

SPEECH BY
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AT THE
NATIONAL SCIENCE CHALLENGE (NSC) & INTERNATIONAL
MATHEMATICAL OLYMPIAD (IMO) CONTRIBUTION CEREMONY

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Assalamualaikum Warahmatullahi Wabarakatuh.

Salam Sejahtera, Salam 1Malaysia and a very good afternoon.

1. First and foremost, I would like to thank the Academy of Sciences Malaysia and the ExxonMobil Subsidiaries in Malaysia for this invitation to witness the **NATIONAL SCIENCE CHALLENGE AND INTERNATIONAL MATHEMATICAL OLYMPIAD CONTRIBUTION CEREMONY**. I am also honoured to be given the opportunity to address the audience here today.

Ladies and gentlemen,

2. We are now at a time where sustainable socio-economic performance is closely tied to the production of high calibre, outward-looking and enterprising human capital. This means that as competitiveness is raising, the demand for skills and standards are rising as well. In Malaysia, foreigners are not only working as hard labour anymore but as professionals in various sectors ranging from medicine, engineering to Information Technology or IT.

3. Presently in Malaysia, the number of students taking up science, technology, engineering and mathematics or STEM subjects is declining. Citing statistics from the Ministry of Education, in 2014 the percentage of students who enrolled in STEM stands at 46.7%. Will we ever reach the status of knowledge economy if this downward trend continues?

4. With the advent of the digital age, teaching methodologies must also keep up with the changes. Teachers must be more creative and innovative in getting the students interested in the subjects through **Inquiry Based Science Education or IBSE** method and encourage students to ask questions and develop their critical thinking skills.

Ladies and gentlemen,

5. The Ministry of Science, Technology and Innovation (MOSTI) through Academy of Sciences Malaysia (ASM) has conducted a pilot project on IBSE from the year of 2012 to 2013. 4 schools involving 346 students participated in this pilot project. As part of the pilot project, 20 teachers were trained for at least 60 hours through specialised courses on IBSE to provide them with sufficient exposure to IBSE methodology.

6. From the study, it can be surmised that IBSE in the teaching and learning of science is able to create motivation, interest and excitement to attract students to STEM. IBSE emphasises on learning through hands-on experimentation rather than expecting students to memorise scientific concepts which is the norm in conventional learning.

7. This is one of the challenges with conventional learning as students learn the 'what' but not the 'why' and the 'how'. Realising this, Ministry of Education Malaysia (MoE) has taken the initiative to develop Higher Order Thinking Skills (HOTS) among its students by making it part of the agenda in the Malaysia Education Blueprint 2013-2025.

8. This year, through the MOSTI Social Innovation (MSI) programme, the IBSE project has been expended to train science and mathematics teachers in 28 schools in 3 states.

Ladies and Gentlemen,

9. MOSTI and the Ministry of Education support the National Science Challenge and the International Mathematical Olympiad programmes which are aimed at imparting scientific knowledge, enhancing science exploration, innovation and communication amongst our young generation.

10. The National Science Challenge or NSC is a competition that helps students to develop soft skills and encourages them to think beyond their classroom walls; challenging them to deepen their knowledge and be analytical and creative in applying their knowledge.

11. Today, I am proud to announce that we are sending the 2015 National Science Challenge runner-up winners and the top scorer of the 2015 National Science Challenge (Preliminary Level) to Japan as exchange students under the platform of SAKURA Science Exchange Program.

12. It is also an honour for me to congratulate the 6 students who have qualified to represent Malaysia at the International Mathematical Olympiad or IMO competition in Hong Kong this year.

13. As we all are aware, IMO is the largest, oldest and the most prestigious scientific Olympiad in the world. Many universities worldwide seek out IMO participants for their mathematics programmes. I hope that these competitions will spur students' interest in STEM and help increase the quality of STEM education in Malaysia.

Ladies and gentlemen,

14. In concluding my speech today, I would like to express my utmost appreciation to the ExxonMobil Subsidiaries in Malaysia for supporting these programmes and believing in the importance of STEM-based competitions.

15. I would also like to thank the Japan Science and Technology Agency for giving our students an opportunity to explore and experience the science excellence culture in Japan and share it with their friends when they return home to Malaysia.

16. I truly hope that there will be even greater participation from the private sectors especially multinational corporations and international bodies like ExxonMobil and Japan Science and Technology Agency, to collaborate with us, in upholding the nation's STEM agenda and in ensuring its continuous development.

17. To our young talented minds, my message to you is simple: **"Keep exploring. Keep dreaming. Keep asking why"**. Don't settle for what you already know. **Never stop believing in the power of your ideas, your imagination, and your hard work to make the world a better place through science and technology.**

Thank you.