PEC-Institute's Innovation Council

Work shop on "Cognitive Skills, Design Thinking and Critical Thinking" – Report

Workshop on "Cognitive Skills, Design Thinking and Critical Thinking" was conducted on 24th December 2018 at 10 am. The resource person was Mr.S.Ravindiran, Skill Trainer, Vaniyambadi 270 students ware participated in this program held at Swami Vivekananda Auditorium , Organized by PEC-IIC Coordinators Mr.M.Ganesan AP/MCA and Mr.P.Arunkumar AP/ECE

The emphasis tends to be on utilizing engineering, science and technology to develop solutions for society. The design engineer usually works with a team of and other designers to develop conceptual and detailed designs that ensure a product actually functions, performs and is fit for its. The main benefit of Cognitive Skills, Design Thinking and Critical Thinking Event includes:

· Students get clear idea of what Cognitive Skills, Design Thinking and Critical Thinking actually is.
· Why Cognitive Skills, Design Thinking and Critical Thinking in curriculum?
· Students get a notion of as to how Design Thinking and Critical Thinking aligns with industry need.

Session contents:

Cognitive skills:

Jean Piaget : Constructivism Theory

Kinds of Knowledge:

- Physical knowledge

- Logico-mathematical knowledge

- Social knowledge

Stages of Cognitive Development

- children's schemes change over time
- cognition develops in stages, not gradually
- each stage builds on accomplishments of prior stage

Design Thinking:

- Ideation canvas: People, Activities, Situation/Location and Possible Solution

- Product development: Purpose, People, Product Experience, Product Function, Product Features, Components, Customer Revalidation, Reject, Redesign and Retail.

- Design Engineering Process: series of steps, designing a product that meets certain criteria and/or accomplishes a certain task, how students apply core skills to everyday tasks, how students approach complex challenges, how students approach their changing environment

- Design methodology
    Spaces of design thinking

Critical thinking:

4 aspects of critical thinking:

1. Abstract thinking: thinking past what your senses tell you

2. Creative thinking: thinking "out of the box", innovating

3. Systematic thinking: organizing your thoughts into logical steps

4. Communication thinking: being precise in giving your ideas to others

Event photos: Gallery