High-risk culture work in Singapore?

How South Korea’s Kaist tackles ‘high-return’ projects can provide pointers for fourth university here

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WHO would have thought of it: Converting old ships into desalination plants that use solar power, and sifting them to parts of the world lacking in water but abundant in sunshine.

As one of the possible projects that Kaist – the Korea Advanced Institute of Science and Technology – is looking at, the idea demands interdisciplinary research. And it bears all the barrier-breaking hallmarks of the man responsible for turning Kaist into one of the world’s leading research universities.

“High-risk, high-return” projects – funding research where the probability of success may be lower, but the potential results far more ground-breaking.

“Many universities tend to do what I call ‘mop-up’ operations. They go into an area where leading scholars have already done pioneering work, and try to make minor improvements and emulate what other people have done,” said Prof Suh.

At Kaist, ideas are culled from both staff and students. At one recent internal competition to generate ideas for new-generation cell phones, the winner was an industrial design student whose “very simple” idea was a keyboard that could be folded like a hankie and fit into the pocket.

Several teams headed by professors are now developing the student’s idea.

Programmes like these encourage competition in generating ideas that are new, and get students excited about their own ideas”, said Prof Suh, who was head of the Massachusetts Institute of Technology’s Department of Mechanical Engineering from 1991 to 2001.

Some of Prof Suh’s policies at Kaist have been controversial – tenure was denied 15 out of 35 professors who applied last September, and students who do not meet the grade average of B now have to pay for their own fees of up to US$16,000 ($22,000) a year, reported the International Herald Tribune.

But these measures have only made the university more competitive – there are now more student and staff applicants than ever before, said Prof Suh.

Admittedly, some of Kaist’s goals differ from that of Singapore’s fourth university. For one, Kaist’s major effort is in graduate education, with graduate students outnumbering undergraduates.

Also, Kaist’s focus is on science and technology, while the fourth local university is likely to offer design, engineering and business disciplines.

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Students will be trained in engineering for the first four years, and business and entrepreneurship in their final year.

But Nanyang Technological University’s president Su Guanning said an interdisciplinary education is already available at NTU – albeit only at undergraduate level – where, for example, students can earn both Bachelors of Business (Infotechology) and Engineering (Computer Science) at the end of four years.

From, said Mr Howard Hunter, president of SMU which has a tie-up with Kaist.

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