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**Headline: Commentary: Humanities at the heart of a holistic education in a tech-driven world**

## **Commentary: Humanities at the heart of a holistic education in a tech-driven world**

The fourth industrial revolution has not made the study of the humanities irrelevant. We want our humanists to understand technology and our technologists to understand the humanities, says Ambassador-at-Large Tommy Koh.



"Ignorance of history can get you into trouble and the knowledge of history can empower you", said Singapore's Ambassador-at-Large, Tommy Koh. (Photo: MFA)

SINGAPORE: We are living through the fourth industrial revolution.

The first was the Agrarian Revolution which happened about 10,000 years ago. Humans stopped foraging for food for survival. They learned to grow food and domesticated animals. Food production improved and human settlements grew in size, leading to the emergence of villages, towns and cities. The second revolution, called the Industrial Revolution, began in the 18th century and accelerated in the 19th and 20th centuries. It was powered by the invention of the steam engine, electricity and mass production.

The third revolution began in the 1960s, with the invention of the computer, semi-conductors, personal computers and the internet. That is the world we have been living in.

The fourth revolution began at the turn of the 21st century. It builds on the third industrial revolution as it is also being driven by technology and digitalisation. New technology and innovation have given rise to companies which disrupt the status quo, for example, Airbnb, Grab and Alibaba.

The world is being transformed by robots, artificial intelligence, the Internet of things, big data, smart cities, block chain, the sharing economy, 3D printing, autonomous vehicles, nanotechnology and financial technology.

The fourth industrial revolution is remarkable for its speed and breadth. It is affecting every sphere of human activity.

Singapore must therefore prepare its young people with the knowledge, skills and mindset to take advantage of the new opportunities. This is why the Government has emphasised what is called STEM - meaning science, technology, engineering and mathematics.

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This is not wrong but it does not tell the whole story. Many founders of new and innovative companies are not graduates of STEM. Founder and CEO of Razer, Tan Min-Liang, for example, is not a graduate of STEM but law. He is our youngest self-made billionaire.



File photo of Razer CEO Tan Min-Liang. (Photo: AFP/Roslan Rahman)

#### CASE FOR HOLISTIC EDUCATION

What the world needs is to educate our young people both in the sciences and the humanities. We need technologists who understand the humanities and humanists who understand technology.

When Steve Jobs, who attended but dropped out of a small liberal arts college, was asked what was the most important course he took in college, he said it was a course on calligraphy. His knowledge of calligraphy enabled him to design a keyboard for the Macintosh computer, which distinguishes it from its competitors.

When unveiling a new edition of iPad, Steve Jobs said:

It is in Apple's DNA that technology is married with liberal arts, married with the humanities, that yield us the results that make our hearts sing.

Mark Zuckerberg was a psychology major at Harvard but he also dropped out of college. Mark has said that:

Facebook is as much about psychology and sociology as it is about technology.

I think I have made my point. What is changing the world is not technology alone but innovators and entrepreneurs who have been able to marry technology with design, psychology and sociology.



Facebook's CEO Mark Zuckerberg is seen at the VivaTech (Viva Technology) trade fair in Paris on May 24. (Photo: AFP/GERARD JULIEN)

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## WHY STUDY HISTORY?

When parents ask me what their children should study if they aspire to join our foreign service, I tell them that it doesn't really matter but I hope some of our diplomats would have studied history.

Ignorance of history can get you into trouble and the knowledge of history can empower you.

A Singapore developer had secured a site in Hanoi for development and was confronted by protesting Vietnamese veterans when the developer had wanted to demolish the prison standing on it.

The prison had been built by the French. During the long colonial rule, many Vietnamese freedom fighters had been imprisoned there, and some were tortured and killed.

To these Vietnamese veterans, the prison was sacred territory. In the end, a compromise was arrived at and a section of the prison has been preserved and turned into a museum.

As Chairman at the National Heritage Board for nine years, one of my initiatives was to put up markers to honour great men and women who had visited Singapore during their lifetimes.

The first marker was to honour the great Polish-British writer, Joseph Conrad. A British merchant Seaman before becoming a writer, Singapore was his base as he worked on ships which sailed between Singapore and the Indonesian archipelago and the island of Borneo.

The success of this first marker encouraged me to put up markers to honour Ho Chi Minh, Jose Rizal, Deng Xiaoping and Jawaharlal Nehru. Our gestures have touched the hearts of the leaders and people of their countries.

In diplomacy, I have learned that, as human beings, we think with both our heads and our hearts.

## WHY STUDY LITERATURE?

One of the subjects I studied for my O-levels in 1955 was Literature. 63 years later, I consider the study of Literature one of the best investments I have made.

Through Literature, I acquired a love of books and the joy of reading. Reading is an educational, joyful and liberating experience. You are transported from your circumstances, no matter how difficult and challenging, to another world, another time and another civilisation.

Reading is the key that unlocks the door to the treasury of the world. At the inaugural Book Summit, held in Washington, I was moved by the testimonies of several famous American writers who said that reading had saved their lives.

Reading literature helps you to think, write and speak clearly. Clarity of thought and expression is a virtue which should be cultivated.

Reading literature gives one a better understanding of human nature and the complexity of the human condition. It makes one less judgmental and more sympathetic. Literature complements non-fiction in helping us to understand another country and its people.

In the case of Singapore, we should encourage our students, whether they are studying literature or not, to read the works of our poets, playwrights and authors.

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I am an admirer of our poets, Edwin Thumboo, Lee Tzu Pheng and Leong Liew Geok. My favourite playwrights are Kuo Pao Kun, Robert Yeo, Haresh Sharma and Alfian Sa'at. I recommend the short stories and novels of Goh Poh Seng, Lim Chor Pee, Catherine Lim, Suchen Christine Lim, Philip Jeyaretnam, Simon Tay and Meira Chand.



Playwright Haresh Sharma. (Photo: Mediacorp)

### CASE FOR THE HUMANITIES

The fourth industrial revolution has not made the study of the humanities irrelevant. We should study the humanities because it will help us to think analytically, to write clearly and to speak persuasively. Apart from acquiring domain knowledge in the law, my legal education taught me how to think analytically and how to communicate my thoughts coherently, clearly and persuasively, both orally and in writing.

Norman Augustine, the former CEO of Lockheed Martin, when asked what was the most important qualification for advancement in his company, said that it was the ability to express one's thought clearly in writing.

Amazon boss Jeff Bezos requires his senior executives to submit written memoranda for their meetings. If proposing a new product or strategy, the memo must take the form of a press release. It must use simple, jargon-free language so that a lay person can understand it.

My good friend, Professor Lily Kong, the President-elect of SMU, has written that:

It is in studying the humanities that we learn about humanity, or what it means to be human, in all its beauty and all its foibles.

“Through literature and history, we see, for example, the martyrdom of self-sacrificing leaders as much as we see the viciousness of ambition. We gain insights into what it means to have a kindred spirit but also a cruel enemy. We witness the tenderness of human love, the pain of loss and the joy of reunion.”

“In an age of hyper-technology, all the more reason why we need the humanities – to remind us of the glory and frailty of humanity, to retell the meaning of being human ... Where robots can dispense medicines, and chatbots replace human conversations, the jobs that will withstand the fourth industrial revolution are precisely the ones that require an understanding of human nature and a reliance on human empathy.”

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Professor Lily Kong will begin her term as president of SMU on Jan 1, 2019. (Photo: SMU)

What we should aspire for is holistic education. We want our humanists to understand technology and our technologists to understand the humanities. An education in the humanities train us to think, write and speak clearly.

As long as we are human beings, the humanities will always be at the heart of civilisation.

Professor Tommy Koh is Ambassador-at-Large at the Ministry of Foreign Affairs, Chairman of the Centre for International Law of NUS, and Special Adviser to the Institute of Policy Studies. This commentary is an abridged version of Professor Tommy Koh's piece in IPS Commons. Read the original [here](#).

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