ONLINE WORKSHOP: TECHNOLOGY IN SCIENCE TEACHING

Date : 23 & 24 March 2021

Mode : Online (secretariat will send an email link to all registered participants two days prior to the workshop)

Organiser: SEAMEO RECSAM, Penang

Registration Fee: Free. E-certificates will be provided during the workshop.

Rationale

There is a growing importance of technological applications to improve students' understanding of science contents. According to Barak and Levenberg (2016), it is found that different types of learning technologies can make science learning authentic as they are able to sustain learners' participation and engagement in learning. In addition, the use of a variety of technology applications enhanced students' understanding of subject content (Coffman & Klinger, 2019).

Technology enhanced learning (TEL) in the classroom can improve knowledge retention. One of the proven TEL models is Technological Pedagogical Content Knowledge (TPACK) Framework. This framework is a workable solution for technology integration in the classroom. The TPACK framework looks into the amalgamation of technology, pedagogical and content knowledge for effective comprehension of content knowledge (Mishra and Koehler, 2006; Koehler and Mishra, 2009).

Furthermore, any successful technology implementation in the classroom requires acknowledgment of the dynamic, transactional relationship among content, pedagogy, and the incoming technology. According to the TPACK framework (Mishra & Koehler, 2006), students' learning experience can be enhanced by using specific technological tools such as hardware, software, applications and associated information literacy practices to deliver the content using appropriate / suitable pedagogical approach. These specific technological tools are best used to instruct and guide students toward a better, more robust understanding of the subject matter. Thus, there is a need to understand various strategies to integrate technologies in science learning.

Last but not least, a large number of developed nations are focusing on integration of technology in the education system. It is high time for Malaysian teachers to grow accustomed to integrating technology in their lessons.

Objectives

Participants able:

1. To integrate TPACK framework in the teaching and learning of science;
2. To apply skills in using technology tools and applications for betterment of teaching and learning in science;
3. To explore the integration of social media into PBL approach;
4. To produce teaching materials that embodied Technology Enhanced Learning concept.

Workshop Facilitators

Norhailmi bin Abdul Mutalib holds a degree in Chemistry Science from Universiti Sains Malaysia. He has 14 years of teaching experience as a chemistry teacher and currently work in SMK Jerlun, Kedah as Guru Cemerlang Sains. Among his recent achievement are Malaysia Best Science Teacher by SEAMEO for Ki Hajar Dewantara Award 2018 in Bali, Indonesia, 2019 Guru Adiwira Kebangsaan, and in the same year he become the first Malaysia teacher to attend a course at CERN Geneva Switzerland. Last March 2020, he was among 50 finalist for Global Teacher Prize 2020, London.

Dr. Lee Saw Im is a renowned Chemistry Teacher (*Guru Cemerlang*) in SMK Seri Bintang Utara. Currently, she is the Head of Mathematics and Science Department. She received her degree in Science Education from Universiti Sains Malaysia. She had more than 34 years of teaching experience. She was named the Best Science Teacher at the Southeast Asian Ministers of Education Organisation Award in Bandung, Indonesia, in 2016. She won the Iconic Teacher for Federal Territories of Kuala Lumpur Award for 2017/2018 and got first place for Excellent Teacher in Curriculum award from 2013 to 2017. In the 2019, she was nominated as Global Teacher Award. Her motto is Practice Makes Perfect!