Fostering bright, inquisitive *future leaders of our world*

With the rapid approach of the "4th Industrial Revolution", which will see robotics and artificial intelligence start to take over many of today's routine tasks, educators and policymakers worldwide are looking at ways to reshape their education systems. There is often a gap, however, between broader curriculum reform and achieving real change at classroom level. Hong Kong is no exception. It is in this context that The Hong Kong Jockey Club Charities Trust decided in early 2016 to take a proactive approach by initiating CoolThink@JC to introduce Computational Thinking (CT) into a broad sample of schools at upper primary level, thus providing a body of evidence and experience to stimulate longer-term discussion and reform.

Inspiring Digital Creativity

With the aim of inspiring students to apply digital creativity in their daily lives, CoolThink@JC has trained over 110 teachers for the benefit of around 18,000 primary 4-6 students at 32 schools to date. The CoolThink@JC Competition is one of its signature events which aims to promote CT education and to recognise students' outstanding CT and problem solving capabilities as well as to cultivate their team collaboration. It provided students a good opportunity to explore challenges in their daily lives or community problems and to develop creative and innovative solutions.

"This competition enables primary school students to make use of computational thinking and coding skills they have acquired through the programme and provides the opportunity for them to unleash their creativity," says Leong Cheung, The Hong Kong Jockey Club's Executive Director, Charities and Community. "I am particularly pleased to see the passion and dedication the students have demonstrated today, and the care they have shown towards the people around them by inventing these apps to address their needs."

Keen competition

Now in its 3rd year, the competition has attracted an enthusiastic participation of more than 170 teams from 70 primary schools across Hong Kong. 41 shortlisted teams battled in two categories - App Inventor and Scratch, to compete for a host of prizes. In the App Inventor category, King's College Old Boys' Association Primary School No.2 A team won Champion; SKH Chi Fu Chi Nam Primary School won First Runner-up; King's College Old Boys' Association Primary School No.2 B team won Second Runner-up; and Lok Wah Catholic Primary School won Merit.

In the Scratch category, Ma Tau Chung Government Primary School won Champion; King's College Old Boys' Association Primary School No.2 C team won First Runner-up; TWGHs Tang Shiu Kin Primary School won Second Runner-up; and Marymount Primary School won Merit.

App for elderlies

King's College Old Boys' Association Primary School No.2 A team's invention is a health care voucher app which allows elderlies in Hong Kong to use the vouchers easier, and on top of that, have better security while doing so. The team identified the problem that there is a misuse of health care vouchers, and that with an extensive list of medical service providers, seniors find it hard to identify which providers will accept their vouchers. Furthermore, unscrupulous providers may even scam their vouchers, infringing the rights of this fragile group.

Commenting on their invention, student Mok Ka-hei says, "Our app has many functions. Deliberately designed with large icons and Cantonese voice-over, it is perfectly suited for our senior citizens."

Student Hung Chi-ho explains that one of the most important functions of the app is to identify a list of trusted medical service providers that accept health care vouchers. "This not only prevents seniors from being scammed, but also allows them to use the vouchers more conveniently," says he.

"Last but not least, after use, the app allows elderlies to take a snap of it and send to their family through various communication platforms," says student Da Roza Ricardo Antonio Ernesto. "This helps them gain support and better manage their vouchers."

Wristband prevents drowning

Ma Tau Chung Government Primary School's winning invention is a wristband that seeks to prevent children from drowning. With numbers of children drowning in Hong Kong on the rise, the wristband monitors the wearer's physical traits and sends out warning signals to lifeguards.

Student Leung Yu-him explains their invention, "Our wristband closely monitors the heart rate and blood pressure of the wearer, and if these indicators reach dangerous levels, it will trigger a warning sound."

"Although the wristband itself won't stop children drowning, it will emit a warning sound that will alert lifeguards and help them locate the drowning person easier," adds student Cheung Wan-hin.

"As young children ourselves, we understand that at crowded water sport facilities, parents may not always be able to give their 100% attention to all their children, and we hope this device will help save lives," concludes student Gao Chap-chi.

Leong Cheung, The Hong Kong Jockey Club's Executive Director, Charities and Community with the young Champions.

App Inventor Champion-
King's College Old Boys' Association Primary School No.2 A team

Scratch Champion-
Ma Tau Chung Government Primary School