HEN you ask SPM school leavers what they intend to do with their future, you often hear them answer medicine, biotechnology or engineering. Why are these answers so prevalent? The common reasons are that these are courses recommended by their parents, or by counsellors who give them an overly optimistic view of their potential career path. The herd mentality of following what their peers are doing plays a significant role as well, especially to students who have yet to decide on their course of study. I spoke to someone in an organisation that provides scholarships and funding, and he informed me that one out of 13 students applying for scholarships intend to do medicine.

These responses actually make me sad because no one is giving these young people a clear picture of the future manpower needs of the nation. We don’t need more general practitioners, we need more specialists. That is something not easy to achieve, particularly when these students are not aware of the work/profession, and do not have plans to do further studies in any specialised field of medicine.

At the same time, it’s important to identify what fields are relevant to the graduates in the near future, say five to seven years from now. When you ask these SPM holders what kind of engineering they want to do, they toss out names like marine engineering, aerospace engineering, or automotive engineering. These niches exist, but do we have the infrastructure in Malaysia to support a thriving industry based on them? Encouraging students to enrol for these programmes only spells a future away from Malaysia — in another country where they will be offered better opportunities in these fields, or worse,designating these graduates to unemployability.

For example, for those who say they intend to be automotive engineers, how many engineers do Proton and Perodua need to make cars? How many cars do they create that they need hundreds of automotive engineers — the numbers that graduate each year? We only have two local car manufacturers, and the rest are assemblers. The fact is that we would benefit more if we focused on technical and vocational graduates, those who go on to be automotive technology experts and can apply their trade in pre-existing automobile manufacturing companies.

If you look at most of the cars today, most of the components are electronic. That means that we can’t just bring the car to any road side mechanic if it breaks down. The cars now are so sophisticated and complex that they have to be towed to the workshop and analysed by a computer if there is a problem. For example when the taillight of a continental car malfunction, there is a specific light on the dashboard that will inform you of the malfunction. The light will not switch off until you take the car to their service centre and get it fixed.

This means that we need people who can analyse those service centre reports and make accurate diagnoses. Recently, I saw an advertisement on a luxury car website asking for SPM school leavers with good results to be trained as supervisors at their service centres. What does this tell us? That we need morevocational and technical graduates. But not many people are interested in pursuing studies in the technical and vocational field because they don’t understand its importance. We still look down on technical and vocational skills, and that is a mindset that we have to change.

What should be done is a review of engineering studies so that the output of institutes of higher education can be closer to the needs of the industry. It is important that universities work closely with the industry to keep track of the developments in engineering-related studies in the current business environment. It is not enough to know that we need electronics engineers — we should know what kind of electronics engineers we need — is it in aeronautical technology (for the aviation and airline industries), or maybe marine technology (for the maritime and related industries)?

Bearing all this in mind, it’s about time that we, as educators, start planning for the future graduates of the country. If we don’t do forward planning now, we will not be able to cope with the needs of the country, and a lot of young people will not be able to contribute effectively in the nation building process. Tertiary institutions should not just be looking at traditional areas of engineering, but rather take a more dynamic view by incorporating it not only as a foundation for strong technical and vocational education, but also a professional education with pride and prestige.

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Professor Datuk Dr Zabid

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**full text:**

“We need more specialists, not generalists”
We need more specialists, not generalists

can be reached for any feedback

✉ pvc@unirazak.edu.my