



## ROLE OF TEACHERS IN EDUCATION FOR SUSTAINABLE DEVELOPMENT

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### **Abstract**

*Education, including formal education, public awareness and training should be recognized as a process by which human beings and societies can reach their fullest potential. Education is critical for achieving environmental and ethical awareness, values and attitudes, skills and behaviour consistent with sustainable development and for effective public participation in decision-making. Both formal and non-formal education are indispensable to changing people's attitudes so that they have the capacity to assess and address their sustainable development concerns. As education for sustainable development is education for a future that we can't yet predict, it is important that education programmes seek to develop skills for understanding and anticipating change and for facing the future with courage and hope. The challenge of sustainable development is difficult and complex and, poses particular challenges to education planners, institutions, and teachers. Sustainability is interdisciplinary and applied in nature, making experiential education approaches ideal. Sustainable development is aimed at preserving and improving the quality of life permanently and in the long run. It requires active and knowledgeable citizens and caring and informed decision makers capable of making the right choices about the complex and interrelated economic, social and environmental issues human society is facing. Internet is an excellent source of information not just for the students but for the teachers as well. A teacher's professional duties may extend beyond formal teaching. The role of a teacher is to teach, the role of a student must be to learn. The role of teacher is often formal and ongoing, carried out at a school or other place of formal education. A popular teacher becomes a model for his students. The role of a teacher in society is both significant and valuable. It has far-reaching influence on the society he lives in and no other personality can have an influence more profound than that of a teacher. This paper is based on role of teacher in education for sustainable development.*

**Key Words:** *Sustainability, Sustainable Development, Teachers, Education, Students, ICT.*

### **Introduction**

Education is recognised as a major tool to change societies, consequently it is necessary to make education into a constructive tool by creating awareness among students. The link between education and development are seen in both directions. Nevertheless, it requires equilibrium to avoid detrimental effects and lead the world to a sustainable path. There is a need to develop a more efficient tool to measure development. Economic growth does not represent improvements of life. It was internationally recognised that SD can be achieved through a process of learning. Therefore, education needs to be enhanced to lead the world to a more sustainable way of living. Education as presently constructed can be broadly divided into three orientations: the vocational/neo classical, the liberal progressive and the socially critical. In education, teachers facilitate student learning, often in a school or academy or perhaps in another environment such as outdoors. Education should improve the fundamental skills required for success in the labour market and in life in general more than today. Education should be more practice oriented and should provide more support to students to adopt an approach of lifelong learning, thereby easing labour market tensions, making people more flexible concerning changing their jobs. A teacher who teaches on an individual basis may be described as a tutor. Teachers may provide instruction in literacy and numeracy, craftsmanship or vocational training, the arts, religion, civics, community roles, or life skills.

Education can enhance the effectiveness of each of these instruments through developing informed engagement, agency and empowerment among all affected stakeholders. Further, education can build lasting change – that is, sustainable change, because it is owned by the learner and reaches hearts and minds. It is the primary agent of transformation towards sustainable development, increasing people's capacities to transform their visions for society into reality. Education not only provides scientific and technical skills, it also provides the motivation, justification, and social support for pursuing and applying them. For this reason, society must be deeply concerned that much of current education falls far short of what is required. Improving the quality and coverage of education and reorienting its goals to recognize the importance of sustainable development must be among society's highest priorities.

### **Objectives of the Paper**

- Understand the concepts of role of teachers, sustainability and sustainable development; the interdependence of natural and socio-economic systems at local, national and global levels.
- Develop an understanding of the social, economic, environmental and technological issues facing the world today.
- Engage in active participation of building sustainable development.



### **Background: Sustainable Development and DESD**

Sustainable development has become a fashionable notion in the mouth of many policy and decision makers. The notion covers a wide range of issues related to all spheres of life. The concept was popularised after the Earth summit in Rio de Janeiro in 1992. For the first time the global public was alerted that the ecological resources of planet earth were limited and its health was threatened by the pollution generated by the world economy and population. The summit stressed that the kind of growth industrialised nations are pursuing and developing nations are aiming at is suicidal for the planet in terms of long term consequences. "Sustainability" was put forward as a criteria able to indicate the appropriateness of a measure in terms of its long term consequences: a measure or behaviour is sustainable if it takes into consideration the long term effects and risks it generates and respects the needs of future generations. It is based on the principle that the earth does not belong to any given generation but has to be "passed on" from one generation to the next. No generation has the right to damage the future life chances of next generations, through a behaviour using all the resources available today, and without preparing the ground for the needs of their children and the children of their children.

A teacher's professional duties may extend beyond formal teaching. Outside of the classroom teachers may accompany students on field trips, supervise study halls, help with the organization of school functions, and serve as supervisors for extracurricular activities. In some education systems, teachers may have responsibility for student discipline. Higher education has a crucial role to play in sustainable development. In the decade since the Earth Summit, many higher education institutions worldwide have made significant efforts to incorporate sustainable development into academic programmes, research, community outreach and their own management operations. Universities can also render a valuable service by integrating components of sustainable development into their outreach programmes for teachers, senior managers and local leaders such as mayors, parliamentarians and others in leadership positions. Quality in education relates to the quality of the work undertaken by a teacher, which has significant effects upon his or her pupils or students. Further, those who pay teachers' salaries, whether through taxes or through school fees, wish to be assured that they are receiving value for money.

The role of a teacher in society is both significant and valuable. It has far-reaching influence on the society he lives in and no other personality can have an influence more profound than that of a teacher. Students are deeply affected by the teacher's love and affection, his character, his competence, and his moral commitment. A popular teacher becomes a model for his students. The role of teacher is often formal and ongoing, carried out at a school or other place of formal education. When we speak of good teachers, it means that a teacher must be a model of faith and piety and should have a fairly good knowledge. A teacher should consider it his duty to educate and train his students and should feel responsible for it.

Teacher education refers to the policies and procedures designed to equip prospective teachers with the knowledge, attitudes, behaviors and skills they require to perform their tasks effectively in the classroom, school and wider community. Teacher education is often divided into these stages which are below:

- Initial teacher training / education (a pre-service course before entering the classroom as a fully responsible teacher);
- Induction (the process of providing training and support during the first few years of teaching or the first year in a particular school);
- Teacher development or continuing professional development (CPD) (an in-service process for practicing teachers).

### **The Importance of a Teacher in Today's Internet-Dominated Age**

Internet is an excellent source of information not just for the students but for the teachers as well. Learning from Internet has become conservative now. People have started learning musical instruments and even sports using the online sources. Moreover, schools teach us some of the best lessons of life—from behaving formally, respecting the teachers, communication skills, presentation skills, team work, leadership, discipline, social skills to helping us discover our hidden talents and possibly polish those skills. Internet can't deliver the actual classroom experience which you can cherish after the school days are long gone. Anderson and Glen (2003) explain the origins of the educational application of the term information and communication technology (ICT), as deriving from previous terms like information technology (IT) and new technologies. It is important to discuss various concepts related to the key terminology that will constitute the focus of this paper. Other terms such as integrating ICT or using ICT which are used inter-changeably throughout the review will also require some clarification and reflection. The mediocre teacher tells. The good teacher explains. The superior teacher demonstrates. The great teacher inspires. - William Arthur Ward, British novelist. I think in the past information was scarce and we saw the role of the teacher as primarily to convey information and then to test students' memory of that information. Increasingly, information is abundant and teaching, I think is more about learning how to learn, conveying how to think, how to ask the right questions and how to frame the problem. Working creatively in teams is also key.

The term 'sustainable development' was first given currency by the World Conservation Strategy (IUCN, UNEP, WWF



1980) and later reinforced by the Brundtland Report (World Commission on Environment and Development 1987). However, it is an evolving concept. The World Conservation Strategy primarily sought to protect essential ecological processes, life-support systems and genetic diversity through the sustainable utilisation of natural resources. Sustainability education (SE), Education for Sustainability (EfS), and Education for Sustainable Development (ESD) are interchangeable terms describing the practice of teaching for sustainability. ESD is the term most used internationally and by the United Nations. While all of these cover the concept of teaching for sustainability. “Sustainability and sustainable development itself are about collective values and related choices, and are therefore a political issue, almost certainly the supreme political issue of our century” (Prugh & Assadourian, 2003: 11). Some of the key points from the paper follow:

- The quality of the human and biospheric future depends on our collective capacity and ability to learn and change.
- Sustainable development is not itself sustainable (that is, lasting and secured), unless relevant learning among all stakeholders is central to the process.
- While sustainable development can be promoted through policy instruments, these tend to be effective for only as long as they are applied.

Sustainability is interdisciplinary and applied in nature, making experiential education approaches ideal. However, obstacles related to feasibility and implementation have prevented wide-scale adoption, especially for large courses and at public universities. It can be defined as the practice of reserving resources for future generation without any harm to the nature and other components of it. Sustainable development ties together concern for the carrying capacity of natural systems with the social, political, and economic challenges faced by humanity. Sustainable development is the organizing principle for sustaining finite resources necessary to provide for the needs of future generations of life on the planet. It is a process that envisions a desirable future state for human societies in which living conditions and resource-use continue to meet human needs without undermining the "integrity, stability and beauty" of natural biotic systems. It is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. It contains within it two key concepts:

- The concept of needs, in particular the essential needs of the world's poor, to which overriding priority should be given.
- The idea of limitations imposed by the state of technology and social organization on the environment's ability to meet present and future needs.

### **Sustainability versus Sustainable Development**

There is a debate about whether sustainability is synonymous with sustainable development, different, ambiguous or contradictory. It seems that we are still far from seeing a full agreement among people. For example, Gibson et al. (2005), in their book *Sustainability assessment: Criteria, processes and applications*, used the concepts sustainability as synonymous with sustainable development. Gibson et al. present different features which could be used to define sustainability. Sustainable development simply provides a framework for thinking about what sort of world this could be, and what is needed to build such a world, that is, what goals, values, concepts and skills will be needed. Analysis of lessons learnt over the past decade of educational innovation illustrates that educational systems and institutions are coming to understand the importance of education for sustainable development, the new vision of education it encompasses, and the contributions it can make to basic education, secondary, technical and vocational and higher education, in teacher education and in adult and community education.

Seeking sustainable development through education requires educators to:

- Place an ethic for living sustainably, based upon principles of social justice, democracy, peace and ecological integrity, at the centre of society's concerns.
- Encourage a meeting of disciplines, a linking of knowledge and of expertise, to create understandings that are more integrated and contextualized.
- Encourage lifelong learning, starting at the beginning of life and grounded in life — one based on a passion for a radical transformation of the moral character of society.
- Develop to the maximum the potential of all human beings throughout their lives so that they can achieve self-fulfilment and full self-expression with the collective achievement of a viable future.
- Value aesthetics, the creative use of the imagination, an openness to risk and flexibility, and a willingness to explore new options.
- Encourage new alliances between the State and civil society in promoting citizens' emancipation and the practice of democratic principles.
- Mobilize society in a concerted effort so as to eliminate poverty and all forms of violence and injustice



- Encourage a commitment to the values for peace in such a way as to promote the creation of new lifestyles and living patterns.
- Identify and pursue new human projects in the context of local sustainability within a planetary consciousness and a personal and communal awareness of global responsibility.
- Create realistic hope in which the possibility of change and the real desire for change are accompanied by a concerted, active participation in change, at the appropriate time, in favour of a sustainable future for all.

Sustainable development is aimed at preserving and improving the quality of life permanently and in the long run. It is a process aiming to improve the quality of life in the broadest sense, which cannot be restricted to financial wealth or material welfare but comprises the quality of the environment, the exercising of democratic rights, access to natural resources and to services and institutions made available by the society, along with full physical and mental health, spare time, safety, and security. Social welfare is a manifestation of the quality of the environment and that of the life of people making up society. Education for sustainable development means and implies far more than those working outside the field often perceive it to mean. It offers a renewed vision for educational policy and practice fully in tune with the needs and issues of the 21st century. "Education for sustainable development implies a shift from viewing education as a delivery mechanism, to the recognition that we are all learners as well as teachers. ESD must happen in the villages and cities, schools and universities, corporate offices and assembly lines, and in the offices of ministers and civil servants. It emphasizes the important role of education in shaping future development options and choices.

Sustainable development requires active and knowledgeable citizens and caring and informed decision makers capable of making the right choices about the complex and interrelated economic, social and environmental issues human society is facing. The basic principles of sustainable development make it possible to harmonise the various development strategies with the horizontal strategy on sustainable development and they also provide a general type of guidance for determining the Strategy's priorities, more specifically defined goals and tasks, the frameworks and means of implementation, in a coordinated and harmonised way. Many of the current social and economic processes and their impacts are contrary to the requirements of sustainable development. Groundwork has been laid for sustainability education worldwide. Recent changes in service learning, a focus on literacies and skills, standards that support interdisciplinary thinking, and the role of systems thinking have all increased the visibility of the movement. Various approaches to ESD encourage people to understand the complexities of, and synergies between, the issues threatening planetary sustainability and understand and assess their own values and those of the society in which they live in the context of sustainability. ESD seeks to engage people in negotiating a sustainable future, making decisions and acting on them.

It is, for example, increasingly important to include materials on sustainable development in courses for journalists, engineers, managers, doctors, lawyers, scientists, economists, administrators and numerous other professions. As students arrive at the university from secondary schools with experience in and a taste for interdisciplinary work, universities in many countries are slowly adapting to meet their needs and demands. Major research projects, such as that on climate change, work across disciplines. However, the frontiers between academic disciplines remain staunchly defended by professional bodies, career structures and criteria for promotion and advancement. Some progress has been made but much more remains to be done to break down disciplinary barriers and develop student and staff expertise in working collaboratively on real world problems in real world settings. Almost universally value, indigenous peoples respect and love the land as a mother, treating it as sacred, believing that people, plants, animals, water, the land and the sky are all part of the same on-going cycles of life. Shafika (2006) defines Teacher Professional Development (TPD) as 'a systematized, initial and continuous, coherent and modular process of professional development of educators in accordance with professional competency standards and frameworks'. Teacher professional development would also include training in the adaptation to the evolution of change of the profession of teachers and managers of education systems.

#### **The Essentials of the Concept of Sustainability**

- Ñ A challenge to conventional thinking and practice;
- Ñ In all its formulations concerned about long as well as short-term well-being;
- Ñ Covers the core issues of decision making;
- Ñ Demands recognition of links and interdependencies;
- Ñ Must be pursued in a world of complexity and surprise, in which precautionary approaches are necessary;
- Ñ Recognizes both inviolable limits and endless opportunities for creative innovation;
- Ñ Open-ended;
- Ñ The means and the ends are necessarily intertwined; and
- Ñ Both universal and context dependent.



The concept of sustainability goes far beyond ecological issues. Sustainability requires us to think about the long term consequences of all measures we initiate: it requires us to think about the ultimate consequences of our behaviour and the damage it does not only to future generations but also to people living and breathing in other parts of the world. It requires us to think in holistic and global terms beyond the criteria of the immediate satisfaction of our needs here and today. It requires people to change their outlook on life, taking into account complex consequences of their deeds and acting as part of a global community, where all human beings have the same right to develop themselves and enjoy the same basic rights.

Education for sustainable development (ESD) aims at increasing the knowledge about the concept of sustainability all over the world. The challenge is to widen people's perspectives in order for them to take the global consequences of their actions into consideration. Thus, the overall goal of the UN Decade on Education for Sustainable Development (DESD) is to integrate the values inherent in sustainable development into all aspects of learning to encourage changes in behaviour that allow for a more sustainable and just society for all. During this decade, education for sustainable development will contribute to preparing citizens to face the challenges of the present and the future, and decision-makers who will act responsibly to create a viable world. Five kinds of fundamental learning will be enhanced: learning to know, learning to do, learning to be, learning to live together, and learning to transform oneself and society.

Education for sustainable development is about learning to:

- Respect, value and preserve the achievements of the past;
- Appreciate the wonders and the peoples of the Earth;
- Live in a world where all people have sufficient food for a healthy and productive life;
- Assess, care for and restore the state of our Planet;
- Create and enjoy a better, safer, more just world;
- Be caring citizens who exercise their rights and responsibilities locally, nationally and globally.

#### **Sustainable Development Multiple Choices**

- A redundancy, since unsustainable activities cannot provide true development;
  - An oxymoron (a self-contradiction) that amounts to believing that you can have your cake and eat it too;
  - A case of developers getting the noun and environmentalists being left with the adjective;
  - A dangerous delusion, promoted by those who are willing to recognise that we are already overstraining our planet's capacity to withstand our impositions:
  - One of the land mark steps in human history, following opposable thumbs, the discovery of fire and the invention of progress;
  - An exceptionally popular term, invoked favourably by all manner of otherwise incompatible individuals;
  - A term that everyone can support, largely because no one knows what sustainability means and/or one agrees on what development means;
  - A term that offers an accommodation of opposing forces-suggesting that responsible stewardship of nature and continuity of gains in human material well-being are compatible
- Sustainable development can be advanced by policies and programmes of education for rural transformation that:
- Close the resource gap in education, especially in rural areas.
  - Reflect rural concerns in EFA strategies.
  - Provide educational statistics and educational management information systems that better reflect the rural realities
  - Facilitate transfer, adaptation, dissemination and use of appropriate technologies from rich to poor countries and to rural people.
  - Bring the benefits of information and communication technology to rural people.
  - Act to build the learning community in rural areas and create international and regional partnerships to articulate, build the constituencies of support, plan and guide follow-up activities to promote education for rural transformation.

Reorienting education to sustainability requires us to work increasingly at the interface of disciplines in order to address the complex problems of today's world. What people will need to know in five, ten, twenty or fifty years cannot be reliably predicted. It is predictable, however, that such developments will not fit neatly into the disciplinary boundaries that have been in place for more than a century. Hence, understanding and solving complex problems is likely to require intensified co-operation among scientific fields as well as between the pure and mathematical sciences and the social sciences, the arts and the humanities. Reorienting education to sustainable development will, in short, require important, even dramatic changes, in the way we think of knowledge.

As education for sustainable development is education for a future that we cannot yet predict, it is important that education programmes seek to develop skills for understanding and anticipating change and for facing the future with courage and hope.



This would involve coming to realise that the future is a human creation, made by our decisions, and that in a democratic society; people have the right, indeed an obligation, to contribute positively to a sustainable future. This would involve learning how to learn, how to analyse and solve complex problems, how to think creatively and critically about the future, how to anticipate and make our own histories. These contribute to the skill of foresight and are all aspects of a futures orientation in education. The challenge of sustainable development is difficult and complex and, poses particular challenges to education planners, institutions, and teachers. Chief among these is achieving an understanding of the meaning of sustainable development appropriate for educational settings. However, this problem is not really that difficult —at its heart is the simple idea of ensuring a better quality of life for everyone, now and for generations to come, and this is the entire purpose of education in a nutshell.

### Conclusions

In recent years, sustainability has gone main stream. From corporate strategies, to hotel laundry policies, to academic curricula, everyone and everybody seems to have embraced the concept of adapting for a durable future. The role of a teacher is to teach, the role of a student must be to learn. The role of teacher is often formal and ongoing, carried out at a school or other place of formal education. Higher education has a crucial role to play in sustainable development. The internet too provides a powerful tool for communication and building networks. To some extent this is happening already with an increasing demand for courses and awareness raising on issues of sustainability from a wide range of sectors. Education for sustainable development is an emerging but dynamic concept that encompasses a new vision of education that seeks to empower people of all ages to assume responsibility for creating a sustainable future. Human beings are very adaptive and intelligent beings who have learned to live unsustainably in rather a short space of time. Time is of the essence as it has become clear that some of the effects of climate change are already unstoppable. The role of a teacher in society is both significant and valuable. “Education for sustainable development implies a shift from viewing education as a delivery mechanism, to the recognition that we are all learners as well as teachers. ESD must happen in the villages and cities, schools and universities, corporate offices and assembly lines, and in the offices of ministers and civil servants. Our challenge for the future well-being of the planet and of human life is to learn – very quickly – how to live sustainably. Since education has been recognised as an important tool in developing human capacity, this research looked at implementation of education as a tool for sustainable development.

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