

## **“Sustainable Development” - a philosophical approach within the context of education in India.**

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### **Abstract:**

Sustainable development is one of the most important chapters of discussion in the 21<sup>st</sup> century. In this context, the education sector is also playing a vital role in accomplishing sustainability. The present paper is discussed on the core concept of sustainable development. It implies the role of education in sustainable development and makes a correlation between Environmental Education (EE), Education for Sustainable Development (ESD), and Development of Education (DE). This paper highlights the main components of sustainable education and how sustainability adds purpose to education. The discussion brings to light sustainable education for a better and brighter India and sustainability gives relevance to the curriculum—providing adequate training; based on pertinent competencies to the engineering students in the field of sustainable development.

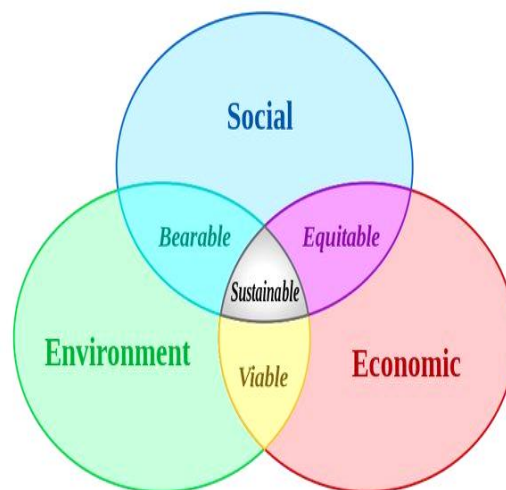
Key words: Philosophy, Sustainable development, Ethical dimension of education, Competencies.

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### **Introduction**

The concept of Sustainable Development complies with the progress that congregates the present needs. It by no means cooperates with the capacity of future generations to satisfy their self desires. The core technique of the term ‘sustainable development’ is the improvement that appears to balance distinctive, regularly competing, requires towards a focus of the environmental, financial, and social boundaries, we are facing as a society. Sustainable improvement basically implies human society’s effect at the herbal surroundings. Brundtland commission (formally the sector commission on surroundings and improvement) delineated the notion of sustainable improvement in 1987, as “Development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (Brundtland, 1987). This rationalization considers that when the improvement of human wishes and improvement of the fine is needed, it must occur without reducing the ability of the natural environment meeting present and future

needs. The movement of sustainable development was basically raised to protect earth's regeneration capacity and the interests of future generations. In the beginning the term sustainable development encompassed the development of existing environment including different policies but presently the key principles of sustainable development emphasize the stress on social justice and fight against poverty, since 2002. The mainstays of sustainable development are economy, society and environment. The following diagram shows that environment plays a vital role in human society and in economy.



### **Role of education in sustainable development:**

In an Irish context, **Elaine Nevin** discussed the role of education in attaining sustainable development. It explores the connection among improvement education (DE), education for Sustainable development (ESD) and Environmental training (EE). The object examines how these 3 'educations' can expand and develop, and considers examples of 'good exercise' in ESD in the context of Irish country wide coverage frameworks, especially specializing in how ESD can suit into these frameworks. The environment and environmental development is the main focus in ESD and simultaneously it also gives coverage in different areas- such as alleviating poverty, corporate responsibility, citizenship, human rights and peace, ethics and responsibility in local and global environments, democracy, justice, gender equality, management of natural resource and biological diversity. There are some important features for the successful implementation of ESD as well as giving the identical importance on each the gaining knowledge of system and the results

of the schooling technique (adapted from 'UN Decade of Sustainable improvement' UNESCO Nairobi Cluster, 2006). ESD should:

- Be embedded in the curriculum in an interdisciplinary and holistic way, bearing in mind an entire-institution method to policy making.
- Percentage the values and ideas that underpin sustainable development.
- Sell essential wondering, trouble solving and motion, all of which broaden self assurance in addressing the challenges to sustainable improvement.
- Appoint an expansion of educational strategies, including literature, artwork, drama and debate to demonstrate the procedures.
- Permit rookies to take part in choice-making on the design and content of educational programmes.
- Address nearby as well as global problems, and avoid jargon-ridden language and phrases.
- Appearance to the future, ensuring that the content material has an extended-term perspective and uses medium and long-time period making plans.

### **Correlation between Environmental Educations (EE), Development of Education (DE) and Education for Sustainable Development (ESD).**

In spite of so many differences, Environmental Educations (EE), Education for Sustainable Development (ESD) and Development Education (DE) are correlated in some common points. All are very effectively apprehended with understanding, attitudes and behavioral change through education. All are centered with the endorsement of human values; i.e. self respect, respect to others and respect to the world and planets. The Environmental training specializes in the conservation and safety of the environment collectively with herbal habitats and ecosystems.

Development Education (DE) focuses on improvement of quality of life for people through alleviating poverty, promoting social justice exploring basic human needs and makes relations to local and global actions. It highlights on interdependence and interconnectedness between people locally and worldly but does not conventionally broaden this to ecosystem interdependence or specific environmental concerns. The study helps people to acquire knowledge, skills, attitudes, values and behaviors as they can be capable to develop the world analyzing it critically and make it greater just and equitable location. It has much in not unusual with different wings of social and political training (DCI, 2003) including human rights training, peace training, multicultural

education, education on race and race problems, environmental education and in the long run citizenship training etc. The basic motto of Education for Sustainable Development (ESD) is the development of quality life for people without destroying the environment. ESD extends upon the social and human rights element in DE and other instructional sectors to include a robust environmental attention. ESD stocks many similarities with DE and addresses troubles such as weather trade, oil shortages, and water pollution, the want to keep biodiversity in addition to poverty relief and human rights. ESD and DE also hire similar methodologies together with: crucial wondering and trouble fixing, experiential gaining knowledge of, position play, guided interpretation, debate, futures thinking and participatory selection making.

### **Components of sustainable education.**

Sustainable schooling is an academic method aimed at organizing in students, colleges, and groups the values and motivations to behave for sustainability now and inside the destiny – in a single's very own existence, in their groups, and on a global platform. Gaining knowledge of surroundings, curriculum and teacher are three major components of sustainable education. Mastering surroundings is one of the most vital additives of schooling wherein a student learns and creates. Four major pillars of education for sustainability are i) social equity, ii) economic development iii) environmental protection and iv) cultural / human sustainability. The intention of sustainable schooling is to “make certain inclusive and equitable satisfactory education and promote lifelong gaining knowledge of opportunities for all.”

### **Sustainability adds purpose to education.**

We will be able to enjoy the gifts of nature fully in future if we make well correlation between our effective ways of thinking and significant adjustment to our life styles and it is only possible if we are properly educated regarding the preservation of our natural resources as to make sustainable futures. With this regard, Environmental Education is core component which can make people more conscious and develop the full sense of sustainability of nature. It is necessary to add this curriculum to all streams of education from school levels to higher education. In present scenario UNESCO is advising to all countries of all over the world to introduce environmental education as a core curriculum component by 2025. Audrey Azoulay, director-general of UNESCO explores “*Education must prepare learners to understand the current crisis and shape*

*the future. To save our planet, we must transform the way we live, produce, consume and interact with nature. Integrating education for sustainable development into all learning programmes must become fundamental, everywhere”.*

In recent times, Singapore’s education minister, Lawrence Wong, publicizes the concept to introduce sustainability education in all school levels and higher classes in the course of ‘**Eco Stewardship Programme**’ (ESP). The curriculum will be initiated along with the Singapore Green Plan by 2030 aiming at the inspiration of wider mindset changes and develops new concept, ideas and environmentally conscious habits among the students through which they can learn how to save the environment by effective using existing resources. The school infrastructures will be adopted with new sustainability features, such as use of LED lights, direct-current ceiling fans, and use of solar panels; e-vehicles and other energy efficient technologies. The students will be able to adopt new daily habits in respect to sustainability, such as minimizing food waste, reducing the use of water, energy consumption and recycling. Wong says, *“Building a culture of sustainability requires schools, families, and the community to complement one another’s efforts. The learning from schools will reinforce our community efforts, and in turn, will encourage and cultivate more good habits to create a ripple effect on society”.*

## **Sustainable Education for a better and brighter India.**

The concept of sustainability in India lies in few simple words like conservation of environment and economically and ecologically sustained development together. The concept of sustainable development encompasses few components like systematic way of planning of development, social, economic and environment.

Next the question arises why sustainability needs for India? High growth of population, mushrooming of startups, growing urbanization, implementation of digitalization and adaptation of hi-tech technology feels India the need of sustainability. India's primary object centers round to offer common get proper of entry to cheap power in a sustainable manner. We're now an energy-surplus country.

193 Member States on the UN fashionable meeting Summit in September 2015 adopted agendas including 17 sustainable development goals (SDGs) 2030 and 169 targets. It came into effect on 1 January 2016. These 17 SDGs and 169 targets made pregnant the clear concept of sustainable development in India. The government of India's foremost think tank, NITI Aayog, has been

entrusted with the task of coordinating the SDGs, mapping schemes associated with the SDGs and their goals, and figuring out lead and helping ministries for each goal.

Regarding the discussion on the present status of sustainable development in India, it is to say that the study found nationally, India is off target for 19 of the 33 indicators. In respect of critical indicators, such as, access to basic services, wasting, child marriage, overweight children, anemia, use of tobacco, partner violence and use of modern contraceptive, it is surveyed that more than 75% of districts in India were off target.

### **Role of Gurukul in Indian context**

In respect of sustainable education system, India is fulfilling one of the most important goals of sustainability ensuring comprehensive and quality education for all. India's ancient life learning sustainable education system is lively acquired in the curriculum and activities of **GURUKUL** which is the portrait of rich traditions and cultural heritage of ancient India. Its curriculum is involved with the most precious and well-known education and life learning systems practiced in ancient India.

Gurukul is the residential life learning schooling system whose origin derives from 5000 BC in the Indian subcontinent. In Vedic era, Gurukul was the centre of learning where the students (*Sisyas*) complete their education under a living ideal (*Acharya*) residing at *ashram*, growing up in a natural phenomenon. They realized how to deal ethical, cultured and well disciplined life. All were considered as equal in the ashram and no fee was charged from the learners. But the *sisyas* needed to provide a *gurudakshina* which changed into a token of recognize paid to *Acharya*.

In Gurukuls, the *sisyas* acquire their knowledge in all subjects through practical learning, self learning and extracurricular activities. In one side the *Acharyas* imparted their knowledge to the *sisyas* for the growth of their personality, body wellness, positivity and intellectual properties; on the other hand; they also taught how to deal peaceful life encompassed with devotional practice like meditation with naming sounds, *yogas*, *asanas* and chanting *mantras*. The *sisyas* become self dependent through doing day to day activities in their own hands.

The following lessons derive from Gurukuls related to Sustainable Education.

- Developing their thoughts about existence, happiness and humanity.
- Personality development.
- Awareness in lifestyles and career via holistic training. Sense of discipline.
- Feel of field.
- Admire for elders, professionals and nature.
- Expanding thoughtfulness and intelligence.
- Admiration for nature, animals, and human beings.
- Critical thinking and thoughtful decision making.

In present scenario of India, people prefer private school with new age curriculum. The Bal Gurukuls functioned through the 'Indian development foundation' – a national NGO in India offer a qualitative coaching empowering and remodeling the child with higher holistic schooling.

#### **Role of environmental schools to establish Sustainable education in India.**

Mobius Foundation in south India first introduced India's first environmental school. It's miles the first eco-school in India and south Asia. It focuses on imparting environmental education; building on core philosophy of sustainability to the students by making their sustainable future. Its impact covers a balanced combination of modern education, extracurricular, self skills and ability and overall sustainable development. The education system fosters the physical, psychological social and well being of a student.

#### **Sustainability gives relevance to the curriculum—providing adequate training; based on pertinent competencies to the engineering students in the field of sustainable development.**

The term competency implies the well coordination of visible and quantifiable knowledge, skills, behavior and abilities that add to improve employee's performance and eventually result in organizational success. The competency skills focuses on individual employee's Knowledge, attitudes, behaviors and skillful performance. The core elements of competencies are- i) good relationship building, ii) develop people, iii) leading the change, iv) capability to inspire others, v) ability to think critically, vi) ability to communicate clearly, vii) create accountability.

By the end of 2003, a very crucial issue raised regarding the standard for professional registration, especially for engineers. In this context the educational and professional institutions have to make new recruitment preparing and maintaining the parameters of competencies with sustainability. It implies that the teachers, trainers and employers of engineers have to be adaptive with new and upgrade skills, education and professional experience for the upcoming generation.

There are generally eight sustainability competencies for the sustainable development goals and these are as following-

- i) Systems thinking competency,
- ii) Anticipatory competency,
- iii) Normative competency,
- iv) Strategic competency,
- v) Collaboration competency,
- vi) Critical thinking competency,
- vii) Self-awareness competency,
- viii) Integrated problem-solving competency (UNESCO, 2017).

Three areas are to be covered to establish relevant competencies and sustainability in an organization.

- i) **Integration of courses:** A separate course curriculum could be introduced in with gradual integration creating it pleasurable and prevailing additional time which is most significant rather than cramming. The integration would be made considering what courses are needed for it.
- ii) **Develop competencies:** The delivery instruments are very important and it is needed to be identified. Livelihood case studies are more relevant than case histories. The task would be considered as multi- disciplinary where a good correlation between deferent departments would be made and give input in inter departments. Very significantly it is to judge that everyone is required to be a sustainability expert and they have enough knowledge to act suitably.
- iii) **Maintain responsibility:** The organizations have to maintain the high responsibility if they make hire people from external sources. The hiring people would be very eminent and efficient in their area of specializations.



### **Competency training – Engineering teachers and students:**

The outstanding performance would be expected from the industrial engineering teachers imparting qualitative, pioneering, original, value driven training and development programmes like workshops, seminars and it is the most important that the competency based training and development would be focused on a Holistic Learning/ Teaching Approach. Teachers should forever make a foot step at the forefront by improving their well skilled knowledge, personality and ability. For this reason, the strong and enormous research are required in the field of Training and Development imputing knowledge of Science, Technology, Engineering , Mathematics and convey useful and practical information to the future blooming industrial engineers.

### **Industrial Engineering Student Skills:**

The following skills are required for the engineering students.

- i) Critical thinking, ii) creativity, iii) innovation, iv) communication, v) collaboration, vi) information literacy, vii) media literacy, viii) flexibility, ix) adaptability, x) initiative, xi) self – direction, xii) social and cultural skills, xiii) productivity, xiv) accountability, xv) problem solving, xvi) leadership & responsibility.

### **Training Implementation:**

The Training and development process is a lifelong learning process. The training would be implemented covering the following areas – contextual, conceptual and content related competencies, educational transaction and activities, competencies related to evaluation, management, parent related, microteaching, research, blueprint preparation, innovation programmes, question making workshop, provide ongoing training support, supply system monitoring and backup recovery etc.

### **Developments:**

Developmental activities could be based on the following aspects- Classroom Management, Conflict Management, Discipline Management, Time Management, Session Plan / Work Plan., student psychology and emotional intelligence, Leadership Development etc.

## **CONCLUSION**

Through the above discussion we understand that sustainability of training and education implies aggregate of content fabric, studying strategies, and results that permits students increase an expertise base about the environment, the economy, and society, similarly to helping them

examine competencies. Schooling is not static however develops and modify with time. It should be used as a device on the way to emerge sustainable living and additionally offer possibilities to think severely innovate and offer answers towards nearby demanding situations that have a global relevance. Sustainable improvement in India encompasses a diffusion of improvement schemes in social, miscellaneous areas such as smooth electricity, easy water and sustainable agriculture, and human assets segments, having stuck the attention of each imperative and nation governments and additionally private and public sectors. Through above discussion we've got furnished an explanation of the ethical measurement of Education for Sustainable Development (ESD). The significance and versatile intricacy of this dimension display that moral considerations need to have a principal region in ESD.

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