

Summer 2020 Newsletter

# Impact

TOUCHING LIVES, MAKING AN IMPACT

*Special Edition*

**RS Head's Review  
of the 1st Term  
of Headship**

COVER STORY

## REVIEWING WHAT WE HAVE ACCOMPLISHED AND FORGING AHEAD TOGETHER FOR A BRIGHTER FUTURE (PART I OF 2)

**Professor Hector Tsang**

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**Professor Jin-Guang Teng (President of PolyU), Dr Miranda Lou (Executive Vice President of PolyU) and Professor David Shum (Yeung Tsang Wing Yee and Tsang Wing Hing Professor in Neuropsychology, Chair Professor of Neuropsychology, Dean, Faculty of Health and Social Sciences) met with RS 2019-2020 Year 1 high flyers students.**

How time flies! It has been three years since I began to serve as Head of the Department of Rehabilitation Sciences at The Hong Kong Polytechnic University (PolyU) in 2017. With our colleagues' efforts and excellence, the Department has developed rapidly and achieved remarkable performances in research, teaching and learning, and community services. We have also been widely recognised by academic and professional communities. As my first term draws to a close, I would like to take this opportunity to review what we have achieved in the past three years in Part I. In Part II, I am going to introduce our strategic plans for my second term of Headship at RS.

## ►► TEACHING AND LEARNING

Adhering to PolyU's motto "to learn and to apply, for the benefit of mankind", the Department has continuously committed to cultivating students to become excellent physiotherapists and occupational therapists. We have recruited distinguished scholars and well-trained professionals in order to enhance our quality of teaching. Table 1 shows the figures on the number of academic staff members recruited in the past three years with breakdown on ranks.

	Cumulative (as of July 2020)	Newly recruited (since July 2017)
Chair Professor	3	-
Professor	9	-
Professor of Practice (Full-time/Part-time)	2	2
Associate Professor	8	-
Assistant Professor	18	9
Research Assistant Professor	4	4
Senior Clinical Associate /Clinical Associate	19	7
<b>Total</b>	<b>63</b>	<b>22</b>

*Table 1: Staff strength of RS (as of July 2020)*

Regarding the results of admission to our undergraduate programmes in Occupational Therapy (OT) and Physiotherapy (PT), the Department has always topped the list of PolyU. This year, the average scores of our PT and OT students in the best six subjects of HKDSE were 34.4 and 32.8 points respectively. Around 190 students received Entry Scholarships, and 40 of them obtained 36 points or above. I must admit that our admission scores over the past three years have set a new benchmark for undergraduate programmes at PolyU.

	2017/18	2018/19	2019/20
Bachelor of Science in Occupational Therapy	32.8	33.1	32.8
Bachelor of Science in Physiotherapy	34.5	34.5	34.4

*Table 2: Admission Score (in best six subjects) from 2017/18 to 2019/20*



**Group photo of PolyU Senior management, RS staff and RS awardees of PolyU's Entry Scholarships for Outstanding Admittees**

Other than our excellence in undergraduate programmes, we performed very well in the MOT and MPT programmes funded by the Social Welfare Department as an alternative channel of providing trained allied health professionals to social welfare settings. While I am writing this review, the Senate has just approved the offering of the self-financed 2-year full-time Master in Physiotherapy and Master in Occupational Therapy for three additional annual intakes with effect from the intake cohort of January 2021. The funding model will follow what we have been doing for the past four cohorts since 2012. The only difference is that the coming three cohorts will be launched on an annual basis with the number of students fixed at 48 for each programme. The funds involved were already confirmed by SWD. We hope in the long run these master entry programmes will become UGC funded so that our model of training PTs and OTs will be on a par with Australia and other equivalent western countries.



**Director and top management of Social Welfare Department, HKSAR visited RS.**

In addition, we have made effort to create a stimulating, inspiring, and pleasant learning environment, encouraging students to acquire and apply knowledge and skills. In 2018, we organised the first RS Got Talent and the 40<sup>th</sup> Anniversary Futsal Cup to foster all-round development of students and provide them with opportunities to cultivate creative talents.



**The first-ever talent show for RS students - RS Got Talent 2018**

Furthermore, over the past few years, our students have participated in different international competitions with outstanding achievements. Led by Professor Kenneth Fong, our OT students have won SIX awards in the i-CREATe competition with their innovative designs for the disabled for three consecutive years. In 2018, our students won the first runner-up in the Fourier Cup Chinese Rehabilitation Innovation Competition. Their academic performance is also remarkable. Since 2017, our students have won a total of 26 academic awards locally and internationally, some of which are renowned scholarship awards, for instance the Hin Sang Carman Pang Scholarship, the Innovation and Technology Scholarship, and the Hong Kong Jockey Club Scholarship.



**OT and PT students won the Innovation and Technology Scholarship and HSBC Hong Kong Scholarship 2019/20.**



**PT student won the Hong Kong Jockey Club Scholarship 2019.**

In terms of teaching, our colleagues attained extraordinary achievements in the past three years. Dr Shirley Ngai was awarded the 2018 National Teaching Achievement Award (Higher Education) (Second Class Prize) by the Ministry of Education. She is among the first academics from Hong Kong to receive this top honour in education at the national level. Moreover, aiming to broaden students' learning experience, we adopted diversified learning strategies and offered effective teaching support. To stimulate innovation in teaching methods, we implemented a subsidy scheme and provided seed grants for qualified teaching staff. Starting from 2017/18, the total amount of learning and teaching seed grants provided by the Department has reached approximately HKD1.3 million. With the support of the scheme, some projects gave rise to impressive outcomes. For example, Mr Angus Law won the "Learning Technologies Award - Bronze in Best Use of Mobile Learning" in London in 2019 by putting forward the idea of using 3D holographic technology as a pedagogy. Also, in order to strengthen school-based assistance, we not only communicated with students through a series of student forums, but also organised the High Flyer Mentorship Programme, which is aimed at inviting elite alumni to give talks and provide our students with clear guidance on their studies and careers. In the past two years, over 40 high-flyer students benefited from the program.



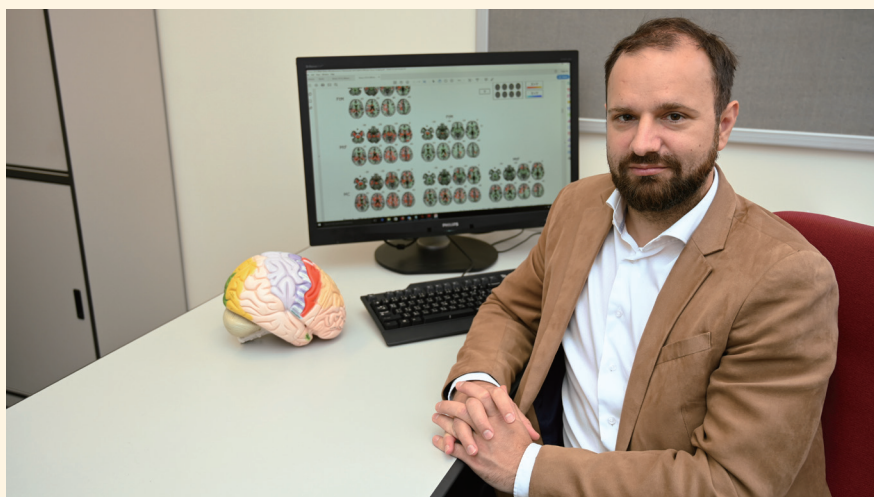
**Dr Shirley Ngai was awarded the 2018 National Teaching Achievement Award (Higher Education) (Second Class Prize) by the Ministry of Education.**

As for the teaching team, the Department has been recruiting outstanding scholars and promoting eligible academic staff to higher ranks so as to recognise their efforts and retain these well performing staff members in the department. In the past three years, a total of 13 Department members were promoted. In addition to my promotion to Chair Professor, 4 Associate Professors were promoted to the rank of Professor (Professor Margaret Mak, Professor Shamay Ng, Professor Amy Fu, and Professor Kenneth Fong), 6 Assistant Professors were promoted to the rank of Associate Professor (Dr Sam Chan, Dr Benson Lau, Dr Shirley Ngai, Dr Cynthia Lai, Dr Tamis Pin, and Dr Sonata Yau), and 2 Clinical Associates were promoted to the rank of Senior Clinical Associate (Ms Josephine Wong and Mr Alexander Woo). We were glad to have Ms Stella Cheng, the Chairlady of the Hong Kong Occupational Therapy Association (HKOTA) join us as the first Professor of Practice (PoP) last year to perform teaching and give professional advice on clinical research and knowledge transfer. This reflects our strategic vision of bridging the gap between academics and practitioners for the betterment of our professions.

## ▶▶ ACADEMIC RESEARCH AND ACHIEVEMENTS

As a leading department in the field of rehabilitation in Asia and the world, we strive to promote interdisciplinary and innovative research. Over the years, we have achieved breakthroughs in different research areas including East-meets-West in Rehabilitation Sciences, neuroscience and neurological rehabilitation, orthopaedic and sports rehabilitation, and geriatric rehabilitation. This is owing to the fact that the Department has proactively shifted its emphasis to academic research and its impact on education and knowledge transfer. Since July 2017, we have allocated nearly HKD10 million in departmental seed funds for research. In 2017-18 and 2018-19, we received more than HKD17 million and HKD16 million in external research grants respectively. This reflects on the one hand the quality of our research proposals and on the other the great interest and confidence of various funding bodies in our research projects.

In the past three years, our colleagues have received a number of research-related awards in recognition of their contributions to rehabilitation sciences. For example, Dr Georg Kranz was selected as the laureate of the Federation of European Societies of Neuropsychology (FESN) Cortex Prize 2019 in recognition of his contribution in the area of neuroscience among young scientists. Dr Bolton Chau was selected by the Association for Psychological Science (APS) as one of the “APS Rising Stars” in 2020 for his research excellence among peers. Moreover, Professor Chetwyn Chan was bestowed the State Scientific and Technological Progress Awards (Second Class Prize) in recognition of his contributions in advancing technology and bringing benefits to the community through his research project.



**Dr Georg Kranz won the “FESN Cortex Prize 2019”.**

Academic publications by our colleagues in recent years have also gained international recognition. In 2018, Professor Marco Pang received the Readers’ Choice Award from the *Journal of Physiotherapy (JoP)* which ranks first among all journals in the Rehabilitation category, with an impact factor of 5.55. Dr Arnold Wong also won the SOSORT 2019 Paper Award in the 14<sup>th</sup> International SOSORT Meeting. In 2018 and 2019, Professor Margaret Mak and Dr Bolton Chau also won the Best Paper Award of RS for the notable impact factor of their journal papers, which are 19.819 and 21.126 respectively.

Moreover, Professor David Shum, Dean of the Faculty of Health and Social Sciences, was recently endowed with the Yeung Tsang Wing Yee and Tsang Wing Hing Professorship in Neuropsychology. Professor Margaret Mak and I were subsequently appointed as Shun Hing Education and Charity Fund Fellow in Rehabilitation Sciences in 2017 and Cally Kwong Mei Wan Professor in Psychosocial Health in 2018. We are proud of the University's recognition of our academic achievements. Both our Dean and myself are among the top-cited scholars in our respective fields.



**Professor Hector Tsang and Miss Cally Kwong Mei Wan**

In recent years, our Department has made efforts to strengthen cooperation with academic sectors and to facilitate knowledge and technology transfer in Hong Kong, China, and Asia. In 2018, we held the 11<sup>th</sup> Pan-Pacific Conference on Rehabilitation (PPCR) and invited keynote speakers from world-renowned universities. The conference successfully attracted hundreds of scholars and researchers to share their research findings and insights regarding the development of rehabilitation services. In 2019, we also co-hosted the 6<sup>th</sup> International Institute on Kielhofner's Model of Human Occupation (MOHO) with the University of Illinois at Chicago, putting forward the latest developments in rehabilitation. We focus on not only the generation of new knowledge, but also its dissemination and application. To foster intellectual exchange and cooperation in the Greater Bay Area, we take the lead in providing educational institutions in Mainland China with professional training and rehabilitation services. Last year, I accepted an invitation from the Fifth Affiliated Hospital of Guangzhou Medical University to serve as Distinguished Professor of Nanshan Scholar and offer guidance on their research, curriculum and education.



**Professor Hector Tsang being appointed as Distinguished Professor of Nanshan Scholar.**



**Memorandum of Understanding (MoU) Signing Ceremony with Caspar-Health Limited to provide the best remote rehabilitation for patients by using their tele-rehabilitation web platform combining with the Remind-to-Move treatment invented by PolyU.**

To improve our research infrastructure, since 2018 we have carried out extensive construction and renovation in three phases. I am happy to announce that Phase I has finally come to an end. The renovated and newly established infrastructures of this phase include a new rehabilitation service centre in Core W for the provision of occupational therapy services to the public, an Assistive Technology Lab, an East Meets West and Psychosocial Rehabilitation Lab and a Basic Science Research in Rehabilitation Lab on ST 8th Floor, with a total floor space of over 300m<sup>2</sup>. After renovation, the installation of new equipment and modern technology will accommodate our needs in conducting interdisciplinary, translational and cutting edge research, as well as in developing innovative assistive devices for rehabilitation and application of VR technology, creating a synergy effect of advancing research on the one hand and benefiting those in need on the other hand. Even more heartening is that the second phase of renovation that started in June is scheduled for completion in late August this year. The renovation in this phase involves upgrading of existing laboratories on ST G/F, ST 1/F, ST & QT 4/F and our existing Rehabilitation Clinic in AG056 for a total of 1,160 square meters. Details of the second phase of renovation are as below:

Location of Phase II Renovation (area in m <sup>2</sup> )	Laboratories
ST G/F (430m <sup>2</sup> )	<ul style="list-style-type: none"> <li>• Gait and Motion Analysis Laboratory</li> <li>• Wellness &amp; Exercise Laboratory</li> <li>• Chan Sui Kui Sport Centre</li> <li>• Dynamic Posturography Laboratory</li> <li>• Transcranial Magnetic Stimulation Laboratory</li> <li>• Pain Research Laboratory</li> </ul>
ST 1/F (30m <sup>2</sup> )	<ul style="list-style-type: none"> <li>• Spinal Research Laboratory*</li> </ul>
ST & QT 4/F (280m <sup>2</sup> )	<ul style="list-style-type: none"> <li>• Virtual/ Augmented Reality Laboratory*</li> <li>• Physiotherapy Practical Skill Teaching Laboratory*</li> <li>• Cardiopulmonary &amp; Exercise Physiology Laboratory</li> <li>• Research Offices</li> </ul>
AG056 (420m <sup>2</sup> )	<ul style="list-style-type: none"> <li>• Rehabilitation Clinic</li> </ul>

**Note:** \* *New laboratory*



Laboratory	Major equipment housed	Research Impact
<p><b>ST814 Assistive Technology Lab</b></p> <ul style="list-style-type: none"> <li>- ST814a Driver Assessment &amp; Rehabilitation Lab</li> <li>- ST814b Assistive Technology Products and Technical Workshop</li> <li>- ST814c Neuromodulation Lab</li> </ul>	<p>Robots; Brain-computer Interface; Brain modulation such as TMS and tDCS; Neurofeedback and EEG systems; Activity monitor; Portable motion capture and analysis system</p>	<p>To advocate the use and application of assistive technology to improve functional capabilities of individuals with disabilities, our Department has set up a new Assistive Technology Lab at ST 8/F that comprises of 3 functional rooms and 3 functional areas, providing state-of-the-art equipment in Driving Rehabilitation Lab, Neuromodulation Research, Technical Workshop (with 3D printer), Smart Model Home (to demonstrate new technology in assisting daily life for people with disabilities, products displaying corner, and area for robotic therapy and upper limb motion studies.</p>
<p><b>ST816 East Meets West and Psychosocial Rehabilitation Lab</b></p> <ul style="list-style-type: none"> <li>- ST816a Assessment Room</li> <li>- ST816b Pediatric Neuroscience Laboratory</li> </ul>	<p>VirCube (CAVE); One-face Mirror Interview Room</p>	<p>The East Meets West and Psychosocial Rehabilitation Lab consists of a one-face mirror interview room and a pediatric neuroscience laboratory in support of neuroscience and behavioral research. The Lab houses a VirCube, which is an immersive VR technology with perspective and motion tracking. With the new set-up, researchers can design customized content to assess and train users' ability, and develop assessment and intervention protocol for the clinical application.</p>
<p><b>Basic Science Research in Rehabilitation Lab</b></p>	<p>RT-PCR, photo- and fluorometric plate reader, ChemDoc imaging system, Nanodrop, microtomes, cryostat, class-II biological safety cabinets, mechanical testing system and peripheral quantitative computed tomography etc.</p>	<p>This is a new integrative laboratory that consolidate research activities from molecular, cellular to holistic animal models pertinent to mechanistic investigations of physical and mental disabilities encountered in rehabilitation. The laboratory comprises of 9 sections, housing state-of-the-art equipment for live animal experiments, cell culture experiments, orthopaedic measurements, automated three-dimensional quantitative morphometric investigation, storing samples and experimental tissues, routine histochemistry, immunocytochemistry, and dissection of wet tissues, and small rodent surgery etc.</p>
<p><b>W210/ W211 Tam Wing Fan Rehabilitation Services Centre (Occupational Therapy)</b></p> <ul style="list-style-type: none"> <li>- 4 treatment rooms:</li> <li>*Psychosocial and Integrative Rehabilitation Treatment Room;</li> <li>*Orthopaedics and Surgical Treatment Room;</li> <li>*Neurological Treatment Room;</li> <li>*Paediatric Treatment Room</li> <li>- Clinical Teaching Unit</li> </ul>	<p>Sensory integration; sensory learning and processing equipment and assessment tools; Toy library; Virtual reality training equipment; End-effector upper limb and social robots; Splinting and pressure therapy equipment; EEG and biofeedback system</p>	<p>In order to expand the service scope from children to adults with physical and mental disorders, we are delighted to receive Ms Tam's donation in setting up a new Rehabilitation Services Centre. The centre plays a role in providing quality OT services to PolyU staff, students as well as people in Hong Kong. It also provides opportunities of clinical education for both local and overseas undergraduate and postgraduate OT students; and supports translational research activities conducted by our colleagues. The centre is equipped with state-of-the-art technology in children developmental training and sensory integration, musculoskeletal, neurological, burns, and work rehabilitation, mental health and sleep wellness programmes, home visits in terms of home assessment and home modification etc.</p>

Table 3: Phase I renovation – infrastructure and laboratories

## ▶▶ COMMUNITY SERVICE AND SOCIAL PARTNERSHIP

Beyond teaching and research, over the next few years we intend to make a positive impact on society by expanding our community services. Here I would like to express my sincere gratitude to Mrs Tam for her generous donation of HKD20 million towards the building of the Tam Wing Fan Rehabilitation Services Centre (Occupational Therapy). The new centre is expected to commence services in the coming August. With the help of the donation, we can provide high quality occupational therapy services with the use of world-class rehabilitation equipment, such as an arm rehabilitation robot for stroke patients, a mindfulness training station with well-equipped biofeedback machines, and a social robot for training children with autism.

Aside from training allied health professionals for people with disability (PWD) in Hong Kong, in the past three years, we have provided consultation for the new Hong Kong Rehabilitation Programme Plan as commissioned by the Labour and Welfare Bureau (LWB) of the HKSAR Government. Under my supervision, our Consulting Team won the Most Valued Project Award and the Multi-departmental Participation Award in PolyU in 2018. More recently, our team headed by me in RS joined forces with the School of Nursing and succeeded in winning another consultancy project commissioned by the LWB to help the HKSAR Government to formulate carer policy for the elderly and PWD.



**Consultancy Services for Review of Hong Kong Rehabilitation Programme Plan won two awards.**

Apart from the HKSAR Government, we have also established partnerships with business companies and NGOs to promote rehabilitation services in recent years. We have had a number of visits by external parties, including government officials from the Labour and Welfare Bureau, Food and Health Bureau, and Education Bureau, and representatives from K. Wah International and the China Disabled Persons' Federation. With the support of our colleagues, our Department has launched a wide variety of collaborative projects, some of which are influential to society. For example, Dr Andy Cheng received the Most Innovative Award and the Best Quality Award (Gold) at the 4<sup>th</sup> Force Research Award Scheme by developing a computerised hazard perception test to record police motorcycle officers' eye movements and response latencies in potentially dangerous traffic situations.

2018 marked the 40<sup>th</sup> anniversary of our Department. To celebrate the special occasion, we held a series of celebratory events, including the Elite Alumni Seminar cum Kick-Off Ceremony of the 40<sup>th</sup> Anniversary Celebration, PolyU OT Day, the Mental Health Symposium, the Summer Overseas Exchange Subsidy Scheme, RS Got Talent, Quality of Life through Research and Technology Advancement Conference, the 4<sup>th</sup> Elite Alumni Seminar, the 40<sup>th</sup> Anniversary Futsal Cup, and the 11<sup>th</sup> PPCR. We also organised the 40<sup>th</sup> Anniversary Gala Dinner, bringing together government officials, community leaders, renowned scholars, outstanding alumni, and pioneers in rehabilitation. Apart from strengthening our ties with stakeholders and society, the events provided valuable learning opportunities for the students and helped broaden their horizons.

## ►► CONCLUDING REMARKS: RS'S BALANCED SCORECARD PERFORMANCE

The overall performance of our Department in the past three years is enlightening and encouraging. Since 2016, PolyU has adopted the Balanced Scorecard (BSC) as an internal strategic management tool to gauge the performance of academic departments against key performance indicators (KPIs) structured around different domains. Over the years, the BSC has been refined and revamped to align with common objectives within the University and among the departments. Although changes were made to the KPIs of each release of the BSC results, it is apparent that the Department has made a big leap forward in teaching and learning in the recent BSC release and has excelled in the strategies launched to develop the Department. Our Department is one of the top performers in “teaching and learning” and “financial sustainability” in the recent BSC release. We are also making a team effort to increase development in other areas such as research, internationalisation and knowledge transfer. I am confident that we will receive more good news in future BSC releases. This concludes this brief review of our achievements during the first term of my Headship. I hope the accomplishments will arouse excitement among readers so that they will look forward to more and higher levels of achievement in the coming three years. This will constitute the focus of Part II of this article which will appear in the coming issue of *IMPACT*.

### Acknowledgement

All of the above accomplishments are team efforts of the SMG group consisting of the three Associate Heads, and the two undergraduate Programme Leaders. I am also grateful to the former Provost Professor Philip Chan, Interim Dean (2017-2018) Professor Daniel Shek and incumbent Dean Professor David Shum for the resources allotted to RS and then supervision given to me, which lead to these positive outcomes. Finally, I express my sincere thanks to DAC Chairman Professor SL Ho and our Departmental Academic Advisor Professor Renee Taylor from the University of Illinois at Chicago for their advice and support.



Group photo of SMG members