

Hong Kong RAE 2020: Perspective from a department hosting two healthcare disciplines

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■ University Grants Committee (UGC)

- The non-statutory body that advises the Hong Kong Government on the funding and strategic development of higher education in Hong Kong
- **UGC's roles & functions:**
 - **Oversee the deployment of funds** for the strategic development of the higher education sector
 - **support the continuous development of the higher education sector** to achieve greater impact and recognition
 - **give steering advice to the higher education sector from a system perspective** and facilitate institutions to fulfill their distinctive roles
 - **facilitate the sustainable development of higher education** to meet the demands of the changing times
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- There are 8 UGC-funded universities in Hong Kong
 - **PolyU** is one of them

■ Research Assessment Exercise (RAE)

- Part of UGC's commitment to **assessing the performance of the UGC-funded universities**
- Intended to encourage world-class research and drive excellence
- **Assesses the research quality** of the UGC-funded universities **by using international benchmarks** to delineate their areas of relative strength and make recommendations for further improvements
- Has already conducted **five RAEs**: 1993, 1996, 1999, 2006 and 2014
- **Next RAE:**
 - To be conducted in 2020 (**RAE 2020**)
 - **The first RAE that includes research impact as part of the assessment** with a view to encouraging the conduct of research of broader social relevance with high economic and social benefits
 - **Similar to UK's REF 2014**

■ RAE 2020

■ Objectives:

- **Assess the research quality** of UGC-funded universities **by international standards**
- **Identify excellent research** across the spectrum of submissions to drive excellence and encourage world-class research
- **Produce assessment outcomes to inform the distribution of part of the Research Portion of the UGC Block Grant** in a publicly accountable manner
- **Provide accountability for public investment in research** and produce evidence of the benefits of this investment
- **Provide robust benchmarking information** and establish reputational yardsticks for use within the UGC section and for public information
- **Delineate universities' areas of relative strength and identify emerging research areas and opportunities for development**

■ RAE 2020

- **Elements of assessment & relative weightings:**
 - Research outputs – 70%
 - Impact – 15% (new in RAE 2020)
 - Environment – 15%
- **Period of assessment:**
 - 6 years (1 October 2013 to 30 September 2019)
 - For Impact, the underpinning research can be undertaken during the period of 1 January 2000 to 30 September 2019 (20 years)

■ RAE 2020

- **13 panels incorporating a total of 41 units of assessments (UoAs):**

Panel (code & name)	Unit of Assessment (code & name)
1 Biology	1 biological sciences (incl. environmental biology, biotechnology, agriculture & food science, veterinary studies)
	2 pre-clinical studies
2 Health Sciences	3 clinical medicine
	4 clinical dentistry
	5 nursing, optometry, rehabilitation sciences and other health care professions
	6 Chinese medicine
3 Physical Sciences	7 physics & astronomy
	8 materials science and materials technology
	9 chemistry

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■ RAE 2020

■ Research areas:

- 69 research areas under 41 UoAs
- **UoA 5** (nursing, optometry, rehabilitation sciences and other health care professions)
- 4 research areas under UoA 5:
 - 5a Nursing
 - **5b Other health care professions**
 - 5c Optometry
 - 5d Rehabilitation sciences
- UoA 5 was under 4 separate cost centres in RAE 2014
- **Each UoA is a submitting unit in RAE 2020** (while each cost centre was a submitting unit in RAE 2104)

■ RAE 2020

- Submitted items (papers / impact case studies / environment) are assessed and rated as
 - 4* **World leading / outstanding** impacts / conducive to producing research of **world-leading quality**
 - 3* **Internationally excellent / considerable** impacts / conducive to producing research of **internationally excellent quality**
 - 2* **International standing / some** impacts / conducive to producing research of **internationally recognised quality**
 - 1* **Limited** originality / **limited** impacts / conducive to producing research of **limited quality**
 - Unclassified
- Each UoA will have an overall quality profile produced by summing the 3 sub-profiles with appropriate weightings

■ A brief history of PolyU

- The Hong Kong Polytechnic University (PolyU)
 - Founded in 1937 as the Government Trade School
 - In 1947 as the Hong Kong Technical College
 - In 1972 as the Hong Kong Polytechnic
 - Upgraded to university status in November 1994 as PolyU
 - We celebrated our 80th anniversary 2 years ago
 - <http://www.polyu.edu.hk/web/en/home/index.html>





■ Where are we?

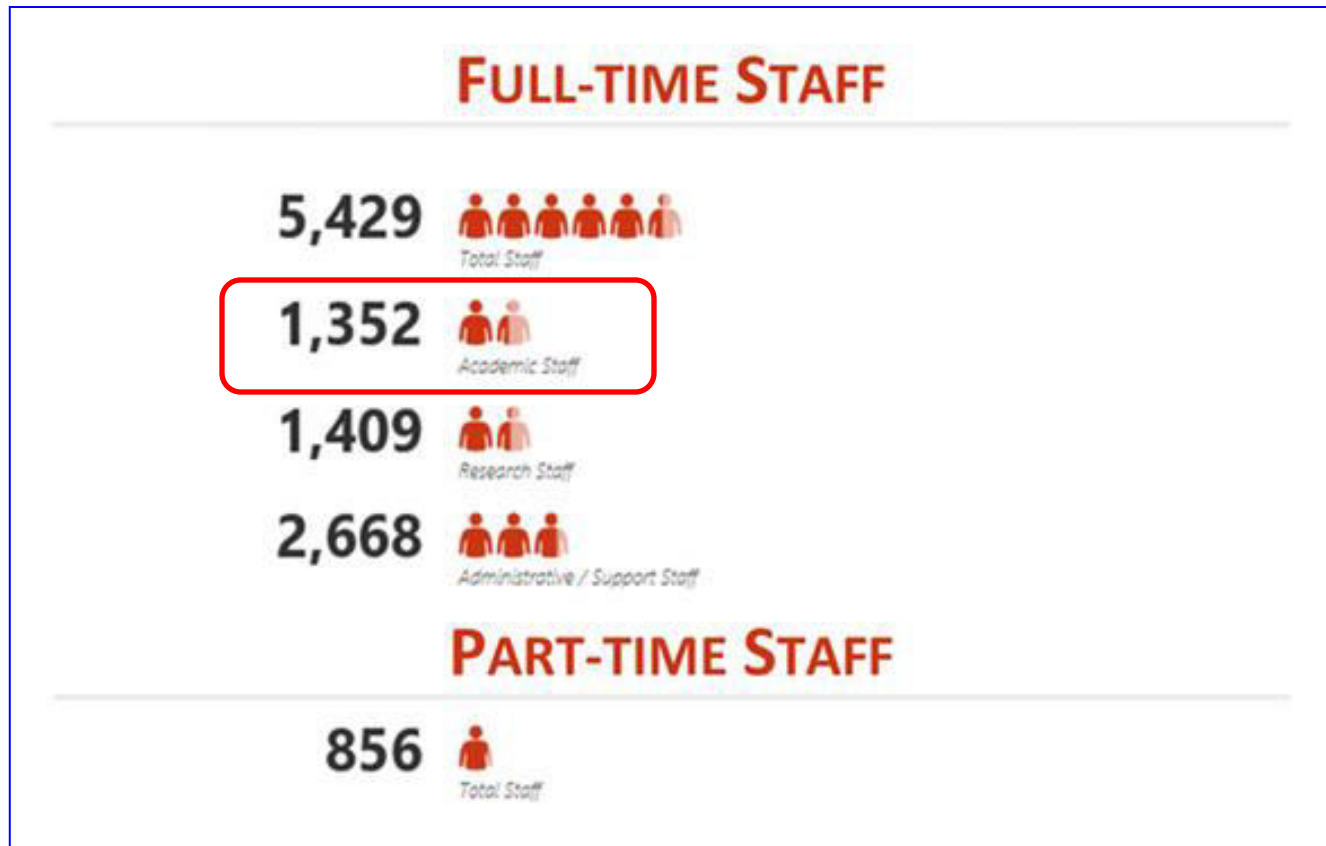


- **A brief overview of PolyU**
 - Ranking highlights



■ A brief overview of PolyU

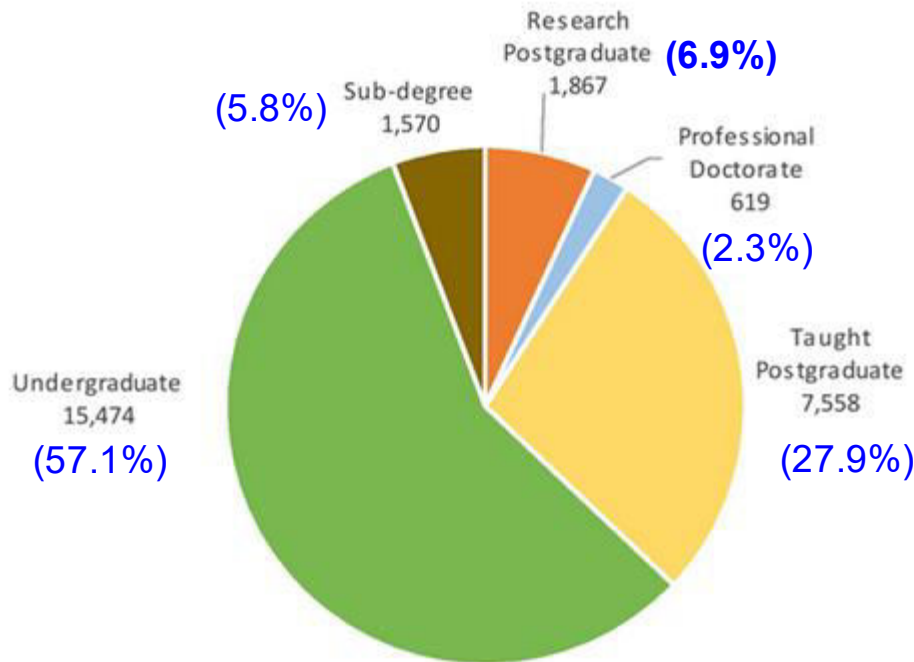
- Current staff strength (as of 31 October 2017)



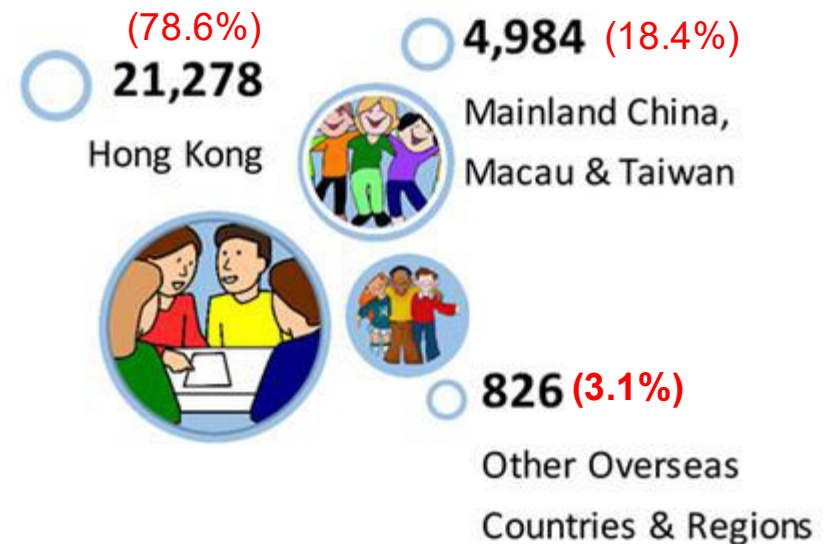
■ A brief overview of PolyU

- Total student enrolment (2017/18): **27,088**

Student Enrolment by Level of Study



Student Enrolment by Place of Origin



■ A brief overview of PolyU

- The official medium for instruction is **English**
- Has 25 departments/schools within 6 Faculties plus 2 independent schools
- Faculty of Health and Social Sciences (FHSS) is one of the 6 Faculties
- FHSS has 5 departments/schools
 - Department of Applied Social Sciences
 - **Department of Health Technology and Informatics (HTI)**
 - Department of Rehabilitation Sciences
 - School of Nursing
 - School of Optometry

■ A brief overview of HTI

- Department of **Health Technology and Informatics (HTI)**
 - Officially inaugurated as a new department on **1 September 2005** within Faculty of Health and Social Sciences (FHSS)
 - Host of two disciplines: **Medical Laboratory Science (MLS)** and **Radiography (RAD)**
 - However, MLS and RAD were first offered in the then Hong Kong Polytechnic as sub-degree programmes in **1978** under different departments (i.e. 41 years' history)
 - <http://www.polyu.edu.hk/hti/>



- **Staff structure of HTI (as of September 2019)**
 - 21 full-time academic staff (Chair Prof/Prof/Associate Prof/Assistant Prof)
 - MLS: 11 (1/1/6/3) – including 1 Prof as Head
 - RAD: 9 (0/0/6/3) – including 2 Associate Prof as Associate Heads
 - Faculty-based strategic research area: 1 Assistant Professor
 - Still actively recruiting more academic staff (**all ranks**)
 - Those with appointment start date on 1 September 2017 or afterwards are not included in RAE 2020
 - 8 Senior Clinical Associate / Clinical Associates / Instructors
 - MLS: 3 (0/0/3)
 - RAD: 5 (1/3/1)
 - These colleagues are **not** appraised for their research (also not included in RAE 2020)

■ Academic programmes

- 4-year Full-time BSc programmes – funded by UGC
 - BSc(Hons) in Medical Laboratory Science
 - BSc(Hons) in Radiography
 - Both are within top 4 degree programmes within PolyU in terms of student quality
- Taught master programmes – self-financed (mostly part-time)
 - MSc in Medical Laboratory Science
 - MSc in Medical Imaging & Radiation Science
 - Planning of a new MSc Medical Physics
- Research degree studies
 - MPhil
 - PhD (34 + 9 as of today)
 - Mostly full-time study

Thematic Research Area

- **Health and Disease: From Mechanism to Clinical Application**
 - **Cancer**
 - **Metabolic and Ocular Disorders**
 - **Immunity and Infection**
 - **Haemodynamics and Vascular Disorders**
 - <http://www.polyu.edu.hk/hti/en/research/research-areas.html>



■ University Research Facility (URF) in

■ Life Sciences (ULS)

- <https://uls.polyu.edu.hk/>

■ Behavioral and Systems Neuroscience (UBSN)

- <https://ubsn.polyu.edu.hk/>

■ Chemical and Environmental Analysis (UCEA)

- <https://ucea.polyu.edu.hk/>

■ 3D Printing (U3DP)

- <https://u3dp.polyu.edu.hk/>

■ Materials Characterization and Device Fabrication (UMF)

- <http://www.umf.polyu.edu.hk/>

■ Big Data Analysis (UBDA)

- <https://www.polyu.edu.hk/ubda/>

■ Preparation of RAE 2020

- Started in early 2017 university-wide
- Coordinator of each UoA
 - **Coordinator of UoA 5** working with Department Heads and assisted by Chairmen of their respective Departmental Research Committees
- Research output (4 paper per eligible staff member)
 - Papers assessed by two external consultants (UK), done separately by each department
 - Papers rated 2* or below to be replaced if possible
 - Provided short-term funding to colleagues to generate more data for better papers if appropriate

■ Preparation of RAE 2020

■ Research impact

- **5 impact case studies for UoA**
- **Working in groups** with members from different departments
- External consultants give advice on impact cases (& environment)
- A retired Chair Professor from HTI appointed to help draft the cases
- Issues: Evidences supporting the claim of impact hard to collect
- HTI: contributed and involved in 2 cases

■ Preparation of RAE 2020

■ Research environment

- Overview, research strategy, people, income, infrastructure, collaborations, esteem, and contributions to the discipline or research base
- Collection of hard data and other relevant information from different departments
- External consultants give advice on environment (& impact cases)
- A retired Chair Professor from HTI appointed to help draft the environment document

■ Our strategies to improve research performance and prepare for RAE 2020

■ People: staffing policies

- Active recruitment for replacing retired staff
- Looking for candidates with strong research track record (with 3*/4* papers; successful grant applications) and/or background in MLS or Radiography
- **Start-up research package plus 1 PhD student for new staff**
- Less teaching in the first 1-2 years if possible
- Communal lab design: no need to spend in setting labs or buying instruments
- Mentorship programme for new assistant professors
- **Major reviews for new assistant professors within 6 years** (university policy)
- Stringent conditions for getting people of teaching track approved (these staff are NOT included in RAE) (university policy)

■ Our strategies to improve research performance and prepare for RAE 2020

■ Infrastructure

- Communal lab design: no need for individual PIs to spend in setting labs or buying expensive instruments
- A new position of Scientific Officer was created: managing research labs and training of research students/personnel for using instruments in our research labs
- University research facilities (URFs)
 - Equipped with many expensive research instruments
 - URFs for Life Science, Behavioral and Systems Neuroscience, Dig Data Analysis are particularly useful to our colleagues
 - All manned by support staff (PhD-qualified scientific officers)
 - Nominal charges for usage

■ Our strategies to improve research performance and prepare for RAE 2020

■ Research strategy (1)

- Seed funding for producing pilot data for grant applications
- Sharing of successful experience in securing grants (departmental/faculty)
- Compulsory internal vetting of research proposals for major funding
- Promotion of quality rather than quantity
 - Revising criteria for appraising research performance: the final rating affects merit-based salary adjustment on an annual basis
 - HK\$100,000 (as research fund) for papers with impact factor of 10 or above with key authorship

■ Our strategies to improve research performance and prepare for RAE 2020

■ Research strategy (2)

- Increasing research student numbers
 - Hong Kong PhD Fellowship Scheme
 - Students supported by Teaching Postgraduate Scheme (TPS)
 - Students supported by external grants
- Promoting and facilitating grant applications from all sources (local, Mainland China and overseas)
- Possible matching of secured external grants
- Financial support of publication charges (by our Faculty)
- Research student-led weekly research seminars for presentations by research students
- Annual HTI Postgraduate Symposium

■ Our strategies to improve research performance and prepare for RAE 2020

■ Research strategy (3)

- Promoting collaboration between colleagues from the two disciplines
- Promoting collaboration with researchers outside the Department/Universities
- Departmental financial support of conference attendance
- Promoting conducive research environment
 - Announcement of successful grant applications by Head or DRC Chairman
 - Announcement of staff promotion by Head
 - Protection of young researchers from admin duties

■ Our strategies to improve research performance and prepare for RAE 2020

- What are the immediate outcomes in the past few years?
 - More successful grant applicants (local, Mainland China and overseas), and also higher success rates
 - Many more research students above the 12 FTEs allocated to the Department
 - Many more papers with higher impact factors
- Will have to wait for the RAE 2020 results (announced in early 2021)

<https://www.polyu.edu.hk/hti/en/about-hti/activities-and-achievements.html>



UNDERGRADUATE STUDENTS

POSTGRADUATE STUDENTS

STAFF

ALUMNI

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Thank you!

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