

He switched to his new passion at the last minute

Mr Chua Yao Hui had his heart set on studying economics when it was time for him to declare a major after his second year at Yale-NUS College. "I thought it gave a good balance between pragmatism and what I was passionate about," said Mr Chua, 25, who graduated in May.

But while economics helped him to understand social inequalities, his relationship with the subject did not develop further as he continued with his studies during a year-long exchange programme at Harvard University in the United States in his third year.

"There wasn't a spark," said Mr Chua. He found a new love in programming when he took his first computer science class at Harvard. "I saw a way to address inequality through technology."

Despite feeling like he was in "uncharted waters" during classes, as he was not familiar with the methodology, he pressed on, regularly pulling all-nighters to complete class assignments.

"I persisted because I saw so much potential in tech... You can mould it to fit today's problems," said Mr Chua. Though he was close to becoming a full-fledged economics major, with only an honours thesis left to complete, he requested a change in major from economics to mathematical, computational and statistical sciences late into his

third year, and got the nod.

After completing his exchange programme, he moved from Massachusetts to New York for an intensive 12-week boot camp in Web development at Fullstack Academy, a coding school, so that he could catch up with other coders.

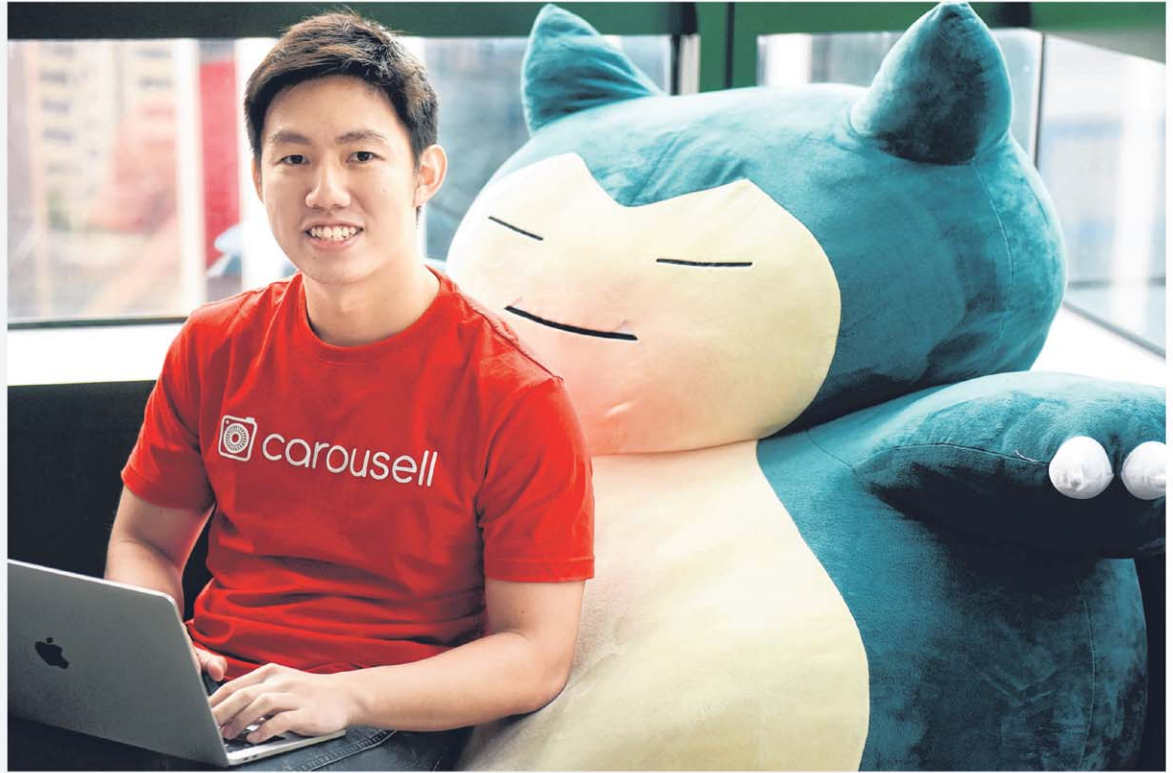
His mother, a client service manager, was initially doubtful of his decision to change his major so late into his programme, but supported him after he explained to her that tech was his passion.

Now a software engineer at online marketplace Carousell, Mr Chua believes that having more flexibility in the curriculum would benefit university students.

"It encourages students to go beyond their comfort zone and explore new subjects, and this helps to promote innovation."

While he recognises that this might take time away from specialised skills training, Mr Chua said that many young adults do not know much about the various options available before they enter university, and it is worth giving them some time to explore alternatives before committing to a specialisation. "If someone is passionate about what they do, they will do a good job, and they will seek ways to better their skills."

Yuen Sin



Mr Chua Yao Hui, 25, was close to becoming an economics major when he switched to mathematical, computational and statistical sciences at Yale-NUS College. Now he is a software engineer at Carousell. He believes that having more flexibility in the curriculum would benefit students. ST PHOTO: FELINE LIM

The road to flexibility in changing majors

NUS and NTU more stringent on transfers; SUTD, Yale-NUS let students specialise later

Yuen Sin

SkillsFuture and lifelong learning are now buzzwords in the higher ed-

ucation landscape, with universities revamping their courses to have bite-size offerings to cater to adult learners.

But at the undergraduate level, is there also enough flexibility built into the university curriculum to accommodate those who may have discovered new passions midway through their programme?

At a forum in March, Singapore Management University's board of trustees' chairman Ho Kwon Ping made a call for more flexibility in Singapore's university system.

Given that most universities here follow the British system of requiring students to decide on their major when they apply to school, Singapore's system has an "inbuilt inflexibility" that may not be productive for the economy, and students have to decide at too young an age what they want to do for the rest of their adult life, he pointed out. In the American system however, students declare their major one or two years into their undergraduate programme.

A check by *The Straits Times* found that universities here do have some form of provision for students who wish to change their course of study midway into their education.

Older, bigger universities such as the National University of Singapore (NUS) and Nanyang Technological University (NTU) are more stringent. However, two newer and smaller institutions that were established in collaboration with American counterparts - Yale-NUS College and the Singapore University of Technology and Design (SUTD) - only require students to choose their course of study at the end of their first or second year.

Students at SUTD have to declare their specialisations only at the end of their first year, after taking common modules in subjects such as design, science and mathematics. At Yale-NUS College, most students have to declare their majors only at the end of their second year.

SUTD's director of admissions Lim Su Fang said that such an approach allows students to make more informed decisions, so that they can pursue further education "in the areas which they are really passionate or interested in". It is something that works well for SUTD, going by the number of students who change their minds about their course of study.

More than three in 10 students in SUTD's past few cohorts end up choosing a specialisation at the end of their first year that differed from their initial preference when they applied to the school, said Ms Lim, though students are not encouraged to switch specialisations after that. Only two or three students have done so since 2012.

There is greater flexibility at Yale-NUS College, where students

are allowed to change their major up till the end of the second instructional week in their graduating year. This is because major requirements make up only about a third of the Yale-NUS curriculum, said the university's executive vice-president of academic affairs Steven Bernasek. About a fifth of Yale-NUS' pioneer batch of students who had to declare majors switched their majors, while 8 per cent of Yale-NUS' current batch of graduating students who had to declare majors did the same.

It is a slightly different picture at

420

Average number of Nanyang Technological University students who apply to change their major each academic year.

170

Rough number of students who succeed in doing so every year, from the average 420 who apply.

24k

NTU's current undergraduate population.

NUS and NTU, where a smaller proportion of students successfully switched their course of study midway through their programme. An average of 420 NTU students in each academic year have applied to change their major over the past few years. Out of these students, about 170 are successful in doing so every year, or less than 1 per cent of NTU's current undergraduate population of about 24,000.

At NUS, only about 2 per cent of eligible students successfully changed their major or programme in the last academic year.

Such applications to NUS and NTU for a transfer are assessed on a case-by-case basis, and subject to approval by the university.

Over the last two years, several faculties at NUS have revised their undergraduate curricula to allow students to pursue double-major or major-minor combinations that allow them to pursue other interests and disciplines without having to push back their graduation date, said NUS' vice-provost of undergraduate education and student life Bernard Tan. The university now offers more than 90 structured double-major and major-minor combinations.

Ms Bernadette Chin, 25, initially majored in industrial and systems engineering at NUS in 2010. At the end of her second year, she applied to NUS for a transfer to major in philosophy instead, which was initially her minor.

In order to do that, she had to extend her time at NUS by another two years, as mapping her existing academic credits over to the new programme would pose problems. She topped her Bachelor of Arts cohort when she graduated last year, for which she received the Lee Kuan Yew Gold Medal, and is now pursuing a Master of Philosophy at NUS.

While it would have made things easier for her if she had been able to transfer across programmes without having to start her new programme on a clean slate, Ms Chin said that she is aware the flexibility comes with its own set of logistical issues. "It sounds nice in theory, but some courses may have enrolment limits, and students may also have problems meeting the requirements of the course (that they want to transfer to)."

National Institute of Education don Jason Tan said that the local university system has been "gradually evolving" towards greater flexibility, and suggested that career counselling can be stepped up to complement this. But he noted that a balance needs to be struck with practical considerations, such as making sure that degrees awarded meet the accreditation requirements of external professional bodies.

"You can't get away with studying fewer modules," he added.

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