

**Title:****Education for Resilient and Sustainable Futures**

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**About the Author**

An Architect, Urban Planner and Sustainability Strategist with international experience across a diverse range of sectors including residential, corporate, industry, museum, health, education, housing and public architecture and interiors. He is a founding partner at Transenviro Design Studios and is passionate about sustainable development, education, and heritage. He is actively engaged in the development and implementation of 'Ecohousing', which is India's first residential building Green Certification System. He also facilitates a national think tank – 'EcoSTEPS', which primarily engages in inquiring, brainstorming, humanising and strategising sustainability ideas, initiatives and projects.

**Abstract**

What the future holds for us depends on how we act today. Our actions are driven primarily by our aspirations and needs, but influenced and conditioned by our beliefs, values, attitudes and experiences. To create resilient and sustainable futures, human society needs to make responsible and accountable choices today. With the predicted rise in natural and man made disasters, climate change and wide spread displacement of communities, we humans must evolve to be more resilient, adaptable and caring. To achieve acceptable levels of sustainability in the future, we must address the challenges associated with income disparity, equitable access to resources, environmental justice and inter-generational conflict. Hence the need emerges to introduce and establish neo-humanistic principles in human society and to do so there could be no better medium than 'education'. It may then be appropriate in stressing that education is the best mechanism for enabling resilient and sustainable futures. At its core, education must be about transformation (of attitudes, choices, environments and our core inner selves).

This paper explores and emphasises the idea of 'experience' being the best teacher and how our educational environments need to evolve and change to be able to create experiences that make us and our society more responsible and caring. The paper further highlights critical sub-environments, namely the social, economic, natural, built and regulatory environments. These must offer a variety of experiences and events that stimulate and educate us. Such a conducive environment needs to be created now to ensure that we convert this impending state of emergency in to a state of emergence and that our socio-economic and socio-ecological strategies address the need for human development, planetary preservation and spirituality to its fullest.

## Education for Resilient and Sustainable Futures

What the future holds for us depends on what we hold for the future. To have a more meaningful, resilient and peaceful future, we must take necessary action today. By the year 2020, half of India's billion plus population will be under the age 18. This new generation of people will have access to more advanced technologies and scientific understanding, but will also consume resources at unprecedented levels. Therein lies the dilemma as well as the opportunity underpinned by the need to take responsible decisions and develop correct attitudes that help preserve life-supporting global environmental conditions.

We live in times of wide spread environmental degradation, economic disparity, resource depletion, climate change and human conflicts. More number of people are displaced today than ever before due to intensified natural calamities, conflicts and climate change. A recent UN publication states that over the next two decades, India will be one of the worst affected countries in terms of number of displaced refugees emerging within the country as well as from the neighbouring geographical regions. It is now critical for all of us to become more adaptable, resilient and accommodative in the wake of mass global human displacements.

A recent study concluded that at least 50% of global terrestrial surface must be left untouched by human activity to enable our planet to self recover and replenish essential resources required for all life-forms to thrive, not just humans. This is a big ask in light of current trends in urban densification, population growth, resource depletion, food production, consumption and waste creation. A global paradigm shift in our attitude and approach towards environment preservation is required. Younger minds must be exposed to environments and opportunities conducive for them to develop sustainable aspirations, make responsible choices and evolve resilient futures. After agriculture, industry and knowledge, the next revolution is and has to be 'sustainability'. Humans need to be more empathetic, ethical, sensitive, responsible, equitable, honest, caring and above all, loving towards all other life-forms and the Earth as a whole.

Hence the need emerges to introduce and establish neo-humanistic principles in human society and to do so there could be no better medium than 'education'. It may then be appropriate in stressing that education is the best mechanism for enabling resilient and sustainable futures. At its core, education must be about transformation (of attitudes, choices, environments and our core inner selves). It must bridge the gap between ego and universal humanism. It is rare for individuals to create long lasting impact of social significance. Instead, how we educate and raise our children will have a perpetual inter-generational positive collective social impact.

Human beings develop attitudes based on experiences and external stimuli. An attitude is that part of an individual's personality that defines his or her self and is the discriminatory behaviour displayed by an individual. A wide variety of interpersonal behaviours and cognitive processes such as behavioural intentions, liking, dispositions, prejudice and preconceptions collectively can be termed as 'attitude'. Attitudes are learned, easily transmittable and difficult to shed. A strong belief or predispositions about the external stimulus are the basic building blocks of an attitude. When people experience a certain event or are affected by an external stimulus to such an extent that compels them in developing a set of beliefs, they invariably convert these beliefs into attitudes. Society has a big contribution in the formation of individual attitudes and these attitudes in turn govern the lifestyles and behaviour patterns of the individuals who then contribute to the character of the society as a whole. It is a self perpetuating cycle.

Attitudes further develop into intentions and behavioural patterns. By controlling attitudes, one can control thinking and behavioural patterns. Attitudes can only be changed through a change in the underlying beliefs. Unlike attitudes, beliefs can be influenced and changed. Influence is that external force, event or an experience which initiates the process of change. Hence it can rightly be concluded that experience is the best teacher and the environment we are in defines the nature, quality and significance of such experiences. The human perceptual process is primarily based on external objectivity and its relative internal subjective interpretation. While it is clear that we perceive the environment as it is, we do interpret this information based on an undefined pattern of

attaching levels of significance and relevance to a given event. This response mechanism may form the basis of individual characteristics that make all humans unique and hence the need arises for an educator to understand the process of perception, form a suitable method to inquire/investigate the psychological traits of the students and devise suitable learning strategies.

Experience contributes to what we learn and know and also to how we interpret what we perceive. The following elements constitute the human perceptual process and the practical integration of their deeper understanding may enable formation of better educational environments -

- a) Experienced Significance - may be described as the process of attaching significance and relevance to a particular experience resulting in the formation of preconceived notions and/or the semantic interpretation based on previous learning. The tutor must inquire into the past experiences of the student and rightly understand where he/she is coming from and aspiring to be.
- b) Knowledge, inherent or learnt – this may reveal the forces/sources, which have moulded, are moulding and will mould the experienced significances of an individual. The tutor may include a few short exercises or interactive models to understand the basis on which the individual takes decisions pertaining to their response.
- c) Weighing – each individual assigns a preferred weight to their interpretations to arrive at a final judgement of their current situation. This weighing may be influenced by the following – personal priorities, age, gender, cultural and social influence, education, occupation, financial and social status, disabilities and health issues and so on. The human mind tends to assign variables and weights to the information received through the senses on a highly circumstantial basis. A critical analysis of the participant's situation and possible future events may be taken into account by the educator to understand the way individuals will interpret or change their preconceived notions.
- d) Being aware of vs. taking account of – a crucial element in creating desirable experiences, this element defines the level of detail, quantum of information and the communication of appropriate messages embedded in the environment. To a large extent, it also defines the mode of communication and also the level, duration and location of interaction between the environment and the participant (educators and students). The educationists must understand and define elements that are important in such environment configurations.

Thus it is essential for the environment, that surrounds and stimulates us, to be conducive for individual and collective progress and evolution; in particular the educational environment. The educational environment is a multi-layered and multi-dimensional fabric that comprises several integrated sub-environments, of which the following are the most critical – *social, economic, natural, built and regulatory*. A brief discussion follows -

- a) Social environment – is the most important enabler / disabler of education access in our communities. India is plagued with highly detrimental social issues that restrict access to education based on caste, religion, status, gender and so on. It is also one of the key stimuli for social interaction, collective development and communal integration. Positive social elements such as equity, empathy, justice and co-operation must be at the forefront of our education systems.
- b) Economic environment – is probably the key to the full utilisation of all educational mediums by all stratas of the society. Economic conditions restrict the degree and level of education sought by various stratas. The public education system in India is largely subsidised, although of not much value in its practical application. Hence the more significant and useful forms of education may still be out of reach for students from lower income backgrounds. Also, in many cases, due to financial hardships, many young students have to stop or reduce their education in order to earn a living. The economic environment is a key force that makes an individual sacrifice or fulfill his or her desire to learn.
- c) Natural environment – was the most significant source of knowledge in ancient times, but today we have alienated ourselves from it and only learn about it in textbooks. An occasional visit to the zoo or the botanical garden is the closest we ever get to nature these days. How can we protect something that we are not in love with? We all must fall in love with nature and what could be a better way to do that other than by living with it. Bio-

philia and bio-mimicry must become a part of our education and also our daily lives. Nature is flawless and an endless source of information, knowledge and inspiration.

- d) Built environment – is the most influential aspect in our daily lives. The streets we walk in, the school buildings we study in and the homes we live in, all signify a degree of personalisation and preference that makes us feel comfortable, safe, respected and looked after. The spaces we build influence us in many ways through out our life. Sun light and natural ventilation have been proven to have positive effects on our learning abilities. The colours and textures on surfaces trigger certain emotions and responses in our minds and hence form the basis of our experiences in built spaces. Some spaces are inviting, some are calming, some frighten us while some repel. It is up to us to build an exemplary built environment around us to be able to send the right messages out and to serve as a platform for future generations to learn from and improve upon.
- e) Regulatory environment – may be deemed as the backbone of our education system and revolves around policies and strategies devised to create a robust and effective framework to enable development of pedagogy, mediums and curriculum, and the dissemination of education. This framework cannot afford to be static, as it currently is, but instead, it should be active and be able to respond to future needs emerging from various facets of our individual and collective lives. The system must identify skills in demand and shortage, create opportunities for innovation and entrepreneurship, delve deeper into accessing and harnessing indigenous knowledge and evolve better systems of inquiry, research and experimentation. Today, India faces the challenges of falling short of globally accepted education systems, while this was actually reverse in ancient times. The education policies and strategies of the future must also address the need to include spirituality, universal humanism, progressive utilisation and socio-ecological resilience.

Having said this, I must conclude that education is the key enabler for a resilient and sustainable future and it is crucial that we establish the most conducive environment to enable development and deployment of an appropriate and progressive education system. The environment, our greatest teacher, must offer a variety of experiences and events that stimulate and educate us. This environment needs to be created now to ensure that we convert this impending state of emergency in to a state of emergence and that our socio-economic and socio-ecological strategies address the need for human development, planetary preservation and spirituality to its fullest.