Sustainable Innovations for Lifestyle, SDGs, and Greening Education

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Abstract. HRDEF is *a*ddressing promising developments towards UN Sustainable Development Goals (SDGs) and sustainability of our planet Earth. As per data from various studies, climate education, 21st century skills are ignored in mainstream education [Garg, 2020]. To bridge this gap, HRDEF build capacity for citizenship, Climate Action, and SDGs among youth, professionals so that they are able to tackle future challenges. Building an inclusive, effective path for the sustainable future with SHWID require inclusive, quality education. In this regard, learning, engagement with games, hands-on activities is very important, and our work showed that leaners understand, take action for climate change, SDGs. HRDEF is developing Educational Games, Hands-on Activities kits for school students, college youth; conducting workshops with them, educators to teach a specific curriculum topic related to sustainability such as climate change, water cycle, energy that increased player's motivation towards science, sustainable work environments. HRDEF presented their work at the TECH 2017, 2018 UNESCO MGIEP, UNESCO ESD 2021, and UN HLPF side event 2021, 2022, STI 2022. We discuss use of games for students and youth in different settings for advancing SDGs, building sustainability concepts for Healthy Planet. HRDEF inculcate, motivates learners for STEAM, 21st Century Sustainable living. Apps on SDGs, COVID-19, hands-on activities, quiz, model making, projects and other creative forms of expressions increased players motivation towards sustainability. Students, youth of our after-school GOAL program become motivated, equipped with self-confidence to excel in life and creating sustainable future. As systemic changes required continuous working and time for visible performance.

Keywords: Sustainable Lifestyle, SDGs, Greening Education.

1 Introduction

Lifestyle for Environment (LiFE) movement currently required in our society because of issues of climate change, sustainable development, sustainability of life, its inhabitants, and our planet Earth. 21st century skills and pro-environmental behavior are missing in schools, Higher Education Institutions (HEI), and work places. Yale University research on climate change communications pointed out that 65% of Indian

population is not aware of climate change published in 2016. Thus, everyone urgently needs to include climate change and ESD in a radical way to address future challenges. Humans impact are visible in the form of development since industrial age such as burning fossil fuels, deforestation, pollution, and overpopulation which results in soil erosion, poor air quality, health issues, migration, loss of biodiversity, undrinkable water, changes in ecosystem, limitation of natural resources, food. These human generated activities leads to extreme climatic events, more disasters such as heat waves, rising sea levels, melting glaciers, storms, warming of oceans that directly, indirectly causing loss of life, livelihoods, biodiversity, infrastructure, and socio-economy in last couple of decades. Therefore, we need to think how our lifestyle related to climate change affects such drastic climatic events.

Using plastic bags, single use plastic items, wastage of water, energy, fuels, improper waste management, and our modern lifestyle practices or behavior are problem for environment and acts as trigger points for climate change. As per Sandrine Dixson-Declève, co-president of the Club of Rome "Behavior change can only do so much without a full turnaround from our pro-growth politics, financial and economic models towards a more holistic well-being economy"[Akenji et. al., 2021] and "Without addressing the way the wealthy live, it will not be possible to curb climate change." The research calls for a "rapid and radical" reduction in carbon footprints by the Hot or Cool Institute, based on an analysis of half of the G20 group of countries, to keep the 1.5 Celsius warming goal within reach [Beh, 2021].

2 Global Partnerships for 'One World'

Through education we transfer knowledge, values, and skills across generation to facilitate societies to build the foundation for sustainable future. But many barriers to education access, outcomes, and monitoring of progress are main challenges that need to be addressed for achieving SDG 4.7 and interlinkages of SDGs for global partnerships [UN Reports]. The global climate education and the concept of ESD are unable to provide radical transformation of education systems needed to guard against climate change. India's Philosophy of 'One World', Global Partnership, and culture of support is known for centuries. Uniting all stakeholders for their role in shaping the 2030 Agenda and the SDGs on three pillars of economy, social, environment with culture based on the principles of equality and humanity was very important for the global society.

Children, youth, professionals need to imbibe greener values such as adopting gardening, ReConnect with Nature, sustainable living to maintain the environmental balance, under the action plan of environmental protection, conservation of environment, and to create the awareness among citizens Greening Education, ESD are must [Garg, 2021]. Much of the climate change research has been done in USA, Europe, Australia or developed world than in developing countries which have different eco-socio-cultural patterns. Thus, we need to conduct more studies that are universal in

nature and merge with balanced factors related to human behavior impact on climate change to unite for 'One World'

3   Innovations in Quality Skillful Education: Games for SDGs, Sustainability, and LiFE

Games offer experience of adventure, challenge, and hold the attention of players for hours. People acquire new knowledge, complex skills from game play preparing them for sustainable development [Noonoo, 2019; Stommen et. al., 2016]. This paper based on case studies for developing sustainable lifestyle, climate change capacity building in students, educators. Some games are external designed while we designed games keeping in mind Human Work Interaction Design approach through studying work settings and embedding screenplays, rules for better understanding [Clemmensen et.al., 2005; Campos et. al., 2009]. Youth can be change agent and driver for ESD through developing skills given in figure 1.

Fig. 1.   How young people can be driving force for sustainability and act as change agent?

Thus, through our board game on water management, we educate learners and community on related issues. We encourage interactive, embodied learning that help learner to develop creativity, critical thinking, and problem solving that are essential as the 21st Century skills and pro-environmental behavior [Mustaquim & Nystrom, 2014]. We conducted analysis on environment awareness, motivate learners to do good act and they pledged for the same, positive actions for sustainable society. Demographic differences such as household size, family patterns (context, gender, income, minority status, motivation, incentives); psychological factors such as needs, wants, rewards, goals, values, ideologies, beliefs, attitudes, world views; cultural norms, and empathy to nature affect consumption. There is need to understand delicate balance between environmentally responsible behaviors, Eco-Consciousness, and happiness based on above factors w.r.t. different economies, rich-poor divide.

4   Transformation of Education to create Eco-Consciousness

Education have made important contributions to development but now need more participatory, community oriented accountability to shape Generation Z's future with sustainability in mind to create Eco-Consciousness. We are motivating individuals, students, youth, and households to reduce their electricity, water consumption, use

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local resources, carry their own water bottle, bag, segregate waste at source, promote composting, reuse old plastic for crafts, use both sides of paper, reuse it, use cycle or public transport when possible, donate old items. Learning occurs not just in the game play but other kinds of making activities encourage collaboration among participants, thus provide a context for peer-to-peer teaching and for the emergence of communities of Learners. It will go a long way in nurturing spirit of inquiry, fostering creativity and developing culture of innovation among learners; equipping them with skills and competence to create equitable and sustainable future. We require radical transformation for Climate Action, SDGs, LiFE, and Sustainability Education. We need to adopt sustainable living, contribute towards climate action, and try to be SDGs change maker.

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