Original Research Article

Sustainable education – a need of the hour – creating of the hour – creating education for sustainable development

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Transformation with sustainability is the key feature in the 21st century and sustainable education is the answer. The term sustainable refers to preserving and continuing or being able to maintain or upheld. Hence in the context of the theme of this paper, a pertinent question that needs to be deliberated is what the purpose of education is and what is sustainable education? What needs to be maintained in all streams and all levels of education and how that can be imparted needs discussions, experimentation, and implementation. Swami Vivekanand has rightly said that good education is necessary for a person to stand on his feet, build his self-confidence and earn his living. The basic essence of education is the holistic development and complete well-being – personal, professional, and emotional leading to better abilities of self-inquiry and inquiry of surroundings, a critical mind, problem-solving approach, and positive thinking. Irrespective of the subjects taught the basic essence of education remains the same even today. The challenge is the changing modes of delivery and easy access to unfiltered information how do the new methods cope with keeping the base of the education strong.

The principles on which it can be designed. The methodology adopted is doctrinal and practical experiences. The model suggested is based on the experience of a number of workshops conducted involving many of the principles suggested in the paper. Hence the paper proposes the integration of sustainable education into the mainstream curriculum by presenting two designs created by the researcher. The models are unique and presented for the first time in this paper.

This paper will focus on the pedagogy which can be adopted for sustainable education in the technology-intensive world with the new normal of online classes or hybrid modes in the times of uncertainties of pandemics hovering on us and the role of various stakeholders involved in the education system. The recommendations in the paper can be integrated into any stream and level and make global learners happy and responsible professionals and citizens leading to better economic and social development. The paper is in three parts, Sustainable Education, Principles of Sustainable Education and Ways in which sustainable education can be imparted, and new technologies and pedagogy for sustainable education blossom.

Sustainable Education:

Sustainable education is often misunderstood as education for sustainability or education for sustainable development (ESD). However sustainable education is different from these terms and implies a deeper meaning. The idea of sustainable education can be drawn from Swami Vivekanand's vision and thoughts of education where he has always emphasized the purpose of education is to provide 'life-building, man-making, character-making assimilation of ideas". The ideal of this type of education would be to produce an integrated person. While we look

at any early syllabus the thrust areas remain in building character, self-confidence, promoting bonding and brotherhood, and holistic development. Irrespective of the stream of education these remain pillars for growth. So sustainable education would imply these basic core values which can be preserved and nurtured and becomes stronger over a period of time. Professor Stephen Sterling defines sustainable education as:

"a change of educational culture, one which develops and embodies the theory and practice of sustainability in a way which is critically aware. It is therefore a transformative paradigm which values, sustains and realises human potential *in relation to* the need to attain and sustain social, economic and ecological well being, recognising that they must be part of the same dynamic" (Sterling, 2001:22)". He further in the same paper specified Sustainable education implies four descriptors: educational policy and practice which is sustaining, tenable, healthy and durable.

- *Sustaining*: it helps sustain people, communities and ecosystems;
- *Tenable***:** it is ethically defensible, working with integrity, justice, respect and inclusiveness;
- *Healthy***:** it is itself a viable system, embodying and nurturing healthy relationships and emergence at different system levels;
- **Durable:** it works well enough in practice to be able to keep doing it.

While the term sustainability is often referred to in the context of economics and the environment, education must be sustainable with the pillars of values, self-confidence, feeling of oneness, and integrity.

In the building of a good nation and society, education plays a crucial role. Providing education that is sustainable is the responsibility of all stakeholders and not only educational institutions though they would always play a pivotal role as the maximum time the child spends in schools and colleges. It is here that pedagogy plays a crucial role. Hence when any curriculum is designed the principles of sustainable education should be kept at the forefront and not the education for sustainability. Sustainable education would invariably lead to all other sustainabilities.

Principles of Sustainable Education:

Education should cater to the creation of compassionate thinking, and whole-brain thinking. Confident minds to question and address the issues and concerns. Awareness of self and surroundings, acceptance of others, and adaptability to situations should be the thrust of raining. Life skills and application-based learning should be the focus in the specific subjects. Emotional professional and personal well-being should be the focal point of any course in any education system. The question remains is how to cover the same and what kind of curriculum should be designed.

I have designed a model based on three principles on which the curriculum for sustainable education can be designed in any stream.

UVR – Universal Consciousness, Values and Reflective Learning:

Universal Consciousness*:* This is based on Vedanta. Universal Consciousness is beyond the mind and heart. It's the conscious that can direct the mind and heart and not vice versa. Universal consciousness is the ability to recognise your own soul as supreme and also others' soul as supreme. This aspect of universal consciousness brings out the universal truth that all are one. Understanding the feeling of oneness makes the mind of the learner open to new learning and thoughts without any biases. And this aspect of no bias and treating all with equality is also then enshrined in a universal formal document viz UDHR Universal Declaration of Human Rights and also in the constitution of almost all countries. While we discuss in the formal education systems the principles of no discrimination on grounds of caste colour, creed, or race and emphasize on equality the basis of this flows from the principles of universal consciousness. It is imperative that every education system irrespective of the stream makes the students experience the universal consciousness. This can be done through the activities involving the head and heart and delving deep within. It's the self-awareness and self-recognition which forms the base of this powerful principle.

Value-based education: Values are basic and fundamental beliefs that guide or motivate attitudes or actions. Values describe the personal qualities one chooses to embody to guide actions. Values form action in personal and professional space and functioning. It is often taken as what is good and desirable. The term what is good and desirable may be debated to be subjective however there are certain basic values that are at the core of every human being viz kindness, compassion, and honesty. These values are eternal and required in every role and job. Hence any education system which is designed this should form the important principle. Values can never be preached and hence the pedagogy of the same has to be action-based. It is learned by observation and hence the role of all the stakeholders is very important. The significance of values finds a place in the mainstream syllabus also by way of punishment and penalty for violating the rules or not being trustful or kind or compassionate. Some examples here would be a provision which is made in environment protection laws, Protection of senior citizens and parents care and protection Act, Animal cruelty laws, domestic violence act etc. These legislations if understood in depth reflect the basic values that one should have and violation of the same is punishable in some form or the other.

The best pedagogy for incorporating value-based education in mainstream education can be based on ABC – Action, Belief, and Correct. The ABC model of value education emphasizes Action-oriented to do good and correct things. And the good actions are contagious so the fellow students and community also follow.

Belief is for doing what is right, the self-belief is very important. Inculcating the habit of believing in one's own action and accepting the results of the same Correct, being right. The heart invariably knows what is right. Believe in yourself and take the right decisions.

Reflective learning: The third principle of education is reflective learning. Reflective learning involves students thinking about what they have read, done, or learned, relating the lesson at hand to their own lives, and making meaning out of the material. It's more than just memorizing some facts, formulas, or dates. Today when information is flooded at the touch of the finger on the devices which is on every palm, the ability to understand the information and analyse with the whole mind is important. The role of the teachers today is changed from information providers to information using. From memorising minds to creating thinking minds is the need of the hour. Hence any education system today needs to design its modules on the principle of reflective learning.

6 London Business School at https://teaching.london.edu/development/teaching-strategies/reflective-learning/

There are several advantages of reflective learning for the student, which include:

• Taking responsibility for own learning and personal growth

• Being aware of internal thought processes and motives for own action

The most important advantage is in reflective learning there is no right or wrong but own perceptions and an opportunity for peer learning.

The pedagogy which can be adopted for reflective learning is inquiry-based and interactive. The role of the teacher is to ask students and enable them to do a good debriefing. Reflective learning becomes more meaningful when done amidst students.

The UVR model will enable us to lay down the principle in designing the curriculum. A thoughtful curriculum delivery plan will enhance the learning with a strong base. How can we keep sustainable education intact in the technology-driven world is the next segment of this paper which would focus on the positives that technology has bought and how it can be used to the best keeping in mind the UVR model of teaching.

Sustainable Education in the Technology-Driven Systems:

To be away from technology is impossible. Rather the technology-driven system is the next world. Connectivity to the virtual world and education systems and universities in the virtual world is the future. We may not need land but space in the cloud to start new universities schools and colleges. Connectivity to any part of the world is by the click of the mouse. However, the learner is still an individual and human. Hence the basic core of education irrespective

of the space or mode should remain sustainable. The education system which was by and large in brick-and-mortar mode worldwide suddenly went online due to the pandemic. LMS systems and online meeting platforms became the virtual classroom. With God's grace, the dark clouds of a pandemic are moving away however the new normal which were created still finds place due to some advantages it holds over the brick-and-mortar classrooms. The hybrid model of learning and flip classroom are common these days. Hence to be adapted to this new normal and yet apply the UVR model is something that needs to be explored and adopted. The very important advantage that the technology gives is accessibility, inclusivity, wider reach, no space constraints, unique features, and networking.

A very important disadvantage that has been discussed by many is increased screen time, less personal attention, and lack of attention span.

Keeping these advantages and disadvantages in mind I have designed the **ADAPT** model which can be adopted in the technology-intensive education system. This **ADAPT model** is keeping in mind the UVR principles.

1. **Activity Based Learning**: Activity-based learning with proper briefing and clarity should be the base of all curriculum delivery which generates feelings and understanding. The technology gives unique features by which Activity-based learning can be made more interactive and inclusive. Multimedia tools can be adopted to make it engaging, interactive and participative. Tools like PowerPoint with less words and more visuals can be very effective. The audio visuals help retaining the participants attention hence music can be included. Chat box feature enables to share views hence participants who are hesitant to talk in classroom can actually be comfortable in this mode and express their views. What's app groups are common these days. These groups can help in sending periodic reflection questions enabling the participants to be on the journey of self-awareness and awareness about surroundings. Technology holds huge potential for imparting education on UVR model.

2. **Discussion and Feedback:** The activities become more meaningful if a good discussion and debriefing take place. Technology enables large group discussion by creating break out rooms or via discussion forums on Learning management systems. This discussion need not be confined to the given span of time like in a physical classroom. A discussion forum can be kept open for a particular time enabling the participants or students to reflect

3. **Application:** The learning of universal consciousness, values, and reflection should be ensured is applied in real-life scenarios. Periodic feedback from the learners can enable them to understand if the UVR model is a creator of universal goodness. Technology has made taking the feedback easy through google forms.

4. **Possibilities:** Education should lead the learner to identify the possibilities of the self. This aspect would enable any learner to build the self-confidence which is key to success. To enable participants to know their own possibilities, and how at times they react in situations that seem to be impossible but have simple solutions, that can be done through simple games, strength stories, and reflections.

5. **Transformation through Technology:** Technology if used in the right way has the power to transform. Various software and technologies available today can be used to play thought-provoking games for global goodness, sustainable education, and the complete well-being of individuals and society.

   Sustainable education will lead to macro and micro benefits. Education with a value system, differences transforming into feelings of oneness, and economic development for societal transformation will be the eventual outcome of sustainable education.

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Education for Sustainable Development (ESD) empowers learners of all ages with the knowledge, skills, values and attitudes to address the interconnected global challenges we are facing, including climate change, environmental degradation, loss of biodiversity, poverty and inequality.

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ibid

Developed by **Ned Herrmann**, Whole Brain® Thinking divides the brain into four quadrants. Each quadrant represents a different part of the brain: Analytical, Practical, Relational, Experimental at https://www.thinkherrmann.com/

London Business School at https://teaching.london.edu/development/teaching-strategies/reflective-learning/