The Challenges in Integrating Human Values in Technical Education

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The Main Challenges

- Creating an appreciation of the need
- Removing misconceptions about EHV
- Charting out a clear, universally acceptable methodology
Appreciation of the need

The Problems facing mankind today can be classified as:
- Technogenic OR Social

Technogenic
- Energy security, Environmental Pollution, Climate Change

Social
- Poverty, Inequity, Corruption, Crime and violence
  - Social image of engineering profession

1. Creating an appreciation of the need
Strategies being followed to ameliorate these problems

• Technogenic
  – Energy efficient devices, Renewable Energy Sources, Increasing the use of non polluting energy sources, Sequestration of Carbon dioxide, Forestation

• Social
  – More growth { infrastructure, energy, high tech) to remove poverty and improve equity
  – Computerization to check corruption
  – Use of high tech gadgets to combat crime and violence
Has this approach been successful?

1. Creating an appreciation of the need
Some counter intuitive facts

- Improvement in fuel efficiency of cars has **INCREASED** overall fuel consumption in automobiles
- Improvement in energy efficiency of lighting devices has **INCREASED** the energy consumption in lighting
- Recycling of aluminum cans has **INCREASED** consumption of aluminum in soft drinks industry
- Creating houses for slum dwellers has **INCREASED** the slums in many cities
Some counter intuitive facts

• Increased economic growth has increased inequity in the society
• Though fire-arms for police have improved, the terrorism has only increased

1. Creating an appreciation of the need
Why has this approach not been successful?

1. Creating an appreciation of the need
Overlooking the human dimension – cravings, lack of compassion, hatred and revenge

1. Creating an appreciation of the need
We need to appreciate.....

- Energy, Ecology, Economy crisis has its roots in the crisis of human values, in unbridled consumerism.
- It does not have a purely technical solution.
- We are suffering from ‘Consumption’!
- Gandhiji’s aphorism:
  
  *Earth provides enough to satisfy every man's need, but not every man's greed.*
We need to appreciate.....

• Inequity can not be reduced merely by increasing growth ⇒ the wealth should be generated in a distributed manner rather than distributing the wealth generated centrally

• This needs new technological culture ⇒ decentralized production systems

• Compassion and forbearance, forgiveness, inculcation of human values hold the key to reducing crime and violence NOT better technology
We need to appreciate.....

- **Happiness** is a state of mind not the state of bank balance
- It is dependent on wealth only till the basic needs are not properly satisfied
- Earning beyond this need doesn’t increase happiness
- **Greed** is counterproductive – individually, socially and ecologically

1. Creating an appreciation of the need
Misconceptions about EHV
Common misconceptions about EHV

- There are no universal values
- Conflict with secularism
- Values are “caught” and not “taught”
- Only Enlightened Being can “teach” values, not ordinary mortals
There are no universal values!

• Genesis of this confusion: Various values as defined in social science: personal, family, social, cultural, aesthetic, ethical and moral etc.

• While other values differ, ethical and moral values like truthfulness, honesty, integrity, generosity, compassion, non-violence, forgiveness etc. are universal

• On what basis can we say that these are universal?

• Asking the right questions!
EHV and Secularism

- **Secularism**: A system of social organization and education where religion is not allowed to play a part in civil affairs
- **Article 28**: No religious instruction shall be provided in any educational institution wholly maintained out of state funds
- **Religious instruction**: instructions regarding particular forms of prayer or worship or belief system
EHV and Secularism

- EHV is not religious instruction. Secularism doesn’t imply value neutrality, or moral relativism.
- Values are the basis of civil and criminal laws!
- Education in Human values – ethical and moral values- is the common essence of teachings of all religions.
Common misconceptions about EHV

• Values are “caught” and not “taught”
  – Limitations of charisma
  – Education can never be value free – all interpretations of facts imply a value judgment!
  – Avoiding discussion on ethical and moral values is in itself a value judgment – that these discussions are not important!

• Only Enlightened Being can “teach” values, not ordinary mortals
  – Only an Einstein to teach theory of relativity!
  – Need for caution – value educators should imbibe what they teach!!
Cardinal Principles of EHV
The foundation should not be made dependent on myth, or authority

Provoke the students to analyze nature & their own experiences of life to appreciate the basis of universal human values
Do not be led by reports or traditions, or hearsay. Do not be led by the authority of religious texts, nor by mere logic or inference, nor by considering appearances, nor by speculative opinion nor by seeming possibilities, nor because one’s own teacher has said so. When you know for yourself after careful observation and analysis that certain things are right, wholesome and conducive to the welfare of one and all, then accept Them, follow them.

The Buddha
Analyzing Life’s experiences…I

- Do I feel happy when others
  - cheat, steal, abuse, beat me
- Is it true of all?

Do unto others as you wish
others to do unto you
Analyzing Life’s experiences …II

• What makes us really happy?
  - Greediness or generosity?
  - Cheating or honesty?
  - Anger or forgiveness?
  - Cruelty or compassion?
  - Falsehood or truthfulness?

Is this universally true?

Thus we can discover the requirements for happy living: The Universal Human Values
Cardinal Principles of EHV

♦ Value dimension should permeate teaching
  -- no conflicting signals from different teachers

♦ Give practical training in self-restraint & self observation to actually inculcate values

♦ The Teacher acts as a senior student-
  not a moral master
Value Dimension should permeate Teaching

- Engineering Design Philosophy
- Principles of Management- business/marketing ethics
- Thermodynamics--exergy laws ; New Physics, Ecology
- Appreciating inter-connectedness
- Social & environmental impact studies of all projects ; incorporate value orientation in all subjects
- The challenge of applying engineering knowledge in sustainable decentralized production systems
Need for practical training: Knowing vs Imbibing Values

- Duryodhana’s dilemma
  \[ \text{Janami dharamam na ca me pravritti} \]
  \[ \text{Janami adharmam na ca me nivritti.} \]
- St Paul: *I do not do the good I want, but the evil I do not want is what I do.*
- Chasm between conscious & unconscious mind
- Need for practical training in self control & self observation; bridging the chasm between conscious & unconscious mind; mental purification

Possible through Insight Meditation
Need for practical training: Knowing vs Imbibing Values

- Exposure to social realities: *padyatras*; to good selfless work being done in India e.g. [http://goodnewsindia.com/index.php/gni](http://goodnewsindia.com/index.php/gni)
- Serving the underprivileged: NSS
- Working with NGOs
Role of Teachers

- Hazards of teaching profession => increase of ego
  
  *What you are shouts so loudly in my ears that
  
  I can not hear what you say

- EHV Teacher’s attitude should be like a senior student teaching a junior

- EHV Teacher as an exemplar

- Need for teacher training!
The Spiral of Value Inculcation

- **Right Action (ethics)**
- **Positive mental state (meditation)**
- **Improvement in motives (Value inculcation)**
- **Greater awareness “wisdom”**
Some Pedagogic Challenges

- Synergy between Humanities and Engineering departments – EHV as applied philosophy/psychology
- Developing procedures for “evaluation” of student performance in EHV courses
- Developing case studies in engineering ethics
- Value orientation of various subjects
- Involving NGOs in EHV programmes
Concluding Remarks

• Most problems of modern times have their roots in the crass materialistic world view arising from the neglect of **Universal Human Values**

• Education can never be value neutral; we should encourage discussion on UHV for the default value system is hedonism

• EHV can be effectively done by facilitating self discovery following scientific temper.

• Mere intellectual appreciation is not enough - practical ‘mental training’ is necessary for value inculcation.

• EHV should permeate all teaching!

• The EHV Teacher’s attitude should be that of a senior student, not moral master ⇒ Need for Teacher Training.
Thanks for your kind attention!

The insanity of the collective egoic mind, amplified by science and technology, is rapidly taking our species to the brink of disaster. Evolve or die: that is our only choice now.

Eckhart Tolle