



Promoting STEM Education in Primary Schools

STEM education benefits primary students but adoption in Hong Kong schools has been slow. Why are we lagging behind some other countries?

Science, Technology, Engineering and Mathematics (STEM) education helps to equip students with the practical skills, knowledge and tools that they will need in life. It may also mean that they will contribute to Hong Kong's international competitiveness. However, 40% of the students polled were not familiar with STEM education. Furthermore, nearly 50% did not participate in any STEM-related learning activities because they said they had too many other assignments whereas 36% said their lack of interest was either due to the high cost of such classes or their lack of desire to learn STEM subjects (36.0%).

The survey also revealed that according to the students' own self-assessment, their levels of creativity and problem-solving skills were normal or mediocre.¹ Some of the STEM experts and educators interviewed also claimed that some Hong

Kong primary schools also encountered obstacles when they tried to promote STEM education. These included problems concerning teaching staff, subventions and resources.

Comments from think tank members

Arnold Chan, group convener "There should be a scholarship scheme to reward undergraduates who study STEM-related subjects and who want to be primary teachers. This would encourage talented young people to develop STEM education at primary level."

Derrick Fan, group member "Extending the scope of the existing "Paid Non-local Study Leave Scheme for Secondary School Teachers" so that it includes primary school teachers would also help. This would enrich their pedagogy and give them on-site experiential learning in other countries."

Alan Yip, group member "Cooperation between parents, schools and professional organizations could promote STEM education. In addition, the establishment of a STEM Learning Community* would raise public awareness of its importance."

*STEM Learning Communities

STEM Learning Communities (LCs) have become part of the higher education landscape in certain parts of the world. Their purpose is to recruit, develop, and retain students in STEM disciplines and to increase student academic success, graduation rates, and post-graduation participation in STEM fields. Students who participate in an LC are often housed together, take academic classes together, and are provided with educational and cultural programs to enhance the academic curriculum and social integration. STEM LCs have been shown to facilitate student academic success and persistence in science disciplines.

Source washingtoncenter.evergreen.edu/cgi/viewcontent.cgi?article=1119&context=lcrpjourn

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Group

Education & Innovation group

"STEM Education in Primary Schools"

520 pupils in Primary 4-6 completed a questionnaire in February 2017.

15 STEM experts and educators were interviewed as well.

Full details [in Chinese] yrc.hkfyg.org.hk/news.aspx?id=cdbaaff9-7ec5-4bf6-8494-bd78ab27d5a3&i=5502

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