STEM Education Resources
Maximizing Use

In the 2016/17 academic year, the government provided every local secondary school with a one-off subsidy of HK$200,000 to promote science, technology, engineering and maths (STEM) education. How useful has the subsidy been in terms of extra resources, equipment and teaching materials which are so important for promoting STEM education?

78.8% of schools in the survey promoted STEM with the HK$200,000 government subsidy. 83.6% found it useful but did not explore other resources and 19% did not cooperate with any other stakeholders for this purpose.

When asked to evaluate their implementation of STEM education, the schools' lack of confidence was evident. They rated their effectiveness at an average of 5.6 on a scale of 0-10 where 10 signifies very effective.

5 major obstacles to STEM education in secondary schools

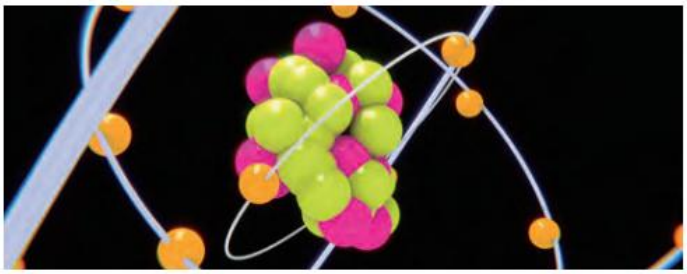
75.7% reported lack of timetabled STEM lessons

71.8% found it difficult to organize cross-curricular teaching on various STEM subjects

57.3% found insufficient EDB examples for teaching STEM

48.6% complained of insufficient teacher training

48.5% reported unclear STEM teaching guidelines



Comments from Youth I.D.E.A.S. think tank members

Mac Chan, deputy convener STEM education can maximize students' potential in science and technology and equip them with necessary knowledge and skills, yet current funds are mostly one-off subsidies, constraining schools from developing sustainable STEM education. A HK$1 billion fund should be allocated to support a ten-year STEM education subsidy programme.

Daneil Cheung, group member Young people face challenges in technological advancement which STEM education can help them tackle. STEM should be valued more highly and more resources should be allocated. For example, STEM education resource centres in the city should be extended.

Jason Cheung, group member STEM education can nurture creativity, collaboration and problem-solving skills. All stakeholders should work together to set clear goals and formulate strategic plans as well as providing better guidelines and models of cross-curricular STEM teaching.

Corroborative findings

A recent Hong Kong Federation of Education Workers' survey of 426 schools backs up HKFYG findings. Its survey reveals that only 36% of the city's teachers are confident about teaching STEM subjects. Over 80% feel facilities are insufficient, 83% say they do not have enough STEM training and support and 82% feel there is inadequate infrastructure for teaching STEM. 71% lament the lack of support for teaching materials.

Sources

scmp.com/news/hong-kong/education/article/2123367/majority-hong-kong-teachers-not-confident-teaching-stem

Report No.26 HKFYG Youth I.D.E.A.S.

Education and Innovation group

Title STEM Education in Secondary Schools: Improving Resource Utilization

Surveyed 105 local secondary schools and 9 of them with outstanding STEM education performance were interviewed in November and December 2017. And follows up Report No 20, "STEM Education in Primary Schools." See Youth *Hong Kong June 2017* for more details.

Full details https://yrc.hkfyg.org.hk/en/2018/01/14/stem-education-in-secondary-schools-improving-resource-utilization-2/

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