

# **Value Education & Professional Ethics**

# Value education

DEFINITION :Value education means inculcating in the children a sense of humanism, a deep concern for the well-being of others and the nation.

## NEED FOR VALUE EDUCATION

- Values allow the individuals to interact harmoniously with others
- Values guide our behaviors; they are part of our identity as individuals
  - They show us how to behave and how not to behave when we're faced with desires or impulses, whether we're alone or with others.
  - They are like a compass that helps us behave consistently, regardless of the situation
  - Values guide our actions and determine for us what's good or bad

- Value means primarily to prize, to esteem, to appraise and to estimate. It means the act of achieving something, holding it and also the act of passing judgment upon the nature and amount of values as compared with something else. - John Dewey
- Learning about self and wisdom of life
- Values reflect one's personal attitudes and judgments, decisions and choices, behaviour and relationships, dreams and vision. They influence our thoughts, feelings and actions.
- Values are like the rails that keep a train on the track and help it move smoothly, quickly and with direction. They bring quality to life.
- Any human activity, thought or idea, feeling, sentiment or emotion, which could promote self-development of the individual in all its dimensions, could be said to constitute a value.

## CLASSIFICATION OF VALUES –

Values Biological Intrinsic Instrumental

- "Everything that is desired is desirable" Biological
- Intrinsic values are reflected in idealism Intrinsic
- the principle of utility is the guiding factor Instrumental

### **Types**

- Aesthetic
- Personal
- Social
- Moral
- Spiritual
- Behavioural Material

## **Traditional Indian Values**

- Truth
- Beauty
- Goodness
- Spirituality
- Simplicity
- Tolerance
- Pursuit of truth and
- Non-violence

## **Constitutional Values**

- Democracy
- Socialism
- Secularism and
- Equality

## **Universal Values**

- Truth
- Righteous conduct
- Non-violence
- Love
- World peace
- Human Right
- Universal Brotherhood

## **Methods And Techniques Of Value Education**

- Direct And Indirect Approaches
- Curricular And Co- Curricular Approach
- Integrated Approach

## **Programmes For Developing Values**

- Community prayer
- Health and Cleanliness programme
- Socially Useful Productive Work
- Special class-room situations
- Cultural and Recreational Activities
- Citizenship Training
- Social Service Programme

# Value & it's types Education depends upon the important parameters.

## Types

- Social values
- Cultural values
- Individual values
- Global values
- Spiritual values

Social values Human condition

- Reflected in life
  - compassion
  - Joy & Love
  - truth Cultural values
- a. Varies with time & place
  - b. b. Right or wrong, True or false & Behaviour of humanbeings
  - c. • Language
  - d. • Education
  - e. • Law & economics Global values Part of planet & similarly nature are inter linked with harmony

.Spiritual values Promote conservationism( in particular) and transform our consumeristic approach.

- Reduction of wants (desire for something)
- Self discipline
- Reflected in self restraint (self control) Individual values
  - a. Individual personality.
  - b. Help=parents & teachers.
    - Individual goals
    - Relationships

Education & it's types Education is as much about building character as ... equipping ... specific skills

Types

1. Formal education
2. Value education

Value based education Formal education

- It's self related
- \• By using instrument
- It's teach right or wrong • It's helpful& loving



## Value based education Environmental education

- Ecology
- Biodiversity Values-based education can strengthen students':
- Optimism
- Self-esteem
- Commitment to personal fulfilment
- Ethical judgment
- Social responsibility

## Concept of value education

- Why & how can use less resources & energy?
- Why need to (surroundings) cleaning?
- Use less fertilizers
- Separate our garbage

## Need of value education

- Improve Integral growth sustainable lifestyle
- Create attitudes
- Increase awareness
  - a. National history
  - b. Environment
  - c. Understand environment with interlinked (land ,air & water)
  - d. Know about living & nonliving organism with Environment

## **Methods of imparting value education**

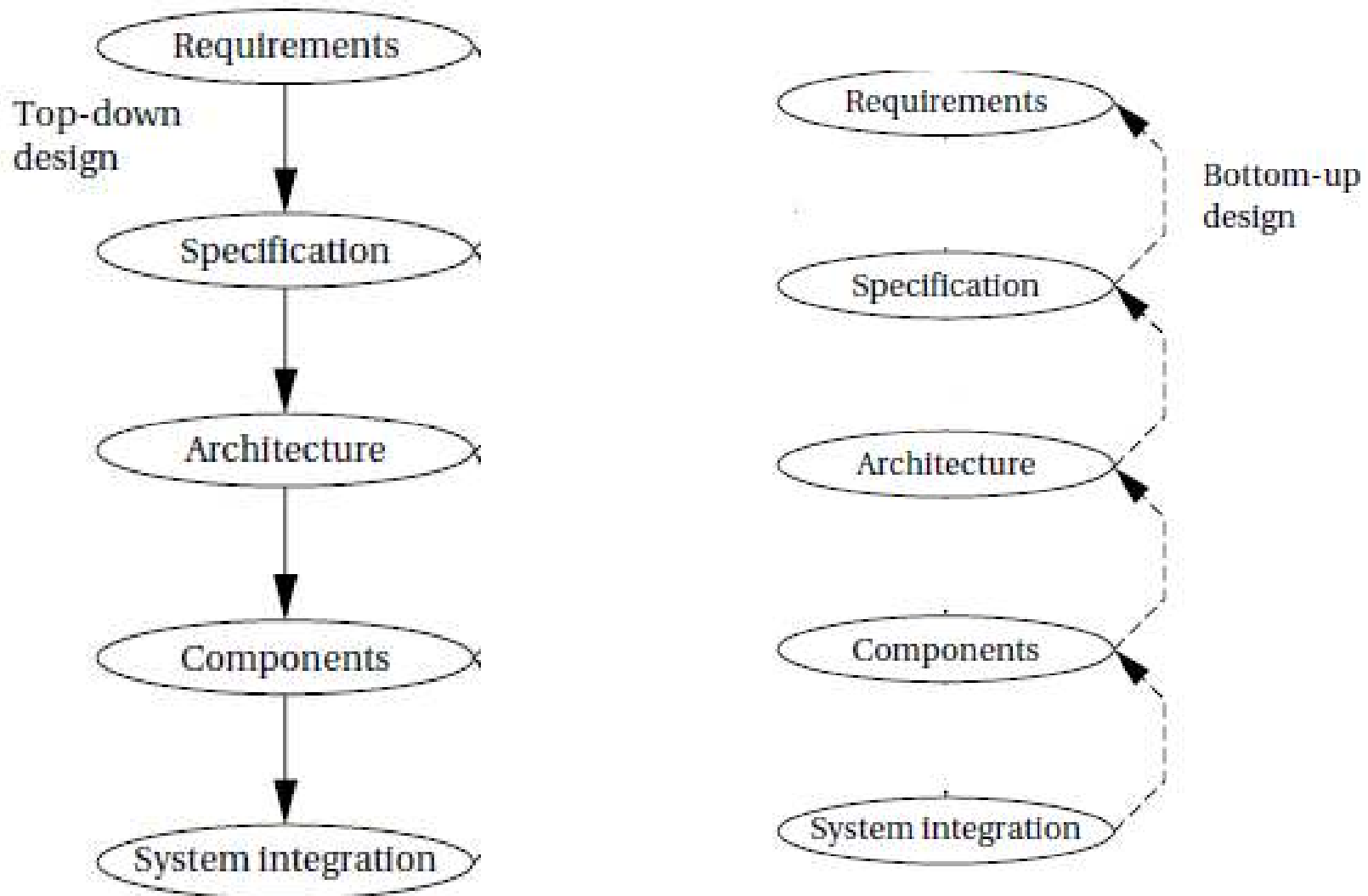
- Telling
- Modeling
- Role playing
- Problem solving
- Studying biographies of great man

# **Professional Ethics**

# Professional Ethics

- Engineering as Experimentation
- Engineers as responsible Experimenters
- Codes of Ethics
- A Balanced Outlook on Law.

# THE EMBEDDED SYSTEM DESIGN PROCESS



# Engineering/ Experimentation Comparison

<b>Engineering</b>	<b>Experimentation</b>
<b>Objective is to solve problems which often involves:</b>	<b>Objective to find new knowledge or answers which also involves:</b>
<ul style="list-style-type: none"><li>- unknowns</li><li>- uncertain outcome</li><li>- monitor, learn from past experiments</li><li>- human subjects / participants often unaware, uninformed</li><li>- often don't recognize all variables</li><li>- natural experiment</li></ul>	<ul style="list-style-type: none"><li>- unknowns</li><li>- uncertain outcome, test hypothesis</li><li>- draw conclusions or verify hypothesis based on experience / evidence</li><li>- "informed consent" of subjects</li><li>- try to control all variables</li><li>- controlled experiment</li></ul>

# Engineering **Projects** Vs. Standard **Experiments**

## Similarities

*Partial ignorance:* The behavior of materials purchased is uncertain and not constant (that is certain!). They may vary with the suppliers, processed lot, time, and the process used.

### *Uncertainty:*

The final outcomes of projects are also uncertain, as in experiments. Some times unintended results, side effects (bye-products), and unsafe operation have also occurred.

### *Continuous monitoring:*

Monitoring continually the progress and gaining new knowledge are needed before, during, and after execution of project as in the case of experimentation. The performance is to be monitored even during the use (or wrong use!) of the product by the end user/beneficiary.

### *Learning from the past:*

Engineers normally learn from their own prior designs and infer from the analysis of operation and results, and sometimes from the reports of other engineers.

*The absence of interest and channels of communication, ego in not seeking information, guilty upon the failure, fear of legal actions, and mere negligence have caused many a failure*

*Ex: Titanic- steamship Arctic*

## **Contrasts:**

The scientific experiments in the laboratory and the engineering experiments in the filed exhibit several

Contrasts:-

### *Experimental control:*

In standard experiments, members for study are selected into two groups namely **A and B** at random. Group A are given special treatment. The group B is given no treatment and is called the 'controlled group'. But they are placed in the same environment as the other group A.

This practice is adopted in the field of medicine. **In engineering, this does not happen**, except when the project is confined to laboratory experiments.

### *Humane touch:*

Engineering experiments involve human souls, their needs, views, expectations, and creative use as in case of social experimentation. **This point of view is not agreed by many of the engineers**. But now the quality engineers and managers have fully realized this humane aspect.

### *Informed consent:*

### *Knowledge gained:*



## *Knowledge gained:*

Not much of new knowledge is developed in engineering experiments as in the case of scientific experiments in the laboratory.

Engineering experiments at the most help us to:

- (a) verify the adequacy of the design,*
- (b) to check the stability of the design parameters, and*
- (c) prepare for the unexpected outcomes, in the actual field environments.*

## **Inference:**

**From the models tested in the laboratory to the pilot plant tested in the field, there are differences in performance as well as other outcomes.**

# CODES OF ETHICS

The 'codes of ethics' exhibit, **rights**, **duties**, and **obligations of the members of a profession** and a professional society.

The codes exhibit the following essential roles:

1. Inspiration and guidance. *The codes express the collective commitment of the profession to ethical conduct and public good and thus inspire the individuals. They identify primary responsibilities and provide statements and guidelines on interpretations for the professionals and the professional societies.*
2. Support to engineers. *The codes give positive support to professionals for taking stands on moral issues. Further they serve as potential legal support to discharge professional obligations.*

# CODES OF ETHICS

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3. Deterrence (discourage to act immorally) and discipline (regulate to act morally). The codes serve as the basis for investigating unethical actions. The professional societies sometimes revoke membership or suspend/expel the members, when proved to have acted unethical.

4. Education and mutual understanding. Codes are used to prompt discussion and reflection on moral issues. They develop a shared understanding by the professionals, public, and the government on the moral responsibilities of the engineers. The Board of Review of the professional societies encourages moral discussion for educational purposes.

# CODES OF ETHICS

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5. Create good public image. *The codes present positive image of the committed profession to the public, help the engineers to serve the public effectively. They promote more of self regulation and lessen the government regulations. This is bound to raise the reputation of the profession and the organization, in establishing the trust of the public.*

6. Protect the status quo. *They create minimum level of ethical conduct and promotes agreement within the profession. Primary obligation namely the safety, health, and welfare of the public, declared by the codes serves and protects the public.*

7. Promotes business interests. *The codes offer inspiration to the entrepreneurs, establish shared standards, healthy competition, and maximize profit to investors, employees, and consumers.*

# Limitations of Codes:

The codes are not remedy for all evils. They have many limitations, namely:

1. **General and vague wordings**. Many statements are general in nature and hence unable to solve all problems.
2. **Not applicable to all situations**. Codes are not sacred, and need not be accepted without criticism. Tolerance for criticisms of the codes themselves should be allowed.
3. **Often have internal conflicts**. Many times, the priorities are clearly spelt out, e.g., codes forbid public remarks critical of colleagues (engineers), but they actually discovered a major bribery, which might have caused *a huge loss to the exchequer* (Owner).

**4. They can not be treated as final moral authority for professional conduct.**

Codes have flaws by commission and omission. There are still some grey areas undefined by codes. They can not be equated to laws. After all, **even laws have loopholes** and they invoke creativity in the legal practitioners.

**5.** Only a few enroll as members in professional society and non-members can not be compelled.

**6.** Even as members of the professional society, many are unaware of the codes

**7. Different societies have different codes.** The codes can not be uniform or same! Unifying the codes may not necessarily solve the problems prevailing various professions, but attempts are still made towards this unified codes.

Ex: Leave for Pongal

**8.** Codes are said to be coercive(Powerful). They are sometimes claimed to be threatening and forceful.

# INDUSTRIAL STANDARDS

Industrial standards are important for any industry. Specification helps in achieving interchangeability.

Standardization reduces the production costs and at the same time, the quality is achieved easily.

It helps the manufacturer, customers and the public, in keeping competitiveness and ensuring quality simultaneously.

Industrial standards are established by the **Bureau of Indian Standards**, in our country in consultation with leading industries and services.

The International Standards Organization has now detailed specifications for generic products/services with procedures that the manufacturers or service providers should follow to assure the quality of their products or service. **ISO 9000-2000 series** are typical examples in this direction.



# INDUSTRIAL STANDARDS

<i>Aspects</i>	<i>Purpose</i>	<i>Examples</i>
1. Quality	Value appropriate to price	Surface finish of a plate, life of a motor
2. Quality of service	Assurance of product to ISO procedures	Quality of degrees according institutions by educational institutions
3. Safety	To safeguard against injury or damage to property	Methods of waste disposal
4. Uniformity of physical properties and functions	Interchangeability, ease of assembly	Standard bolts and nuts, standard time