

**For discussion  
on 13 September 2021**

**Legislative Council  
Panel on Information Technology and Broadcasting**

**Progress Update on Various Initiatives to Promote Students' Interest  
in Information Technology**

**Purpose**

This paper aims to update Members on the latest progress of various initiatives to promote students' interest in information technology (IT).

**Introduction**

2. IT is the key driver for supporting innovation, raising competitiveness, promoting continuous social and economic development as well as facilitating long-term prosperity. With the rapid development of IT in many spheres of economic activity, there is an increasing demand for all aspects of IT talent both locally and globally. In a bid to nurture students' computational thinking at the stage of schooling and prepare them for early integration into the digital society, the Government has introduced several policies and initiatives to enhance students' exposure to IT in their formative years, as well as to nurture and enlighten their logical thinking and creative problem-solving skills.

**Initiatives to Promote Students' Interest of IT**

Current Policy of the Education Bureau

3. The Education Bureau (EDB) has all along been nurturing students' interest in innovative technologies and IT through diversified strategies, including optimising classroom learning, strengthening professional training of teachers, and providing related resource support.

4. EDB has optimised the learning and teaching of IT in secondary and primary schools. Coding education has been enhanced at the primary level with an aim to foster students' interest in learning programming as well

as developing their computational thinking skills and enhancing creativity from an early age. At the secondary level, learning elements related to programming and innovative technologies such as artificial intelligence (AI), augmented reality and virtual reality and their applications in the Technology Education Key Learning Area are also enriched. EDB will continue to review the implementation of relevant curricula in secondary and primary schools, enhance professional training of teachers, and develop diversified learning and teaching resources, with a view to supporting classroom teaching.

5. EDB continues to organise professional development programmes related to e-learning, innovative technologies and IT for teachers, including seminars, workshops as well as exhibitions. Different topics on innovative technologies, such as drone programming, robotics and AI, are included to enhance teachers' professional repertoire in teaching using various IT tools and resources, grasping the latest development in innovative technologies and IT and enabling them to teach students to learn with good use of IT tools.

6. In addition to classroom learning, EDB has been encouraging schools to enhance students' interest and ability in IT through life-wide learning activities beyond the classroom. Starting from the 2019/20 school year, a recurrent Life-wide Learning Grant<sup>1</sup> has been provided to public sector schools and schools under the Direct Subsidy Scheme at the secondary and primary levels to support schools in taking forward, on the present foundation, life-wide learning with enhanced efforts, to enable students to learn in authentic contexts, including activities related to innovative technologies and IT. EDB will also continue to collaborate with stakeholders, including professional bodies and innovation and technology (I&T) enterprises, etc., to organise different types of interesting learning activities and competitions to enrich students' experience in learning IT and innovative technologies, thereby strengthening their learning interest.

#### “IT Innovation Lab in Secondary Schools” Programme

7. The Office of the Government Chief Information Officer (OGCIO) launched a three-school-year “IT Innovation Lab in Secondary Schools” programme in the 2020/21 school year. During the programme period, each publicly-funded secondary school<sup>2</sup> can apply for funding support of up to \$1 million to organise IT-related extra-curricular activities (ECAs) and to procure IT equipment and related professional services required for the

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<sup>1</sup> For the 2020/21 school year, the provision for each public sector secondary and primary school are \$1,170,000 and \$760,000 respectively (taking the operation of 24 classes as example).

<sup>2</sup> Publicly-funded secondary schools include government, aided, caput secondary schools and secondary schools under the Direct Subsidy Scheme.

activities. The programme aims to foster an IT learning atmosphere, cultivate students' interest in IT and enhance their innovative thinking, thereby promoting local popular science education and expanding the local supply of I&T talent to meet the social needs of a technology-driven development. Response from schools and relevant stakeholders has been overwhelming since the programme was open for application in December 2020. As of August, more than 220 secondary schools have submitted funding applications for organising activities such as courses on AI and mobile app programming, as well as participating in robotics competitions, etc. Among which, 148 of the applications have been approved, involving a funding of over \$56 million. In addition, we have received feedback from some 1 600 students who have participated in the activities. More than 80% of them considered such activities useful in stimulating their interest in IT and enriching relevant knowledge.

8. Furthermore, we have also sponsored three non-profit making organisations (NPOs)<sup>3</sup> to organise various IT activities to help promote the “IT Innovation Lab in Secondary Schools” programme to schools, students and parents. As of August, the three NPOs have organised over 60 online seminars and workshops in which around 2 700 students from more than 200 secondary schools have participated. In addition, OGCIO has organised five online briefing cum sharing sessions during the period from November last year to August this year. The number of school principals and teachers took part in such sessions exceeded 800.

#### “Knowing More About IT” Programme

9. To enable our next generation to know and experience the benefits of I&T as early as possible, we have launched the “Knowing More About IT” programme for primary schools as an extension of the “IT Innovation Lab in Secondary School” programme. All publicly-funded primary schools<sup>4</sup> in Hong Kong are encouraged to organise IT-related ECAs so that primary students could be exposed to basic IT concepts and technical knowledge such as coding and logical thinking as early as possible, thereby enhancing their interest and awareness in I&T, and assisting them to integrate into the development of knowledge-based economy and digital society.

10. Under the “Knowing More About IT” programme, each publicly-funded primary school can apply for a funding grant of up to \$400,000 from OGCIO within the three school years from 2021/22 to 2023/24 for

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<sup>3</sup> Including Hong Kong Wireless Technology Industry Association Limited, Hong Kong New Emerging Technology Education Association and Ampower Talent Institute Limited.

<sup>4</sup> Publicly-funded primary schools include government, aided and Direct Subsidy Scheme primary schools.

organising IT-related ECAs for students and procuring IT equipment and professional services such as cloud services required for the activities concerned. OGCIIO has organised three briefing cum sharing sessions to introduce the programme to schools in June and July this year. Principals and teachers from around 300 primary schools have attended the sessions. The programme has just opened for application in September. We will continue to organise regular sharing sessions to encourage more schools to participate in the programme.

11. OGCIIO has formulated the application guidelines and a reference list of IT equipment for schools' reference. A one-stop support centre has been set up to provide assistance for secondary and primary schools in respect of application. We have also set up an Advisory Committee comprising experts from the IT sector, academia and education sector to provide advice on the reference lists of equipment, nature and types of activities, and the implementation progress of the programme. Besides, a Vetting Committee made up of experts from the education and IT sectors has been formed to examine school applications and make funding recommendations. We will monitor the effectiveness of the subsidised activities, and conduct yearly review on the organisation of activities and utilisation of fund in schools.

#### “Hong Kong ICT Awards”

12. Since 2006, OGCIIO has organised an annual “Hong Kong ICT Awards” together with the industry, aiming at recognising and promoting outstanding information and communications technology products and applications. The Awards has all along actively encouraged the participation of academia. Since 2014, the Student Award Category has been introduced which covers primary and secondary schools as well as tertiary institutions, with a view to inspiring the innovation and creativity of young people through the Award and encouraging them to develop and apply innovative technologies to devise proposals and solutions to tackle issues closely related to citizens' daily lives. The Awards has been receiving overwhelming responses from students, with a record high of 1 244 entries in the Student Award Category of the 2020 edition. Winners of various editions of the Awards have been arranged to participate in different high-level regional and international awards and they have attained remarkable achievements. For example, they have won 16 Merit Awards in the “Asia Pacific Information and Communications Technology Alliance Awards” and the WSA European Young Innovators Award in the “World Summit Awards”, etc.

### “Build a Secure Cyberspace” Promotional Campaign

13. The Government has been actively organising various activities to raise students’ awareness of information security and guide them to make proper use of IT. Since 2005, OGCIO has been partnering with the Hong Kong Police Force and the Hong Kong Computer Emergency Response Team Coordination Centre to organise the “Build a Secure Cyberspace” promotional campaign every year. Through various competitions such as poster design, short video making, mascot design and comic design, etc., the campaign aims to raise secondary and primary school students’ awareness of cyber security, and to convey messages about cyber security to the public through their creative and inventive designs. Since 2007, OGCIO has also been cooperating with information security professional bodies to conduct regular school visits. Up to now, more than 84 000 teachers, students and parents have participated in the activities. Although affected by the epidemic, we have organised more than 30 physical or virtual school visits in the two school years of 2019/20 and 2020/21, conveying information security messages to more than 6 300 teachers and students.

### InnoCarnival

14. InnoCarnival is an annual flagship public engagement event organised by the Innovation and Technology Commission (ITC), which attracted over 200 000 visits in the past years and was well received by students. With the support by local universities and educational institutions, research and development centres, government departments, technology enterprises and non-governmental organisations, the carnival has provided a wide range of activities, such as exhibitions, interactive games, workshops and seminars, enhancing students’ interest in I&T and their awareness of the latest local technology achievements. “InnoCarnival 2021” will be held from 23 October to 31 October 2021.

### “City I&T Grand Challenge”

15. Organised by the ITC together with the Hong Kong Science and Technology Parks Corporation, the first City I&T Grand Challenge was launched on 18 December 2020, under the theme “Innovating for Hong Kong's New Normal”. All sectors of the community were invited to put forward I&T solutions focusing on two topics, namely “Environmental Sustainability” and “Social Connectivity”. The competition is divided into four categories, including the Primary School Group, the Secondary School Group, the University/Tertiary Institute Group and the Open Group. ITC had received more than 740 submissions from over 1 250 contestants participated on an

individual or team basis. Over 500 submissions were received from more than 880 students of primary schools, secondary schools and universities/tertiary institutes which takes up over 67% of the overall submissions received. The semi-pitch and grand pitch will be staged in mid-September and mid-October at the Hong Kong Science Park respectively. Winners of each Group will be awarded cash prizes and trophies. In addition, for winners of the University/Tertiary Institute and Open Groups, they will also be given financial support for research and development as well as training sessions for refining their I&T solutions for trials at designated venues such as government departments or public organisations.

### **Advice Sought**

16. Members are invited to note the contents of the paper.

**Innovation and Technology Bureau  
Education Bureau  
Office of the Government Chief Information Officer  
Innovation and Technology Commission  
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