

The ASQ-Local Member Community, Trinidad and Tobago Supported the STEM02 Seminar on 'STEM Education Policy and Implementation for Schools' on 8th June 2019

The American Society for Quality (ASQ) - Local Member Community (LMC), Trinidad and Tobago supported the STEM02 Seminar that was hosted by The DMME - Industrial Engineering Office of The University of the West Indies (UWI) at Room 1, 1/F., Block 1, Kenneth S. Julien Building, from 9.00 a.m. to 12.00 noon on Saturday 8th June 2019. The Seminar was co-organised, in collaboration with the ASQ-LMCtt, the Education Society (EdS) Chapter and The Technology & Engineering Management Society (TEMS) Chapter of IEEE Trinidad and Tobago, and the Society of Caribbean Industrial Engineers (SCIE).

The seminar was facilitated by **Dr. Ruel Ellis**, the Chairman of EdS Chapter, IEEEtt. **Professor Kit Fai Pun**, of the Industrial Engineering Office and the Chairman of TEMS Chapter, IEEEtt gave a welcoming address to participants. Science, Technology, Engineering and Mathematics (STEM) are at the heart of a technological revolution which is transforming the way we live and the way we work. If Trinidad and Tobago is to be a key player of this transformation, we must be engaged in nurturing, developing and deploying STEM talent. Formulating viable STEM Education Policy and leading/facilitating its implementation in schools is a challenge that requires many stakeholders to work together. This Seminar has its theme of "STEM Education Policy and Implementation for Schools in Trinidad and Tobago". It was sought to facilitate the nation-wide awareness and provide participants with the current thoughts and insights from different perspectives on formulating STEM Education Policy and implementation for schools in Trinidad and Tobago (T&T).

The Seminar programme was quite packed. There were three presentations in two sessions, followed by an open discussion forum. The guest speakers are of diverted background. They are holding positions like Curriculum Coordinator, Project/ Research Officer, and Vice Chair, from the Ministry of Education, NIHERST and a Professional Body, ASQ, respectively. They are expert of their respective areas related to STEM education and training. All invited speakers were asked to sharpen/streamline their respective presentations in 25 minutes. Individual presentations are highlighted as follows:

1. *"STREAM Education: Roadmap for Implementation in the Education System"* - **Ms. Tricia Gilkes**, Curriculum Coordinator (Ag), of Ministry of Education, T&T. The Speaker talked about STREAM Education utilizing six (6) specific disciplines namely Science, Technology, Research, Engineering, Arts and Mathematics in an interdisciplinary and applied approach. The presentation addressed the challenge to implement leaning activities that would help increase student engagement behaviorally, emotionally, and cognitively, thereby positively affecting student learning and achievement. It was proposed that the implementation of a STREAM Education Programme could contribute and have been contributing to the solution for this challenge. Ms. Gilkes then introduced a roadmap advocated by the Ministry of Education to ensure that STREAM Education is embedded in the education system and by extension contribute to the development and implementation of a National STEM Policy for Trinidad and Tobago.
2. *"STEMM for National Development and Sustainability: From Gap to Policy to Value Added"* - **Mr. Roashion Persadie**, Vice Chair, The ASQ-LMC, T&T. The presenter shed insights on the contemporary issues of STEM and proposed the value of STEMM (where the second M is for Morality) as paramount to the future success and sustainable development of Trinidad and Tobago, He explained the importance of

STEMM as relevant to STEM and included the non-STEM endeavours and activities. Mr. Persadie discussed issues of dominant and emerging culture, and their influences on strategic planning and execution, whilst acknowledging that the 4th Industrial Revolution has been redefining economies, jobs as well as individuals.

3. *"How Can We Prepare Students for the 21st Century?"* - **Ms. Lovaan Superville**, Senior Project/Research Officer, NIHERST's Innovation and International Projects Units, T&T. The presentation addressed the need for 21st century skills that has spurred the emphasis on Science, Technology, Engineering and Mathematics (STEM) in classrooms. The T&T Government's National Development Strategy of Trinidad and Tobago 2016-2030 (Vision 2030) identified the need to "Revise the school curriculum to emphasise core values, nationalism and workforce readiness skills". "STEM Education and 21st Century Skills Development" was a major Strategic Initiative identified in NIHERST's 2020-2022 Strategic Plan. Ms. Superville shared recent findings and statistics collated and shed lights on the NIHERST's initiatives to facilitate the growth of the capacity, capability and opportunity of the STEM labour force in Trinidad and Tobago.

Facilitated by **Dr. Ruel Ellis**, a Discussion Forum was to enhance views sharing among the participants and a panel of invited speakers, on the agenda addressing the theme of the Conference.

A total of twenty-nine (29) participants including invited guest speakers, practicing teachers, academics, graduate students, Ministry representatives and others attended the Seminar. A photo e-album for the seminar, <https://photos.app.goo.gl/sJFd2Jop2w4TFpTG6>, was created. We received 21 completed evaluation forms. Feedback from participants was overwhelmingly positive, with 8 responses (38.1%) rating '5: Very Good' and 11 responses (52.4%) rating '4: Good'. We received 1 rated '3: Satisfactory' and 1 rated '2: Fair'.

Many participants commented that the presenters were very knowledgeable about their areas of expertise and the presentations were interactive and informative. Some participants shared that they would like to have a follow up course with a fee attached and a follow-up seminar covering how to fully implement these policies to get the best possible return.

Prepared by:
Professor Kit Fai Pun
for the Organising Committee
of the STEM02 Seminar 2019

Dated: 16th June 2019

Photos of the STEM02 Seminar 2019



Three Invited Speakers (from left): Ms. Tricia Gilkes of MOT, Mr. Roashion Persadie of ASQ-LMCtt, and Ms. Lovaan Superville of NIHERST



Photo taken for participants with the Master of Ceremony, Dr. Ruel Ellis (Centre) at the STEM02 Seminar on Saturday 8th June 2019



Three Invited Speakers (from top): Ms. Tricia Gilkes, Mr. Roashion Persadie and Ms. Lovaan Superville, receiving their Commemorative Plaques from Professor Kit Fai Pun (Industrial Engineering Office, Faculty of Engineering)