

4th International Conference on Environmental Education

Centre for Environmental Education, Ahmedabad, India, 24-28 November 2007

“Promoting Sustainable Development – What Role for Higher Education?”

By

Goolam Mohamedbhai

President, International Association of Universities

Contents

- What is Sustainable Development?
- Why is SD important?
- How do we define Higher Education?
- Why is HE important for promoting SD?
- How can HE promote SD?
 1. Curriculum reform
 2. New pedagogical approaches
 3. Teacher training
 4. Research
 5. Postgraduate programmes
 6. Prof. continuing education
 7. Campus greening
 8. Reg. Centres of Expertise
- Constraints and challenges for HE
- The Way Forward

What is Sustainable Development?

- A difficult concept to understand
- Very complex to define
- SD is much broader than environmental protection
- Education for SD is not just environmental education
- Bruntland Commission definition (1987):

“SD is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.”

Why is SD so important?

- Growing evidence over past decades that human behaviour is undermining long term survival: over-consumption & -production, pollution, deforestation, over-use of natural resources, etc.
- Effects of such behaviour now clearly visible – climate change, ozone depletion, toxic pollution of natural resources, desertification, etc.
- Globalization having a negative impact on development of many societies & communities
- Huge disparities in economic development (poverty, health, education) not sustainable globally
- Whatever happens locally has an effect globally
- Lack of tolerance and cultural understanding threatening world peace

How do we define Higher Education?

Higher Education should include all post-secondary education institutions:

- Universities
- Research Institutes
- Teacher Training Colleges
- Community Colleges
- Polytechnics and Technical Institutions
- Colleges of Agriculture, Health, etc.
- Nursing Schools

Why is HE important in promoting SD?

- HE trains professionals, future leaders and decision-makers
- Through research, HE can help to find solutions to social and technical problems
- HE, having expertise in many areas, can adopt a multi-disciplinary approach
- HE has links with many sectors of society – government, businesses, NGO's, industry, professions, etc.
- Through community service HE can reach out to vulnerable sections of society
- HE has international linkages
- HE is highly regarded in society and serves as a model

How can HE promote SD?

1. Curriculum reform
2. New pedagogical approaches
3. Teacher training
4. Research
5. Postgraduate programmes
6. Professional continuing education
7. Campus greening
8. Regional Centres of Expertise (RCEs)

1. Curriculum Reform

- Introduce one compulsory common module for all students (can be by DE or online), explaining SD concepts & creating awareness of the major SD challenges facing the world
- SD to be then mainstreamed in all curricula
- All programmes to adopt a multi-disciplinary approach, interlinking natural, applied & social sciences
- Concepts of ethics and social responsibility to be introduced
- In engineering, agriculture, economics, etc. students to be conscious of the environmental, social & economic impact of their professions

2. New Pedagogical Approaches

- Teach through understanding & analysis, rather than learning facts
- Encourage multidisciplinary project work
- All programmes to develop generic skills:
 - team work
 - critical thinking
 - creativity & innovation – “to think outside the box”
 - systems thinking & holistic approach
- Introduce concept of ‘think globally, act locally’

3. Teacher Training

- Teacher training a major responsibility for HE
- Best approach to promote SD is to introduce it at primary & secondary schools
- Most school teachers however have not been trained to inculcate SD concepts to pupils
- Curricula of all teacher training programmes for new teachers must incorporate SD concepts
- Existing teachers must be re-trained, a mammoth task, may have to resort to using DE and online

4. Research

- HEIs have expertise & physical resources to study & find solutions to SD problems
- Research on SD by doctoral students can be very useful
- Most HEIs cover several disciplines – this facilitates the multidisciplinary approach necessary to solve SD problems
- HEIs have international links, so they can reinforce their expertise & learn from experiences from other parts of the world

5. Postgraduate Programmes

- Running postgraduate programmes (e.g. Master's) is an ideal way to promote SD at higher level
- Specialist programmes suitable for advancement of knowledge & promotion of research (e.g. in deforestation, climate change, water resources, air pollution)
- More general 'conversion' programmes in SD suitable for graduates in any field
- Such programmes can be run regionally or even internationally

6. Professional Continuing Education

- HEIs, in collaboration with professional associations (e.g. engineering, architecture, agriculture), can run continuing education programmes to update professionals on latest findings on effect of their work on SD, and new approaches to minimize negative impact

7. Campus Greening

- HEIs must practise what they preach
- They can promote SD on their campus by:
 - designing their buildings to minimise energy consumption
 - introducing energy conservation measures
 - reducing use of paper
 - recycling of waste
 - planting trees and bushes
 - minimising use of fuel-driven vehicles on campus
- Many institutions have successfully done so, e.g.
 - Tecnologico de Monterrey, Mexico
 - Univeritat Politecnica de Catalunya, Barcelona, Spain
 - Univesiti Sains Malaysia, Penang

8. Regional Centres of Expertise (RCEs)

- Launched by UNU/IAS for promoting EfSD in context of UNDSO (2005-2014)
- RCEs promote EfSD through:
 - collaboration among all levels (primary, secondary, higher) and types (formal, informal, non-formal) of education
 - R&D in SD
 - collaboration among academia, business, industry, NGOs, local government, media, etc.
- So far over 60 RCEs created in different parts of the world
- In most RCEs a HEI plays a leading coordinating role
- Objective is to create a Global Learning Space for SD through a network of RCEs worldwide

Constraints & Challenges for HE

- Current departmental academic structure not conducive to promoting SD approach
- Faculty reluctant to apply multi-disciplinary approach:
 - no exposure to such approach
 - prefer specialist, discipline-based teaching
 - find discipline-based, individual research more rewarding
- Faculty still teach by providing knowledge:
 - this is how they were taught
 - little experience in problem-solving, systems-based approach
- Professions and employers
 - fear dilution of discipline content
 - prefer inclusion in programmes of latest technical findings

The Way Forward

- Faculty must be trained for SD approach
 - a major, immediate challenge
 - use of DE & on-line learning
 - requires a regional/international approach
- HEIs, professions and employers must work together
- Within institutions, both 'bottom-up' and 'top-down' approach to be used
- Need for an international collaborative approach involving UNESCO, UNU, UNEP, IAU, etc.
- Identify lead institutions in different world regions and create network of institutions promoting SD in each region

THANK YOU