

Science innovation contests heighten students' interest in testing and certification

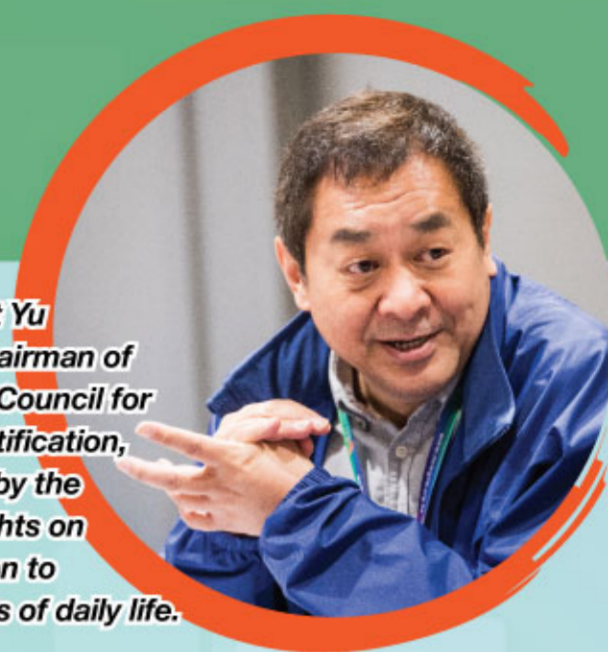
Two recent science competitions for secondary students have helped raise their awareness of the importance of testing and certification. Motivated by their curiosity and determination to uncover the truth behind some daily living products, the contestants have harnessed their creativity to develop innovative and eco-friendly testing solutions. Most importantly, they have grasped this valuable opportunity to understand how testing can help safeguard consumer interests.

HKCTC Special Award

The inaugural "HKCTC Special Award for Outstanding Project in Testing", co-organised by the Hong Kong New Generation Cultural Association and Hong Kong Council for Testing and Certification (HKCTC), was part of the well-established Hong Kong Youth Science and Technology Innovation Competition for 2016-17. The objective of the special award was to introduce the concepts of testing and certification and promote them among local young people in the hope that it would generate a ripple effect in the community, said Professor Albert Yu Cheung-hoi, Chairman of the Hong Kong Council for Testing and Certification.

On the day of the competition, Professor Yu went around the finalist teams' presentation booths. He watched their demonstrations and asked the teams follow-up questions. "Many entries are innovative. The students demonstrated their creativity in their presentations. With their innovative ideas, the students have developed solutions for practical applications on different aspects of their daily life," he continued. "In the process, they have come to understand more about the role of testing in providing quality assurance and boosting consumer confidence. They have also learnt that they need to work on experiments repeatedly to arrive at reliable results."

Professor Albert Yu Cheung-hoi, Chairman of the Hong Kong Council for Testing and Certification, was impressed by the students' thoughts on testing in relation to different aspects of daily life.



The champion team of this special award was formed by Chiu Shun Lok, Chow Chin Hong and Chan Ka Kiu, all secondary two students from The Chinese Foundation Secondary School (CFSS). Their winning project investigated whether sports drinks widely available in the market gave the health benefits as claimed. Embracing the spirit of finding out the truth, for nearly a week, the team had to repeatedly cycle with an empty stomach and then consume different sports drinks and let each other test their physiological reactions. "This was the first time we had undertaken such a project that required repetitive experiments over a fixed period of time.

Concern over the lead-in-drinking-water incident at public rental housing estates had prompted the first runner-up team, also from CFSS, to develop a low-cost water-filter which featured a common kitchen waste known as sugarcane bagasse. The team, consisting of Cheung Cheuk Wing, Chiu Hong Yiu and Tang Ping Lam, said the contest was a precious opportunity for them to innovate and create solutions to help the community. "Water is an essential resource," they said, "hopefully, our filter can be widely adopted in some third-world countries where sugarcane bagasse is easily available."

A measuring cup with diagonal markings, which indicated precisely the amount when liquid was being poured out from the cup, was invented by the second runner-up team from S.K.H. Li Ping Secondary School. The team, with Wong Ching Ho and Lau Ka Hin as members, remarked that the challenge was to draw the markings because the final product needed to ensure that it had top-notch professional accuracy. "This contest allowed us to experience the stringent requirements in the testing and certification sector."

"Digi-Science" Video Production Competition for Hong Kong Secondary Schools 2016-17

Themed "Testing Science in Everyday Life", the first "Digi-Science" Video Production Competition for Hong Kong Secondary Schools was co-organised by the HKCTC and the Hong Kong Association for Science and Mathematics Education. The contest encouraged students to produce a two-minute video depicting their innovative testing experiments.

HKCTC Member, Mrs Agnes Mak Tang Pik-yee, who is also the Executive Director of the Hong Kong Productivity Council, was one of the judges for the competition. She was impressed by the high-quality entries which demonstrated the contestants' curiosity about matters in their daily life and competence in analysing issues from different perspectives.

"The core messages in the videos are presented in a succinct and concise manner. Many contestants are able to articulate complex scientific concepts with simple layman language that helps to engage the audience," commended Mrs Mak.

Professor Ho Kin-chung, another member of HKCTC and Dean of School of Science and Technology of the Open University of Hong Kong, also served as a judge for the competition. He echoed Mrs Mak's comments, "This contest benefits the students in their personal growth. It inspires their curiosity, which in turn, helps sharpen their logical thinking and unlock their creativity. For example, the Champion team in the Junior Division produced a video on testing BPA content in plastic containers. This falls in the field of analytical science. It shows that the team has made a lot of efforts in extracurricular studies to gain a thorough understanding of the subject."

The Champion team of the Junior Secondary Division consisted of Tam Hoi Ching, Kam Yi Ying Anna and Cheung Tsz Ching from Po Leung Kuk Choi Kai Yau School. The team aimed to utilise easily accessible chemicals to verify if a plastic container was BPA-free. "After the contest, we realised that not all tests that generate accurate results require costly materials. This has further boosted our interest in testing."

The video submitted by the Champion Team of the Senior Secondary Division explained how diet soft drinks containing artificial sweeteners could be differentiated from the sugared ones by colorimetry. The team was formed by Chan Ming Hei and Nam Cheuk Yin, both are S5 students from St. Paul's Convent School. They said the contest incentivised them

to acquire science knowledge that was applicable to daily life. "We have identified that some artificial sweeteners in diet soft drinks can cause cancer if consumed in large quantity. This experiment has raised our awareness of food labeling and selection,"



Po Leung Kuk Choi Kai Yau School, the Champion team of the Junior Secondary Division.



St. Paul's Convent School, the Champion team of the Senior Secondary Division.



Professor Ho Kin-chung (left), Dean of School of Science and Technology of the Open University of Hong Kong, and Mrs Agnes Mak Tang Pik-yee (right), Executive Director of the Hong Kong Productivity Council, appreciated the contestants' efforts in creating the experiments.