Institution Innovation Council (IIC)  
Report on
Workshop on  
“Cognitive Skills, Design Thinking and Critical Thinking”  
by
Dr. Srinivasan Vathsal,  
EX Professor EEE IARE, Dundigal  
On 7th May 2019  
Organized  
in collaboration with IIC MHRD  
by

Convener Institute IIC
Dr. B. Vandana

President Institute IIC
Dr. P. Pabthuraj

Principal Signature
Dr. R. S. Jahagirdar

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KG Reddy College of Engineering & Technology
Chilkur (V), Moinabad (M),  
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MHRD'S INNOVATION CELL  
(GOVERNMENT OF INDIA)
Workshop on
“Cognitive Skills, Design Thinking and Critical Thinking”
KG Reddy College of Engineering and Technology, Moinabad, Hyderabad
On 7-5-19

Details of Resource Person
Name: Dr. Srinivasan. Vathsal
Designation: EX Professor EEE IARE, Dundigal

Hyderabad 50004

The institute organized oneday workshop on cognitive Skills, design Thinking and critical thinking in association with MHRD IIC, the workshop conducted was on live over skype. The resource person is Dr. S. Vathsal who is Rt. Director from DRDO IR/IPR New Delhi, he has more than 35 years’ of experience in research and in teaching, he also been as a speaker for various workshops, conferences, seminars and colloquium etc. The speaker initiated the talk by defining these 3 parameters and global relation among each. The terms follows a loop relation like cognitive gives how people think and understand, applying and understanding will helps to think critically for resolving technically which further leads out frame of design thinking. The cognitive development will begin to understand the development of logical competence and cause of developmental change and an account of the nature of developmental change. The Jean Piaget have developed 4 stages for this theory like sensori–motor stage, pre-operational stage, concrete operational stage and formal operational stage. This gives the details of qualitative difference between child and adult thinking, biological approaches, language in the outcome of cognitive ability rather being the lead in cognitive development.

It is believed that the cognitive development was the direct result of aging and environment. He also explained few keywords schemmass, assimilation, accommodation, adaptation and equilibration. The Piagets theory considered the following like methodology, evidence, alternative explanation and practical application. After Piagets theory the Lev Vygotsky theory explains the acquisition of knowledge was active and socially constructed rather than a passive conditioning and he believed that social interaction played a vital role in cognitive development firstly on social level. He discussed the difference between Piaget vs. Vygotsky learning, role of language, biology and child activity etc. Design as the transformation of existing conditions into preferred ones the definition was given by Herbert Simon, and he always linked to the improved future. Unlike, critical thinking which is a process of analysis and associated with the breaking
down of the ideas. Design thinking there is no judgments, eliminates fear of failure and maximum input and participation. Wild ideas are welcome since these often lead to the most creative solution. He emphasized and explained how design is related in research. Define, research ideate, prototype, choose, implement and learn makes design a fascinating and evolving subject. Design thinking in research, review the history of the issue, remember and existing obstacles, collect examples of other attempts to solve the same issue, identify the project supporters, investors and critics and take into account thought leaders opinion. Implementing of design thinking executes assign tasks, execute and deliver to client. The learning objectives acquire a deep understanding of the design thinking principles, process and tools, apply the design thinking methodology and tools to generate breakthrough ideas and co-create an improved customer experience journey, Improve personal effectiveness by becoming a more empathetic service provider.

The event was conducted in association with MHRD at institute and students attending the talk in various sections
innovation index. NIRF is created for building competition among institutions and started ARIA ranking. Ecosystem of supporting start-UPS is gradually improving. We are third largest start-up ecosystem in the world, AICTE brought out AICTE start-up in 2016 where an entrepreneurship to develop in even remote areas. Have to develop courses on innovation, SWAYAM programme initiated by GOI.

The event was conducted in association with MHRD at the institute online and students attended the talk.