Vision 2020: Interest in Science, Maths & Engineering Crucial for National Development

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We're running out of time; Vision 2020 is less than five years' away. As Malaysia gears itself towards a developed nation status by 2020, there is still much to do to get there.

One of the most direct ways is to ensure a sufficient and growing number of engineers in the country. The increase in the number of engineering students is paramount to meet the nation's need for engineers to implement and maintain the many development projects.

On a recent visit to the International Bureau of Education (IBE) in Geneva, Deputy Prime Minister Tan Sri Muhyiddin Yassin spoke of the need for Malaysia to harness skills and knowledge in Science, Technology, Engineering and Mathematics (STEM). He posits its importance across all sectors for Malaysia to remain on the growth trajectory towards economic and social gains.

He mentioned that some countries, which had started at the same level as Malaysia, had moved much further ahead; he credited this to their wisdom in making full use of STEM to boost their country's fortunes. As such, he stressed on the need for human capital development in STEM which he considers vital in the nation transformation process.

He added that to achieve this, a strategy comprising a series of actionable plans is needed to support the production rates needed for generating skilled STEM human capital at two levels, namely secondary schools and tertiary institutions, in order to achieve the target of 500,000 STEM graduates by 2020.

Although the solution is apparent, its execution is the challenge. One of the factors hindering this is getting more students interested in science and science classes. Science and mathematics should be made interesting, easy to understand and be more hands-on and exploratory. This is in line with the Government's aim for a 60% science and technology-based education by 2020.

An interest in science and mathematics, or STEM, will bring direct results to national development, particularly because of the role of engineering in a country's development. For the engineering profession, greater interest in STEM in school will result in more students being eligible to pursue engineering courses in universities. An increase in the number of engineering students will help meet the nation's need for engineers which translates into greater implementation and maintenance of the country's economic development projects.

The Institution of Engineers Malaysia (IEM) lauds the Government's efforts to promote the study of science in schools. Without a large number of science students in schools, universities will not be able to produce the number of engineers needed and this will be detrimental to the progress of the nation.

As a national association with the nation's interests at heart, IEM has been actively conducting school career awareness talks, arranging competitions and exhibiting interesting projects on engineering to school children to promote an interest in engineering. IEM has also set up IEM Student to encourage students to choose sections in the various universities. Engineering students are also encouraged to join IEM as Student Members which will enable them to get access to IEM resources and activities, such as talks and networking.

IEM is one of the supporting members (together with AAET, MiGHT, UTAR and NSC) ofthe Kuala Lumpur Engineering Science Fair (KLESF), an annual programme aimed at promoting interest in STEM among primary and secondary school children, in line with the Government's vision and aspirations.

IEM is of the opinion that career prospect isa major factor when a student is considering tertiary studies and career options. Prospects for engineers include top level positions, attractive remunerations as well as status recognition, all of which will motivate students to take up STEM education and to pursue a career in engineering.

Students must be made aware that job prospects for engineering graduates are bright as the government allocation for infrastructure development supports a growing demand for engineers. The national development towards an industrialised nation has also spurred the demand for engineers.

Students and their parents must realise that engineering is not limited to the five traditional branches, namely Civil, Mechanical, Electrical, Electronic and Chemical Engineering.

Today, engineering has expanded into many new disciplines including Aeronautical Engineering, Environmental Engineering, Maritime Engineering, Mining Engineering, Oil and Gas Engineering. All offer exciting career options for students.

For the uninitiated, an engineer is, basically, someone who has the ability to understand and visualise engineering problems and be competent to improve, overcome or mitigate the problem. Engineering graduates have the opportunity to work in a wide range of industries namely construction, consulting, manufacturing, oil and gas and in various Government agencies.

As the largest employer in the country, the Government should provide equal opportunities and create a structured pathway for all science-based professionals, in particular engineers, to take up high positions in the Civil Service. Recognising the contribution of engineering success and seeing it as a pathway to top positions in the Civil Service will surely motivate students to pursue STEM education in the country. ■

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http://www.thestar.com.my/Opinion/Letters/2015/07/09/Harness-STEM-for-engineering/