

## New Talent Development Approach lights up Gifted Students' Pathways for the 21<sup>st</sup> Century

(Hong Kong – 16 July 2021) To foster gifted students to cope with the 21<sup>st</sup> Century challenges in a more efficient and systematic manner, the **Hong Kong Academy for Gifted Education** (HKAGE or Academy) announced the implementation of **Talent Development Approach** (TD or Approach) today, which will be applied to its provisions starting from September 2021. With this Approach, gifted students would explore diverse learning pathways for their dreams.

This new Approach is so adopted as the demand from gifted students for career-related programmes is evidenced by a student survey where approximately 80% of students looked for programmes related to careers.

Strong demand for work experience programmes among students:

- Female students: 88.9%.
- Male students: 74.9%.

Relatively popular work experience programmes:

- Science (Physics and Chemistry): 74.6%.
- Social Sciences (e.g., Business and Finance, Economics and Psychology): 74.1%.
- Future academic directions: 71.0%.

Most popular university subjects among students:

- Science: 74.4%.
- Social science: 44.8%.
- Medicine: 43.1%.

Most popular industries among HKAGE students:

- Human Health industry, e.g. doctors, nurses, occupational therapists and physiotherapists: 30.7%.
- Education: 14.9%.
- Professional Services: 7.9%.
- Information and Communications: 7.3%.

(for details, please see *Factsheet #3*)

The TD model is comprised of stages titled 'Exploring Interests', 'Developing Competence', 'Towards Expertise' and eventually 'Becoming Eminent'. To achieve this, all the current GE programmes will be fine-tuned and arrayed in accordance with particular pathways while new programmes be developed. Most of the new programmes are highly supported by numerous community leaders and renowned organisations like the Hong Kong Applied Science and Technology Research Institute (ASTRI), the Hong Kong Newly Emerged Sports Association (NESA), etc.

**Ir Dr Alan LAM, Chairman of the HKAGE**, expressed his gratitude to these collaborators, 'It is our greatest pleasure to have the generous support from many prominent community leaders, experts, scholars, and industries as well as professional institutions by offering innovative and personalised coaching and mentorship programmes.' He added, 'We know that there are fantasies, possibilities and ambiguities lying ahead of our gifted teens who are making every endeavour to explore their future. With the expertise, extensive life experience and the devotion of the coaches and mentors, these talented youths would be able to find guiding light for their pathways to the future.'

**Dr Lucas HUI, Acting Co-CEO cum Chief Technology Officer at ASTRI**, said: "To develop Hong

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Kong into a superior Smart City, we need a lot of outstanding innovation and technology talents. ASTRI has been fostering the development of a technology talent ecosystem through various initiatives. We are pleased to collaborate with HKAGE in raising students' awareness and interest in innovation and technology at an early stage, with a view to expanding Hong Kong's tech talent pool. We are truly encouraged by the exceptional ability of the HKAGE students involved and their great enthusiasm for learning."

TD programmes of different streams, such as STEM, Humanities, and Leadership, had been conducted in a 2-year pilot run from September 2018 to August 2020. Innovative multi-disciplinary programmes including **Big History and Collective Learning** and the **Big Ideas** series have been launched, so were the individualised mentorship programmes, such as **Hong Kong Gifted Apprentice Programme (HKGAP)**. Together with the existing training for competitions and academic courses, more than 50 programmes were provided under the pilot run and well received by about 1500 student members. Participation statistics including high application rate and satisfaction were encouraging whereas positive comments from student members were also recorded.

**Dr Eric Fung, Head of Research Division**, elaborated on the evaluation results made by student members who joined HKGAP that 'the mentorship programme could offer students opportunities to widen their vision and expose themselves to different sectors of the society. With the guidance from their mentors and interaction with their peers, the mentees were happy that their self-confidence in social interaction was strengthened, social competence enhanced, exposure to new communities enlarged. Moreover, the mentors could inspire their future development direction.'

An all-round Form 5 student member who has outstanding attainments in academic subjects, arts and sports, **Louis KWOK**, a **Winner of Hong Kong Outstanding Students Award**, was content to have joined the HKGAP at the age of 12 and became one of the youngest mentees in the pilot programmes, 'I would say HKGAP was a key step for me to gain abilities much earlier than the others'. He continued, 'HKGAP did not only provide me knowledge and social connections, but also shaped my path.' One of his future goals is to become a tech entrepreneur. Under the HKGAP, his passion for robotics and innovation has been further developed with inspirations from his master, **Dr Crystal FOK, Director of Hong Kong Science and Technology Parks** and his fellow mentees from different social backgrounds.

Another apprentice of Dr Crystal FOK, **Michael SUN** (Form 5) who is passionate about STEM and innovation for the benefit of humankind, was also a mentee to Dr Jimmy WONG. Michael's latest invention, a microswimmer, has bought him fame in numerous competitions including the 2<sup>nd</sup> place of the **Grand Award** as well as the **INCOSE Special Award of Regeneron International Science and Engineering Fair 2021** (formerly known as Intel International Science and Engineering Fair, **Intel ISEF**) and **Hong Kong Young Scientist of the Year Award 2020**. He treasured the support from his mentors, 'This has helped my personal development not only by giving me valuable insight and knowledge into the fields I am interested in, but also by improving my communication, organisation, and leadership skills.'

As a master to high school gifted students, **Dr Crystal FOK Director, Hong Kong Science and Technology Parks**, wanted to be the friend of her apprentices instead, 'the gifted students may find it hard to share their views with their parents and peers, I can become their older friend and listen to their thoughts and dreams. Not only would a mentor provide academic knowledge to the mentees, the mentor could also provide emotional support and grow together with the mentees.'

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Dr Jimmy WONG's current apprentice, **Jenny JIANG** (Form 5) is fascinated by physics and just won together with 4 teammates the 2<sup>nd</sup> runner up in the **International Physics (Safe Cracking) Tournament** organised by the **Davidson Institute of Science Education** in Israel, beating 39 teams from all over the world. Because of enthusiasm in physics, she was matched with Dr Jimmy WONG under the HKGAP. She enjoys the personalised learning experience which enables her to explore all possibilities with the one-on-one guidance from her master. She said, 'through the individual thematic project, my skills in planning and problem solving are polished as well as time management skill, self-motivation and creativity which are highly required for this project. This kind of learning experience is very different from school's passive learning approach.'

**Dr Jimmy WONG Kam Yiu, Executive Director of the HKAGE**, said 'According to our survey findings, student members have high demand for work experience programmes. We see their needs for a clear pathway for future and hence this TD Approach is developed to help them explore their interest and walk on a clearer pathway.' He added, 'Our survey findings also show that student members are overwhelmingly interested in science subjects for their tertiary education (74.4%). However, instead of just giving them what they want, we take a step further. Given their limited exposure and vision at these young ages, we would strive to offer them a wider exposure than just sciences. Only when the students have broader vision on the community and the global trend, could they explore their real interest, make their dreams, and identify their pathways for future.'

**The Hong Kong Academy for Gifted Education**, a subvented non-governmental organisation, was established in 2008. It aims at serving the education sector in Hong Kong, offering high quality information, support and appropriate learning opportunities to gifted students, their parents, teachers and other stakeholders engaged in gifted education. Most of its programmes are provided free-of-charge.

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Appendix  
Photo Link :

Photo	
<p>#1.</p> 	<p>#2.</p> 
<p>#1. Dr Jimmy WONG (right) and the student apprentices, namely (from left) Jenny JIANG, Louis KWOK, and Michael SUN. The arrow symbolises the pathway of Talent Development Approach.</p>	<p>#2 (from left) Dr Crystal FOK, Mr William CHAU, Dr Lucas HUI, Ir Dr Alan LAM, Dr Jimmy WONG, Louis KWOK, Michael SUN, and Jenny JIANG.</p>
<p>#3.</p> 	<p>#4.</p> 
<p>#3 Dr Jimmy WONG (right) interviews the collaborators providing TD programmes, (from left) Mr William CHAU and Dr Lucas HUI.</p>	<p>#4 Dr Jimmy WONG (right) introduces the Talent Development Approach and Dr Eric FUNG (left) presents the student survey results and the feedback of the Pilot Run of the TD programmes.</p>
<p>#5</p> 	<p>#6</p> 
<p>#5. (from left) The apprentices Jenny JIANG, Michael SUN and Louis KWOK share their</p>	<p>#6. Dr Crystal FOK is holding the keyword “Enrichment” which is the first stage of the Talent Development Approach.</p>

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wonderful learning experience with their masters, Dr Crystal FOK and Dr Jimmy WONG.

**#7**



#7 Mr William CHAU is holding the keyword “Advanced learning” which is the second stage of the Talent Development Approach.

**#8**



#8 Dr Lucas HUI is holding the keyword “Specialisation” which is the third stage of the Talent Development Approach.

**#9**



#9. Ir Dr Alan LAM is holding the keyword “Personalised learning” which is the third stage of the Talent Development Approach.

**#10**



#10. (from left ) Jenny JIANG, Michael SUN with his micro robot, Louis KWOK with his robotic arm, and Dr Crystal FOK.

**#11**



#11 Michael SUN (Form 5) and the enlarged model of his award winning invention, a microswimmer (actual size: 200 um), which significant potential in biomedical therapies like drug/cell delivery, microsurgery, sensing, and diagnosis.