

Interview Article with Dr. S. Devarajan

(Head of Advanced Manufacturing / Production Engineering, TVS Motors, Bangalore)



On 13th October 2022 Dr. S. Devarajan Head of Advanced Manufacturing / Production Engineering, TVS Motors, Bangalore, delivered the Keynote Address for the 10th International Finance Conference 2022 at SDMIMD. Post session the Dimensions committee had the honour to interview Dr. S. Devarajan to further capture insights from his experience rich illustrious career.

The interaction was as follows:

Dimensions Team: “When older curricula are on par with future curricula how to bridge the gap?”

Dr. S. Devarajan: “Special courses can be bought in along with a lot of project presentations and future outlooks on them. Everyone has got beautiful ideas that can be implemented in exams apart from just using the book solutions along with their respective professor’s guidance in college. Course curriculum should ensure that students are more inclined towards industry oriented rather than just gaining book knowledge say for example Today, in e-commerce platforms like Amazon, Flipkart, etc their logistics has almost 15% wastage of cost which is covered by the customers in various forms like delivery charges and all for which students can come up with logical solutions to prevent the loss these are the kind of industry based approaches which can be included in the course curriculum. Participation in events outside of college like competitions etc. Students can read a lot of research papers and brainstorm them along with their batchmates to know the latest advancements in the industry. Changes cannot happen drastically they have to happen step by step and each college/institution can come up with its own innovative measures to align more towards industry oriented. He also stressed colleges/institutions as the only platforms to do any new things and to commit mistakes and learn from them. The same cannot happen in any workplace as it will have its own severe consequences. Knowledge of simulation software and case study analysis can be improved with the help of college guidance as they are also noted to be one of the key factors to get a touch on the industry applications.”

Dimensions Team: “How are TVS working on strengthening Gemba and how is the industry working on Gemba?”

Dr. S. Devarajan: “There are 3G’s (Gemba, Gembutsu, Genjitsu). Gemba is the place of work, Gembutsu is the touch or feel of the component and Genjitsu is the principle. These are the basics required. They are very much focused on keeping the place clean, tidy, and organized. 5S is a workplace organization method that uses a list of five Japanese words: seiri, seitan, seisō, seiketsu, and shitsuke. These have been translated as 'sort', 'set in order', 'shine', 'standardize', and 'sustain'. Before practicing 5S for the organization, it should be practiced for oneself as the company is disciplined on a personal level too. 5S at a personal level means daily shaving, bathing, and changing clothes and socks. This example was given by the keynote speaker to his team members, and they were thrilled as they could do the 5S in their workplace. Leadership plays an important role in this he stated an example of Kumble’s and Dhoni’s captaincy. Kumble used to pose fine on players who used to come late for practice sessions and post this some sort of discipline was bought but not to a great extent under Dhoni’s captaincy he used to pose fine to all other players excluding the latecomers, so this bought in a huge change and players ensured each other were on time. So, this created good bonding and resulted in the unity of the players also. This is how Gemba plays a huge role as all are touching humans at an elemental level.”

Dimensions Team: “Bringing in cultural changes to the workforce whose thoughts are not in alignment with the organization’s goals! in this case, how do you plan on bringing automation to the current workforce or they might be forced to upskill? How do you plan on bringing the change to the organization? When the younger generation comes up with new ideas and technological development will the higher and older generation of the workforce be ready to accept them and upskill themselves?”

Dr. S. Devarajan: “The skillset of people is also changing today. Manufacturing is no longer a dirty word, Automation, Robotics, and IOT have already come into the picture. There are already people who have gone to the next level in upgrading themselves. TVS has a suggestion scheme inside the factory, the workforce can suggest, and implement and they will be rewarded for the same this way people start thinking differently. Almost 50 suggestions per employee every year are received by the company. On the Founder’s Day of the company, the best suggester will be rewarded along with their families which leads to peer pressure and make the other employees also think differently. The operators/workforce of the company will be sent to various countries to attend various seminars, and they will have been the only people from their village who would have to travel abroad. They get to change their surroundings around themselves and encourage everyone around them also to study. We must walk the talk; empowering people is a very important aspect of an organization. We can make India proud by applying these techniques to their respective companies. The children and the young engineers in college should change to bring about a bigger change in society and their thoughts. In Japan, parents teach their kids at a very young age, and the timing in Japan is very good.”

Dimensions Team: “Industries are moving towards robotics, especially the manufacturing sector. Most of the equipment manufacturing has been taken up by China so how are the industries trying to manufacture the equipment within India?”

Dr. S. Devarajan: “The humanoid robot is coming more into the picture these days. Many equipment parts are still being imported like sensors and semiconductors units. PLI schemes and in another 4-5 years there will be development in this as all are huge investment areas. This will happen in the area, we have to wait for a few more years. Not many are interested in taking mechanical and even mechanical engineers are moving towards IT sectors. The manufacturing industry is not being projected well in the country, it is still being projected as a dirty job like welding, painting, etc. Things have changed, but the same is not being projected. There is a huge gap between what is being taught and what is done in the industry. Mechanical engineers must visit factories to see what is happening, physically visit the companies, and get into sustainability to give something back to society. Due to the above-mentioned factors, it will take a few years for countries like India to manufacture within the country.”

Dimensions Team: “New technology is adapted only if it’s better than the previous one. EVs are a better option than fuel cars but with the current condition the usage of electricity is dirty, how do you think EVs are still a good option?”

Dr. S. Devarajan: “In carbon footprint, there are four phases the supply phase, manufacturing phase, usage phase, and after-usage phase. If this carbon footprint is applied at every stage, we will know if it’s green or not. Suppose thermal charging is done, there is more carbon footprint than hydel charging. EVs are good for the public but the energy available is still a question. Now they are talking about multi models of analysis in terms of sustainability.”

Dimensions Team: “Do you see hydrogen as a viable form? Hydrogen to generate needs electricity and to transport requires petrol and diesel again. Isn’t it quite inefficient?”

Dr. S. Devarajan: “We are trying to drive atoms from molecules. There is nothing right or wrong, it will just be hybrid mode. Old things like horse carriages are still there in Finland it is available in India also. The best is to go towards newer areas, maybe towards solid cells, a new thing coming up in this area. To reduce lithium usage different uses of cells are being brought into the picture. A lot of research work is going on about these. Anything about the technology we Indians will be trying out from TVS to Mopeds from Apache to Three-wheelers.”

Dimensions Team: “India has a huge population at various levels of consumers, and their preferences are changing every now and then. How do marketers of companies take the ideology and values of their products to the consumers and bring about a change in their mindset and align themselves with consumer preferences?”

Dr. S. Devarajan: “First, the company must understand who their customer is. From the marketing end, they know who their customers are but they wouldn’t have spent much time with them. We have a market research team, and new product development teams so they spend time going to the market and spending time with the customers throughout the day. What the consumers/customers do from morning till late in the evening. The type of meetings, household communities, student communities, everything is covered by this they get to know what is not in their convenience. We are in the mobility phase in how much mobility we are helping the

customer. We stay with customers and learn what they want rather than asking what so and so the brand gives them, which we cannot.”