

Professor. L.S. GANESH (Retired)

Department of Management Studies,
INDIAN INSTITUTE OF TECHNOLOGY MADRAS,
Chennai, Tamil Nadu, India.

Workshop on Human Pursuits, Technology, Invention and Innovation

Date : 22-12-2020
Time : 10 : 00 am to 1: 00 pm

Venue : Gray's Lecture Gallery (offline)
via ZOOM portal (online)

Patron



Dr. Surya Prakasa Rao, MD
Professor and Dean,
Narayana Medical College,
Nellore, Andhra Pradesh, India.

Convenor



Dr. Sivakumar Vijayaraghavalu, Ph.D.
Professor and Head,
Narayana Translational Research Centre

Prof. L. S. Ganesh (Speaker) – Reception in Dean's Chamber



Speaker Introduction by Dr. SP Rao, Dean, Medical College



Prayer Song by 1st Year PG Medical Student



Flower Bouquet Presentation by 1st Year PG Medical student



Felicitation by Dr. N. Sivakumar, Dean, Dental College



Our honorable Dean Dr. SP Rao commenced the workshop with welcome greetings to the guest speaker – Professor L.S Ganesh, IIT Madras and the medical & allied medical -students and -faculties present in the Gray’s lecture gallery of our institute. As well he greeted all other 198 online participants from India (96%) and foreign countries (4%) including UK, Saudi Arabia and Japan. Indian registrants were pan across India – Andhra Pradesh (84%); rest 13% are from the following states – Tamil Nadu, Telangana, Karnataka, Maharashtra, Pondicherry and Sikkim. He then requested a first year PG medical student to recite a prayer song. Then, the speaker was felicitated with a flower bouquet by a PG medical student and Shawl by Dental College Dean – Dr. N. Sivakumar. Post felicitation, Dr. SP Rao introduced the speaker to the audience as follows -

Professor L. S. Ganesh (aka LSG) recently retired as a Professor in the Department of Management Studies, Indian Institute of Technology Madras.

He has over three decades of academic experience involving teaching, research and intellectual services. His academic interests span the areas of systems thinking and applications, systems modeling and analysis, data and decision analysis, institutional planning and development, social entrepreneurship and project management, technology management, knowledge management and public systems management. Earlier, he served as an associate fellow in the educational planning unit of the National Institute of Educational Planning and Administration at New Delhi and then as an Assistant Professor at the Indian Institute of Management, Bangalore.

He has served as a Visiting Professor at the University of Passau in Germany, the Indian Institute of Management at Bangalore and Kozhikode, the Indian School of Business at Hyderabad, the National Institute of Technology at Trichy and other national-level and sub-regional Institutions. His research papers continue to be published in the most reputed academic journals and are cited often, earning him significant acclaim globally and nationally.

He is highly respected and rated by his peers as one of the top researchers in India in the field of Management. He is widely admired by his students, peers and audiences as one of the most inspiring teachers and orators whose clarity of thought and communication are exemplary, and whose insights and messages are transformational.

International organizations such as the World Bank and the UNDP, and national-level Institutions and organizations such as the MHRD, AICTE, NBA, ISRO, CII, FICCI, and MMA have utilized his expertise and services in some of their projects, programmes and events.

He has led executive development and continuing education programmes for the most reputed multinational and national – level organizations and has delivered keynotes, seminars and lectures to a wide variety of audiences ranging from business/industry

leaders and professionals through scientists to school children. He has made significant contributions to the growth and development of IIT Madras and his Department.

The noteworthy ones include

- a) The launch and development of the MBA programme,
- b) Establishment of strategic relationships through MoU's with international and national-level Institutions and organizations,
- c) The re-invention, revival and relaunch of the unique MS (Entrepreneurship) research programme,
- d) The promotion and incubation of student-led start-ups/entrepreneurial ventures,
- e) The formulation of the IIT Madras' perspective plan in 1991 and strategic plan in 2001 and contribution to the second strategic plan in 2014.

He has served several offices in his Institute including those of Warden, Advisor (Cultural), Advisor (Office of Alumni Affairs), Professor-in-charge of Human Resources Development (twice), Professor-in-charge of the Cell for Professional Ethics and Human Values, and Professor-in-charge of the Cell for Technology Innovation, Development and Entrepreneurship Support (C-TIDES), which is now the e-Cell of IIT Madras.

He served as the Dean (Students) of the Institute during 2011-14. He has held key positions in professional bodies such as the Project Management Institute (India), Society of Operations Management, and Product Development and Management Association (India).

Professor LSG has been offered many Awards, Honors, and much professional recognition, including:

- The Distinguished Alumnus Award by the BITS Pilani Alumni Association (Delhi Chapter), in 2007

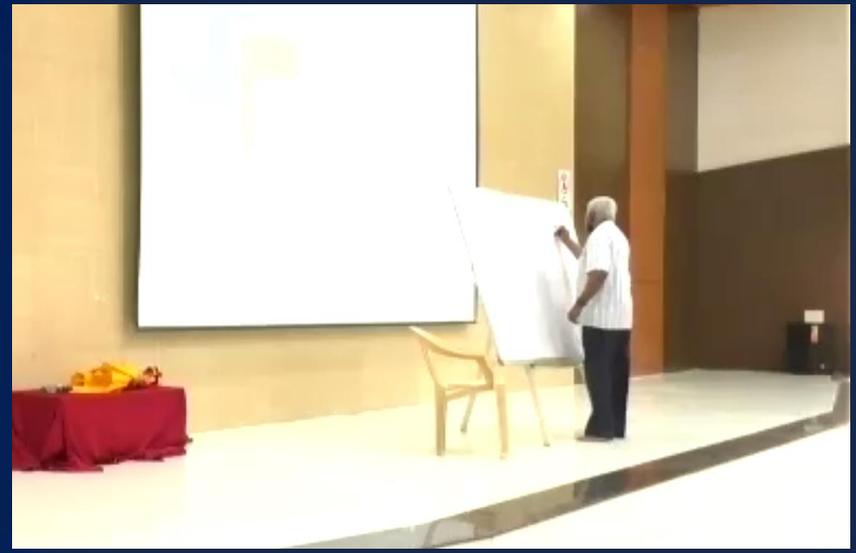
- The IIT Madras Alumni Association Award for Distinguished Services, in 2015
- The prestigious Distinguished Fellow award by the Project Management Institute (India), in 2017
- The Distinguished Professor award by the Computer Society of India (Mumbai), in 2017
- The status of Visiting Professor and Mentor-in-Residence at the IIM at Bangalore, in 2020
- The status of Professor of Eminence at the Anna University in Chennai, in 2020, and
- The status of Member of the Syndicate, Periyar University in Salem, in 2020.

He is now:

- A member of the Board of Governors of the Indian Institute of Management at Trichy

- A member of the Board of Governors of the Indian Institute of Technology (IIT) at Palakkad,
- A Nominee of the President of India to the faculty selection committees of the National Institutes of Technology (NITs) located in different states and union territories of India, and Chairperson, Board of Governors, Government Engineering College, Kozhikode.
- LSG is an accomplished rock, blues and jazz vocalist and rhythm guitarist. He loves work, music, philosophy and dreaming. After this introduction, dean requested Professor LS Ganesh to take over the stage to deliver his talk. Guest speaker, thanked our institution, dean and the convener – Dr. Sivakumar Vijayaraghavalu for arranging this workshop and started his talk on Human pursuits and values. He started to explain about the values of the human experience to the audience

Sample Pictures of the speaker addressing to offline & online participants



Prof. LS Ganesh, addressed the audience with an opening note – “hope you all will accept me as your friend and not keep me in pedestal of professor” and told the audience that this is quite an imposing hall and it is his first visit to Narayana Medical College, Nellore. He informed that he retired in July 2020, but continues his work in spirit, may not be by letter, so that’s the background. He said that when I asked to interact with you on a topic connected with incubation, I felt it will be good to go to the roots of the story; you know, where does this story started and there are situations in our country; where the incubation and promotion of startups as critical necessity for us, for various reasons. I will outline the reasons later. Before, I get into the discussion on human pursuits, technology, invention and innovation. All of you may be aware that India is one of the prominent players among 192 countries that signed the United Nations (UN) Millennium Development Goals (MDGs) that started in 2000. Since the goals were not achieved; from 2015 onwards it was reframed as Sustainable Development Goals (SDGs); with a primary aim to eliminate the extreme poverty; thereby the pervert humans can live with dignity

and honor. Hence, let's address the UN's first goal of elimination of extreme poverty for that two principles can be applied viz., 1. Equality & 2. Equity.

In certain circumstances, the principle of equality is the correct principle to be used. In some other circumstances you cannot be equal by design; but you have to be equitable which means to each person should receive value according to his requirement. But, what's the frame for referencing the requirement of a person in a fair manner? It's a practical question.

Okay, I'm here, you're there. How can we decide upon equity in a particular context? See distribution of food right now; or let's say I got some prasadam from the temple. How do I distribute? If I am going to distribute it among every one of us here, none of us will get anything. I cannot be equal in this case; hence there is no way it can be equal to have a set of rules to ensure what is called as a fair and acceptable distribution process. It's a correct value system. So it's like that. So we use principles of equality and equity depending on the situation to ensure maximum benefit is attained by the needy and for

this you don't need to be a communist or a capitalist or a political ideology to talk about equity. You just have to be a good human being that's all very- very simple thing. In this regard did we progressed significantly, lets forget the world and focus on our country – India? if asked me and the statistics also reveal it's a big “NO”. Because, 600 million people; that is half of the nation's population is living under extreme poverty; in rural areas people earning less than Rs. 35/day are considered to be poor, whereas in urban areas people in poverty are making less than Rs. 45/day. The extreme poverty is connected intimately with various other aspects of the human life such as basic nutrition, health, a gainful employment, contribution to national growth; all these things are intertwined. I hope you all able to visualize the magnitude of the challenge that we all are facing in eliminating extreme poverty. We all have a role to play in our -own lives, -families, -neighborhoods, -communities and society at large. So we have to have that visualization - what I do today must have an impact on myself, my family, my neighborhood, community and society at large, which is a very fair position to take part in nation building and elimination of poverty.

By doing so I will be rational, because I transact value otherwise, I will be irrational. I believe and by definition the startups and other enterprises core business is to create value develop it and distribute it. Thus there are two models to transfer the values – 1. Business model; 2. Social model; and there starts the story of an enterprise, which can be a business enterprise or social enterprise. Then he described about the differences between the business and social enterprise in detail.

The second goal to achieve is women empowerment and many other UN's SDGs are related directly to the status of women in the society and the way they are dealt in a society. In this aspect also country has long way to go. I am not talking about the celebration of womanhood; which will be ideal. I am just emphasizing the recognition a woman deserves in the family and in the society. A woman is a central figure in a family around her the family revolves, this is the traditional truth and we don't need someone from outside to teach us. I don't feel we are doing fair job in this concern. To be frank I myself don't know

whether I am giving fair importance to my wife and daughters. I may have good intentions; whether it is translated into practice matters a lot. We may have hundreds of good intentions but what is the guarantee that the intentions are transformed in to practice on the ground; where is the evidence for it? I think this is where as a society we fail; and need to address this greater concern. Statistics shows that relatively societies with high women empowerment are better than the societies in which they are less empowered. A common folk-lore joke in India is money in women hands are safer than with men. Though it's a joke, there is rational behind it, in general by mental model women are more focused on the family and are less, self-centered, however it cannot be generalized to all the women. If someone wants to test it; you are most welcome to do the survey using lots of survey methods/tools available. The third concern to address is sectoral role play.

Economically speaking every country has three sectors, the primary, secondary and tertiary where the primary concerns the inputs to the economy. I am talking about this because startups and entrepreneurship and enterprises can play in any of the three

sectors. The primary sector is technically the input sector to the economy. Typically, agriculture, fisheries, forestry, horticulture etc. Some people even put mining minerals in the private I have seen both happening. The secondary sector is the value addition sector – the manufacturing production sector; the entire supply chains come in this category. The tertiary sector is service oriented such as - education, health care, tourism and all information services. It is important for us to know where are we as a country in all these sectors. The startups are naturally focused on the maximum gain out of unit effort invested to do that one needs to do the - SWOT analysis – strength, weakness, opportunities and threat analysis to create a value to the idea and transfer to the society via two routes – a. business; b. social route. The value transferred need not be only the money between the buyer and the seller; it can be in any other form also. For example, currently I am transferring the knowledge as the value – notionally I am seller and the audience here are the buyers; hope you all got it. If I blabber in front of you then I fail to transfer the value and I become irrational.

The transaction in business model is known as quid pro quo the money from the buyer is transferred to the seller in some form – as direct cash payment, electronic payment, or easy monthly installments (EMI); whatever be the mode the money goes to the seller that's how the model is designed. The social model is created to be a non-profit organization that is they will create a value, develop and distribute it without expecting a monetary benefit from the intended beneficiary (IB). Social enterprises also can operate using business model, but it should value its social mission or purpose greater than monetary benefits. Hope, the difference between the business and social enterprise is clear.

Every moment of our life has value in it. If anyone wants to use the washroom during this talk; you should ease yourself and come back; that's the value of this moment otherwise, you are irrational. He requested the startups or inventors to visit the IIT Madras research park to see more about different types of start-ups, incubators and spin-off companies by the inventors. It's the nurturing ground for young inventing minds to transfer their idea in to value/product that can be distributed in the society. Professor told that he is at the

other end of the life and may say bye to this world within a decade. He further told that when seeing the young minds with great energy and enthusiasm; it warms his heart and he feel that there is a definite hope for this country and it lies with these young innovative minds. He insisted that he had given a great challenge – that is elimination of extreme poverty from the country and all the citizens of this country should live with self-esteem and –respect and with basic dignity and honor and he believes that it is quite possible if we all work towards that goal.

He also told the audience that as a teacher he is very proud of himself and can look back with full-heart and fulfillment. He told that he never took attendance even once in his courses till date; if students want to learn they can come to the class otherwise they are most welcome if they pass the exams without attending the classes.

He asked the audience a question – what is the value which I am talking so much here today? He started explaining with an analogy – if it raining heavily where do you find the

value or which object will give value to go in the rain? The audience answered as umbrella, the Professor further elaborated it to rain coat with a hood or something else that could completely protect from the rain. He asked another question; if you want to go outside in summer in this place (Nellore), which object will be of value? Many answered cap, hat etc, professor added sunglasses, sun-screens etc., are the objects that will be valuable to beat the bright sunny day in Nellore. Another question – he asked now can I abstract the value out of the product and make it a concept associated with that product; that's where the ideation for the startups arise; you are creating an idea for a product. There are some ideas that become a very big success story; I am wearing one such against my own original likes and dislikes is the Apple – watch I am wearing; I bought two months ago; if you ask me, are you proud about it. I don't know whether I am proud or not. This was driven by the information value from one of my student friend, who said Professor LSG you are more than 65 years and told me have this Apple watch on you. I am talking about the health technology here. Prof. told that he read a news that, apple watch warned someone; that in another 20 min he may get a stroke. The person took the warning seriously and rushed

to the hospital, as warned he got the stroke, since he was on time doctors saved him. The watch can even print the ECG; thus this invention adds value to the life by lowering the risk of mortality by constantly monitoring my vitals.

Then he told that value is three dimensional, each one of us creates a value in our existence as human beings – this is called *existential value*. The second dimension is *experiential value* – the value that we derive from our experiences and the third one is stability/strength as the value. For example, how comfortable you will be in a thermal wear right now; how many of you will be comfortable, little comfortable and not comfortable at this moment in thermals? For this question; most of the audience answered that they may not be comfortable in thermals.

All of us uses combination of resources, action experience and conditions every moment. To explain it professor asked the audience – currently what experience you all going through? Which deliberate or may not be deliberate involuntary action experience. Are

you engaging in right now; I am also doing it – what is that? One of the 1st year PG medical student answered it as breathing. Prof. told absolutely correct, it is an action experience; do not under –estimate the importance of breathing; I mean that’s the reason people in ancient India wrote volumes in Pranayama (breathing – Yoga). He continued with questions and asked what is the resource we use for breathing – most of the students answered it as air – he continued his talk saying that it is the free natural resource. Do you agree whole world of business built around the value of air – for example, air purifiers, air conditioners, fans, coolers, ventilators with oxygen supplement. Then he asked what is the other value which we need for our survival – many answered as water. He said not a bad answer; but not that one – much more basic value is sleep. I studied that 50-60 h continuous sleeplessness results in hallucination and 220 h without sleep will lead to cardiac arrest. He highlighted the technologies that were created for our survival.

He then requested all the participants to imagine a mental model of a triangle with technology at the apex of the triangle, science and engineering are bottom two vertices

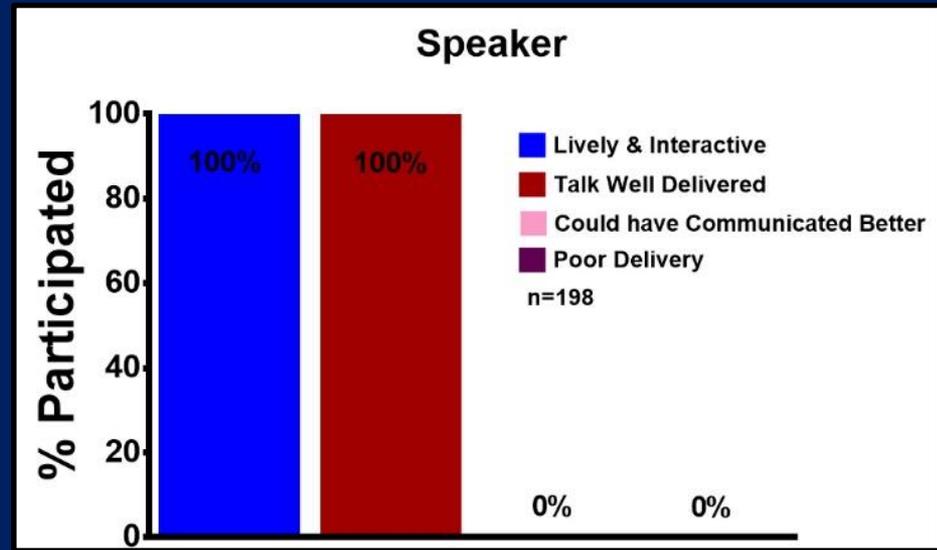
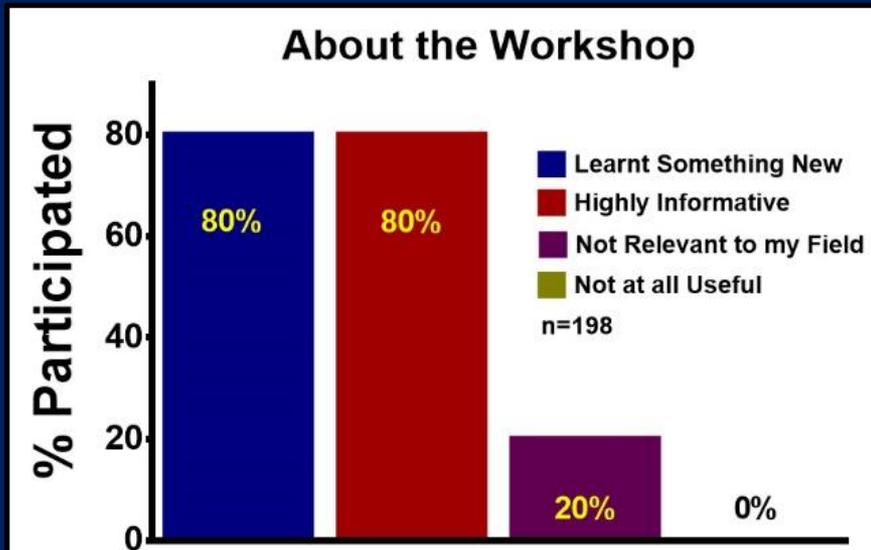
of it. They are all interconnected, today we are in world where we cannot practice science without technology and engineering and vice – versa. Science is knowledge, engineering is action and technology is things. For example, the spectacles most of you wearing is the technology, it involves the knowledge of optics and the action of engineering to produce it. Next, he defined invention as creation of a new or modified functionality of a technology. He explained functionality using white board marker and a ball point pen as examples. Though both are pens; their application is different; one is to write on white board and another one is to write on paper. If I need the convenience of both the function in one pen, then that is invention. The development of a new functional capability or a significantly modified functional capability is invention by definition. Once the invention is made it needs to properly registered to protect the intellectually or the ideation behind it for that purpose we have Intellectual Property Rights (IPR).

Finally, innovation by definition is a process by which a domain, a product, or a service is renewed and brought up to date by applying new processes, introducing new techniques, or establishing successful ideas to create new value. The creation of value is a defining characteristic of innovation. But, innovation demands commercial success; without that, it can be claimed as unused invention. Innovation at times may not be commercially successful but it becomes popular and widely used. For example, dil-scoop in cricket, innovated by Dilshan, Sri Lankan cricket batsman; similarly, reverse sweep is another example of innovation that is widely used and popular among modern cricketers. Finally, he spoke about use, misuse and abuse of technology and thanked all the participants who were patiently listening to him. He also thanked the organization, dean and convener for organizing the talk and if God permits he would like to talk in-depth in this topic in near future. Post his talk, dean concluded the workshop by offering a memento and vote of thanks to the Professor L.S Ganesh.

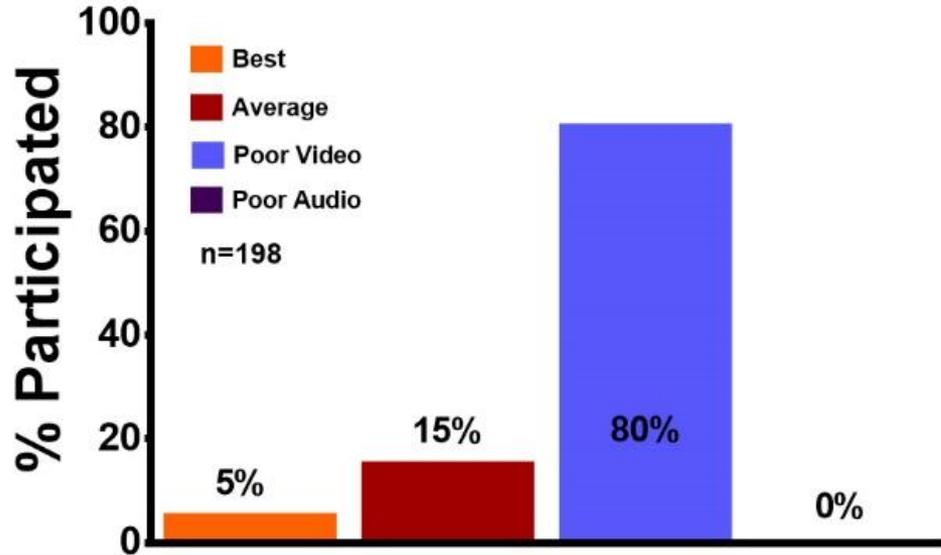
Vote of thanks and memento presentation to the speaker by Dr. SP Rao, Dean



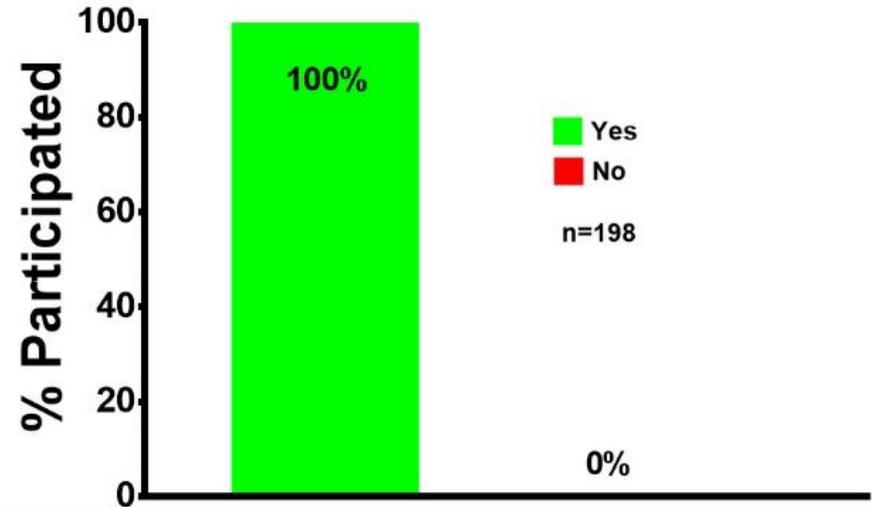
Participants Poll



Audio & Video Quality



Would you attend similar workshops in the future



Thanks