

OPENING CEREMONY OF 7TH ASEAN +3 JUNIOR SCIENCE ODYSSEY (APTJSO)

TALKING POINTS FOR OPENING REMARKS BY YB YEO BEE YIN (MINISTER OF ENERGY, SCIENCE, TECHNOLOGY, ENVIRONMENT AND CLIMATE CHANGE)

1. On behalf of Malaysia, I would like to welcome delegates from all around ASEAN and Korea to come to Malaysia. Selamat Datang ke Malaysia.
2. Thanks to the organizing committee and strategic partners for this event.
3. I think this is very important program for all of us because we know that science, technology and innovation will help to change not only the region but also the world.
 - Research paper by the General Electric says that 65% of jobs that is going to be done by people is actually a job that do not appear today.
 - In a future where artificial intelligent, robot, machine is going to do a lot of brainwork for our students and our future generations.
 - Encouraged not only the students but as well as the adults, not only think about education syllabus but also think about the skills of our student.
 - Is not theory of certain physic, is not thermodynamic, is not chemistry, It is the skill to learn how to learn, it's the skill that will be able to adapt the new environment, which is changing so fast, and yet can still learn very quickly and adapt quickly.
 - I would like to challenge you, you do not only learn a particular skill or particular knowledge. You learn how to learn quickly and adapt it.
4. Quote from Klaus Schwab who is the Founder and Executive Director of World Economic Forum, he said in this new world it is not big fish which eat the small fish but the fast fish which eat the slow fish.
 - Be quick in everything we do but above everything else.
5. Today our topic of this competition is about ASEAN + 3 Science and Innovation for Good Health and Societal Wellbeing.
 - I would like us to think about what are the challenges that we face in health and also societal wellbeing.
 - We face an aging society, we face a society where our people live longer and they need a lot of health care.
 - We live in a society because of increase of urbanisation and hospital are getting more and more congested.
 - The challenge about public hospital and to find parking because the hospital is so congested and people are queuing up and waiting half day just to see doctor.
 - We spend some much of our money on treatment and yet not prevention.
 - How do we cut the time that patient wait outside or to wait for the doctors?
 - How do we actually make less people come to the hospital?
 - How do we reduce the spending on health care and yet have better quality of health care for all people?
 - If we have a system, a big data where actually the system itself can identify the patient health data and this is the entire history of them.
 - Your doctor will know how much your heartbeat is not only when he see you on that day but also historical heartbeat and know the trend of it.
 - Artificial intelligent, the analytic was actually already analyse some of the things that in the data itself.

- Health care where you have actually have a lot of technology in term of internal of things, in term of good data, in term of different technology that can help the doctors to treat the patients and with that a lot of people are worried, what about my privacy.
 - There is so many things on the cloud, all my health information are on the cloud, there is where the blockchain technology comes.
 - You decide on which information you give to the doctor and the doctor can then tell you what to do in the future.
 - Expecting students to think about the system, to think about the problem from a bigger perspective that is to solve people problems.
6. Peter Drucker in his book talks about innovation.
- People always think about the need to look for new information and innovation is about creating something that is new to solve the problem.
 - Innovation is actually not always about creating something new. Innovation is about getting all knowledge together to make something new.
 - The computer to cite another example required no fewer than six separate strands of knowledge.
 - i. Binary arithmetic;
 - ii. Charles Babbage's conception of calculating machine in the first half of the nineteenth century;
 - iii. The punch card invented by Herman Hollerith for the US Census of 1890;
 - iv. The audion tube, an electronic switch invented 1906;
 - v. Symbolic logic which was developed between 1910 and 1930 by Bertrand Russell and Alfred North Whitehead; and
 - vi. Concept of programming and feedback that come out of the abortive attempt during World War 1 to develop effective anti-aircraft gun.
 - Although all the necessary knowledge was available by 1918, the first operational digital computer did not appear until 1946.
 - That tell us that innovation is not only about creating something new. Innovation is also about how we do use the set of knowledge that we have to solve the problem.
7. Some of the key achievements of young women scientists in ASEAN:
- Ms. Shu Lam – Malaysian Scientist who stunned the world by discovering a potential solution to the antibiotic-resistant bacteria commonly known as “superbugs”.
 - Dr. Nguyen Thi Hiep - Vietnamese scientist at the International University-Vietnam, National University-Ho Chi Minh City, she won the 3rd Annual ASEAN-U.S. Science Prize for Women 2017. Her research focuses on reducing the pressure placed upon healthcare systems in increasingly urbanized centres with at-home-care health solutions.
 - Dr. Rina Patramanon – Thai scientist at the Khon Kaen University, who develops innovative biosensors to put a stop to chronic non-communicable diseases that are plaguing a growing urban population. Among her innovations is Youth Meter, a mobile-based platform that provides a digital health check-up with a single drop of urine.
8. APTJSO is evidence that we have played our role in sowing the seed for tomorrow, by engaging our younger generation to appreciate science and technology as drivers for good health and societal wellbeing.
- It is our hope that this competition will not only spur and intensify STI knowledge among the participants, but also provide opportunities for all of our participants here to make new friends and to have connections towards potential scientific and technological research collaborations.

9. Again, I would like acknowledge the efforts of the Young Scientists Network Malaysia (YSN-ASM) and other strategic partners who collaborated with the Ministry in this competition.
10. To all the teams that will be participating in the 7th ASEAN Plus Three Junior Science Odyssey, I wish you all the best, and may this “Odyssey” inspire you to be a renowned scientist in the near future. Embrace the competition, but remember that the Odyssey is greater than winning medals; it is about working together to provide a good future for our region and the world.
11. On that note, I hereby declare that the 7th ASEAN Plus Three Junior Science Odyssey is officially opened.

APTJSO Opening Ceremony full video: <https://www.youtube.com/watch?v=eefVjCLo5U8>