



AUGMENTATION OF ENVIRONMENTAL EDUCATION IN DEVELOPING ATTITUDES TOWARDS ENVIRONMENTAL PROTECTION

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Abstract: Environmental education is the need of the time. Though implemented worldwide, is the instructed education being translated into implementation? Or the conventional environmental education should be supplemented? This mini review assesses the present implementational status of environmental education imparted during childhood, adolescence, and considers demography, gender and consumers in macro view. It was concluded that traditional environmental education could not suffice, as its translation into practice and daily habits requires value addition, in terms of encouraging pro environmental beliefs along with exposure to nature, creating awareness during early education while utilising prompts, training teaching staff and integrating active youth, and encouraging environmental sustainability labelling on consumer goods.

Key words – Environmental Education, Pedagogy, Implementation, Sustainability, Nature, Adolescence, Childhood, Consumer, Labelling, Sustainability, Augmentation.

INTRODUCTION

Environmental education and awareness are a prime concern globally, particularly for developing countries. Nahar *et al.*, 2022 conducted a study in Dhaka, Bangladesh to assess environmental perceptions, attitudes and awareness of residents concerning sustainable urban environmental management. Respondents possessed moderate to high perceived knowledge regarding the causes and effects of environmental pollution, and expressed intentions to mitigate pollution in their surroundings. Only 18% of participants were aware of garbage management procedures in their homes and neighborhoods, which highlighted a critical gap in environmental awareness of the subjects.

Considering the study above, it is clear and evident that environmental education and awareness needs to seep into all sections of the society. Uralovich *et al.*, 2023 in their study believe that negative human attitudes toward nature have disrupted natural balances, leading to pressing environmental challenges. They suggest that merely implementing eco-friendly technologies and conservation efforts is insufficient. Therefore, they emphasise on the critical role of environmental education in achieving sustainable development and environmental sustainability, and advocate for fostering a deep-seated environmental consciousness through education into various sectors to cultivate a society that values and actively participates in environmental preservation

A well aware and environmentally literate society exhibits pro environmental behaviours and takes conscious steps towards promoting environmental sustainability, which is evident from the study by Özbay & Duyar (2022) where they examined data from 20 Organisation for Economic Co-operation and Development (OECD) countries between 1997 and 2019, investigating how varying education levels influence environmental quality and renewable energy consumption. Study found that higher education levels are associated with reduced CO₂ emissions, indicating improved environmental quality, while lower education levels tend to increase emissions. Additionally, higher education levels significantly boost renewable energy consumption, whereas increased CO₂ emissions and higher per capita GDP negatively impact renewable energy usage. These findings suggest that enhancing higher education may play a crucial role in promoting environmental sustainability and adoption of renewable energy sources.

Apart from promoting environmental sustainability, overall well being is also promoted, which can be observed by this study which attempts to assess the role of human–nature connectedness (HNC) in promoting sustainability. A comprehensive global meta-analysis was held by Barragan-Jason *et al.*, (2022) where they reported that individuals with higher HNC not only exhibited more pro-nature behaviours but better health outcomes as compared to those with lower HNC. It was observed that in addition to traditional environmental

education showed minimal impact on HNC, while interventions involving direct contact with nature and mindfulness practices significantly enhanced HNC.

DISCUSSION

Effect and prospective augmentation of Environmental education during Childhood:

DeVille *et al.* (2021) in their study identified experiences in nature during childhood as significant predictors of environmental attitudes and behaviours in adulthood. They mentioned of consistent evidence which suggested of linkage between increased exposure to natural environments with stronger environmental values and a heightened sense of connectedness to nature, leading to promotion of pro-environmental attitudes and behaviours in an individual.

Iwasaki, 2022 reported enhanced water conservation behaviours among young children in Fukuoka Prefecture, Japan by providing visual prompts, alongside lectures on global warming and resource conservation, leading to development of sustainable behaviours from an early age.

Furu & Heilala, 2021 in their study “Sustainability Education in Finnish Early Childhood Education: Practices and Pedagogies” observed a gap persisting between policy advancements, with staff often uncertain about integrating sustainability into daily activities. It was observed that while sustainability is acknowledged as a core value, its practical application varies, with some educators viewing it as an alternative pedagogy rather than an integral component. Thus, the need for clearer guidelines and concrete examples to effectively translate sustainability policies into everyday educational practices is desirable.

Effect and prospective augmentation of Environmental education during Adolescence:

In a study done on adolescents by Sarrasin *et al.*, 2022 examining influence of their climate anxiety, personal and collective efficacy beliefs, and group dynamics during environmental education on their pro-environmental behavioural intentions, it was observed that higher levels of climate anxiety were associated with stronger pro-environmental intentions. Personal and collective efficacy beliefs, both, positively correlated with these intentions.

The article “School Strikers Enacting Politics for Climate Justice: Rethinking Education” studies two school strikers, embodying 'principled disobedience' by challenging traditional norms to address the climate crisis. White *et al.*, 2021 emphasizes the opportunity for educators to rethink educational practices towards more engaged and responsive educational environment, by integrating the experiences and perspectives of politically active youth in light of School Strike 4 Climate (SS4C) movement.

Effect and prospective augmentation of Environmental education considering Demography:

Wan & Du (2022) utilized data from the 2013 China General Social Survey for their study titled “Influence of Social Capital and Environmental Knowledge on Pro-Environmental Behaviour in China” observed that higher levels of social trust and adherence to social norms significantly promote private pro-environmental behaviours, such as energy conservation and waste reduction; while, expansive social networks and active social participation were found positively associated with public pro-environmental behaviours, including community environmental initiatives and policy advocacy. Environmental knowledge further enhances these behaviours, serving as a crucial mediator that amplifies the effects of social capital components on individuals' environmental actions.

In research article titled "Public views on plastic pollution: Knowledge, perceived impacts, and pro-environmental behaviours", Soares *et al.*, 2021 investigated public perceptions of plastic pollution, focusing on how sociodemographic and psychological factors predict individuals' environmentally friendly actions. Results pointed that both sociodemographic variables and awareness of plastic pollution's impacts, significantly predicted pro-environmental behaviours. In terms of participants, older participants and women reported engaging more in such behaviours, while financial incentives emerged as relevant motivators.

Effect and prospective augmentation of Environmental education considering Gender:

In a study aimed to assess "The effect of gender on environmental attitude: A meta-analysis study", Gökmen, 2021 found a small, but statistically significant size favouring females, indicating that women generally exhibit more positive environmental attitudes than men. Further statistical analyses revealed that this gender difference is most pronounced at the primary education level, suggesting that early educational interventions could be pivotal in fostering environmental awareness.

Effect and prospective augmentation of Environmental education considering Consumers:

In an attempt to study consumer behaviour regarding food and drink products, via assessment of environmental sustainability labels by Potter *et al.*, 2021 it was observed that labels can positively affect product selection and purchasing decisions. Therefore, it was suggested that labels could be made more effective by optimising their design, format and presentation. Authors mention that impact on actual consumption remains underexplored.

CONCLUSION

It can be fairly concluded from this mini review, that conventional environmental education cannot suffice as its translation into practice and daily habits requires value addition, in terms of exposure to nature, utilising prompts during lectures/ teaching practice, adequate and appropriate training of teaching staff, encouraging pro environmental beliefs (both publicly and privately), integrating politically active youth, creating mass

awareness of pollution's impacts, fostering environmental awareness during early education and optimise labelling of products and consumer goods.

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