

A Study of Existing Perceptions/ Understanding of Education for Sustainable Development of Indian Teachers

Anuradha Gupta*

Abstract

‘Education for a Sustainable Future–ESF’ fosters an understanding of the interconnectedness of ecology, economics and social equity. It utilizes a multi-disciplinary, learner-centered approach, and an innovative and participative style to sensitize and empower individuals, especially students, to think, act and re-act as responsible citizens and to find sustainable solutions to real life issues, at local, national and international levels. Hence, it is a mix of Environmental Education (EE), Value Education (VE), Citizenship Education (CE), Multi-disciplinary Education and Systems Education, and uses diverse educational techniques and strategies like experimental learning, enquiry based learning, situational analysis, forward and backward visioning, storytelling, brainstorming, and mapping to explore the issue in its totality.

This paper aims to highlight a number of aspects of ESF in the Indian context. It attempts to examine teachers’ understanding of and attitudes towards the concept of ESF and the reasons behind them. It examines on the one hand, the perception that the Gurukul system embodied the essence of ESF, and on the other, why ESF is sometimes considered a foreign import, difficult to assimilate and adopt. It also looks at how the subjective locations of teachers affect their perceptions of and attitudes to ESF.

This paper thus aims to assess and analyse the following with respect to Indian teachers:

- Their present level of awareness, and their knowledge of various concepts related to ESF.
- Their attitude towards ESF
- The skills and styles utilized by teachers to promote ESF in their day-to-day teaching.
- The nature of the support system, which facilitates the adoption of ESF in the daily teaching schedule.
- The constraints that hinder the adoption of ESF as a regular teaching tool.

* Prithvi Innovations, Lucknow
prithvinnovations@hotmail.com

- The extent of their inclination or willingness to adopt ESF.
- Their own ideas, suggestions and plans to promote ESF among other teachers.
- The degree of their concern and commitment towards developing guidelines and priorities for Education for Sustainable Development (ESD) in this decade.

The information and insights gained would go a long way in evolving a progressive, creative, dynamic, effective and practical strategy with regard to ESF in the coming decade, in line with the global requirement.

Introduction

Education for Sustainable Development/ Future—An Emerging Global Concept

According to Julian Agyeman, Assistant Professor at Tufts University, “sustainability places emphasis upon the need to ensure a better quality of life for all, in a just and equitable manner, whilst living within the limits of supporting eco-systems.” The views expressed above not only aptly summarise the views articulated in The Earth Charter but also sum up the underlying principles of ESF—the only means to attain the sustainability goals, as defined above.

The Earth Summit (The UN Conference on Environment and Development in 1992) in its Agenda 21, also emphasized the role of education in creating and nurturing sustainable communities. The Johannesburg Summit in 2002, re-affirmed the importance of education in achieving the Millennium Development Goal of international co-operation to promote strategies for Sustainable Development (SD). Then in December 2002, the United Nations General Assembly declared the period from 2005 to 2014 the Decade of Education for Sustainable Development (DESD).

DESD envisions a world where everyone has the opportunity to benefit from education, and learn the values, behaviour and lifestyles essential for a sustainable future and for positive societal transformation.

Hence, if communities and nations hope to achieve sustainability goals, basic education must be reoriented to integrate ESD at all the stages of education—pre-primary, primary, secondary, higher secondary and advanced—and within all forms of the existing educational set-up, i.e. formal and otherwise.

It is important at this point to clearly understand the concepts of ESD and ESF. ESD is future-oriented education that fosters understanding of the interconnectedness of ecology, economics and social equity. The five major components of ESD that guide and motivate people to seek sustainable livelihoods, participate in a democratic society, and live in a sustainable manner are as follows:

Knowledge

People need basic knowledge from the natural sciences, social sciences, and humanities to understand the principles of SD. Knowledge based on traditional disciplines supports ESD.

Values

They are an integral part of ESD, with respect at the centre: respect for present and future generations, respect for cultural difference and diversity, and respect for the natural environment. Values taught in school need to reflect the larger values of the society that surrounds the school. Social justice is also a central part of ESD, since it includes respect for the traditions and religions of other communities, meeting basic human needs, and concern for the rights, dignity, and welfare of all people.

Issues

Teachers should be equipped to help students identify and think about the complexities of issues from the perspectives of many stakeholders. Older pupils and university students need to acquire skills to analyze issues and the proposed solutions to them, understand the values underlying opposing positions, and analyze conflicts arising from those issues and proposed solutions.

Perspective

The ability to consider an issue from the view of different stakeholders is essential to ESD. Every issue has a history and a future. Looking at the roots of an issue and forecasting possible futures based on different scenarios are part of ESD, as is understanding that many global issues are linked. For example, over-consumption of such consumer goods as paper leads to deforestation, which is thought to be related to global climate change.

Skills

ESD must give people practical skills that will enable them to continue learning after they leave school, to have a sustainable livelihood, and to live sustainable lives.

Hence ESD is value-driven and utilizes interdisciplinary and multi-disciplinary, learner-centered approaches (as illustrated in Fig.1 & Fig.2), innovative and participative styles to sensitize and empower individuals, especially students, to think, act and re-act as responsible citizens and find sustainable solutions to real life issues, at the local, national and international level.

Figure 1. Education for Sustainability as an Individual Discipline

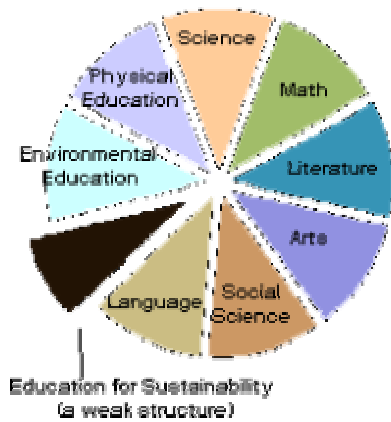
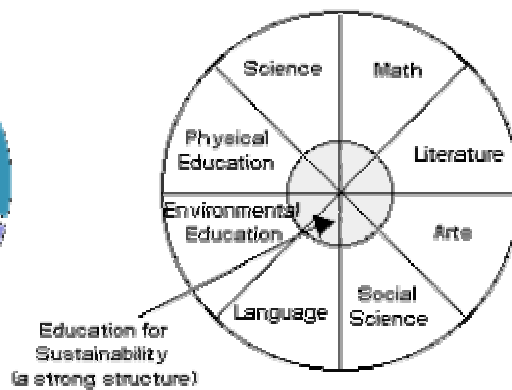


Figure 2. Education for Sustainability as a Multidisciplinary Subject



ESD is transformative education, which calls for transformational motivators or educators who can understand its continuously evolving nature. The challenge today before teachers is to integrate ESD in the formal structured curriculum by addressing all the above components in it (i.e., knowledge, values, issues, perspectives, skills and strategies). Simply adding more to the curriculum will not be feasible in most schools; they already have a full curriculum. Deciding what to leave out—what does not contribute to sustainability or is obsolete—is an integral part of the reorienting process.

The Roots of ESD in India

ESD has deep roots in Indian history. Since Vedic times, Indian religion and culture in its diverse forms has proposed, practiced and preached ESD as it is understood today.

One finds several instances in our holy scriptures where special stress has been laid on inculcating ESD from a very young age. The basic values and underlying principles of ESD were taught at home, and were later nurtured by the gurus, (i.e. the teachers) in the *gurukuls*.

Set in natural surroundings, the *gurukuls* (the traditional educational structure) provided an excellent platform to the shishyas (students) for a first-hand experience of nature.

This helped them to acquire a deeper understanding of the various issues resulting from the interconnectedness of society, economy and ecology, developed in them the right perspectives, values and skills so as to lead sustainable lives. Though challenging and difficult, the well-defined, structured and versatile approach of the *gurukuls* was unique in all aspects and very close to the present model of ESD being proposed across the globe.

Even in the pre-independence era, lot of stress was laid on EE since the *vidhyalayas* or the *padhshalas*(schools) were set in rural settings and had an open and flexible structure (i.e not confined to the four walls of the school building). This provided ample scope for a wide range of activities for the young students.

The Vardha scheme formulated by Gandhiji and the concept of Shantiniketan by Sri Rabindranath Tagore re-emphasized the importance attached to the concept of ESD in India down the ages.

With the coming of the British the Indian education system witnessed a major transformation both in terms of structure and methodology used. The present education system reflects the strong dominance of the British system. One rarely comes across the rich traditional *gurukul* system of education in modern India.

Despite the strong roots of ESD in Indian soil, do the present teachers in India understand ESD as the emerging global concept? Do they share the same educational goals when it comes to integrating ESD in the school curriculum? Do they consider ESD an important concept? Do they see it as a Western concept, a foreign concept difficult to assimilate and adopt? How many strongly feel that the *gurukul* system in India was in the true sense ESD? Are they ready to look beyond and innovate and experiment in this field? These are some of the vital issues that the present study aims to present, highlight and share with the various stakeholders of ESD.

Objectives

Teachers play an important role in the development of a child from a very early age, hence it is important to know what they think, understand and feel about ESD, both in the Indian and international context. The paper has thus been divided into three phases with the aim of assessing and analysing the following major components of ESD, with respect to Indian teachers:

- Their present **level of awareness, knowledge** about the various concepts related to ESD.
- Their **perspective or approach** towards ESD.
- The present **skills and styles** utilized by the teachers to promote ESD in their day-to-day curriculum.
- The nature of the **support system** that facilitates the adoption of ESD in the daily teaching schedule on a regular basis.
- The barriers or constraints that hinder the process of adoption of ESD as a regular teaching tool.
- Their **attitude, inclination or willingness** to adopt ESD.
- Their own ideas, **suggestions and strategies** to promote ESD amongst other teachers.
- The degree of their **concern and commitment** towards developing guidelines and priorities for ESD in this decade.

The information and insights gained would go a long way in evolving a progressive, creative, dynamic, effective and practical strategy with regard to ESD in the coming decade, in line with the vision of the DESD.

Background of this Study

A number of multi-dimensional, 'Beyond Class-rooms' programs on VE, EE, Community-participation and CE, Capacity Building for Teachers, organized by Prithvi Innovations under the broad theme of ESD, in different schools of Lucknow over a period of three years provided Prithvi ample opportunity to to closely interact with the principals, teachers and students of various schools. This helped in gaining some insight into the present system of education followed by various schools, the structure and content of the course curriculum of pre-primary, primary, middle and senior level, the competency and commitment of teachers, the teaching approach and methodologies followed by them and the evaluation pattern.

The overwhelming response and participation of all concerned (principals, teachers, students, parents, and staff) in the above programs, established beyond doubt the immediate need for this kind of re-orientation in the present educational system to integrate ESD in all disciplines, so as to make education a life-long learning experience capable of bringing positive socio-economic change leading to a sustainable future. It also highlighted the immediate need to develop a well-defined, focused study to explore and identify, examine and evaluate, compare and contrast such transformational interventions taking place outside India over a period of time, and to document such responses, to serve as the basis of further research and innovation in the field of education.

This is how the present study came into existence.

Methodology

As mentioned earlier the present research is as comprehensive and continuously evolving as the subject under study. Hence it has been divided into two phases.

Phase I- A Survey of Teachers of English Medium Schools in Lucknow.

Phase II-A Comparative Study of similar surveys done outside India, to examine the points of similarities and difference in the understanding and approach towards ESD between developed and developing countries.

Based on stratified random sampling, the teachers of famous public and private schools and professional institutes of Lucknow were chosen to represent the population of Indian teachers.

Survey Instrument

Since we did not find any existing standardized instruments suited to the requirements of the study, it was decided to develop our own survey instrument, i.e. a questionnaire (a mix of quantitative and qualitative questions/statements) to examine the Indian teachers' perceptions/understanding of ESD. Besides this questionnaire, personal and group interviews were also conducted to supplement and validate the data collected through the questionnaire.

Since there was no standardized questionnaire to record such responses, it was decided to frame a comprehensive questionnaire for teachers, as a first step. In order to do so one to one

discussions were held with some of the principals and teachers of public and private schools in Lucknow to discover their perceptions about such a study, their willingness to participate and their suggestions. Based on the experiences of previous interactions, a search on the Internet, and the above meetings and dialogues, a draft questionnaire was prepared.

Phase II

But fortunately, before we could launch our pilot study, we came in contact with Dr. Beth Covitt, a visiting Fullbright Fellow of Griffith University, Australian School of Environmental Studies, who was involved in more or less similar research work on ESD on teachers from Australia, India, South Africa, and the United States. Dr. John Fien and Dr. Debbie Heck were also involved in this project.

Dr. Covitt needed some help in data collection in India. Since we had already conceptualized the basic outline of our study, we were happy to associate with her and share our views and thoughts. Since vision-sharing, building positive partnerships, and networking is an important component of ESD, both of us were willing to synergize our knowledge and experience. It was this association that led to the second phase of our study.

Dr. Covitt had framed a questionnaire on ESD for the purpose of this survey, which was along the same lines as our draft questionnaire. It was, however, much longer and had more qualitative questions. Since we also wanted to conduct phase II, for the purpose of consistency in data collection and analyses of results, our questionnaires had to be common. Therefore, with her permission, we made slight modifications in her questionnaire and adopted it for the purpose of this study.

Accordingly, 300 questionnaires were distributed to teachers of the selected schools and institutes.

Expected Results and Outcomes

The data collection of the first phase is complete. The tabulation and analysis of results is underway, and should be over by the end of December.

Statistical tools like SPSS will be used under the guidance of statistical expert, Mr. Masood Siddiqui to find out if there is any significant variation in the perception, understanding, attitude, approach and style of teachers, with respect to ESD, on the basis of the following variables: the grade and the subject taught by them, years of teaching experience, gender, and the nature of the institute in which they teach, among other things.

We will look at some means and trends as regards the following:

- The educational goals as defined by the teachers
- Their familiarity with some basic components and teaching approaches of ESD—multiple viewpoints, VE, CE, socially critical education, systems thinking education, and issue-based and action-based learning

- The greatest barriers in adopting ESD—the lack of knowledge, experience, action-plan, time, resources, administrative support, infrastructure, training, support from colleagues, etc.
- The greatest facilitator in teaching ESD
- The extent of their willingness to integrate ESD in their teaching
- Their exposure to professional training programs on ESD

The open-ended questions in the survey and the interviews and discussions should provide further valuable qualitative data to complement the quantitative data gathered, and help in a better understanding of how many teachers in India understand ESD as it was set out in the questionnaire.

Recommendations

The conceptual basis, the strong socio-economic implications of the intricate interconnectedness of various aspects of life makes ESD a continuously evolving subject, requiring constant study and research by various stakeholders. Hence, more extensive work would need to be done to gain a comprehensive understanding of ESD, but it is hoped that this study will help highlight some important areas to consider.

Some important aspects that cropped up during the course of the study:

- It's important to translate the questionnaire into Hindi and other regional languages if the survey has to be extended to Hindi-medium or regional schools. It would be unfair to leave out the perceptions of the teachers of these schools, which comprise a major percentage of the education system.
- The reorientation of education to address sustainability throughout the formal education system (including universities, professional schools like law and medicine, and technical schools, in addition to primary and secondary education). Soon after the completion of Phase I, it was felt that since education is a continuous process, it extends beyond the school years. Hence, any study on ESD would not be complete and realistic, if it was restricted to school education only. It is, therefore important to include the perceptions of the teachers or lecturers of professional and technical institutes too by launching a similar survey for them.
- Because ESD is a lifelong process, the formal, non-formal, and informal educational sectors should work together to accomplish local sustainability goals. Implementing ESD is as huge a task for a community as for a nation. Fortunately, formal education does not carry this responsibility alone. The non-formal educational sector (e.g., nature centers, NGOs, public health educators, and agricultural extension agents) and the informal educational sector (e.g., local television, newspaper, and radio) of the educational community must work cooperatively with the formal educational sector for the education of people in all generations and walks of life. It is important to integrate this aspect in follow-up studies on ESD.

Scope of Work/Application There is tremendous potential in India to integrate ESD at all levels of education. What a student does after education, how well s/he adapts, and what choices s/he makes will depend on how well ESD was integrated in her/his educational experience and on the opportunities made available to her/him to engage with SD.

Whether important lessons about cultural diversity, rich heritage, local governance, gender equality, human rights, forces of market-economy, the pressures of growing population and urbanization on our natural environment, health and sanitation, the ecological implications of our consumption patterns, and so on were made available in the educational period would depend on the educators' awareness of the crucial role of ESD in imparting true and life-long learning.

This study will open new dimensions for further studies and research to assess, how well educators work to help their students grow and develop physically, spiritually, intellectually, emotionally, culturally, economically and environmentally, so that they flourish in whatever socio-environmental contexts they find themselves in. This personal learning is most likely to foster the values that form the basis of SD, since it is more a matter of confidently adopting a vision of sustainability, than of assimilating a body of knowledge.

It will also help us to understand how educators extend this learning outside classrooms, so that learning within ESD does not remain merely personal, but leads to active participation in seeking and implementing new and favourable patterns of social organization and change, in line with the vision of SD.

Therefore, the scope of the present study is all-encompassing. It can be summarized as follows:

- To improve basic education and reorient existing education, so as to integrate sustainable issues while framing the curriculum content and structure, while designing the teaching approach and style, and especially while deciding on the examination or evaluation criteria and methods with the view to constantly assess the five major components of ESF—knowledge, perspective, values, attitude and skills.
- To develop public understanding and awareness by the regular exchange of views and innovations in ESD.
- To impart professional training in ESD so as to overcome the barriers to ESD. Training evolves from education and is often more specific and focused depending on the present status and the need for improvement in the given situation and in a particular segment of society.

Our chief purpose, therefore, in conducting this study is to motivate and mobilize the teachers to be transformational educators, to understand, appreciate and subsequently initiate a process of experimentation and innovation in their teaching approach and style as far as ESD is concerned.

It aims to help them to go beyond the realms of the formal, structured, confined syllabus prescribed by governing authorities; to stretch their imagination, unfold their creativity, and broaden their vision when it comes to imparting ESD.

The broader areas of applicability of this study

To generate public awareness especially through educators and students about the multifaceted dimensions of ESD, to provide a platform to share their views, to build consensus on the underlying principles of ESD, to make use of information and communication technologies to create networks and partnerships with other groups, to research and innovate so as to build their capacity to take ownership and responsibility of fulfilling the vision of the Decade of Education for Sustainable Development(DESDE) and also to design mechanisms for monitoring and evaluating their initiatives throughout this decade.

Conclusion

No aspect of life can be left untouched when we talk about ESD. Though ESD may seem to convey messages that are subtle, dynamic, and diverse, and hence difficult to comprehend and achieve for educators, this isn't actually the case.

Educators only have to realize that SD is essentially about relationships—relationships between people and their environment. The human element is now widely recognized as the key variable in SD, both in terms of reasons for unsustainable development and in terms of the hopes for SD. Human relationships based on pure self-interest, self-gratification, power, lust, and greed lead to the over-exploitation of our precious natural resources, with little regard for their availability for future generations. This in turn leads to the creation of classes: the haves and the have-nots (social injustice and poverty), on account of the inequitable distribution of wealth and welfare.

On the other hand, relationships based on respect for the environment and cultural diversity, lead to just, peaceful and negotiated mutual interest, which in turn lead to greater equity and dignified social set-ups where communities flourish along with their natural environment and not at the cost of it. These are the underlying values, perspectives, knowledge, attitudes, skills and strategies that ESD should promote.

To take up this challenge, what we need today is a strong, and committed force of multifaceted motivators cum educators (not mere teachers), full of drive, energy, creativity, confidence and perseverance who can think critically and compassionately.

The ever-evolving, complex and far-reaching concept of ESD can become a reality if we can have more transformational educators, who can see beyond, think beyond and act beyond. Educators who are not mere preachers but true followers and promoters of ESD, who have imbibed ESD into their daily lives, which is reflected in their teaching approach and style. For only they can lay the foundation of transformative education—an education which encompasses all the stages and disciplines of life, and brings about a fundamental change in the way we think, act and react to the various socio-cultural, economic and environmental challenges around us.

For only such a system of education and educators can promote:

- Respect for the dignity and human rights of all people across the globe and commitment to social and economic justice for all,
- Respect for the human rights of future generations and a commitment to intergenerational responsibility,
- Respect for Earth's eco-systems and its diversity, and a commitment to conserve it,
- Respect for cultural diversity and heritage, and a commitment to build strong cultural bonds across nations and promote peace and tolerance.

And only such a system can in the true sense inspire the belief that each of us has both the potential and the responsibility to take decisions that ensure the long term future of the equity, economy and ecology for all. Only such a system of education can foster values, behaviour and lifestyles necessary for a sustainable future.

How well the present educational set-up in India conforms to the proposed structure of ESD is what this study has attempted to highlight. What are the reasons behind the gap between theoretical explanations of the underlying principles of ESD as stated above and their actual practical demonstration and application in daily life?

Developing an increased understanding of the difference between the theoretical and the practical might provide the starting point for more specific transformational interventions, research and innovation in the field of ESD.

References

Websites

- <<http://www.esdtoolkit.org>> (24 November, 2004).
- <<http://www.earthcharter.org>> (5 December, 2004).
- <<http://www.ceeindia.org>> (7 December, 2004)
- <<http://www.road.unep.org>> (7 December, 2004).
- <<http://www.unesco.org>> (8 December, 2004).