Gamification for Sustainable Development

An International Symposium

Theme: Sustainable Behaviour

Abstract
Social Awareness of carbon emissions is at the forefront more than ever with growing concerns regarding the planet’s survival. Global warming presents one of the greatest epistemic environmental threats of our age. While CO₂ emissions have returned to slower growth rates, with a pronounced slowdown between 2014-2016 in the USA and European Union, the growth in China/India specifically, and most developing nations has dominated global trends for the past 20 years (Peters, G; Andrew, R; Canadell, J; Friedlingstein, P; Jackson, R; Korsbakken, J; Peregon, G 2020). Contributing to the continued growth of CO₂ emissions is the implied correlation between higher levels of economic activity and the requisite use of non-renewable resources (e.g. coal, oil and gas) all resulting in more emissions (Ahmed.R; Sabau.G; Haghiri.M, 2019). Much of the contributors to increased CO₂ emissions are linked to conversion of raw material into economic outputs specifically for energy & consumables. This is further capitulated by mass consumerism and trade openness’ creating greater movement of goods and services across borders fueled by modern technologies and managerial philosophies that are polar opposite to environmental friendliness. While social activism exists for CO₂ emissions reduction the degree of traction remains relatively negligible. Policies, programmes and projects aimed at addressing global climate change, requisite for social and institutional change to support climate variability, risk and its future impact (Corbera. E; Roth. D; Work. C, 2019) have been lethargic at best. There is an urgent need to create sustainable social behaviours which exact pressure on policy makers, inform improved decision-making and act as levers for improvement of the planet’s survival.

This abstract explores the potential of gamified approaches (Hamari, Koivisto, & Sarsa, 2014) to incentivize carbon emission reduction posing the question: How can we utilize gamified approaches to create/increase requisite (positive) sustainable behaviours to enable significant change regarding carbon emissions reduction. The abstract utilizes a combination of a conceptual gamified framework & toolkit utilizing crowd-sourced methodologies to assist in creating sustainable practices, leverage information sharing through crowd-sourcing as a source of collective analytics for policy makers and provide developmental guidelines for continued educational awareness and action.

Keywords: Carbon Emissions, Gamification, Behavioural Change, Crowdsourcing

References
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