Higher Education and Sustainable Development

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Abstract

The recognition that education, at all levels, can be a powerful tool in promoting sustainable development led to the concept of ‘education for sustainable development’. Subsequently, in 2002, the United Nations declared 2005-14 as the Decade of Education for Sustainable Development, with the objective of integrating the principles and practices of sustainable development into all aspects of education and learning, and appointed UNESCO as the lead implementing agency. But what is ‘sustainable development’ and what is the role of higher education in promoting it? Sustainable development is a concept that is not new, and yet it is complex and not easy to define. In 1987, the Brundtland report from the World Commission on Environment and Development defined it as “meeting the needs of the present without compromising the ability of future generations to meet their own needs”. This remains the most quoted definition, although there is continuous evolution in the way sustainable development is operationalised. The International Association of Universities, or IAU, has been active in encouraging universities to promote sustainable development since the 1990s and, in 1993, adopted a policy statement known as the Kyoto Declaration on Sustainable Development. Although this declaration dates back to over two decades, it is remarkably comprehensive and outlines all the fundamental issues concerning the role of universities in promoting sustainable development. The opening clause urges universities to seek, establish and disseminate a clearer understanding of sustainable development. The IAU has continued to maintain sustainable development as one of its key action areas and has developed an online portal on Higher Education for
Sustainable Development in order to encourage higher education institutions around the world to network and showcase their activities through the portal. Sustainable development based research and education is the backbone of a nation. Moreover, sustainable development policies highlight the role of education which has become the need of the day to create the awareness among the students, researchers and teachers as well as in local communities for environment protection. The present paper gives an overview regarding the role of research and higher education in the development of a country in sustainable manner. Attempts have also been made to summarise the status of higher education system in the country and various national and state funding agencies which are working for the R & D programmes in the country.

**Keywords:** sustainable development, research, Higher education, India.

**INTRODUCTION**

Sustainable development is a process which involves human’s intelligence, decision making efficiency, planning and management skills, power of imagination, entrepreneurship, development and production with environmental safety etc. Usually, sustainable development is a human subject. The issue associated with sustainable development can be seen as one of the basics of any society. Therefore, so far its major field of concern has been for the environment, but its applicability has been extended to wrap almost each human attempt. The discussion is a principal element in education for sustainable development. Environmental education is the fundamental education to study the sustainable development. In other words environmental education can be able to make a path for education for sustainable development.

Any researcher who is working for education for sustainable development can support the mode of life explained by value based interpretation of sustainable development. In the last decade, the education for sustainable development has been accepted as a main policy which is the utmost need of the day for each state or country. Moreover, the sustainable development has gained the due attention on
international forum not only by researchers or environmentalists but also by the chiefs of several countries. Initially sustainable development was discussed globally in UN Conference on Human Environment Stockholm in 1972. After that in 1987 UN World Commission on Environment and Development published a report on “Our Common Future” which was also popularised as Brundtland Report then concern for a sustainable development was came into consideration.

In UN Earth Summit 1992, which was held in Rio de Janeiro, Brazil, a conscious thought was emerged for environmental problems along with solutions to resolve the problems and the requirement of a multidisciplinary approach was recognised. Again in 2000, the chief of various countries gathered to discuss the issue of environment conservation under the umbrella of UN. After Johannesburg conference in 2002 on sustainable development, 2005–2014 was declared as “Decade for Education for Sustainable Development (DESD)” by UN General Assembly accepting the significance of Education for Sustainable Development Sustainable development is a pattern of using natural resources in such a way which provides regular individual requirements considering the preservation of the environment for coming generations.

After Brundtland Report sustainable development was defined as “Sustainable development is the development which meets the needs of the present without compromising the ability of future generations to meet their own needs” \[1\]. After Rio Earth Summit 1992, the role of education to avoid the ecological degradation was accepted as a result of Rio Declaration on Environment and development.

Education for Sustainable Development is an idea of education which aims to empower the individuals to assume liability to build a sustainable future. The thought of sustainable development touches aspects of the institutional and social framework. There has been increasing identification of the significant role of education in promoting sustainable development since 1992 Earth Summit in Rio de Janeiro. However, any individuals or organizations do not have all the
knowledge to develop learning systems which are essential to maintain sustainable development in the specific surroundings

2. Global Action
The question of what happens to Education for Sustainable Development after the end of the Decade inevitably cropped up. In 2014, after broad consultations with and inputs from a wide range of stakeholders, UNESCO came up with the post-Decade of Education for Sustainable Development Global Action Programme, or GAP on education for sustainable development, and a roadmap for implementing it. The GAP is generic in nature and applies to all levels of education. It identifies five priority action areas:

- Mainstreaming education for sustainable development in both education and sustainable development policies;
- Transforming learning and training institutions by integrating sustainable development principles in daily activities;
- Building capacities in educators and trainers;
- Empowering and mobilising youth; and
- Accelerating the implementation of sustainable solutions at local and community levels.

In order to mark the final year of the decade of education for sustainable development, two major back-to-back conferences on education for sustainable development were organised in Aichi-Nagoya in Japan in November 2014.

The first was the International Conference on Higher Education for Sustainable Development, hosted by Nagoya University and organised by the United Nations University with the support of the government of Japan and various organisations, including UNESCO, UNEP and IAU. The conference felt that there was a need for higher education institutions to adopt a ‘whole-institution approach’, including transformative leadership, encouraging capacity development and undertaking an assessment of the institution for sustainability. The conference also proposed that institutions engage with different types of knowledge and work with critical community groups such as youth and the private sector, and engage with policy issues.
In the ensuing Nagoya Declaration on Higher Education for Sustainable Development, participants renewed their commitment to support activities towards sustainable development, including implementation of the Global Action Programme and called on world leaders to recognise the essential role and responsibility of higher education institutions towards creating sustainable societies. Immediately following the International Conference on Higher Education for Sustainable Development came the World Conference on Education for Sustainable Development, a major event organised by UNESCO and the government of Japan and attended by nearly 1,000 participants.

Although the conference covered the whole range of education and learning, most of the workshops and sessions were directly or indirectly relevant to higher education, such as teacher education, lifelong learning and information and communications technology. Similarly, in the sessions dealing with global sustainable development challenges such as water security, renewable energy, biodiversity, urbanisation, etc, it was clear that the involvement of higher education institutions would be crucial. A declaration on Education for Sustainable Development was adopted at the end of the conference, calling for the commitment to education for sustainable development of all stakeholders and inviting governments to allocate substantial resources to enable the implementation of the GAP priority actions.

**From development to sustainability**

Higher education has played an important role in promoting sustainable development during the Decade that has just ended, and it is vital that it continues to do so in the post-2014 implementation of the GAP. This is particularly important in view of the post-2015 Development Agenda that is currently being formulated by the UN. Indications are that the eight Millennium Development Goals will be replaced by 17 Sustainable Development Goals, or SDGs, explicitly linking development to sustainability. A glance at the proposed draft SDGs shows that their implementation will require substantial inputs from higher education. This must be recognized by the relevant UN agencies, the governments...
and, as importantly, by higher education institutions themselves. Institutions now have the responsibility, more than ever before, to integrate sustainable development into all their teaching, research, community engagement and campus operations.

**Objectives of Higher Education Regarding Sustainable Development**

In the area of higher education, the research programme should be influenced by striving for sustainability. The objectives of higher education are to discover new tools to deal with big problems such as pollution, climate change, energy, biodiversity, environment conservation etc. The responsibility of higher educational institutions is to develop new methods and new approaches to explain the sustainability to everyone. Sustainability is a superb issue to bring together several different disciplines. The role of higher education for sustainable development in different educational institutes is very important and should be focused for the following objectives

1. To recognize and follow the excellent case studies in higher educational institutes.
2. To build a clear vision of teaching and research in higher education for sustainable development.
3. To educate the decision makers and students about the hazardous aspects of current development.
4. Dissemination of knowledge of alternative paths of sustainable development through higher education.

According to UN, the main aim of education for sustainable development is to cover economic, socio-cultural and ecological aspects considering the global dimensions. The challenges which are value-based interpretation of sustainable development are required to represent with more emphasize. However, it is difficult to integrate the various aspects of sustainable development into higher education syllabus in the light of value-based interpretation. But, it may be simple after following the relevant professional practices and incorporating the ecological, economic, social and cultural elements of sustainable development in to research and teaching of higher education professionals.
Models for Sustainable Development

The correlation among economy, ecology and equality can be useful to develop a sustainable society. Some models are very much helpful to understand the concept of sustainability by gathering, sharing and analysis of the data. Three important models have been reported to recognize the sustainable development[4].

The multidimensional sustainable development indicators (MSDI) which hold the linkage among the economy of a community, environment, and society are given herein.

1. Gross National Happiness (GNH): The four pillars of GNH
   (i) Sustainable socio-economic development promotion
   (ii) Conservation and promotion of cultural values
   (iii) Environmental conservation
   (iv) Good governance

2. Human Development Index (HDI): Measurement of
   (i) Life expectancy
   (ii) Literacy and education
   (iii) Standard of living

3. Ecological Footprint (EF): Comparison of human consumption of natural resources with Earth’s ecological capacity to rejuvenate them

4. Happy Planet Index (HPI): An innovative measure of human well-being and environmental impact
Challenges for Sustainable Development

Now-a-days sustainable development has become a key issue at state, national and international level concerning education policy since last decade. Various stakeholders recognize the sustainable development in different ways and search for different outcomes. There are some specific challenges in the implementation of sustainable development in higher education and can be understood as:

1. Lack or poor communication skills in higher educational institutes for the term sustainable development and also in its application.
2. Lack of trained professionals in higher educational institutes.
3. Requirement of inter-disciplinary research in sustainable development manner.
4. Collaboration, networking and coordination among different educational institutes.

While on the other hand, seven types of sustainability have been reported which would be necessary in research for sustainable development as given below [5]:
   i. Biological sustainability.
   ii. Environmental sustainability.
   iii. Social sustainability.
   iv. Cultural sustainability.
   v. Political sustainability.
   vi. Economic sustainability.
   vii. Moral-spiritual sustainability.

Strategies to be adopted for Sustainable Development in Higher Education

Some important strategies are necessary which should be adopted for the promotion of education of Sustainable Development in Higher Education system and can be described as below:

1. Analyse on the basis Questionnaire of sustainable development obtained from participants
2. Need of national coordination and supporting networks
3. Dissemination of policies and case studies outcomes
4. Capacity building in teaching professionals and students
5. Identify the leadership and award the good professionals

**Conclusion**

After this brief survey on education and research in the country, it can be concluded that a lot of scientific programmes are being implemented by Govt. of India as well as state governments to promote the research and higher education standard. Since, the environmental protection has become an essential part of the curriculum of a country therefore national policies on environmental education have been made. Although departments of education and universities are able to expand the education for sustainable development but the network of several non-government organizations (NGO’s) can also participate to serve the purpose. Besides, education and research through distance learning can also be an option to strengthen ESD in higher education in the country.

**References**


