respect sustainability, like the net zero products.

Socially, integrating environmental and climate perspectives improves the quality of life for individuals and communities. Sustainable urban planning creates green spaces, promotes active transportation, and enhances livability in cities, fostering mental and physical well-being. Addressing climate change also involves empowering vulnerable populations, such as women, indigenous communities and those in low-income regions, by ensuring equitable access to resources and decision-making processes. Climate adaptation measures, such as building resilient infrastructure and improving disaster preparedness, protect livelihoods and reduce in-

equalities, particularly for those most affected by environmental changes. Integrating these perspectives also strengthens global efforts to achieve sustainable development goals (SDGs) by addressing interconnected challenges such as poverty, food security, and education.

Thus, integration of environmental and climate change perspectives into education offers numerous benefits for individuals and society. It equips students with the knowledge and skills needed to address pressing global environmental challenges. By fostering environmental awareness, students develop a sense of responsibility toward sustainable practices, conservation of natural resources and reducing their ecological footprints. Teachers play a critical role in connecting theoretical concepts to real-world applications, encouraging learners to explore solutions for climate adaptation and mitigation. Educational institutions serve as hubs for environmental education, promoting green initiatives, research, and innovative solutions to tackle climate change.

Enhancing life skills: The Kerala experience

The intersection of life skills enhancement and climate change resilience has become a critical focus for sustainable development, especially in regions like Kerala. Kerala's long history of community involvement and decentralized planning serves as the foundation for its climate policy. The state's strategy for improving life skills places a strong emphasis on helping people acquire the social, emotional and cognitive abilities necessary to handle the challenges posed by climate change. The curriculum, community training sessions and local governance frameworks all incorporate programs aimed at fostering critical thinking, problem-solving and adaptable skills. In the face of environmental uncertainty, these programs provide people the tools they need to make wise decisions, come up with creative local solutions and work together. The state's model demonstrates the transformative power of integrating life skills development with climate adaptation strategies. During recent climate-related disasters, the Kerala society showcased remarkable resilience, largely due to the life skills acquired through years of capacity-building programs (Neeraj *et al.*, 2020; Jayashree *et al.*, 2023). The ability to assess risks, communicate effectively and work collaboratively ensured that disaster response was swift and coordinated. Moreover, the emphasis on psychosocial

skills helped individuals and communities recover emotionally, fostering a collective spirit of hope and action.

Kerala's initiatives also demonstrate how important governance and policy are in promoting the development of life skills. By implementing policies that support climate knowledge and sustainable development, the state has institutionalized climate resilience. Projects like the Haritha Keralam Project and the Green Kerala Mission highlight the significance of integrating environmental awareness into daily life and bridging the gap between grassroots action and policy. Nishad and Prasad (2018) evaluated the environmental awareness among people in Amboori, Thiruvananthapuram district Kerala. In another study, John (2022) identified the lack of systemic and holistic linkages across the curriculum with respect to the infused environmental concepts in Kerala school curricula. Kerala's systematic approach to addressing climate concerns is highlighted by the collaboration of government programs, civil society organizations and community involvement. Thus, the Kerala experience provides valuable lessons for global climate action. It underscores the importance of investing in human capital and fostering an ecosystem where life skills development is integral to climate change strategies.

Conclusion

One of the most important steps in preparing Kerala's secondary school students for the problems of the twenty-first century is incorporating environmental and climate change perspectives into life skills instruction. This method equips children to be proactive and responsible citizens. Additionally, it gives them the tools they need to help ensure that their communities and the planet have a sustainable future. It is impossible to overestimate how urgent it is to address environmental and climate change issues. Teaching the next generation is crucial to fostering resilience and advancing sustainable development as Kerala continues to experience devastating effects due to these problems. By embracing this holistic approach to education, Kerala can set an example for the rest of the country and the world, demonstrating how life skills education can be a powerful tool for creating a better future for all. Thus, the integration of life skills education with environmental and climate change perspectives can have a transformative impact, not just on individual

students but on society as a whole. Kerala has the potential to establish a model for how education may be an effective instrument for climate change by producing resilient, talented and environmentally conscientious people. As students develop into engaged citizens, their capacity for critical thought, productive teamwork and sustainable behaviour will influence a future in which societies are better prepared to confront environmental issues and strive for a just and sustainable society. Thus, strategies incorporating life skills with environment and climate change will serve as a template for showing how education can be the key to sustainable development and climate resilience.

Conflict of Interest - None

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