

Future Challenges and Role of Young Engineers

by Ms. Suvarna Ooi

YOUNG engineers who have just joined the industry, or who are about to, may quickly find themselves becoming overwhelmed by the various issues that they face at the workplace. So how can they better prepare themselves to deal with some of these seemingly insurmountable challenges? JURUTERA sought out Ir. Dr Nehemiah Lee Chee Hai, managing director of Nehemiah Reinforced Soil Sdn Bhd, who talked about his experience when he first started out.

After completing his studies, Ir. Dr Lee recalled that one of the biggest challenges he faced when he first embarked on his engineering career was the lack of good mentors and role models to look up to. Having a good mentor, he believes, is very important especially for young engineers who want to become successful in their own field.

He said, "A common misconception among young engineers when they enter the industry is that they should only be good in terms of the technical stuff. They tend to retreat from entrepreneurship, marketing and innovation which is a big loss to them. Even if they do not wish then to climb the corporate ladder or be an entrepreneur, young engineers need to develop their skills in these areas as well."

After several years, Ir. Dr Lee decided to establish himself as an entrepreneur by starting his own company. He found that he had to face a completely different set of challenges. Not only did he have to deal with cash flow problems, he also had to face constant threats from his competitors and the arduous task of building a track record when he first started out. However, it seems that the biggest challenge he faced then was having to compete on an uneven playing field caused by unethical practices.

He said, "When I started my own company, I told myself that I simply would not give in to corruption at any cost. And the way I overcome temptation was by having faith in God. However, it is not simply a matter of relying on blind faith, as one must also have a firm belief in the principles of integrity, perseverance, hard work, ingenuity and technical competence, and be market oriented."

As an entrepreneur, Ir. Dr Lee pointed out that he is grateful for his engineering training and background as it has taught him to be analytical and to solve problems, and deliver value to his customers. He said, "In the past, engineers tend to perceive themselves as mere professionals just like doctors, lawyers, architects and accountants. We provide our service to our customers and get paid for it. As professionals, our scope of influence is very limited because we can only provide our service to a limited number of clients, just like a doctor who can only see a limited number of patients each day."

However, he added, "For entrepreneurs such as Steve Jobs and Tony Fernandes, their influence is almost limitless. They have most definitely changed the way people live. Nowadays, we have engineers who have become entrepreneurs like Datuk Lin Yun Ling of Gamuda Bhd whose impact on the infrastructure development of this country is far reaching. In short, nowadays, we have trailblazers who set examples and the pace to encourage the transition from an engineer to an entrepreneur."



*Ir. Dr Nehemiah Lee Chee Hai,
Managing Director of Nehemiah Reinforced Soil Sdn Bhd*

After completing his engineering degree, Ir. Dr Lee went to the United States to earn his Masters in Civil Engineering as he believed that the experience would provide him with the right exposure to further enhance his knowledge and skill set. He said, "At that time, I found a good mentor in a form of my professor who was supervising my applied research. Way back in the 1970s, there were very few people who continued their studies after getting a degree."

Ir. Dr Lee pointed out that successful entrepreneurs share several characteristics, such as, having great leadership skills and the belief in the importance of integrity, hard work, perseverance, discipline, good business acumen and in building relationships, communication skills and the willingness to take calculated risks.

He believes that having leadership qualities is essential to a successful entrepreneur as one needs to have the vision and the ability to assemble followers or employees, and unite and motivate them. In other words, leadership is about vision casting and motivating followers to fulfil the entrepreneur's vision.

Proof of his entrepreneurial talent was evident when Ir. Dr Lee won the Platinum Award in the Entrepreneur of the Year category in the Star Outstanding Business Awards (SOBA) 2011 which was held in November last year. In his acceptance speech, he attributed his win to the hard work and commitment of his management team. His company currently has businesses in India, Bangladesh, Singapore and Indonesia, and will be venturing into Australia next year.

He believes that the industry needs to persuade more engineers to become entrepreneurs by encouraging successful engineer entrepreneurs to share their stories. In fact, the testimonies of these successful engineers could be one of the most powerful motivators for those who are just starting out.

His advice for young engineering graduates who want to become entrepreneurs is to dare to dream big and to persevere until they have achieved those dreams. Although the path to becoming a successful entrepreneur is never easy, the end result will justify the effort.

Comparing the challenges that young engineers face today to when he first started, Ir. Dr Lee said the most notable difference was that the speed of business transactions has accelerated with the advent of personal computers, the internet and mobile phones. Likewise, the expectation for the speed of delivery has also risen exponentially.

In addition, he felt that globalisation has made the market a lot more competitive because technical products and professional services can be sourced from all over the world and delivered right to the customer's doorstep.

Correspondingly, tremendous opportunities have also opened up whereby local products and services can be delivered globally.

However, according to Ir. Dr Lee, one of the areas that young engineers in Malaysia need to improve upon involves the acquisition of soft skills such as social interaction, communication and presentation skills, creativity and innovative capabilities to be able to develop the famed blue ocean strategy.

He said, "Besides technical training, engineers need to develop soft skills like communication skills and interpersonal relationship building skills which will enhance their marketing flair. Having a creative and innovative mind that regularly thinks out of the box will help an entrepreneur sustain a successful business on a long term basis."



Ir. Dr Nehemiah Lee has won several awards

Generally, he feels that young engineers in Malaysia tend to be narrow in their outlook, especially those who have been trained locally. Although there are many good examples of young engineers who shine out, they are the exceptions. The majority of young engineers share a fear of the unknown and are unable to interact confidently with foreigners.

Ir. Dr Lee said, "As a result, they are less adaptable to foreign culture and are less exposed to the latest technology and best practices. In fact, I believe many have lost their competitive edge compared to their counterparts from other countries." He pointed out that sending local engineers on a stint of work exposure in a foreign culture, especially in more advanced organisations, would help to make them more competitive.

In fact, he suggested that young engineers should be encouraged to participate in an internship exchange programme with engineering firms overseas as this would help them develop a global outlook and increase their exposure to the latest technology and best practices. He believes that if IEM could help organise such a programme, it would help young engineers in Malaysia to become more competitive in a globalised environment. ■