

Innovative Education for Sustainable Development

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Abstract:

Education for Sustainable Development (ESD) is a burning issue of the world. Through ESD, the world wants to bring awareness among the future generation in maintenance of healthy natural environment and shaping a sustainable future. This requires a re-orientation of current education systems, where economical growth goes hand in hand with environmental integrity and social justice. ESD never be considered as a new subject in the field of study as it deals with real –life issues which have an impact both locally and globally. It develops not only knowledge of particular subject but also it improves certain values and world-views. Besides this, certain values, unsustainable practices such as collaboration and creativity, empathy and honesty are being imparted. Topics such as planting trees, water conservation etc., should be incorporated in curriculum. Therefore ESD brings surrounding world, people and cultural heritage into limelight. Inter disciplinary and cross – curricular work have been developed through Inquiry Based Learning. ESD focuses on managerial approach and ignoring the current trends in education, influenced by global capitalism. Therefore, issue of future sustainability can be dealt with the societies which are flexible, adaptive and resilient. Imparting innovative education for sustainable development in the curriculum for all level of students will create a hope for better future.

Keywords: *Inquiry Based Learning, Managerial Approach, Sustainable Development, Task Based Learning.*

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I. INTRODUCTION

In globalised world, education is being imparted through integrated approach rather than conventional mode. Unlike the class room learning, the creativity of the learner is nurtured by environment. Pure learning can be possible by the teacher, who transform the brick-and-mortar confinement and take the students on a journey of pure learning by responding to their doubts and instilling an environment of curiosity among the students. Therefore innovative methods are being incorporated in educational institutions to optimize the learning experience and to install the latest educational technology.

Education for Sustainable Development (ESD) is a burning issue of the world. Through ESD, the world wants to bring awareness among the future generation in maintenance of healthy natural

environment and shaping a sustainable future. This requires a re-orientation of current education systems, where economic growth goes hand in hand with environmental integrity and social justice. Van Poeck and Loones commented: “Education for Sustainable Development is learning to think about and work towards a liveable world, now and in the future, for ourselves and for others, here and elsewhere on the planet” (2011: 5). According to Dewey, “ESD is not just adding sustainability as an extra topic to the curriculum, but rather enabling learners to contribute to sustainable societies. ESD is about preparing the learner for an active role in society oriented towards sustainability. In this sense, ESD is connected to the tradition of citizenship education, preparing students to become active citizens in society” (1944: 78). It is obvious that ESD focuses on managerial approach and ignoring the current trends in education, influenced by global

capitalism. Therefore, issue of future sustainability can be dealt with the societies which are flexible, adaptive and resilient.

The need for ESD is increased by leaps and bounds in modern era. Innovative curriculum is formed to achieve integration of sustainability competences by the Governments to achieve progress towards sustainable development. GAP (Global Action Programme) on ESD has been launched by UNESCO in 2013, which mentioned Five Priority Action Areas.

1. Advancing policy;
2. Integrating sustainability practices into education and training environments (whole-institution approaches);
3. Increasing the capacity of educators and trainers;
4. Empowering and mobilizing youth;
5. Encouraging local communities and municipal authorities to develop community-based ESD programmes

II. Sustainable development is a key factor in education

Sustainable development must be taught from pre-school to higher education (i.e. from schools to universities) as it dealt with the issues faced in and around the world. It also suggests the different modes and solutions to protect our environment

III. Participative Approach

ESD never be considered as a new subject in the field of study as it deals with real –life issues which have an impact both locally and globally. Economic, social and environmental dimensions are reflected in ESD. Different situations are created and enabled the students to enact accordingly. For instance, Role play is an impactful method to enhance the learning level of the student by giving opportunity to the learner to live the experience through empathy and internalising values. It is instructed by UNESCO that

sustainable content should be introduced in secondary and higher education curriculum, which stimulates student's analytical and critical thinking. The teacher- centred class rooms teaching should be shifted to student- centric class rooms teaching. At the same time, task based education system should be implemented in all educational institutions, which provides opportunities to the students to take a brisk role in discussions, analysis and application of values.

McKeown and Hopkins commented: “ESD learning processes encourage learners to ask critical reflective questions, clarify values, envision more positive futures, think systematically, respond through applied learning, and explore the dialectic between tradition and innovation. Some ESD pedagogies promote cooperation and collaboration, issues of investigation, using multiple perspectives and real-world problem solving, as well as equity in the classroom by meeting all student needs (2010: 180). Therefore, all these pedagogies facilitate the student to understand the issues of sustainability and ignite the passion to learn skills and values required to sustainable societies.

IV. Collaborative Learning

According to Aristotle man is a social animal. It is evident that without possessing life skills a man cannot lead a successful life in this globalized world. Collaboration and co-operation plays a vital role in all enterprises. The seed of collaborative mind should be implanted in primary schools by allowing students to create and organize group presentation of stories and skits. They should be allowed to work in groups under the supervision of teacher, which inculcates team spirit among the students. Besides this, collaborative project work will be assigned to students by providing resources to the groups with specific targets.

V. Learning beyond the classroom

Knowledge cannot be gained only through the books. Hands- on- learning plays a vital role in

building career of the student. The following bar chart represents different modes of learning. The students learn 5% through lecture method, 10% through reading, 30% through listening, 50% through group discussions, and 75% through experimental method. It is obvious that experience creates mastery. It can be represented through the following bar chart.



Hence, learning beyond the classroom should become part and parcel of every educational institution.

VI. Learning through Participatory Process

In this pedagogy, students are provided with a chance to organize different programmes in the premises. Liberty will be given to the students to offer voluntary services, at the same time; they will be treated equal to citizens.

VII. Models of Quality Education

The concept of providing quality education is being discussed in international educational discourse. For example, the World Educational Forum on Education for All (EFA) has addressed quality education in its EFA framework. Two principles are characterized to define quality in education: the first identifies learners' cognitive development as the major explicit objective of all education systems. The second emphasizes education's role in promoting values and attitudes of responsible citizenship and in nurturing creative and emotional development.

VIII. UNESCO focused on three Models of Quality Education

i) The economic model of education

Barrett et al deals commented: "The 'economist' view of education uses quantitative measurable outputs as a measure of quality. For example, enrolment ratios and retention rates, rates of return on investment in education in terms of earnings and cognitive achievement as measured in national or international tests" (2006: 2) Kumar & Sarangapani commented: "This model is philosophically based on human capital theory which posited that education was important to economic development and reduction of poverty" (2006:8).

2. ii) The humanist tradition

It emphasizes education as a process, with the students. Goals of education include wider social goals (e.g., human rights, social justice and democracy) and personal goals. The humanist tradition is based on the observation that children have an innate interest and ability to learn. It aims to develop the whole personality as well as creativity and problem-solving abilities. Currently, humanist approaches are described with terms such as learner centred, participative and democratic. Furthermore, they embrace contemporary concerns of human rights and environmental sustainability" (2004: 10).

iii) Incorporating local issues in curriculum

Incorporating local issues is part of the learning, which connects the abstract and academic concepts so that both can grow together. The learning as connection model is grounded in a constructivist perspective of education. Nikel and Lowe (2010), synthesizing many studies on quality education, proposed a framework of seven dimensions of quality that are held in dynamic tension.

The seven dimensions are:

1. Effectiveness: the extent to which stated educational aims are met.
2. Efficiency: economic considerations, such as ratio of outputs to inputs, to maximize the use of resources.
3. Equity: issues of access to education for all people regardless of gender, ethnicity, disability, sexual orientation, etc.
4. Responsiveness: meeting the needs of the individual learners in classroom interactions by taking into consideration the uniqueness of the learner's abilities.
5. Relevance: the usefulness of education to the life of the learner immediately; when the learner comes of age; and to more distant future later in the learner's life.
6. Reflexivity: the ability to adjust to rapid change, which plays a vital role in engaging an uncertain future.
7. Sustainability: 'focuses on behaviour change and acceptance of responsibilities, goal-setting and decision-making (2010: 599).

IX. The role of Higher Education Institutions

ESD should be a mandatory subject in every institution. UNESCO organized an international conference on "Pathways towards a Shared Future: Changing Roles of Higher Education in a Globalised World" in 2013.

X. The following resolutions are suggested to implement in every Higher Education Institution.

- a) It is instructed to chalk out the plan characterized by sustainable development by hierarchy of the universities
- b) ESD must be mainstreamed into all educational programmes. Student organisations should be involved in participatory process
- c) The boards of the faculties should improve opportunities for all members of the university community including students to become competent in SD and to engage with the (local) civil society.

- d) The university managements should create an organisation/organisation structures with a cross-disciplinary mandate to promote ESD activities.
- e) The universities should engage in joint learning experiences/create strong partnerships with companies, governments, NGOs etc. on SD/ESD.
- f) Higher Education Institutions should become models of SD, not only in what is taught but in how all manner of university activity is carried out, i.e. purchasing policy, campus greening, employment policy, equity and other such issues.
- g) The boards of the faculties should earmark development funds in order to achieve the above objectives. (2008: 180)

It is obvious that people get awareness and knowledge about sustainable development. They must familiar with the challenges faced by human beings in near future and training needs to be provided to all groups of professionals, and lifelong learning opportunities should be accessible to all members of society. However, the universities strive to improve the quality of their educational programmes and embrace the fundamental ideas of ESD and put them into practice.

XI. ESD to Meet the Needs of 21st Century

ESD develops not only knowledge of particular subject but also it improves certain values and world-views. Besides this, certain values unsustainable practices such as collaboration and creativity, empathy and honesty are being imparted. ESD involves substantially more than simply supplementing existing educational programmes with a few new perspectives or course modules. In participatory learning students are considered as co-producers rather than learners. Certain aspects are to be imbibed at the primary level of education, which plants a seed in the mind of future generation about utilizing the earthly resources along with conserving it in right way.

Programmes such as; planting trees to be conducted in educational institutions for all level of students. Lessons on conserving water for future, to be instilled in academic texts.

- Launching a special drive; about the disadvantages on using single use plastics at the secondary school level.
- Conducting science fairs dedicated to sustainable development and boosting students to come up with ideas.
- Special awards to be given to the students, who provide innovative ideas.
- Making a compulsory provision at the graduation level to do at least on project on sustainable development

XII. The Democratic Challenge of Knowledge Intensive Societies

The increasing knowledge intensity of today's sustainability challenges is potentially a democratic problem. Commercialization of media is a burning issue in modern society. TV channels are being tailor-made for different interests and consumer segments. No doubt that excellent education is provided by our educational institutions. Today's world is global village. Hence, People are getting global information in fraction of seconds. ESD occupies an imminent place in core part of all educational programmes.

XIII. Taking Education for Sustainable Development to the next level

Societies that base their policies on sustainability will have an advantage in tackling future economic, social and environmental challenges. That is why we want sustainable development to be part of all levels of education. By intensifying the transfer of knowledge, from preschools to universities, ESD reaches to the next level.

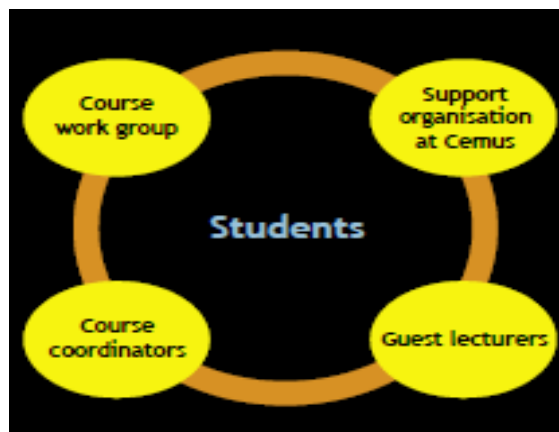
XIV. The Cemus model

The Cemus model for student-run, interdisciplinary education for sustainable development is interesting. Cemus at Uppsala University employs students as course coordinators with the task of planning and running a university course in close collaboration with senior researchers and university teachers. This creates interdisciplinary and creative learning processes and gives students a unique and active role in shaping their own education.

Four Key Components for the Cemus Mode

i) Student Course Coordinators.

A few students are involved in running a university course as a project. Students are treated as course coordinators and take a brisk role in conducting seminars and inviting guest lectures.



ii)

Course work group.

This group consists of experts from different fields, research scholars etc. The course coordinators work with that group and incorporate the suggestions for literature, modifies the course structure and collect feedback on the programme.

iii) Guest lecturers.

Student – friendly atmosphere is created through the guest lectures, as the learners will take active role by participating in discussions and sharing knowledge. The backbone of the course consists of a multidisciplinary lecture series. The course coordinators invite guests from different academic subject areas as well as practitioners to teach the course.

iv) The Cemus administration coordinators

It consists of a Director of Studies, an Educational Coordinator, Project Assistants, and a Programme Director with experience from both teaching and research.

It is clear that Cemus model creates a learning atmosphere among the students. It reduces the gap between the students and provides an opportunity to enrich their knowledge. Therefore, the gap between the teacher and learner is reduced. Cemus is an intense and creative learning environment, which encourages citizenship, a sense

of global responsibility, critical thinking, and the creativity that is needed to make our societies sustainable.

XV. Barriers to implement ESD

- Lack of financial resources
- logistical problems (e.g. lack of means to organize field trips)
- difficulties in fitting ESD into curricula
- lack of teacher training programmes for ESD
- shortage of teaching materials on ESD

CONCLUSION

The contents of ESD are local and applicable to real life situations. ESD provides solutions to problems faced by future generation. It empowers learners with core ideas and quality education for sustainable future. It focuses on cognitive aspects of teaching, along with spiritual development of a person. Besides this, it brings surrounding world, people and cultural heritage into limelight. Inter disciplinary and cross – curricular work have been developed through Inquiry Based Learning. Imparting innovative education for sustainable development in the curriculum for all level of students will create a hope for better future.

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