

THIS WEEK'S TOPIC:

How has the contribution of local universities to Singapore's business sector grown over the years?
 What more can our universities do to boost local business and entrepreneurship?

Business brains from S'pore universities

Christophe Duchatellier
 CEO
 Adecco Asia

THE local universities have grown from strength to strength, providing top quality education to students in Singapore. Over the past decade, we have seen new universities committing to providing a variety of specialisations. Students now have a wider range of course specialisations which will enable them to be ready to join the world of work. Internships and campus recruitment opportunities provided by employers have enabled students to learn about current work environments while joint partnerships with industry bodies also allow for educators and employers to provide relevant insights for students. To boost local business and entrepreneurship, universities and employers can provide platforms for students to showcase their creativity and business acumen, such as giving opportunities for students to run and manage a business or be part of social entrepreneurship think-tanks.

Chris Wei
 Group CEO
 Great Eastern Life Assurance Co Ltd

THE Singapore higher education system is one of the best in the world. Our universities develop a core of Singaporeans who not only excel academically but are equipped with the necessary 21st century softskills.

As a Singapore-based homegrown company, Great Eastern Life is privileged to be able to tap on quality talent from our local universities. We have an active Management Associate Programme where we identify, recruit and groom fresh graduates annually. A significant percentage of these management associates have gone on to assume leadership positions within the organisation. As a company focused on delivering the most trusted and professional financial advice, more than 90 per cent of our planners and advisers are tertiary educated, of whom a significant number are university graduates recruited through our customised internship programme.

We, and Great Eastern Life customers, have benefited from their professionalism, reliability, keen work ethics, strong commitment to excellence and, above all, their acute sense of integrity; traits that closely align with Great Eastern's organisational core values.

Universities should consider increasing collaborative efforts with local businesses, so that graduates start their careers with a mix of academic and practical experience. As an example, we regularly partner local universities to conduct customer research; these projects have provided valuable experiential and cross-learning opportunities for both organisations.

For Singapore, the demand for graduates is likely to increase and we will need a highly skilled and sophisticated workforce to drive our future economy as global competition intensifies. Our universities should consider giving its students international exposure, such as overseas exchange programmes, to prepare our graduates to tackle emerging challenges of greater complexity in order for Singapore to maintain its competitive edge globally.

Yvonne Chang
 Managing Director
 Yahoo! India-Southeast Asia

IN a shift from traditional talent acquisition, our engagement with talent begins far ahead of actual recruitment with our university partners in the form of internships.

What we have seen is that students – even those at premier institutes – are not exposed to real world problems even as they are becoming increasingly entrepreneurial and are looking to invent the next big thing that can be a potential game changer. We need initiatives that can act as catalysts to foster this kind of creativity.

One way we can do this is through internships that expose students to practical problems. In addition, comprehensive mentorship with industry experts at campuses can also help students develop and advance their careers in the right direction.

Lothar Herrmann
 President & CEO
 Siemens Asean-Pacific

OVER the years, our local universities have been successful in providing a steady pool of well-qualified graduates to support Singapore's economic agenda. They have actively collaborated with the public and private sectors to develop relevant



specialised skills for industry as well as research and development capabilities. Siemens has had the privilege to partner both NUS and NTU on several cutting-edge projects. For example, we are the technology partner for NUS-A*Star's Clinical Imaging Research Centre (which aims to promote pioneering biomedical imaging research) as well as NTU's e-mobility study for Singapore. We are now providing funding to kick-start the first audiology programme in Singapore at the NUS – to groom graduates for a profession that is sorely lacking trained manpower in Singapore. Universities should also consider longer-term industry attachment in addition to these collaborations and training for technical skills. This will imbue undergraduates with a sense of entrepreneurship, insights into the business world and the practical application of the knowledge and training they have received in the universities.

Lim Soon Hock
 Managing Director
 PLAN-B ICAG Pte Ltd

COLLABORATION between our local universities and the business sector has increased over the years. It is a healthy trend. It must be further promoted and sustained. Universities' research should not be restricted to pure research. It must also be commercially oriented and be harnessed to spawn new businesses and entrepreneurship. Where we have yet to catch up with other world-class universities is in producing successful companies, if not world class ones, much like what many of the top universities in the US, such as Stanford and MIT, have accomplished. This goal has now become an imperative, given that both NUS and NTU have moved up in the World University Rankings. I remember the LISA, the forerunner of Apple's Macintosh, being conceived in Stanford University, that contributed to the early phenomenal success of Apple. The invention was the GUI – graphical user interface – that revolutionised and simplified the usage of personal computers. There must be a simpler and easier way for businesses and universities to collaborate, learning from experiences. I do not think we are there yet, if current results and outcomes are anything to go by. More needs to be done on this front, if we are to produce more successful companies or enterprises. We do not have to reinvent the wheel. There is much we can learn from the US, with its strong history and sterling track record of

entrepreneurship, much of which is supported and boosted by universities. I am confident that if we are daring to re-engineer the collaborative framework, we can get there. All we need is one big breakthrough to set the motion going, but changes must be made to the status quo.

Dhirendra Shantilal
 Board director & head, Asia-Pacific
 Firecraft

LOCAL universities can further improve their contribution to the business sector by allowing students to spend a gap year working in a field related to their studies, which is a common practice for many college students in the UK and the US. In addition, universities should allow students to be involved in more business and community projects that will interest them in entrepreneurship, and enable them to think of innovative ideas to tackle challenges. At the same time, it is encouraging that the local universities are already taking a proactive approach in engaging businesses. With such collaborations, we see a synergy established between academia and the relevant industries, as students gain valuable industry experience and connections that prepare them for the working world. Taking what they learn in the classrooms and applying it in the real world, especially for those in the engineering and more "hands-on" industries, can elevate their learning process. In return, the business sector benefits from having bright young minds offering fresh perspectives on the industry, the business model and operations.

Lim Tit Meng
 Chief Executive
 Science Centre Singapore

THE Science Centre has regularly worked with academics from local universities. Many of our thematic exhibitions have involved professors and researchers as consultants or advisers in the development process. We have also invited many of them to share their research or innovations through our science café sessions or public forums to enlighten the public and inspire students. A large number of professors serve regularly as judges in science competitions organised for students of all levels, including contests that encourage entrepreneurship. The science centre business has to be literally

knowledge-based and working with universities helps ensure exhibition content and products are accurate, relevant and current. Researchers from universities have also benefited from working with the Science Centre. For example, by testing some of their new communication or visualisation tools developed in the laboratory, some augmented reality and 3D visualisation technology used in exhibition displays have subsequently become successful commercial products. One of the spin-off companies from a local university has become a leader in mixed reality applications in the edutainment industry not just in Singapore but also abroad.

Dora Hoan
 Co-Chairman/Group CEO
 Best World International Ltd

UNIVERSITIES may wish to consider working with SMEs to further develop the business sector. One possible collaboration could be to prioritise local SMEs for R&D programmes. Another way would be to actively arrange for internships in SMEs. This would be a win-win solution, with the SMEs obtaining fresh perspectives from the students and the latter gaining experience for future career advancement. Of course, it would be even more helpful if there could be government assistance (similar to the Max Talent Programme) so as to create more opportunities for the students.

Lam Joon Khoi
 Secretary-General
 Singapore Manufacturing Federation.

THE manufacturing sector is an important pillar of Singapore's economy, contributing more than 20 per cent of GDP. From the sector's perspective, we have to imbibe in students the fundamentals of supply chain and production issues and help them keep abreast of industry development through industrial visits, internships and networking. Academic excellence has to be accompanied by market readiness and familiarity. Hence, I advocate strong collaboration among industry, academic institutions and government agencies to improve the market readiness of students.

The provision of a market place for ideas is practised by many universities. I believe our universities can do more to encourage entrepreneurship through project-based learning and role modelling. The challenge is creating the right ecosystem where practitioners would come forward to

mentor and give inspirational talks to students. Entrepreneurs who are alumni are excellent role models that universities should continue to tap.

Yeoh Oon Jin
 Executive Chairman
 PwC Singapore

LOCAL universities have innovated in the past years in the area of pedagogy, increased interactions with the business community and entrepreneurship. As a result, graduates from the local universities have become more confident, articulate and global-minded, and these attributes are well aligned with what we seek in young professionals. Local universities have also shared with us the expectations of their graduates and this has helped employers like PwC to rethink work scope and work environment to better suit their aspirations.

While entrepreneurship programmes exist currently, they are more focused on the practical know-hows which do not necessarily translate to increasing the ability of students to "think out of the box", generate original ideas and take calculated risks. The latter are more important ingredients to help our young entrepreneurs succeed and more platforms can be created to instil these traits. Over time, this will lead to an ecosystem of thinkers and creators from where successful home-grown entrepreneurs will surface. More experiential student-led ventures can also help them understand early on the requirements and developmental needs associated with creating and running enterprises.

Chua Weng Foo
 Chief Executive Officer
 UNIT4 Asia Pacific

SINGAPORE'S education system has grown to be a well respected model for achieving improved literacy and currency of knowledge that benefits all of our communities. We have witnessed in the past 20 years a workforce that has attained higher qualification levels. Yet we need to ask more of our education leaders and our students. Innovation and entrepreneurship must improve if we want to sustain competition on a global level. Our students and faculty deserve an opportunity for parity in access and opportunity to succeed. Our business sector is reliant on the generation of students in our post-secondary system to be the leaders of tomorrow.

Max Loh
 Country Managing Partner
 Ernst & Young LLP

LOCAL universities are producing an increasingly diverse pool of talent across traditional and new disciplines, and such diversity of thought and knowledge is key for Singapore businesses to thrive in today's globalised economy. However, the knowledge and ideas generated in universities can sometimes be under-exploited commercially. Universities would thus benefit from strong relationships with industry and even angel groups – not just those based in Singapore – so as to provide students with real-world learning and connections, through collaborations such as attachments, mentorships or idea sponsorships.

Establishing entrepreneurship schools or partnering world-renowned entrepreneurship institutions that offer graduate and post-graduate certification, as well as embedding the spirit and values of entrepreneurship in the curricula of other disciplines, are worth exploring further. University programmes could also take on an integrated and multi-disciplinary approach where, for example, the science and technology students with innovative ideas are not separated from the business students who could add values to those ideas from a business perspective.

Joshua Soh
 Managing Director, Singapore and Brunei
 Cisco

OUR local educational institutions, government agencies and private sector companies have always enjoyed a symbiotic and collaborative relationship. What will be critical for the future is having industry engagement so students can benefit from the industry insights, leadership and experience. And educators can weave these insights and learning into their curriculum so that the lessons remain relevant as the world transforms, and continually matches what the industry needs and wants, therefore driving employment and economic progress.

In Singapore, we can strengthen our national competitive edge and regional leadership by preparing students for a dynamic environment. Gone are the days of clearly defined job roles; today everyone is expected to do more, to be stretched beyond what they have been taught in school. So universities need to shift gears from teaching "subjects" to "skills and competencies" so that our graduates will be able to continually assimilate new knowledge and drive innovation.

Janet Ang
 Managing Director
 IBM Singapore

TODAY, we are witnessing a historic convergence of technology shifts from instrumentation, cloud, mobile, social to analytics. Together, they have the potential to transform businesses, government services and society. According to Deputy Prime Minister Teo Chee Hean, Singapore is committed to training 2,500 analytics professionals by the end of 2017. To build world-class analytics capabilities that will help Singapore leverage data as the new natural resource, IBM recently collaborated with National University of Singapore (NUS) and Economic Development Board to jointly establish the NUS Centre for Business Analytics to help students and mid-career professionals gain the latest skills in business analytics and prepare for high-value jobs in the future.

IBM has a long tradition of collaborating with academia. In Singapore, through our partnerships with various institutes of higher learning such as NTU, NUS, Singapore Management University, Institute of Systems Science, Nanyang Polytechnic, Ngee Ann Polytechnic, Singapore Polytechnic and Temasek Polytechnic, we offer courses or degree programmes in Service Science, Management and Engineering (SSME) – an academic discipline designed to produce students with the combined business, technology and social sciences skills needed to enter today's workforce ready to contribute immediately to their countries' economic and innovation agendas. We aim to nurture a new generation of workforce equipped with cross-disciplinary "T-shaped" skills for our customers and partners.

Today, the vibrant SSME ecosystem includes more than 250 institutes of higher learning in 50 countries on six continents offering practical experience and industry participation to interdisciplinary teams of university researchers.

Joshua Yim
 CEO
 Achieve Group

UNDER the leadership of the Ministry of Education, the number of universities in Singapore has jumped from two to six in just over a decade. These local universities have thus played a significant role in grooming a pipeline of Singaporean talent for the local business sector and thus contributed significantly to the country's economic growth over the decades. The strong international reputation of our local universities have also attracted many foreign students. From a recruitment and human resource standpoint, it is interesting to note that the civil service and statutory boards are staffed with many local university graduates. The quality of our civil service is evident, as it is benchmarked and well-respected by many countries around the world. Another observation is that some employers have a certain propensity to hire foreign PMEs, due apparently to the attitudes exhibited by Singaporean workers. This is a real issue based on feedback from the HR community and the heads of organisations that I have received. Therefore, I personally hope that our local universities can go beyond academic achievements to play a stronger role in inculcating good work and social ethics and values in our students.

Dirk-Peter van Leeuwen
 Vice-President & General Manager
 Red Hat Asia Pacific

LOCAL universities and tertiary institutions have been working closely with Red Hat and this collaboration has grown significantly over the years. As a global provider of open source solutions, training and certifications around real world job roles and tasks, we understand the need to build homegrown IT talent to boost local business and entrepreneurship.

Therefore, developing the next generation of IT talent from the local schools is at the crux of the organisation. Established since 2008, Red Hat Academy (RHA) partner programme aims to equip local tertiary institutions and their students with open source skill sets and the opportunity to obtain industry certifications. Four out of five polytechnics and two out

of six universities, as well as more than 5,000 students in Singapore have benefited from Red Hat Academy annually.

David Leong
 Managing Director
 PeopleWorldwide Consulting Pte Ltd

AS a small country with limited natural resources and human resources in particular, it is paramount that Singapore develops a tertiary education framework which not only draws Asia's best to our shores but also trains our locals to compete with the best globally.

The competition will bring out the best in our local graduates since the best of foreign students will raise the bar. Retaining the best brainpower in Singapore for our local businesses should be one of the primary objectives of our universities. It is not good enough to train and release these local and foreign talents to open markets. If the brainpower, innovation and creativity are not captured for the good of Singapore, then our local industry may not be able to leverage on the academic output from our local universities. Our graduates have to be employable and the universities must work with small and large business to build talent for the industries and to train for "fit of use". Globally, graduate unemployment is on the rise, particularly in Europe and the United States. The value of the degree will depreciate sharply the longer one is unemployed.

While we train graduates to take up leadership roles in the public and corporate sectors, entrepreneurship must also be encouraged. The traits that foster innovation and creativity cannot be taught from textbooks in the classroom. What are required are ventures, adventures and the acceptance of failure. Failure cannot be seen as a dirty word. Entrepreneurs and industry leaders can serve as adjunct university professors, for instance, to inspire, incite and excite students into going into business. Nothing ventured, nothing gained.

Brad Gray

Regional Director, South-east Asia
 Polycom

SINGAPORE is a knowledge-intensive economy, with people being our talent capital. Educational quality is thus a significant part of our Singapore conversation, and it is necessary for the country to continually invest in nurturing and developing students in order to bring out the best in them. In this regard, local universities play a critical role by equipping students with practical skills and shaping them into future leaders, thus serving as important catalysts for businesses. It is essential for education to reflect current business needs, and universities need to remain relevant to today's globalised economy by going beyond the academic curriculum, adopting new approaches and facilitating a creative, innovative learning environment.

This can be enabled through technologies such as video collaboration, which challenge traditional learning boundaries, overcome physical barriers and grant students exposure to a wealth of knowledge from international experts. Such enriched educational initiatives expose students to global perspectives, moulding them into well-rounded and capable individuals, and ultimately contributing significantly to the quality of our future workforce.

