

GETTING ON TOP OF TECH

In a world where exponentially developing technologies are changing industries at breakneck pace, institutions have emerged to help top executives and other potential leaders both deal with disruption – and leverage it to solve some of the world's biggest problems. *The Peak* takes a look at some education game changers.

STORY **CHRISTY CHOI**

There's a certain almost mystical quality surrounding Silicon Valley and its tech culture. It's telling that start-ups that do extraordinarily well in securing funding are called unicorns, a creature that doesn't actually exist.

The Valley is a place where fortunes are made and technology has the potential to make anything possible. As the characters in the US sitcom *Silicon Valley* are fond of saying, often to comic effect, many techies want to "try to make the world a better place".

While the line may be comedy gold on television, it's the serious goal of one institution that's based in the Mountain View, California, the heart of Silicon Valley – Singularity University. Founded by Google's director of engineering Ray Kurzweil and entrepreneur Peter Diamandis in 2008, it has managed to get top scientists, engineers and researchers from the likes of Stanford, MIT, Carnegie Mellon and Harvard – as well as corporate heavyweights – on board as speakers or supporters. Its first GSP (then called the

Graduate Studies Program, which was since renamed the Global Solutions Program) was held in 2009. Singularity University, or SU, describes the 10-week course as one that brings together future leaders and entrepreneurs from around the world to "develop team-based technology solutions to widespread global challenges".

SU is not a university in the traditional sense: no degrees are handed out. It shakes up the status quo of education. During the GSP, participants learn about exponential technology development, mentored by

ABOVE
Singularity University CEO Rob Nail giving a talk on advancements in AI and robotics.

leaders and investors in the technology sector. Past speakers have included Tesla founder Elon Musk, the first female space tourist Anousheh Ansari, and Craig Venter, one of the first to sequence the human genome.

By the end of the course at SU's campus in Nasa Research Park, participants must design an entrepreneurial global solution which aims to positively affect one billion people by leveraging exponential trends and innovation. The general idea, for example, is this: get an excellent doctor to work with experts in fields such as business, security,

artificial intelligence, robotics, energy and see them come up with a potential solution for a problem in, say, medicine no-one may have thought of by themselves.

There are two ways to get into the GSP: firstly, by applying directly, or by winning a Global Impact Competition (GIC). The latter are held around the world in different locations where there is a sponsor. Participants have to come up with an idea that will have a positive impact on millions of lives within the next three to five years. Winners of a GIC automatically get a place in the GSP free of charge while their successful

direct applicant counterparts used to pay US\$35,000.

This changed in January 2015, when Google announced it would provide US\$1.5 million annually for the next two years to help successful direct-application GSP candidates participate in the programme free of charge. That year, there were 80 GSP participants. Thousands of people applied. The programme has now hosted participants from 85 countries, with students ranging from a 15-year-old high-school student to seasoned chief executives of multinational companies.



COURTESY SINGULARITY UNIVERSITY



“EVERY DAY WE WERE PUSHED TOWARDS USING POWERFUL TECHNOLOGIES TO SOLVE THE BIGGER CHALLENGES OF THIS WORLD, [RELATING TO] FOOD, WATER, POVERTY, HEALTH”

— Paul Niel, Hong Kong-based graduate of Singularity University

PHOTOGRAPHY GARETH GAY

TECH FOR TOP EXECUTIVES

In 2009, SU introduced a shorter Executive Program (EP). The programme, which costs US\$14,000, covers fields such as AI and robotics, nanotechnology, biotechnology, computing, and energy and environmental systems. Participants gain an understanding of how disruptive technologies may have a strong impact on their industry, and explore growth solutions and response strategies relevant to their industries. (They are accepted based on the level of achievement in their field, recommendations and an essay.) The EP is conducted as week-

long workshops or customised programmes which can be as short as two days.

“Our aim is to educate and enable leaders to use exponential technologies, which are rapidly expanding technologies to benefit billions of people around the world,” says Diane Murphy, spokeswoman for the university who completed the Executive Program in 2011. Exponential technologies have included the computer, the internet and mobile phone technology.

Many of the alumni of the EP form a veritable who’s who of the tech and business world: they include Microsoft co-founder Paul

Allen, Tesla’s Elon Musk and Ratan Tata, India’s second richest man, and actor and tech investor Ashton Kutcher. Hong Kong participants have included Rosana Wong, executive director of construction company Yau Lee Holdings; Sam Moon, executive director of the Next Generation Leadership Council, and Lane Crawford senior vice president Cristina Ventura.

TACKLING GLOBAL CHALLENGES

Hong Kong-based consultant, early-stage technology investor, mountaineer and former Goldman Sachs investment banker Paul

OPPOSITE PAGE CLOCKWISE FROM TOP
Singularity University features a lab with cutting edge hi-tech gadgets; SU co-founders Peter Diamandis and Ray Kurzweil; SU CEO Rob Nail.

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— Diane Murphy, Singularity University



Niel took part in the GSP in 2014. “Singularity University doesn’t aim to create the next social media app,” says Niel, 37, originally from Austria. “Every day we were pushed towards using powerful technologies to solve the bigger challenges of this world – [relating to] food, water, poverty, health.”

The schedule was intense. “From 9am to 7pm there were classes ... [such as on] web programming, drone building; as well as group discussions on topics as varied as human trafficking in India and efficiency of energy storage,” says Niel. “Discussions and brainstorming sessions would quite often go on until 2 or 3 am in the morning. Singularity University has the nickname ‘Sleepless University’”.

Free time was generally spent in an innovation lab, which had things like 3D printers, drones and the latest virtual reality glasses. Someone printed a small 3D version of a photo of Niel for kicks. “It was a playground where you could test your ideas,” says Niel.

Niel, who decided to participate in SU instead of an MBA or other graduate programme, speaks breathlessly of long talks about nanorobots and how technology might allow humans to live forever, and a late-night robot delivery to classmates. After an unprompted discussion of a search for solutions to combat the spread of Ebola, one suggested solution was sent to US President Barack Obama. Niel’s own team identified the need, and developed plans for, a hearing-aid for the ageing population that uses smart sensors.

SU also provides access to an invaluable network where it’s possible to email a query and get a response from anyone from a particular tech expert, to someone on the ground in Mexico who might be able to help set up meetings and introductions with major companies. “In the beginning, it was

more of an education programme, but it has turned into a massively important network,” says Murphy. The GSP also provides access to experts like patent attorneys and may also link students up with corporate or non governmental organisation (NGO) partners like UNICEF.

The GSP has led to the creation of companies like Made in Space, which sent the first 3D printer into space, and Matternet, a company that builds very small drones that can transport things such as blood samples into areas in countries that don't have any roads.

At the request of Hong Kong-based sponsors, the university is set to hold a private session of the EP for industry leaders and Hong Kong government officials in 2016, says Niel. And as one of around a dozen Hong Kong GSP alumni, Niel has been working on bringing a GIC – one of the gateways into SU – to Hong Kong. He has been talking to HKUST and looking for a sponsor. “In the past, there have only been a few representatives from East Asia and Hong Kong,” says Niel. “I want to change this going forward by working together with interested local institutions.”

THE ONLINE EQUALISERS

Other visionaries have made learning available to a far wider audience. Founded in 2006 by a former hedge fund analyst-turned educator Salman Khan, Khan Academy is a website that offers thousands of free instructional videos and exercises, as well as a personalised dashboard that keeps track of a user's progress in free online courses. The academy's mission is “to provide a free, world-class education for anyone, anywhere”.

Khan, who earned three degrees from the Massachusetts Institute of Technology and obtained an MBA from Harvard Business School, started producing and distributing tutorials on YouTube after tutoring

THE KHAN ACADEMY PARTNERS WITH THE LIKES OF NASA, THE MUSEUM OF MODERN ART, THE BRITISH MUSEUM, PIXAR AND MIT FOR CONTENT

BELOW Salman Khan, founder of the Khan Academy

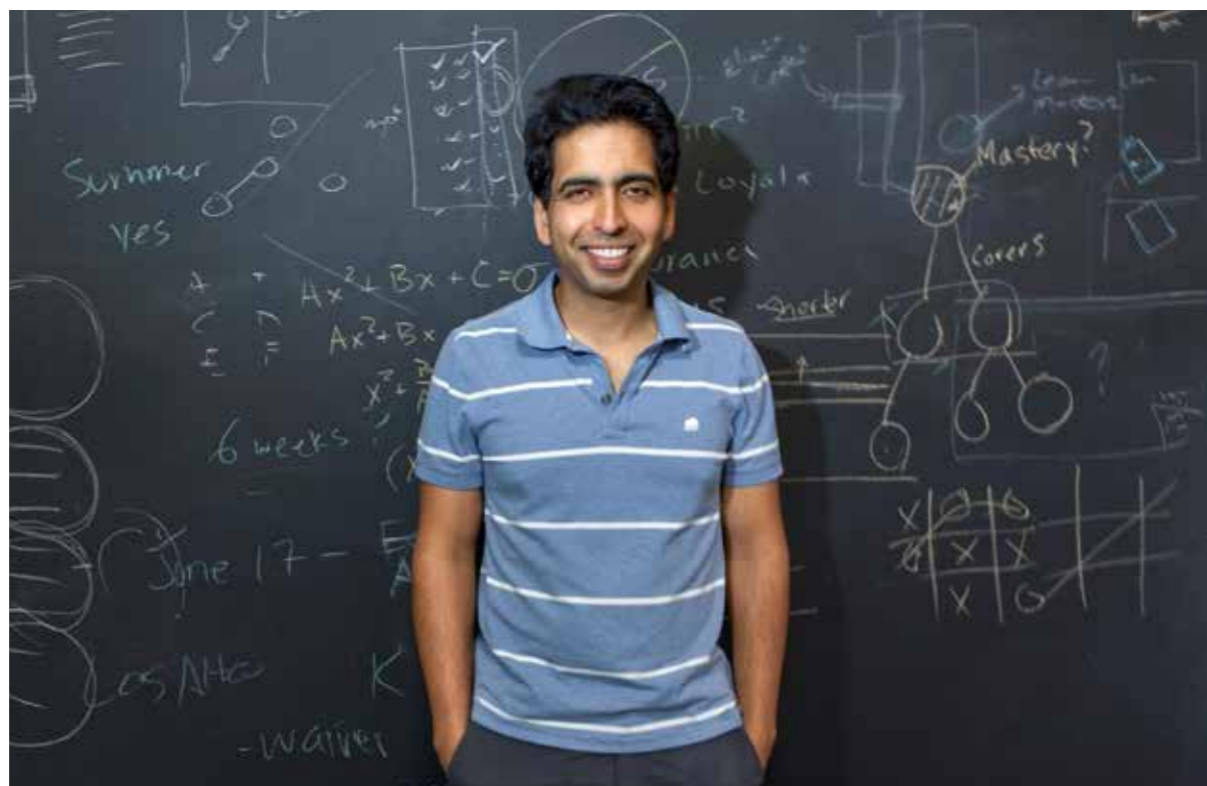
one of his cousins. The success of his videos prompted him to quit his job and finance and devote his time to Khan Academy.

The Khan Academy partners with the likes of NASA, the Museum of Modern Art, the British Museum, Pixar and MIT for content, and also provides resources for parents and teachers. Its topics cover anything from maths, science, computer programming, history and economics. To be more engaging, tests are built like a computer game, with sound effects for when the answers are correct or wrong.

The company has grown from one man producing videos on YouTube to one with 80 staff members and thousands of volunteers across the world. The

project is funded by donations: according to news site Inside Philanthropy, the Bill and Melinda Gates Foundation has donated more than US\$10 million, while Google contributed US\$2 million in 2010.

Writing in *Time* about Khan, who was named one of ‘The World's 100 Most Influential People: 2012’ by the magazine, Bill Gates said the academy aims to “give every kid a chance at a free, world-class education”. In a 2012 article, *Forbes* called the Khan Academy “the largest school in the world”. It is considered one of the most successful massive open online learning courses (MOOCs) to date, with its resources now being translated into over 36 languages.



RETHINKING INTELLIGENCE

The idea of emotional intelligence gained prominence a few decades ago, with the publication of Daniel Goleman's book on the subject in 1995. Now, goals such as learning to have better relationships, becoming more forgiving, or creating a business that better satisfies the emotional needs of customers, are addressed in classes and workshops held at the London-headquartered School of Life.

Founded by philosopher, writer and television presenter Alain de Botton, the school's main aim is to develop “emotional intelligence through the help of culture” and put into action ideas from de Botton's books, such as *Status Anxiety* and *The Pleasures and Sorrows of Work*. “All of our classes deal with everyday existential issues that people face: from finding jobs to facing death. We bring in the history of ideas and culture to help solve these problems,” says Vassili Christodoulou, director of programmes.

The school has proven to be a success, both in London and abroad. Since its inception in 2008, the School of Life has seen some 80,000 students go through its doors, and has grown to include nine additional campuses: in Paris,



FROM TOP Alain de Botton; a classroom at London-headquartered School of Life

Melbourne, Amsterdam, São Paulo, Istanbul, Belgrade, Antwerp, Seoul, and Tel Aviv. More campuses are set to open in 2016. The School of Life provides campus licenses, and those interested in setting up a campus in their part of the world can register their details on the school's website.

The core curriculum is made up of 30 classes led by a faculty which includes psychotherapists, journalists, broadcasters and artists. “We have this perception we can't be taught to do psychological and emotional things better,” says Christodoulou. “We assume ... that the knowledge that matters, that the skills that matter are content-based ... and that's wrong.” Upcoming events cover topics such as “How to Win at Procrastination”,

“Business Storytelling” and “How to Make Your Mind Up.” A one-week intensive programme is limited to 20 participants and costs £800 (HK\$9,400).

The School of Life's business school works with companies to develop training programmes and creative innovations that aim to increase employee and customer well-being, and deepen engagement and loyalty. Clients have included Accenture, Barclays Wealth, Citibank and Fitch.

“We do one-day workshops called ‘The Courage to Lead’ and participants tend to be high-level executives who want to reflect on the challenges of leadership and continue to grow as leaders,” says Christodoulou. [Ⓐ]