Media Release

Temasek Foundation and local polytechnics launch youth leaders exchange programme with TVET institutions across the region

TF SCALE programme aims to encourage cross-cultural learning amongst students on regional economic and community issues

Singapore, 28 March 2014 – Temasek Foundation (TF) and three of Singapore's polytechnics – Nanyang Polytechnic (NYP), Republic Polytechnic (RP) and Singapore Polytechnic (SP) – have partnered 10 technical and vocational education and training (TVET) colleges from across ASEAN to launch the Temasek Foundation Specialists' Community Action and Leadership Exchange (TF SCALE), a student leadership exchange programme. Temasek Foundation is committing a grant of about S$1 million towards the programme.

The inaugural TF SCALE programme was officially launched today at Republic Polytechnic. It provides a platform for youth from various TVET institutions in Southeast Asia to engage in a holistic learning and cross-cultural sharing experience. This includes discussions on regional economic and community issues, and opportunities to apply practical skills, technology and research in developing social innovation projects.

A total of 300 students – comprising 150 from Singapore and 150 from Cambodia, Indonesia, Philippines, Thailand and Vietnam – will participate in the inaugural run of TF SCALE.

To start the programme, NYP, RP and SP will each host 50 students from around the region. During the four-week programme in Singapore, the TF SCALE scholars will be engaged in various TVET-related academic programmes and participate in a series of workshops where they will work in teams to apply technical skills and knowledge to develop social innovation projects with their Singaporean counterparts.

Following this, the 150 TF SCALE scholars from Singapore (50 from each of the three polytechnics) will be attached to one of the regional TVET institutions for a period of two weeks. Here, the Singapore scholars will join their regional counterparts to implement their co-developed social innovation projects to benefit the local communities.

Following the return of the Singapore scholars from their overseas attachments, the TF SCALE programme will culminate in Republic Polytechnic's Experiential Learning Forum on 6 and 7 November 2014, where selected participants will share learning experiences gleaned from their representative projects.

"The youths of today are the leaders of tomorrow, and it is important that we nurture them as leaders who are not just technically work ready, but also global citizens of the future. We hope that the Temasek Foundation SCALE programme brings these youths together in deeper appreciation of our shared future in Asia," said Mr Benedict Cheong, Chief Executive Officer, Temasek Foundation.

The launch ceremony for TF SCALE saw the overseas students and those of the local polytechnics put up traditional musical and dance performances, including a combined ASEAN dance item put together by the three polytechnics. Titled "Celebrating ASEAN", the dance item speaks of the diversity and solidarity that ASEAN shares as one people. The polytechnics also hosted their visiting counterparts on a tour to the Singapore Parliament and Gardens by the Bay.

Further details about TF SCALE, descriptions of some of the highlight projects that the students will be working on, and quotes from the polytechnic spokespersons can be found in the appendix.

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3. Quotes from polytechnic Principals
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About Nanyang Polytechnic

Established in 1992, Nanyang Polytechnic (NYP) is a premier tertiary institution that offers quality education in Engineering, Information Technology, Design, Interactive & Digital Media, Chemical & Life Sciences, Business Management and Health Sciences. It offers 50 full-time diploma courses and a suite of post-diploma and customised courses for continuing education.

The Polytechnic's industry-relevant and real world-based training equips students to become employment-ready upon graduation. It aims to nurture students into innovative and enterprising individuals, capable of succeeding in any path they choose to take, be it a career or in further studies.

Nanyang Polytechnic is also the proud recipient of the prestigious Singapore Quality Award, the Innovation Excellence Award and the People Excellence Award. This makes NYP the first education institution in Singapore to receive these three top organisational and business excellence awards.

About Republic Polytechnic

The first educational institution in Singapore to leverage the Problem-based Learning approach for all its diploma programmes, Republic Polytechnic (RP) has six schools and two academic centres offering thirty-nine diplomas in Applied Science, Engineering, Enterprise and Communication, Events and Hospitality, Infocomm, Sports, Health & Leisure, and Technology for the Arts.

Republic Polytechnic is committed to nurturing innovation and entrepreneurial learning in an environment that develops problem-solving skills and lifelong learning opportunities. Its holistic and broad-based curriculum prepares students for an active and meaningful role in society as problem solvers, respected professionals and passionate citizens.

Republic Polytechnic strives for excellence by achieving various international and national accreditations, including ISO 9001, ISO 14001, OHSAS 18001, ISO 22301, Singapore Quality Class, People Developer, Innovation Class, and Service Class.
For more information, visit http://www.rp.edu.sg

About Singapore Polytechnic

Established in 1954, Singapore Polytechnic (SP) is Singapore's first polytechnic. It has 10 schools that offer 49 full-time diploma courses for close to 16,000 students. SP has adopted a proven creative teaching and learning framework and it offers students a holistic, authentic and industry-relevant curriculum, innovative and vibrant learning spaces, and enriching overseas programmes.

The Polytechnic is committed to producing competent and versatile graduates, who are also imbued with sound values, so that they can be work ready, life ready and world-ready. Among the network of more than 170,000 SP alumni are successful entrepreneurs, top executives in multinational and public-listed corporations, and well-known professionals across various industries and leaders in government.

SP is the first polytechnic to be awarded the President's Award for the Environment in 2010 and the President's Social Service Award in 2011.

Follow us on Facebook at http://www.facebook.com/singaporepolytechnic or Twitter at http://twitter.com/SingaporePoly.

About Temasek Foundation

Temasek Foundation is a non-profit philanthropic organisation anchored in Singapore that seeks to contribute to sustainable growth and a bright future of hope and opportunities for people in Asia. The foundation works with partners to support programmes that build people through health care and education, programmes that build bridges between peoples, programmes that build institutions of excellence through governance and ethics, programmes that rebuild lives and livelihoods affected by natural disasters. For more information, visit www.temasekfoundation.org.sg

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Appendix

1. List of participating institutions:

Singapore
- Nanyang Polytechnic
- Republic Polytechnic
- Singapore Polytechnic

Cambodia
- Royal University Phnom Penh
- Royal University of Agriculture

Indonesia
- Universitas Muhammadiyah Yogyakarta
- Universitas Pembangunan Nasional
- Politechnic Negri Malang
- Politechnic Kota Malang
- Politechnic Caltex Riau

Philippines
- Polytechnic University of the Philippines

Thailand
- Rajamangala University of Technology Rattanakosin

Vietnam
- Vietnam National University

Appendix

2. TF SCALE programme key milestones

Period	Host institution (Inbound)	Visiting Institution(s)	Location
November 2013	Singapore Polytechnic	Universitas Muhammadiyah Yogyakarta Universitas Pembangunan Nasional	Singapore
March 2014	Nanyang Polytechnic	Rajamangala University of Technology Rattanakosin	Singapore
March 2014	Republic Polytechnic	Royal University of Phnom Penh Royal University of Agriculture Politeknik Negeri Malang Politeknik Kota Malang Politeknik Caltex Riau	Singapore
April/July 2014	Nanyang Polytechnic	Polytechnic University of the Philippines	Singapore
July 2014	Singapore Polytechnic	Vietnam National University, University of Science	Singapore
Period	**Host institution (Outbound)**	**Visiting Institution(s)**	**Location**
March 2014	Universitas Muhammadiyah Yogyakarta Universitas Pembangunan Nasional	Singapore Polytechnic	Indonesia
June 2014	Rajamangala University of Technology Rattanakosin	Nanyang Polytechnic	Thailand
September 2014	Polytechnic University of the Philippines	Nanyang Polytechnic	Philippines
September 2014	Royal University of Phnom Penh Royal University of Agriculture	Republic Polytechnic	Cambodia
September 2014	Politeknik Negeri Malang Politeknik Kota Malang	Republic Polytechnic	Indonesia
September 2014	Vietnam National University, University of Science	Singapore Polytechnic	Vietnam

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3. Quotes from polytechnic Principals

"ASEAN countries have a long history of collaborating on the political, economic and community fronts. It is also essential that we continue to nurture the close educational ties that we share with our neighbouring countries. The new friendships made during this programme will give both the local and exchange students a better understanding of the differences within our various communities and appreciate our shared beliefs and practices, as well as put into practise what they have learnt. We are delighted to welcome the ASEAN students for this cross-cultural experience and wish all participants a fruitful exchange programme."

– Mr Chan Lee Mun, Principal & CEO, Nanyang Polytechnic

"TF SCALE is a platform for our regional youth to share knowledge and translate technology into innovative solutions that meet the needs of unique local situations among their communities. This is done by engaging them to discover community issues and applying the skill sets learnt together to derive a practical solution for implementation. We are grateful to Temasek Foundation for being one of the key partners in enabling cross-border collaboration and a holistic learning experience."

– Mr Yeo Li Pheow, Principal/CEO, Republic Polytechnic

As a pioneer in driving the Design Thinking concept since 2010, we are continually educating our students on the importance of applying user empathy to develop needs-based solutions. The cultural exchange offered by this programme will not only allow our students and their counterparts to learn from each other, it will also give us the opportunity to nurture them to serve the community with the skills they have.

- Mr Tan Choon Shian, Principal & CEO, Singapore Polytechnic

Appendix

4. Highlights of social innovation projects on display

Nanyang Polytechnic

- **Community Service Project with Rajamangala University of Technology Rattanakosin, Thailand:** The TF-SCALE programme enables participants to understand the social fabric of Singapore through sharing about different communities who are in need despite Singapore's economic success. Both NYP students and their Thai counterparts will be engaged in sharing sessions that introduces them to social services that are available to children, youth, family, persons with disabilities and the elderly. They will then visit the Bright Hill Evergreen Home to interact with and entertain the aged. This will give participants a clearer understanding of issues that the elderly face, which are often similar despite them living in different countries.

- **Technology Immersion Programme with Rajamangala University of Technology Rattanakosin, Thailand:** NYP robots from the Animatronics Lab have performed well in local and international competitions. Animatronics is multi-disciplinary and involves mechanical design. It uses Computer-aided design (CAD) software, electronic circuit design around a micro-controller and software programming. This project will develop skills and knowledge through hands-on practice. NYP students and their Thai counterparts will be able to assemble their own robots, test and pitch their robots against each other in a competition. This project will develop participants' skills and knowledge through hands-on practice, allowing them to better appreciate the science of robotics and the disciplines of mechatronics.

Republic Polytechnic

- **Gourami Project with Royal University of Phnom Penh and Royal University of Agriculture, Cambodia:** In recent years, the Tonle Sap Lake in Cambodia has seen depletion of its fish stocks due to overfishing and deforestation along its banks. The students from RP will work with their Cambodian counterparts to look at the possibility of using aquaculture techniques to cultivate Gourami fish in rice fields, as an alternative source of food for the local community. As part of the project, the students will also devise innovative ways of keeping away predatory fish such as Snakeheads that feed on Gourami, and develop a cost-effective fish feed. The students will work closely with farmers in the Ballangk Commune (Siam Reap, Cambodia) to develop and implement these techniques, with the goal of contributing to food security in the local community.

- **Raspberry Pi with Politeknik Negeri Malang, Politeknik Kota Malang and Politeknik Caltex Riau, Indonesia:** RP has designed a series of project based workshops on Raspberry Pi, a credit-card sized computer that plugs into a television and can be used in electronics projects and for learning programming. The RP students and their Indonesian counterparts will develop innovative solutions that combine both their technical skills and creativity to develop practical IT solutions in assisting the local communities.

  During the project based workshops, the students will work on projects like setting up an Offline Wikipedia server for rural areas that opens up greater access to information and knowledge; setting up a VOIP server for remote communications; creating Voice-to-Text solutions for the hearing impaired; and designing a talking dustbin to promote recycling efforts.

Singapore Polytechnic

Using a user empathy approach to problem-solving, SP has since 2010, made Design Thinking a cornerstone of its pedagogy. Under a four-phase framework comprising Sense and Sensibility, Empathy, Ideation, and Prototype, which SP developed, participants form a better understanding of the host country environment, empathy for issues affecting the local community, and innovate to make a positive impact.

- **Bamboo fan home industry with Universitas Muhammadiyah Yogyakarta, Indonesia:** An estimated 50 households in Jipangan village, Bangunjiwo, Yogyakarta, produce handmade fans for their livelihood. While there is a strong demand for the fans, the laborious 10-step process often sees particular disruption in the production, particularly in the drying process. The SP Design Thinking methodology was used to develop solutions on how the Bangunjiwo villagers could improve the efficiency and environmental aspects of producing these handmade fans.

- **Batik wood handicraft home industry with Universitas Muhammadiyah Yogyakarta:** Krebet village, Pajangan, Yogyakarta, is known for its batik designed woodwork. The woodwork uses range from ornamental home decor to furniture. This unique product bearing batik designs typically found on fabrics, attracts strong demand from places beyond Yogyakarta, with some of the biggest importers in Bali and Medan. Men and women who work in this industry are often made to endure long hours of discomfort sitting on the floor and dusty environments inevitably caused by the wood carvings. The SP Design Thinking methodology was used to develop solutions on how the work environment could be improved.

- **Sorghum farmers cooperative with Universitas Pembangunan:** Poncosari village, Yogyakarta, has been growing the sorghum wheat for grain or for processing into various food or fuel products. The SP Design Thinking methodology was used to develop innovative new products from sorghum wheat and solutions to improve its processing system. This will help local farmers in terms of economic livelihood or productivity.