

「鷹校長」跳出教育框框 創科精神反轉教室 Principal Eagle Brings the Spirit of Innovation to the Classrooms

iSTEM AI Lab - Eagle Chan

撰文 當文尼



有危先有機 科技教育獲重視

新冠肺炎肆虐全球，香港學生雖停課但不停學，在家學習遙距課程已成教育新常態。疫情「有危亦有機」，令家長、老師積極重新思考未來教學新對策。

Opportunity in Crisis: Importance of Technological Education Recognised

As the novel coronavirus pandemic ravages the world, Hong Kong students are continuing to learn even though classes are suspended. Learning from home and remote courses are now new norms in education. There is opportunity in crisis, with parents and teachers actively rethinking future approaches to education.



人稱「鷹校長」，iSTEM AI Lab創辦人陳基志 (Eagle) 收到不少老師、社工求助，請教如何網上開講、發放功課等。他在疫情之初，便迅速免費開放網上教學短片，又技術支援老師網上授課，希望利用科技顧及學界真正所需，達至「停課不停學」。

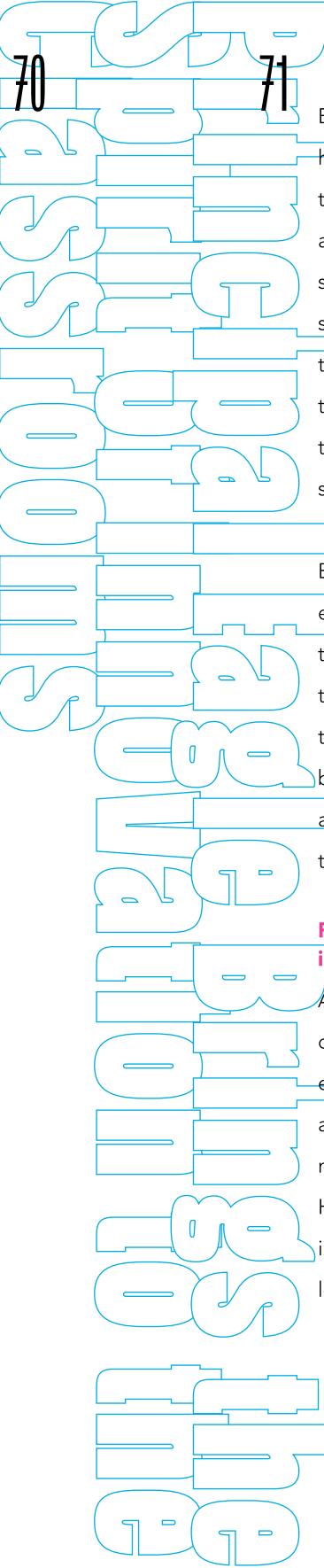
Eagle認為，不少老師過去較少接觸網上教學，突然轉變教學模式，難免感到吃力，但更反映科技的重要性。他希望香港能普及及善用科學教育，改變社會氛圍，令科學長足發展。

回歸教室 體制下碰壁

Eagle在中文大學電腦工程系畢業後，投身本地大型私人機構，出任電腦技術崗位。但他發現工作刻板乏味，並非他的志向，原來自己較喜歡面對人，而非埋首電腦。他又希望能回饋社會，故初出茅廬不久，再重投校園，持續進修教育相關課程，踏上「鷹校長」這條教育路。

「很希望將知識帶給不同學生」，這是Eagle當老師的初心。草根出身的他，入大學前鮮有機會接觸電腦，所以他相信基層弱勢需要學習電腦和科技，才有向上流動的機遇。但他當電腦科老師兩三年後，發現教育制度的保守——「把公開試及呈分試考好便可，為何要接觸那麼多有關科技資訊？電腦科於學制上亦非甚麼重要科目。」

學校只求分數，無形中框住學生，限制他們發揮所長。Eagle認為，學習是為了向自己交代，應拒絕填鴨式教育。「不知道自己學習甚麼，亦非自己想學。」他相信每個人都有不同天份，希望學生能欣賞自己，了解長處再加以發揮。在他眼中，懂得畫畫、編寫一個程式、甚至懂得做一項實驗，也是一項成就。「不是考試成功、DSE成功才算是成就。」



Eagle Chan, also known as “Principle Eagle”, has received many requests for advice from teachers and social workers on giving lectures and distributing homework online. In the early stages of the pandemic, he sensitively started sharing online teaching videos for free and giving technical support on online teaching. He hopes to apply his knowledge in technology to help the industry achieve “suspending classes without suspending learning”.

Eagle thinks that teachers who lack previous experience in online teaching might find it difficult to adapt to the sudden change in the mode of teaching, which reflects that the importance of technology. He hopes that science education will be popularised and made good use in Hong Kong, and enable Hong Kong’s scientific development to have a profound progress.

Returning to the Classroom and Falling Flat in the System

After graduating from the Chinese University of Hong Kong with a degree in computer engineering, Eagle joined a large local company as a computer technician. Yet, he found his job mundane and dull, failing to match his ambition. He realised that he preferred to work with people instead of sitting in front of the computer all day long. With his aspiration to contribute to society,

he returned to the campus and took an education-related course, embarking on his journey as “Principal Eagle”.

Eagle proclaimed his vision: “I hope to bring knowledge to students from different backgrounds.” Born in a grassroots family, Eagle did not have easy access to computers before entering university. He believes that learning about computers and technology can help the underprivileged move up the social ladder. However, his three years as a Computer Science teacher revealed the conservativeness of the education system. “Students only need to focus on public exams and internal assessments. Why should they learn about technology? Computer Science is not an important subject anyway.”

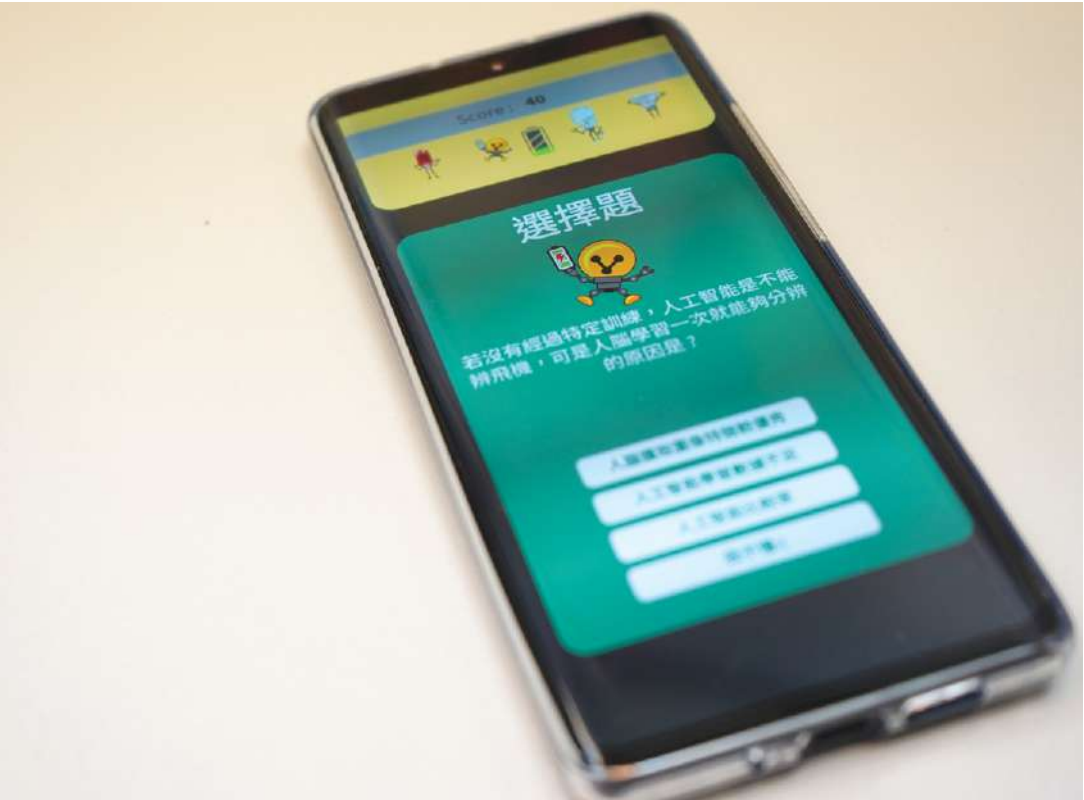
Being exam-oriented hinders the development of students and limits their potentials. Eagle believes that learning is something personal. He dislikes spoon-feeding in education because it forces students into learning something they do not want to and confuses them. He thinks that everyone has different strengths. He hopes that students can learn to appreciate themselves and develop their strengths. To him, simply knowing how to paint, write a program or do an experiment is already an achievement. “Exam results and academic achievements do not define your success.”

自立門戶 結合科技翻轉課室

教學理念與體制現實違背，Eagle於是辭職，自立門戶，推廣「科創精神」。他隨後得到多個計劃支持下，成立iSTEM AI Lab平台，主力推廣人工智能的應用。他們也贏到Good Seed資助，推出專為6至12歲、有特殊教育需要 (SEN) 學童而設的網上STEM活動 (STEM即科學Science、科技Technology、工程Engineering及數學Mathematics的跨學科教育) 以及自製學習套件，透過電腦分析，掌握學生答題的次序、快慢、強弱項等，了解他們學習進度和需要。中心指，學童在軟件上的答題比率比紙本增加約兩成，成功提升學習投入度及持續性等。他們又利

用資助，在學校開設工作坊及參加大型展覽，讓公眾及教師更了解SEN學童需要。

近年政府大力投放資源在STEM教育上，學校陸續開辦相關學科，但Eagle認為還能走更前。他建議直接將科技交到學生手上，透過遊戲化的虛擬教材，啟發學生對科學的興趣。例如，學生以往只能在一星期一節的化學課排隊做實驗，但透過具聲畫效果的虛擬教材，學生能夠在安全環境下模擬實驗過程，了解不同化學元素的組成反應。「以前一個老師對四十個學生，時間掌控在老師手上，現在可以重覆看、重覆試，不懂看到懂。」



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A New Idea that Brings Technology into the Classroom

Realising that his teaching philosophy was incompatible with the system, Eagle resigned from his teaching position and started his own business to promote the spirit of innovation. With the support of several programs, he founded the “iSTEM AI Lab” platform to promote the application of artificial intelligence. The platform also received funding from Good Seed to launch a program that provides online STEM (science, technology, engineering and mathematics) activities and DIY learning kits for children aged 6 to 12 with special educational needs (SEN). The order and speed of answering questions and the students’ strengths are analysed by computer to show the students’ needs and facilitate their learning progress. The Lab also observed a 20% increase in the percentage of tests students took on the software compared to tests that were printed out, indicating the success in creating a higher learning engagement level and sustainability. They also made use of the funding to organise workshops and exhibitions in schools for parents and teachers to promote a better understanding of the needs of SEN students.

In recent years, the government has been investing a lot of resources in STEM education and schools are now offering more related subjects and courses. Despite so, Eagle thinks that it can go more further. Therefore, he suggests to put technology directly into the hands of students, trying to spark their interest in science through

game-based virtual teaching materials. For example, in the past, students could only take turns to do experiments in a weekly chemistry class. But through virtual teaching materials with both image and audio, students can simulate experiments in a safe environment to understand the composition and reaction of different chemical elements and compounds. “We used to have one teacher teaching forty students in the past with the teacher controlling the process. Now, you can keep trying and observing the procedure over and over again until you understand it.”

“I hope to bring knowledge to students from different backgrounds.”