

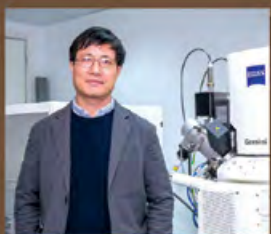
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umagazine

澳大新語



研究生課程碩果累累 Fruitful Postgraduate Programmes



湯子康教授：
把澳門納米科技研究引向世界
Prof Tang Zikang:
'I hope to let the world know there is
cutting-edge nanotechnology research
in Macao'



混成學習的新時代
New Age Education with
Blended Learning

編者的話 *Editor's Words*

澳大本科課程經過數年的改革後，漸見成效。研究生課程近年也進行改革，培養更多高層次的跨學科人才，更好地服務社會。澳大的研究生畢業人數由10年前的203名升至今年797名，一方面反映社會對人才的需求，另一方面也反映學生希望通過繼續進修，在事業上不斷追求卓越。今期的封面故事，我們採訪多名澳大畢業的研究生，瞭解研究生課程如何有助他們在事業上的拓展。

隨著教學科技的日新月異，澳大有越來越多的老師嘗試將創新教學融入課堂，混成學習給學生帶來全新的學習體驗。老師如何通過教學數碼化，令學生更投入學習？今期我們對此有深入的探討。

中文、葡語、英語課程是澳大的三大核心基礎課程，師資團隊實力雄厚，為澳門及大中華地區培育出高質素的中英及中葡人才。究竟澳大的三大語言課程有何優勢，在課程設計上怎樣做到以學生為本，知識與實踐結合？

國際知名納米光電子材料領域領軍人物湯子康教授來到澳大後，如何帶領團隊取得更卓越的成績？花10年時間為澳門新聞史追尋真相的林玉鳳博士，過程中有何挑戰？想知道他們的故事就要閱讀今期的人物專訪。

這一期開始，我們增設「服務社群」專欄。首篇是採訪關心少數族群心理健康的賀伯恩博士，報導他如何帶著學生走進社區幫助不同族群的故事。學院專欄的兩篇分別論述女性擇偶偏好的根源以及有關澳大推行英語教育的文章，見解獨到，不容錯過。

The University of Macau's undergraduate programme reform, which was launched a few years ago, is beginning to show results. In recent years, the university began the process of revising postgraduate programmes as well, with the aim of nurturing more higher-level interdisciplinary professionals. This year, UM's postgraduate programmes graduated 797 students, compared to only 203 graduates a decade ago. This demonstrates that demand for high-quality professionals is increasing, and that more and more people are pursuing further education in order to increase their competitiveness on the job market. In this issue's cover story, we interview some UM alumni, who share with us how their postgraduate studies at UM have benefited their career development.

With the rapid advancements in science and technology, more and more faculty members at UM are incorporating technology into classroom instruction. 'Blended learning' has created a whole new educational experience for students. But how do faculty members increase students' level of engagement through the use of digital technologies?

Chinese, Portuguese, and English are three core programmes at UM. Taught by a strong faculty team, these programmes have collectively produced many high-calibre bilingual professionals for Macao and the Greater China region over the years. What are the advantages of these programmes? How are they designed to ensure that they are student-centred and combine knowledge and practice?

Prof Tang Zikang, a world-renowned expert in the field of nano-optoelectronic materials, joined UM early this year. How does his team plan to achieve new breakthroughs at UM? Dr Agnes Lam spent the past decade redefining the origin of China's modern newspaper industry. What challenges did she encounter in the process?

In addition to answering these questions, we also interview Dr Brian Hall, in our new 'Community Service' column. Dr Hall shares with us how he and his students try to address the mental health problems faced by minority groups in Macao. The two articles in our 'Faculty Contribution' column are also not to be missed. One of them concerns the root cause of women's mate preferences, and the other discusses UM's efforts to promote English language education.

We hope you enjoy reading this issue of *umagazine*.



張惠琴 Katrina Cheong

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電話 Tel: (853) 8822 8833
傳真 Fax: (853) 8822 8822
通訊 Mail: 中國澳門氹仔 大學大馬路
澳門大學N6行政樓G012室
Room G012, Administration Building,
University of Macau, N6
Avenida da Universidade, Taipa, Macau, China
電郵 Email: prs.publication@umac.mo
網址 Website: <http://www.umac.mo/umagazine>

總編輯 Editor-in-chief
Katrina Cheong
執行編輯 Executive Editor
Ella Cheong
助理編輯 Assistant Editor
Cravina Chong
翻譯 Translators
Ruby Chen, Anthony Sou

顧問 Advisors
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Prof Wu Mei
Prof Zhu Shoutong
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研究生課程碩果累累

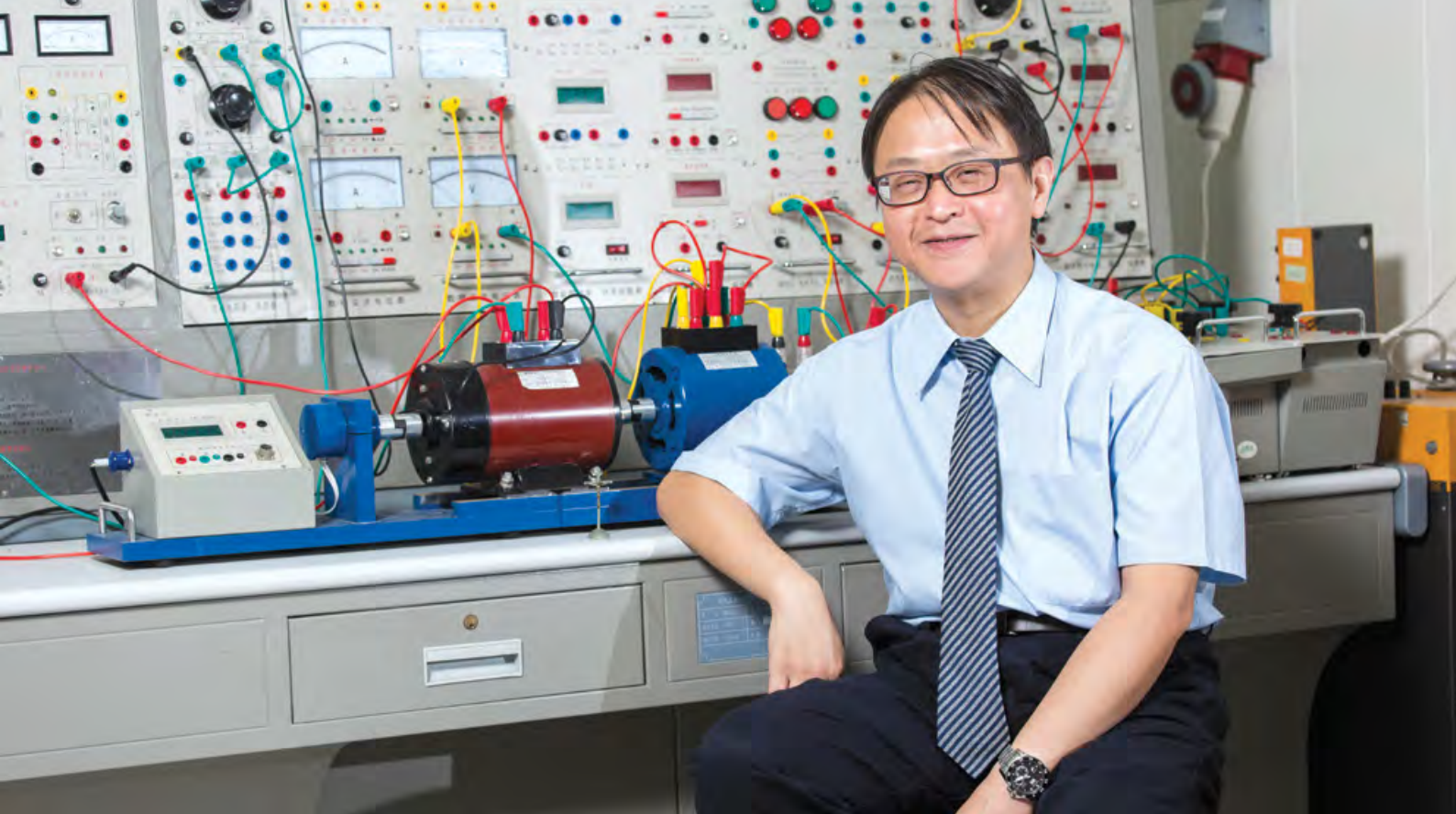
Fruitful Postgraduate Programmes

文Text | 黃首豪 SaoHou Wong 圖Photo | 何杰平、張愛華 Jack Ho, Ella Cheong

澳門經濟發展一日千里，社會各界對人才需求甚殷，為了裝備自己，大學畢業生需不斷持續進修，提升個人專業水平。2006／2007學年澳門大學研究生課程畢業生僅203名，10年後升至797名，升幅近四倍，反映有更多學生願意選擇澳大作為深造的高等學府。為配合特區人才發展的政策，提升研究生課程的競爭力，培養更多高層次的跨學科人才，更好地服務澳門、回饋社會，澳大將對研究生課程進行改革，以吸引更多澳門本地人繼續深造。

With the rapid economic growth in Macao placing higher demands on workers in various industries, more and more people with a college degree feel compelled to pursue further education in order to remain competitive. In the 2015/2016 academic year, the postgraduate programmes offered by the University of Macau graduated 797 students, compared to only 203 graduates a decade ago. The nearly fourfold increase in the space of ten years shows that significantly more students are now choosing UM for further studies. But instead of resting on its laurels, the university is contemplating a reform of its postgraduate programmes, hoping that the revised programmes will better support the SAR government's policies concerning the development of citizens' skills and talents, attract more local students, and ultimately nurture more interdisciplinary professionals for Macao.





鄭德信工程師，電機電子工程博士學位課程畢業生
Cheang Tak Son, engineer and doctor of electrical and electronics engineering

報讀人數逐年增長

據高教辦《2016年專上應屆畢業生升學與就業意向調查》顯示，澳門應屆大專畢業生有意繼續升學的比例達25.2%，即每四個畢業生就有一位有意繼續深造。2010年至2016年間，平均每年超過2,000人報讀澳大的碩士課程，當中獲錄取並入讀澳大的人數約700多人。

在過去10年，修讀研究生課程的學生持續上升。澳大研究生院在2009年正式投入運作，為研究生提供全面先進的專業準備，讓研究生能夠充份地參與其領域的學術和研究工作，並致力為學生鋪墊通往成功的道路及倡導學生對學術的追求。澳大在過去30多年，在精心培育下，一屆屆研究生遍佈各行各業並脫穎而出，在事業上取得了卓越的成就。

研究生如在深水池游泳

在澳大從本科讀到博士的鄭德信，考獲英國皇家特許工程師（CEng）、英國皇家特許環保師（CEnv）、中國註冊高級工程師、英國皇家特許建築工程師、英國營運工程師學會資深會員、英國

Increasing Number of Applicants

According to a survey on post-secondary students' inclination to pursue further education, which was conducted by the Tertiary Education Services Office earlier this year, 25.2 per cent of the post-secondary students in Macao, or one in every four students surveyed, expressed an intention to pursue further studies after graduation. Between 2010 and 2016, an average of 2,000 students applied for UM's postgraduate programmes every year, over 700 of whom were accepted.

Because of the increasing demand for postgraduate studies, UM's Graduate School became operational in 2009. All of the programmes offered by the Graduate School are carefully designed to provide postgraduate students with professional, comprehensive training, and thorough involvement in scholarship and research in their chosen areas of study. The Graduate School is committed to facilitating student success and serving as a strong advocate for their intellectual development. Over the past thirty years, the university has produced many outstanding graduates who have gone on to become leaders in various industries.

Like Swimming in the Deep End of the Pool

Cheang Tak Son completed his bachelor's, master's, and doctoral studies at UM. He is a Chartered Engineer (CEng) registered with the Engineering Council in the United Kingdom, a Chartered Environmentalist (CEnv) registered with the Society for the Environment in the UK, a registered senior engineer in China,



陳志君校長，教育碩士課程（教育行政）畢業生
Principal Chan Chi Kwan, graduate of the master's
degree programme in educational administration

建築工程師學會資深會員、電機及電子工程師學會高級會員資格、和中國機械工程學會高級會員資格等。鄭博士現時在澳門電力股份有限公司任職高級工程師，他說，讀碩士及博士雖然非常艱辛，但這個過程是一種鍛煉，「學士、碩士或者博士學位，背後代表你接受過階段性的訓練，代表你有能力能微觀和宏觀地去分析問題、思考解決方案，而這些能力對日後在社會上的發展都有優勢。」

鄭博士作一個比喻，高等教育就像學游泳、學士就像在淺水區學習基本姿勢、碩士是換到一個深水池，學習正確的姿勢及有速度要求；到博士學位，除了講求速度及姿勢外，還要有創新的概念，使你游得比別人更快。「當克服這些困難後回頭看，甚麼困難其實都不外如是，因為遇到困難時，可能這些問題早在讀碩士或博士時已經面對了。透過這些訓練，或許會比其他他人優勝，在職場上機會更多，跑得更遠。」

a Chartered Building Engineer registered with the Chartered Association of Building Engineers (CABE) in the UK, and a fellow of the Society of Operations Engineers in the UK, the CABE, the Institute of Electrical and Electronics Engineers, and the Chinese Society of Mechanical Engineers. Dr Cheang currently works at CEM as a senior engineer. He says studying for master's and doctoral degrees was not easy, but the process provided good training. 'A degree, whether it's a bachelor's degree, master's degree, or doctoral degree, represents the systematic training you have received,' he says. 'It also proves your ability to conduct micro- and macro-analysis of problems and produce solutions. These skills will give you an advantage in your future career development.'

Dr Cheang likens pursuing higher education to learning to swim. Studying for a bachelor's degree, he explains, is like learning the basic techniques in the shallow end of the pool; pursuing a master's degree is like improving one's techniques and speed; studying for a doctoral degree involves further perfecting those techniques in order to innovate the swimming process itself. 'When you look back on the difficulties you overcame during postgraduate studies, you would realize that all difficulties are pretty much the same,' he says. 'Then, when you encounter a difficulty in your life, you could remind yourself that it is probably not that much harder than the difficulties you faced during your postgraduate studies. Your postgraduate training may make you better than other people, bring you more career opportunities, and help you go farther.'

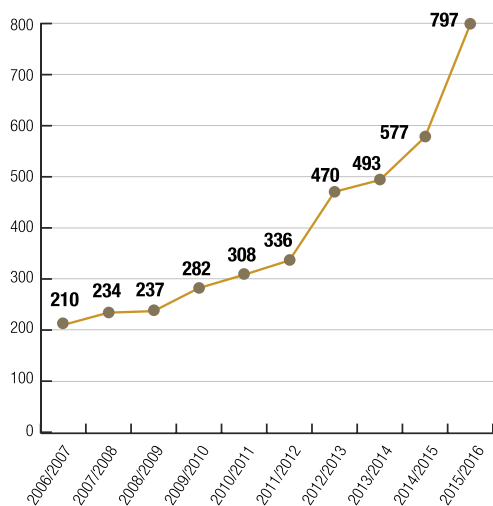
Local Choices More Appealing

Some students prefer to study overseas in order to gain international experience, while others choose to stay in Macao. According to the survey mentioned above, of all the post-secondary students who intend to continue their studies, 52.4 per cent expect to do so in Macao. Dr Chan Chi Kwan, principal of Sheng Kung Hui Choi Kou School Macau, received a bachelor's degree in business administration and a master's degree in education from UM. He is also a recipient of the Medal of Merit—Education from the Macao SAR government. Dr Chan observes that many working people in Macao want to pursue further education but cannot afford to quit their jobs, and for these people, local institutions naturally become their optimal choice. 'Although many programmes are also available in mainland China and other neighbouring regions, if you want to study without quitting your job, UM is certainly your best choice, whether in terms of employment prospects or the connections you can establish,' he says. 'Pursuing postgraduate studies is not just about acquiring professional knowledge and skills; it's also about expanding your network by making new friends from similar professional backgrounds. And this is one of the advantages of pursuing postgraduate studies in Macao.'

本地升學更具競爭力

有學生畢業後想到外國進修，吸收國際經驗，但也有學生選擇留在澳門，根據《2016年專上應屆畢業生升學與就業意向調查》，2016年有意繼續升學的大專畢業生中，有52.4%畢業生預計在澳門升學。在澳大取得工商管理學士及教育碩士、獲澳門特別行政區政府頒授教育功績勳章、聖公會（澳門）蔡高中學校長陳志君博士認為，很多人未必有條件兩袖清風不用工作去修讀碩士或博士，要在澳門工作，進修的時候自然以本地的大專院校為首選：「雖然很多課程在內地或者鄰近地區都有開辦，但如果要邊讀邊工作，澳大當然是首選，對於就業市場和人脈都有優勢。研究生課程不單只學到專業知識，更重要是結識一班同學，而這班同學和你的工作背景都有相關，透過他們可以把你的人脈擴大，認識一班職場上的專業人士，這是留在澳門讀研究生課程的優勢。」

從事教育工作多年的陳校長認為，近20年澳門基礎教育的普及，很多人能完成高中畢業，而大學的普及也讓很多人有能力讀大學，但他認為隨著社會發展，社會對人才的需求卻有不同：「社會可能需要更多大學生擔任不同的工種，一些工種可能已經不能再由一個高中畢業生去擔任，例如以前維修汽車可以由中學畢業生處理，但現在你到車房會發現，很多師傅都是機械工程畢業的大學生，因為現今汽車越來越先進和複雜，需要有工程知識才能進行維修。」



澳大歷年研究生畢業生人數
Numbers of UM postgraduates over the years

With the popularisation of education in Macao over the past twenty years, many people are now able to complete secondary or even higher education, but Dr Chan concedes that the rapidly developing society places increasingly high demands on workers in different professions. 'Today we may need college graduates to do jobs that previously could be done by high school graduates,' he says. 'For instance, in the past, a high school graduate was qualified to work as a car mechanic, but today, many car mechanics are college graduates with a degree in mechanical engineering. That's because today's cars are more advanced and complex, and you won't be able to do the job without engineering knowledge.'

Choose the Path that Suits You

Dr Wong Hang Cheong, an international gold medallist in artistic cycling and a recipient of the Medal of Merit-Sport from the Macao SAR government, notes that whether or not college graduates should pursue further education is a decision that must be made on a case-by-case basis. 'Doing a master or a PhD is not necessarily a good decision; it depends on the circumstances of each individual case,' he says.

Dr Wong completed his bachelor's, master's, and doctoral studies at UM. He now works in the university's Automotive Engineering Laboratory. Wong is grateful for the support of his family and the scholarship provided by the university, which allowed him to continue his studies and represent Macao at artistic cycling competitions. 'During my time at UM, I participated in a project commissioned by the Environmental Protection Bureau to study whether motorbikes are suitable for Macao,' he says. 'I analysed a lot of data and consulted previous research, and also did some test-driving. Then I and the other participants wrote an evaluation report and submitted it to the Environmental Protection Bureau. Promoting greener vehicles in Macao is not just aligned with my personal and research interests, it will also benefit Macao.' Dr Wong



社會文化司司長譚俊榮（左）頒授學位予博士研究生
Secretary for Social Affairs and Culture Tam Chon Weng (left)
presents a certificate to a PhD graduate



王衡鏘實驗室技術員，哲學博士學位（機電工程）課程畢業生
 Wong Hang Cheong, lab technician and doctor of electromechanical engineering

選擇最適合自己的路

在花式單車場上揚威國際體壇並獲得澳門特別行政區政府體育功績勳章的王衡鏘博士說，大學畢業後是否繼續深造，要視乎個人情況：「不是說讀碩士、博士就一定好，要視乎自己的情況。」

在澳大由本科讀到博士，現時在澳大汽車工程實驗室工作的王博士說當時得到家人和獎學金支持，讓他繼續學業之餘，也可以代表澳門參加花式單車比賽。王衡鏘認為選讀澳大是一個正確的選擇。「我在深造期間，參與了環保局委託評估電動電單車是否適合澳門使用的研究項目，當時看了很多資料及研究，亦親身駕駛電動電單車測試，之後參與撰寫評估報告，讓環保局制定相應政策。能推動澳門的車輛轉型去更環保的方式，這不單只是自己的興趣或研究需要，而是對整個澳門社會有幫助。」不過王博士覺得每個人都有自己要走的路，最重要是選擇適合自己的，「澳大現時的環境和教學資源比以前更好，如果真的想要繼續升學，澳大是個不錯的選擇。」

says he made the right decision by choosing UM, but he also believes that everyone has a different path, and it is important to choose a path that suits oneself. 'UM now has a better learning environment and better teaching resources, so it's a good choice for anyone who wants to pursue further education,' he says.

Introducing Middle School Students to Advanced Research

Lam Kai Heng is a teacher at Keang Peng School. He received his master's degree from UM's Institute of Chinese Medical Sciences (ICMS). Under his guidance, his students have won awards at many international competitions. Earlier, he became one of the first teachers in Macao to receive the honorary title of 'Teacher with Outstanding Performance' from the Education and Youth Affairs Bureau. 'Studying for a master's degree has expanded my academic horizons,' he says. 'If you had asked me to supervise students to do innovative research before I started my master's programme, I would have doubted my ability to do that, but after I finished the programme, I felt I didn't even have to confine my research to Chinese medicine. I learned a systematic way to explore the unknown, and I felt I could try anything, even if my attempts might end up in failure.'

把高端科研知識延伸到中學

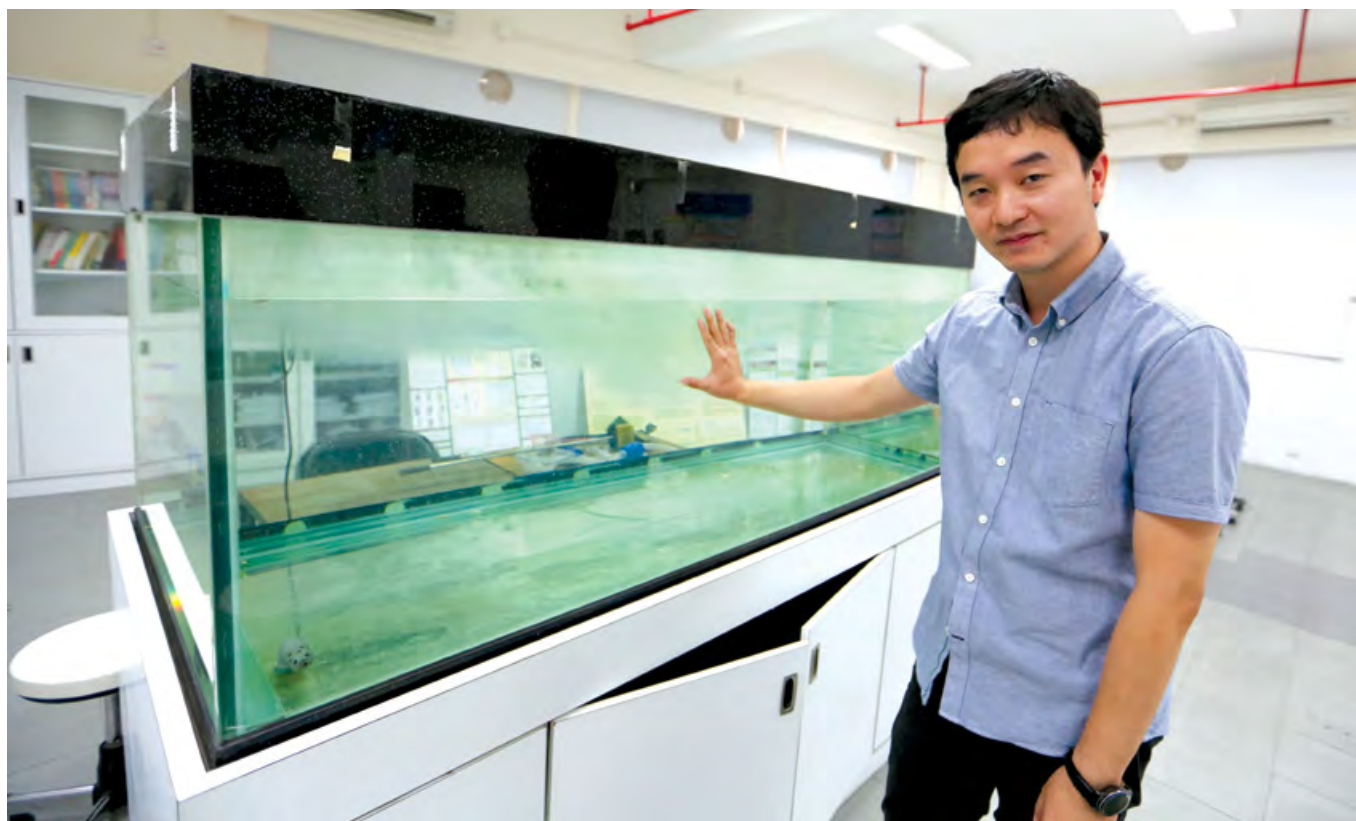
澳大中華醫藥研究院碩士畢業，現任職鏡平中學教師的林啟興多次帶領學生參與國際性比賽並屢獲佳績，早前更獲教育暨青年局頒發首屆「卓越表現教師」榮譽。林啟興說，在澳大學到的專業知識可以完全用在工作上，「讀碩士後發現自己有很大不同，讀碩士前如果要我帶學生做科研創新我應該沒有這個能力，但完成課程後我甚至不再局限做中醫藥研究，因為研究生課程讓我掌握了一套方法去開拓一些未知的領域。甚麼都可以嘗試，雖然也可能失敗，但會懂得想辦法繼續研究，視野也比較廣。」

一直鼓勵學生突破老師框架的林啟興說：「碩士學到的開題、數據分析、寫論文、答辯等技巧都可以傳授給學生。」他的學生也是青出於藍，兩位學生的「妙『魚』連『朱』－朱砂在斑馬魚幼體上的心臟毒性」研究發現朱砂對心臟存在毒性，這項研究2014年連獲四個重要獎項，而這項研究正是林啟興在中華醫藥研究院深造時的研究題目。

Lam teaches his students the skills he acquired during his master's studies, such as how to choose a thesis topic, how to analyse data, how to write up research results, and how to conduct an oral defense. He always encourages his students to surpass their teachers, and surpass him they have. Two of his students designed a research project based on a topic Lam worked on as a master's student. The project, designed to study the toxicity of the mercury compound HgS on the hearts of zebra embryos, received four major awards in 2014.

Bilingual Legal Expert with Multicultural Educational Background

Chen Defeng, a legal expert at Jorge Neto Valente Lawyers and Notaries, received a bachelor's degree from Zhejiang University and a master's degree from UM. The thesis he wrote for his bachelor's degree concerns the challenges in implementing bilingual legislation in Macao and the relevant countermeasures. After graduation from Zhejiang University, he participated in a Chinese/Portuguese Bilingual Legal Talent Programme organised by the Macao Tong Chai Charity Association, through which he had the opportunity to go to Portugal to study Portuguese language and law. Later, he returned to Macao to study law. 'Because I've studied in mainland China, Portugal, and Macao, I'm familiar with the legal systems in all three places, which has helped my career development,' he says.



林啟興老師，理學碩士學位課程（中藥學）畢業生

Lam Kai Heng, local teacher and graduate of the master's degree programme in Chinese medical sciences

三地學習，成就中葡雙語法律人才

畢業於法學院碩士課程，現時於澳門華年達律師事務所擔任法律專家的陳德鋒，說他與澳大結緣是基於一次港澳交流學習團。他當年畢業於浙江大學法學學士，畢業論文是研究澳門雙語立法的困境與對策。大學畢業後透過澳門同濟慈善會的「中葡雙語法律人才計劃」到了葡萄牙學習葡語及法律，輾轉又回到澳門學習法律，他說：「因為有內地、葡萄牙及澳門的學習經歷，對三地法律的體制都熟悉，對未來職業生涯很有幫助。」

陳德鋒說：「澳大深造的研究經歷對我現在的工作很有幫助，因為寫論文的過程中，怎樣去思考問題、邏輯分析、尋找解決方法都與現在律師樓工作相關。」他認為，讀碩士期間參與的研究工作除了學到專業技能外，也可以服務社會，例如他曾參與房屋局委託的法律研究項目。陳德鋒又指研究生課程的學生有來自內地不同地方從事不同工作的人，也有來自本地的法律工作者、政府人員或律師，「當我們一起討論問題時就會非常有意思，因為本地的學生和內地的學生理論基礎有共通的地方，但也有細微的差別，討論起來觀點互相碰撞，是非常愉快的學習。」

研究生課程的未來方向

研究生院現時提供工商管理、教育、法律、社會科學、人文學、自然科學、科技、健康科學、及中醫藥等超過80個研究生課程，所有研究生課程都是經過精心制訂。本身是法學學者的澳大研究



陳德鋒法律專家，法學碩士學位（中文－比較民事法）課程畢業生
Chen Defeng, legal expert and graduate of the master's degree programme in Chinese language - comparative civil law

He adds, 'The skills I acquired at UM are very helpful in my current job, because in the process of writing the thesis, I learned how to consider a problem from different angles, how to improve logical reasoning, and how to find solutions. These skills are all relevant to my current job.' The research projects Chen participated in as a master's student not only helped him acquire professional skills, but also gave him the opportunity to serve the community. For instance, he once participated in a legal research project commissioned by the Housing Bureau. He adds that students enrolled in the master's programme came from different professions. Some of them were legal practitioners, others were government officials, and still others worked as lawyers. 'It was always an enjoyable experience to discuss questions with students from different backgrounds, because local and non-local students have both commonalities and differences in their theoretical grounding, which made intellectual sparks fly,' he says.

Future Direction

UM's Graduate School currently offers more than 80 programmes in business administration, education, law, social sciences, the

生院院長莫世健教授認為，未來社會的發展需要大量綜合性的人才，要具備跨學科知識，針對社會對人才的要求，澳大研究生院將實行雙軌制，「我們一部分是設立實用性課程，根據社會需求來設立，強調跨學科的培訓，專門培養實用性人才；另一部分是對有研究能力和興趣的學生提供學術型的培訓。我們對於知識發展，離不開高科技研究支撐，把研究轉為課程，這可以為我們的學生提供最新的知識。」

莫世健教授說：「雙學位也是澳大未來一個方向。澳大作為一所綜合性大學，很多學科都有領先的地位。面對經濟走向多元，對綜合性人才的需求增加，澳大會推動國際層面的雙學位教育，開辦以實用導向為基礎的專業和跨學科的課程，培養社會現在與未來所需的各種綜合性人才。」



莫世健教授
Prof Shijian Mo

humanities, natural sciences, science and technology, health sciences, and Chinese medical sciences. Prof Shijian Mo, dean of the Graduate School and a legal expert, believes that demand for interdisciplinary professionals will continue to grow in the future. To meet the demand, the Graduate School plans to provide two kinds of training to postgraduate students. 'We will open courses that answer the practical needs of society and train interdisciplinary professionals through these courses. We will also provide research-oriented training to students who are academically inclined,' he says. 'Knowledge cannot evolve without the support of high-tech research. So it's important to derive new knowledge from scientific research to broaden the students' horizons.'

He notes that in the future UM will also consider opening dual degree programmes, a practice followed by many universities in the world. 'As a comprehensive university, UM is a leader in many disciplines. Economic diversification calls for interdisciplinary professionals. So UM will consider launching practical dual degree programmes to train interdisciplinary professionals needed by society,' he says.



短片：澳大研究生課程碩果累累
Video: Fruitful Postgraduate Programmes

混成學習的新時代

New Age Education with Blended Learning

文Chinese & English | 余偉業 Kelvin U 圖Photo | 譚金榮、何杰平 Eric Tam, Jack Ho

近年，隨著教學科技的日新月異，混成學習大行其道，給學生帶來了全新的學習體驗，究竟甚麼是混成學習？澳大如何邁向教學數碼化的道路，令學生更投入學習？

In recent years, educational technologies have proliferated and they are designed to make learning a wholesome experience for students. We hear a lot about blended learning today. But what is blended learning? How may educational content delivered through digital media or online modes better engage students?



專心於 Compiler Construction 上課的學生，一面看著銀幕上的 Powerpoint，一面聽著教授的講解。突然，教授出了一道題，考考學生是否掌握剛剛授課的內容，學生紛紛舉起 Clickers（課堂表決器，電子教學工具之一，Poll Everywhere 也具此功能），輕輕按了一下按鈕，以匿名的方式把自己心裡的答案表達出來。該課程的老師，是澳大科技學院助理教授黃輝博士，他是澳大一位率先把電子科技應用到教學上的老師，他說：「對老師也好學生也好，這份互動是很重要的，大家可即時看到其他同學怎樣答題，從中學習。這樣就能營造出一個輕鬆的學習氣氛，學生的投入程度也隨之大大提高。」

Instead of following a lecture word-by-word or slide-by-slide, students enrolled in the course 'Compiler Construction' can simply click a button to express their opinions and ideas freely, publicly, and anonymously, via the use of mobile technology or e-learning tools such as Poll Everywhere and Clickers. 'It has become compulsory for us, the instructors as well as the students, to see in real time how other students respond,' says Assistant Professor Derek Wong Fai from the UM Faculty of Science and Technology, who was among the first to incorporate e-learning into teaching. 'It helps to create an enjoyable, safe and comfortable classroom atmosphere. Engagement is high.'



學生透過手機與講師在堂上互動
Students interacting with the instructor
in class with their mobile devices

嶄新的反饋式學習

Compiler Construction 班上一位學生、電腦及資訊科學系大四學生侯睿下課後表示，這些電子學習工具有助他循序漸進地理解和消化課堂上所教的知識，也加強了師生在課堂上的互動。雖然每個課堂所應用的電子學習創新方法都不同，但當中大部分導師較偏向用 UMMoodle，而使用 Clickers 或者 Poll Everywhere 則較少。他說：「對學生來講，當老師使用 Clickers 授課，知識更易於理解，我們亦能更好地跟上學習進度。」

只要簡單按一下按鈕，侯睿便瞭解到其他同學的學習進度，並即時得到反饋，而且通過對其他學員的觀察，把學習成果效益最大化。他說：「相對於坐在一角聽課，或自己看書，透過電子學習工具來學習新知識，沒有那麼單調乏味。我希望澳大今後有更多課程能融入不同的電子科技以提升學習效果。」

去脅迫感的課堂參與

電子學習在教與學上的價值，由最初輔助工具的角色，逐漸成為教學過程中的一部分。課堂上，老師可隨時給學生一個突擊提問，形式以選擇題為主。學生透過 Clicker 或智能手機作答，再經電子學習工具的處理，馬上公佈結果和答案。老師亦可從中分析學生出錯的原因，並即時作針對性的解釋。



「混成學習在全球高等教育的進程上是一個不可逆轉的趨勢。」黃輝博士

'In the global tertiary education landscape, it is an irreversible trend.' – Dr Wong Fai

A Novel Way of Learning

'The e-learning tools help us walk through a lesson step by step and enhance interaction in class,' says Hou Rui, a fourth-year student from the department of computer and information science, after attending a lecture about compiler construction. In his experience, the approach of e-learning innovations varies from course to course. Most instructors use UMMoodle, while a few use Clickers or Poll Everywhere. 'It is very convenient for us [students] to review the slides and maintain an appropriate learning pace when Clickers are used,' he says.

Hou can access his class with a click and receive feedback instantly. He also has the opportunity to connect with a wider group of learners that helps him to maximise his learning outcomes. 'The system of learning knowledge through e-learning innovations is less monotonous than just sitting there listening to lectures and reading thick textbooks on my own. I do hope more courses at UM will be conducted via various e-learning technologies,' he says.

Making Class Participation Less Intimidating

Applying e-learning in the classroom is not only considered an add-on; it is also an integral part of the educational process. Students may be asked to take some quick surprise quizzes in class on their smart phones. The quizzes are mostly in the form of multiple-choice questions. Students' answers are directly connected to e-learning devices, which help generate the quiz results. By doing so, the instructor can analyse how mistakes are made and immediately explain what has gone wrong.

也許，一上課就來一場匿名的投票小測驗，能有效令學生精神抖擻，馬上投入學習狀態。黃輝博士也對此策略深感認同。「課堂表決器 Clickers 或 Poll Everywhere 是以網絡通信為基礎的交互式課堂教學系統，旨在收集學生的回應，有助打破傳統的教室框架，讓學生主動參與思考課堂上內容，令學習過程更富趣味性。這些工具用途多元，如小測、集體思考、非正式反饋等，並可以結合 PowerPoint 一同使用。」

劃時代的教學轉變

電子學習雖然暫時僅充當著堂上輔助工具的角色，但已被視為一套有效的教學策略。澳大教與學優化中心（CTLE）主任施博智教授把混成學習定義為虛擬網絡與面對面並駕齊驅的學習體驗，並運用數碼化的文本、音頻和視頻等媒體進行教學。

在實際操作上，混成學習通常透過數碼媒體，鼓勵學生善用課餘時間，先瞭解課本的內容和概念，並進行自我學習的評估，從而增加堂上以學生為中心的互動教學。施教授說：「這兩種教學模式的整合，將有效優化協作學習，深化教與學的互動，按學生自身能力、專長進行教學，從而滿足不同的學習需求，達至深層次學習的效果。」



Christopher Fulton

Beginning a class with an anonymous poll conducted by the instructor is perhaps an ideal way to engage students and create a positive learning atmosphere. Dr Wong finds that this strategy can help to improve class participation. 'Clicker or Poll Everywhere is an effective web-based tool that allows one to collect feedback and responses from the students. It helps facilitate the teaching process by flipping my classroom to actively engage my students so they can study in a collaborative and fun way,' says Dr Wong. 'These e-learning tools can be used for quizzing, brainstorming, informal feedback, and other applications. They enable full integration with PowerPoint and a variety of quizzes and polls are available.'

An Unprecedented Learning Approach

Whether it is used as an auxiliary or main tool, e-learning has proven to be an effective tactic. Prof Spencer Benson, director of UM's Centre for Teaching and Learning Enhancement (CTLE), defines blended learning as the integration of face-to-face teaching and learning with online teaching and learning through the use of digital media, such as text, audio, and video.

'The integration of these two approaches allows for synergy and broadening of the teaching and learning within a course, the ability to accommodate a wider range of student learning styles and needs, and more importantly deeper learning,' says Prof Benson.

'Some students and faculty may no longer carry pens and paper because the smartphone allows one many different ways to take photos, notes, and communicate,' says Christopher Fulton, an e-learning technology officer. 'Personally, I believe the smartphone is the pen and paper, and the preferred note-taking and recording device, of this generation.' What Fulton found through his observation in a recent class, where students were given the option to take a short formative quiz either on paper or on their phone, was that students were more interested in taking a quiz on their phone. 'It might have been that the online quiz was novel, gave students instant feedback, or some other reason – like it wasn't for marks – but clearly there was enthusiasm in that class for learning with technology,' says Fulton.



滿珍紀念書院自主學習共享空間
Self-Access Learning Commons in the Moon Chun Memorial College

「有些學生和教師已不再攜帶紙筆上課，因為他們用手機 apps 或拍照的方式記錄著課堂重點，與大家溝通。」學習科技技術員 Christopher Fulton 說：「這一代人把智能手機視為筆記簿和錄音筆，取代用紙張筆記記錄傳統方式。」而且最近他發現，學生對以手機進行進展性評估小測更為接受，且大感興趣。Fulton 說：「這也許歸功於網上問答測驗較為新穎，能向學生作即時反饋，亦有可能是因為不計分；但無論如何，都看出電子學習科技很吸引學生。」

在澳大，Moodle、Mahara、Turnitin 及 Poll Everywhere 是教學常用的電子學習科技，歡迎全校師生使用，由資訊及通訊科技部、教與學優化中心、圖書館作技術支援。Fulton 表示，許多教學人員都善用網上流行的應用程式和數碼科技，提高教學質量。

寓娛樂於電子學習

另外，大學亦大力鼓勵書院全體教職員善用網上資源，以便追蹤學生進度和促成學習。許多書院導師應用後均發現此舉有利學生學習。例如，滿珍紀念書院為了鼓勵學生主動學習，在「自主學習共享空間」電腦裡安裝了各式各樣、趣味盎然的互動英語學習應用程式，讓學生在沒有老師的情況下都可以靠自己提升英語能力。

滿珍紀念書院副院長 Manuel Noronha 教授說：「這個共享空間很受學生歡迎，他們可盡情享受學習的樂趣。這些線上練習是不計分的，所以學生不會感受到壓力。若然你不清楚自己的英文程度有多好，可以試玩這裡的遊戲，測試自己英文能力的級別，然後就參照測試結果自行擬訂學習計劃。」

這套網上英語學習系統內容豐富，包括寫作實驗室、閱讀與語法指南、聽力與發音練習、互動式評測（入門到高階水平）、商務英語、數碼學習歷程檔、反思寫作教程等。Noronha 教授說：「這套自學系統的課題都有一定的質和量，足以被視為英語核心課程的課外輔助教學。只要有空就可隨時做練習，而且會即時知道結果和得悉要改善的地方。每當有應用程式更新，書院都會發微信通知大家。」

At UM, Moodle, Mahara, Turnitin, and Poll Everywhere are the main e-learning technologies available to all faculty members and students. They are supported by technicians from the Information and Communication Technology Office, CTLE, and the library. As Fulton observes, many teaching staff are making good use of many popular applications and digital tools to enhance their teaching quality.

Entertaining E-learning at Residential Colleges

Teaching staff in the residential colleges are always encouraged to use online resources to facilitate and document the academic progress of the students. Many Resident Fellows (RFs) and Resident Tutors (RTs) find that incorporating an online component into their instructions not only motivates students, but also helps increase their learning retention. For instance, the Self-Access Learning Commons (SAC) in the Moon Chun Memorial College (MCMC) offers a diverse range of opportunities for students to enhance their knowledge of the English language with many up-to-date interactive audio and visual activities and applications installed on the computers.

‘The SAC has become popular among students because it not only provides learning in an entertaining format, but also encompasses independent online learning. Immediate assessment and feedback for each activity completed will indicate to students how much they have learned, or may need to improve. The absence of the classroom teacher means that students are less pressured. In light of this, assessment here will not be attributed, or even affect their overall course final grade. Therefore, students won’t feel pressured to perform,’ says Prof Manuel Noronha, associate master and chief of students of the MCMC. ‘If you are not sure which your level is, just give it a try. There is a level indicator in the applications, so you can do the self-assessment and begin with your suggested level.’



Manuel Noronha 教授
Prof Manuel Noronha

滿珍紀念書院計劃在未來構建更多學習共享空間，並把語言自習系統延伸至葡語學習。「我們書院住了部份主修葡語的學生。上學期，我們邀請了很多葡語講師來書院分享己見，許多學生聞風而至，可見在這一方面是有需求的，而我們會著手研究如何推出這一系統。」Noronha教授說。

更多時間心思的投入

在數碼學習科技日益普及的世代下，教師的工作較以往更為複雜。儘管有許多人覺得，電子學習工具可減輕教師的工作量；但黃輝博士認為，事實剛剛相反。「混成學習令教師在備課時投入更多的心力和時間。首先，你要瞭解電子學習工具如何配合教學，然後熟悉其操作模式，再重新設計原有的課程。過程中，教師需要反覆思考怎樣把不同的知識點有機地連貫起來。」雖然這樣會加重教師的負擔，但黃輝博士深信混成學習利大於弊，並說：「這學習模式不但改善了課堂互動，也能促成自主學習。哪怕工作量多了，但仍然是值得的，而且在全球高等教育的進程上，這是一個不可逆轉的趨勢。」



施博智教授
Prof Spencer Benson

These online English learning recourses include writing labs, reading and grammar guides, listening and pronunciation activities, interactive tests and quizzes (from beginners to advanced levels), business English, and e-portfolio and reflective writing tutorials. 'These independent study sessions can complement their English core courses as a considerable amount of learning continues beyond the classrooms. You can just walk in and try these online exercises any time you want, and you will know the result instantly and what areas you need to improve', says Prof Noronha. 'We will announce to the students when there are any updates, or new applications via WeChat. If they come and join in, it means they take the initiative to learn independently.'

The college plans to create more diversity with the SAC, by extending this e-learning system to facilitate the learning of the Portuguese language. 'We have quite a few students majoring in Portuguese, says Prof Noronha. 'Last semester, we invited various professors from the Department of Portuguese to give talks at our Portuguese Corner. They were free to choose any topic they liked. Many students came to the events. So there is demand in this respect. We'll study the possibility of launching this system.'

Worth the Time and Effort

Today the job of a teacher is more complicated than it has ever been. Many might have a preconceived notion that e-learning tools can reduce teachers' workload. But in Dr Wong's eyes, the opposite is true. 'It takes a lot of skills, time and effort to encourage class preparation. First, you have to study the e-learning programmes. Then you need to familiarise yourself with its operations, and redesign your course accordingly. You have to revisit each point and see how to connect the different points coherently,' he says.

However, Dr Wong still believes that the advantages of blended learning outweigh the disadvantages. 'Blended learning not only improves classroom interactions, but also facilitates their independent learning. Perhaps it causes an increased workload, but it is worth it. In the global tertiary education landscape, it is an irreversible trend,' he says.

International Recognition

Dr Michael Li Zihao, an assistant professor from the Faculty of Education (FED), has received the Silver Award from the International Outstanding e-Learning Awards. The Gold Award went to Prof Malik Hussain from Harvard University's Graduate School of Education. Organised by the University of Hong Kong's e-Learning Development Laboratory, the award recognises innovations in e-learning pedagogy through best practice sharing and building a community of practice among international schools and universities who are proactive in e-learning development.

Dr Li's early adoption of technology for engaging and motivating students and enhancing learning serves as a model for many at UM. His flipped classroom approach and learner-centred, outcome-based educational model help students

國際傑出電子教學

澳大的電子教學水平獲國際認可，教育學院助理教授李自豪博士最近獲頒「2015／2016國際傑出電子教學獎銀獎」，金獎則由哈佛大學教育研究生院的Malik Hussain教授奪得。該獎項由香港大學電子學習發展實驗室頒發，旨在表揚電子教學模式推廣具傑出貢獻的教師和學校。今屆獎項競爭激烈，李博士最終從世界各地眾多申請者中脫穎而出，獲頒銀獎。

李博士素來致力於澳大推廣科技教學，從而提高學生對課堂的興趣。他採用「翻轉課堂」、「以學生為中心」和「以成果為教育基礎」的授課方法，一改以往的傳統教學模式，使學生參與度和積極性大大提高。例如，在李博士的戲劇課裡，學生用谷歌軟件共同創作和撰寫劇本，選用不同的手機程式拍攝短片紀錄學習中的一點一滴。在通識舞蹈課中，他鼓勵學生走出澳大到澳門不同地方用肢體語言為主、多媒體拍攝為輔，記錄和深入理解舞蹈的奧妙和澳門人文地理的精髓。「新時代的教育者應該積極面對和好好利用科技所帶來的機會，改變傳統教育模式。」

開啟數碼教學的未來

自2015年起，澳大每一個學術單位均有助理教授和副教授採用混成學習模式進行教學。施博智教授說：「在教學科技的應用上，澳大還需努力，以趕上香港、亞洲乃至西方高校同儕的步伐。推行混成學習模式，就是利用科技提升教學質量以達至國際水平的第一步。」教學科技還包括線上課程、自主學習程式、大型公開網上課程（MOOCs）等，澳大正因應不同學科需求全面普及電子學習工具的應用，並分階段執行。「迄今為止，多個參與電子教學的課程已在試行或測試中，而教學人員正積極探索適用於澳大、以學者為中心、數碼教學新模式。」

to take responsibility for their own learning. Students from his drama class are taught to brainstorm and co-write scripts with Google software, and to document their learning process through filming short videos with their mobile applications. In his dance class, Dr Li encourages his students to visit different places in Macao and to produce films with multimedia in order to record and comprehend local human geography by body language. 'Educators of the new era ought to take advantage of the opportunities that come with the advancement of technology and change the conventional ways we teach,' he says.

Opening New Doors

Starting in 2015, a select group of UM assistant and associate professors representing each of the academic units agreed to redesign one of their courses and integrate the blended learning approach. 'The effective use of technologies to enhance teaching and learning at UM lags behind that of peer institutions in Hong Kong, Asia and Western institutions,' says Prof Benson. 'The Blended Learning Project is the first step in helping to bridge the gap in our use of technologies to enhance teaching and learning compared to international standards.'

The project sets the stage for the development of models of technology to enhance teaching and learning that can be adapted throughout the university, including the development of online courses, applications, and Massive Open Online Courses (MOOCs). 'To date, several courses of the project have been redesigned and various pedagogical approaches have been piloted or are being tested. All of the project members are actively testing out approaches and ideas for new models of how learner-centred teaching and learning can occur at UM,' Prof Benson says.



李自豪博士
Dr Michael Li Zihao



短片：混成學習的新時代
Video: New Age Education with Blended Learning

創新教學

專訪澳大英語老師

The Dawn of Innovation for Learning

文 English Text | 余偉業、校園記者 Cheila Alexis C. Pangan Kelvin U, UM Reporter Cheila Alexis C. Pangan

圖 Photo | 何杰平、李思 Jack Ho, Manuel Reis 翻譯 Chinese Translation | 蘇恩靈 Anthony Sou

今天，各種創新技術在全球各地的大學如雨後春筍般湧現。為了設計更加全面更具有創意的教學方法，越來越多的大學教師嘗試將科技融入課堂。澳門大學英語中心的老師也不例外。他們創建了不同的資源幫助學生培養語言能力及學術技能。其中有幾位更獲提名英國文化協會2016年 ELTons (English Language Teaching Innovation Awards) 英語教學創新大獎，以表彰他們在提高教學質素方面所做出的努力和取得的成果。

英國文化協會學習事務主管曾討論科技在語言學習的未來發展中所扮演的角色，他表示：「英國文化協會需要有信心利用科技進行教學的老師。如果對科技沒有興趣，教師這個職業可能不太適合你¹。」澳大英語中心高級導師 Jay Bidal 提出了一個充滿創意的想法，將科技融入英語教學。他與阿布札比薩伊德大學的導師花了兩年時間進行《聯繫電子教科書》(英文名稱：Connections E-textbook)研究項目，其後以同名著作共同作者的身分，獲提名英國文化協會2016年 ELTons 英語教學創新大獎中的數碼科技創新大獎。利用移動設備進行教學已成為新趨勢，Bidal 認為，是時候反思現有的課程及教學方法是否適合年輕一代的學習方式。

Today various innovations are appearing across the global higher education landscape. More and more lecturers strive to integrate technology into classroom instruction to create a more comprehensive learning experience. Instructors from the University of Macau English Language Centre (ELC) have created diverse resources to facilitate and develop students' language and academic skills. Their commitment to, and strategies for, enhancing learning quality, have led to their nomination for the English Language Teaching Innovation Awards (ELTons).

'The British Council needs teachers who are confident in dealing with technology,' says the director of studies of the British Council, when discussing the role of technology in the future of language learning. 'You are either into technology or you are in the way and had better start looking for a new job.' Jay Bidal, a senior instructor from the ELC, has introduced a novel and creative technology for teaching the English language. Bidal was shortlisted for the ELTons 2016 in the Digital Innovation category as the co-author of the *Connections E-textbook* – a project he worked on for two years with his counterparts from Zayed University in Abu Dhabi. In a new era of learning with mobile devices, Bidal believes now is the time to reflect whether the current curricular and pedagogical approaches are congruent with the learning styles of the younger generation.



《聯繫電子教科書》
Connections E-textbook

¹ Peacock, Martin. 前言,《英語教學的科技創新》,英國文化協會,2013年

¹ Peacock, Martin. Foreword, Innovations in Learning Technologies for English Language Teaching, British Council, 2013



英語中心高級導師 Jay Bidal
Jay Bidal, senior instructor from the ELC

改變現狀

Bidal 希望創造與傳統紙本教科書截然不同的數碼學習方式。他指出，出版商常常投放大量金錢編製紙本書的內容及版面，因此，他們不願在電子版本上作太大改動。他表示：「一般電子教科書的外觀及學習過程幾乎與紙本版本無異，有些甚至將網上練習題的答案與紙本教科書一同包裝。結果，出版商不能在電子書的設計方面作出甚麼改動或新嘗試，無法充份發揮電子版本的優勢。」

有見及此，Bidal 希望設計出一款適合大學基礎課程的平板電腦教科書，設計著重專題式學習，加強學生之間的合作和溝通。Bidal 表示：「我們還需要對這款設計進行更多研究，找出它相對於傳統紙本教科書的最大優勢，讓學生更容易接受。」

新穎方法

《聯繫電子教科書》的其中一個優點是設計靈活，讓學生能夠根據需要打開說明文字。Bidal 指出，紙本教科書上幾乎必定印有相關教學活動的說明指引，而他們的電子版本情況

Making a Difference

Bidal aims to create a satisfying digital learning experience that is distinct from a print textbook. He notes that publishing companies usually invest a great deal of money into the content and layout of print textbooks and thus they are reluctant to make substantial changes in the digital form. 'The appearance and learning progression of their e-textbooks nearly duplicate those of their print counterparts, especially when online exercises, the answers for which almost always accompany print textbook packages, are factored in. The result is that there is little room for change and innovation in design to further learning goals beyond what paper textbooks are capable of achieving.'

Therefore, Bidal has studied design choices incorporated in a university foundation programme—e-textbook for tablets, with a focus on how e-textbooks can better facilitate collaboration and communication among students by folding project-based learning into their design. 'More investigation needs to be done into this area of e-textbook design and how best to differentiate it from traditional paper textbook design to increase student acceptance of this relatively new mode.'

也基本一樣，但出於種種原因，讀者有時候並不會閱讀這些說明文字。因此，Bidal 的電子教科書設置了文字嵌入功能，將說明文字隱藏在相關教學活動的標題裡，只有在屏幕上點擊標題時說明文字才會出現。

Bidal 表示：「這項設計讓導師進行教學活動時可以靈活處理。他們可以直接口頭告訴學生如何進行活動，也可以引導學生點擊標題，打開說明文字自己閱讀。課堂指令有助加強學生的專注力，說明文字亦不會像平時一樣白白消失在字裡行間中。」有時候，老師也會通過短片解釋教學活動，從而增加趣味性、提升學生的學習興趣。

除此之外，老師可以利用《聯繫電子教科書》設立聊天室，讓學生在課堂上利用聊天室回答問題。跟一般課堂問答相比，聊天室可以讓更多學生進行實時回應及互動。Bidal 表示：「聊天室可以讓20多名學生一起參與討論，而一般的課堂，基於時間限制，每個問題通常只能讓兩三名學生回答。因此，這項設計可以鼓勵學生表達自己的想法。」

獨立學習

《聯繫電子教科書》的其中一個目標是培養學生獨立學習的能力。與著重死記硬背的傳統學習方法不同，Bidal 的電子教科書幫助學生學習如何發現和運用資訊。電子書附有教學影片，包含屏幕抓圖及老師錄音解釋書中段落，讓學生能夠在家中觀看。課堂上，學生可以學習如何利用電子教科書的資訊撰寫論文、報告及幻燈片簡報。Bidal 表示：「課程中，學生能夠獨立獲取資訊，利用書的嵌入提示進行學習，有助增強學生在課堂內外的自學能力。」

創新課程滿足技術需求

相信沒有甚麼比在課堂做簡報或論文答辯更讓學生感到頭痛和恐懼的了，但其實只要方法得當，這方面的技能是完全可以通過訓練得到提高的。澳大英語中心高級導師 Peter Levrai 及 Averil Bolster 設計了一個獨特的以研究為本的訓練課程《學術簡報及相關技巧》(英文名稱：Academic

Novel Approaches

One of the advantages of the *Connections E-textbook* is that instructions appear only when students want or need to read them, or when teachers direct them to do so. As Bidal observes, text-based instructions are nearly unavoidable in print textbooks, and normally their digital counterparts have largely followed suit. This is despite the fact that learners do not always read them, because either there is no need, or teachers deliver instructions orally in class. Therefore, in the e-textbook, the principle of 'embeddedness' is applied to keep instructions from appearing on all pages. Instructions are embedded within the headings of all activities, and revealed only when the headings are touched on the screen.

'Such an approach gives instructors flexibility in how to deal with instructions for an activity. They can simply talk learners through an activity, or they can direct students to touch the heading and open and read the instructions,' says Bidal. 'This has the added effect of helping them to focus immediately on what is being asked of them, instead of the usual situation where such instructions are "lost" among the rest of the text on the page.' Occasionally, instructions are given through a short video for the sake of variety and maintaining interest.

Also, chatrooms can be set up in *Connections* for students to answer questions in class, which can generate more instant responses and interactions than can be generated by simply asking questions. 'I see a much wider range of opinions compared to getting two or three students to answer the questions in class – sometimes 20 or more students are putting their ideas out there,' says Bidal. 'It helps to encourage students to express themselves.'

Independent Learning

Developing students into independent learners is one of the goals of *Connections E-textbook*. As opposed to conventional ways of learning, which may focus on memorising information and rely heavily on rote assignments, the e-textbook helps students to learn how to discover information and apply it properly. The e-textbook contains videos which demonstrate a screencast with instructors explaining a certain paragraph in the text so that students can watch them at home. During the class, students will learn how to use the information from the e-textbook to generate new information for essays, reports, and presentations. 'Students can access the materials themselves and learn from the cues embedded in the e-textbook, which could encourage self-regulated learning in and out of the classroom,' says Bidal.

Innovation for Skills in Demand

Nothing paralyzes students more than having to present a research project or give an oral defense. Fortunately, it is possible to improve

Presenting and Presentations，簡稱APP)，希望提高學生做學術簡報的技能。兩位導師均獲提名英國文化協會2016年ELTons英語教學創新大獎中的學生資源創新大獎。

Levrai 及 Bolster 曾在土耳其、阿塞拜疆、葡萄牙、越南及中國內地的商業及學術機構教授英語20多年。他們認為，學術簡報單靠娛樂觀眾、掌控音調或言辭鋒銳是不足以達到最佳效果的。

Levrai 表示：「做學術簡報的時候，不論你的表現有多自信，表達有多流暢，如果不能清晰的講解研究的重要部分，例如研究方法或數據分析，那麼簡報依然是失敗的。語言技巧對簡報固然有幫助，但並非導師最注重的東西。其實，學術簡報成功的關鍵在於展示充足而條理清晰的資料。」

such performance. Peter Levrai and Averil Bolster, both senior instructors from the ELC, have created a unique research-based training course called 'Academic Presenting and Presentations (APP)', designed to help students cultivate academic presentation skills. They were also shortlisted for ELTons Award 2016 in the Innovation in Learner Resources category as authors of APP.

Levrai and Bolster have taught English for more than 20 years in general, corporate, and academic contexts in Turkey, Azerbaijan, Portugal, Vietnam, and mainland China. In their opinion, an academic presentation involves more than entertaining the audience, mastering the pitch, or achieving an impact with every sentence the speaker delivers.

'No matter how confident and fluent you are in the way you talk, if you can't manage to articulate the important aspects of your research, such as methodology or analysis, your presentation is still considered a failure,' says Levrai. 'It's not so much about language – well, language does help, obviously – but that's not the first thing that lecturers look for. Exhibiting good and well-organised information is the key.'

**ACADEMIC
PRESENTING AND
PRESENTATIONS**

Research Presentations
Writing to Inform & Persuade

Describing Trends & Changes

Peter Levrai and Averil Bolster

《學術簡報及相關技巧》

Academic Presenting and Presentations

英語中心高級導師 Averil Bolster
Averil Bolster, senior instructor
from the ELC



以學術為本

APP 課程專門訓練學生如何做各種學術簡報。Levrai 及 Bolster 指出，訓練課程的教程及練習題適用全球各地，可用於傳播技能、英語教學及學術英語等課程。另外，APP 也涉及其他與學習相關的話題，例如研究和抄襲。

APP 課程強調高層次的學習目標，而非縝密的語言技巧。根據 Levrai 及 Bolster 的經驗，這部分通常是學生覺得最困難的。Levrai 又指出，APP 每個單元都會圍繞一個特定的簡報類型，解釋最有效的簡報方法，以及如何達到相關的學術要求。

Bolster 表示：「有條理地向觀眾口述值得關注的資訊，這樣才能達到學術簡報的目的。」

在新興領域建立專門技術

Bolster 及 Levrai 指出，學術簡報技巧長期以來得不到應有的重視，現時教授學術簡報技巧的「市場」仍然很小，但兩人均致力於在這個新興領域建立專

Academic-oriented Context

APP deals with the various presentation tasks that students may be expected to fulfil as part of their university studies. According to Levrai and Bolster, the instructional and practice material is suitable for an international audience and may be used in a wide variety of contexts in the fields of communication skills, English language teaching, and English for academic purposes. The course also prepares students to cope with broader topics of interest in a study-oriented context, such as research and plagiarism.

The course content emphasises achievement of higher-level tasks rather than focusing merely on discrete language skills, as their teaching experience reveals that this is the area most students find especially difficult. Levrai notes that each unit of APP focuses on a different presentation genre, building the students' awareness of how to present effectively, as well as meeting the specific requirements of an academic environment.

'It's all about the skills, or expertise, of exhibiting noteworthy information in a well-organised manner orally that meet the common set of expectations for academic presentations,' Bolster says.

A New Field to Build Expertise

Bolster and Levrai are both determined to build expertise in an arena which is currently only a 'small market', and therefore has not received the attention they feel that it deserves. 'Most of the textbooks are too focused on exam preparations, language learning, building

門技術。Bolster 表示：「大部分教科書偏重應試準備、語言學習、生字或寫作，很少觸及口述簡報。只有少數書籍教授這方面的技巧。因此，這個領域的發展潛力很大。」

口述學術簡報跟論文寫作同樣重要。Levrai 表示：「老師對口述簡報的要求是條理清晰、符合學術格式、附有正確索引、沒有邏輯謬誤。」

Levrai 認為，市面上的相關教材通常更側重演講技巧。他指出：「市面上的教材不足以滿足學生學習學術簡報的需要。教授寫作技巧的教材遠比教授學術簡報技巧的多。因此，我們希望作出一些改變。」

渴求新想法

創新技術不再是語言教學中可有可無的點綴品，而是變成其中的重要一環。運用創新的教學方法和科技可以讓學習過程變得更生動更有趣。Levrai 表示：「我們希望在現有的基礎上精益求精，將新想法轉化為教學輔助工具。」

vocabulary or writing, but not much about oral presentations,' says Bolster. 'There are only a handful of textbooks elaborating on this topic, so it's a growing area.'

Academic oral presentations are just as important as written essays or research papers. 'Your instructors or lecturers expect you to deliver a well-organised speech based on your works and that should be in an academic format, properly referenced and without any logical fallacies,' says Levrai.

As far as Levrai is concerned, the teaching materials currently available on the market focus more on public speaking than academic presentations. 'The resources are unlikely to facilitate the learning of skills and techniques a student needs to fulfil the requirements of presenting academic papers,' says Levrai. 'The materials regarding presentation skills are not as widespread as those on writing. Therefore, we try to make a difference.'

Stay Hungry for Ideas

Innovation is no longer at the periphery of language teaching; it is at its core. Integrating new teaching methods and technologies into classrooms is vital to enriching students' learning experience. 'We strive to look beyond what we do well today, searching for the brilliant ideas of tomorrow and putting them into practice,' says Levrai.



英語中心高級導師 Peter Levrai
Peter Levrai, senior instructor from the ELC



短片：澳大老師的創新教學
Video: The Dawn of Innovation for Learning

專業翻譯人： 把中西文化故事傳譯下去

Kept in Translation— Professional Translators as Cultural Mediators

文Text | 特約記者黎祖賢 Tony Lai (Stringer) 圖Photo | 何杰平 Jack Ho

你好、Hello、Olá，要精通多國語言並不是一件易事，可想而知，將一種語言的精粹轉化成另一種語言的難度就更大。澳門大學人文學院英文系及葡文系一直致力為培育高質素的中英與中葡翻譯人才，推動澳門經濟發展及向外推廣中國文化。

Mastering a foreign language is not easy. Learning how to translate between two languages is even more difficult. Training high-quality translators who can competently perform their role as cultural mediators is harder still. The University of Macau's Departments of English and Portuguese are committed to achieving just that through their well-designed master's degree programmes in translation studies.



培育高質素中英中葡翻譯人才

人文學院的翻譯碩士學位課程創辦於2007年，含（漢/英、漢/葡）兩組工作語言，每年招收40名學生，一半為本地生。該課程建立後，英文系及葡文系的教授們一直致力為本澳及大中華其他地區培育高質素的中英與中葡翻譯人才，推動澳門經濟發展及向外推廣中國文化。

張美芳教授是該翻譯碩士課程的主任，也是課程創辦人之一。張教授介紹，「我們的碩士課程學制兩年，理論與實踐並重，有兩組工作語言，甚具獨特性，因此吸引較多本地生和非本地生就讀。本地生中的大部分人就職於政府部門，工作範疇涉及到翻譯。通過兩年的學習，他們對其工作語言和文化有更深入的瞭解，提高了獨立思考、分析及創造的能力，並能更熟練地運用各種翻譯策略及技術，以處理實際的翻譯問題。可以說，我們的畢業生逐漸成為翻譯市場新一代的筆譯及口譯員。」



張美芳教授
Prof Zhang Meifang

Nurturing High-calibre Translators and Interpreters

The master's degree programmes in translation studies, offered by Faculty of Arts and Humanities, were founded in 2007. The programmes cover two pairs of languages, Chinese and English, and Chinese and Portuguese. Every year, the two programmes collectively admit 40 students, half of whom are from Macao. Since the founding of the programmes, the two departments have produced many high-calibre translators and interpreters for Macao and for other areas of Greater China.

‘These are two-year programmes. What makes them so unique is that they combine theories and practice and cover two pairs of working languages.’ says Prof Zhang Meifang, coordinator and co-founder of the programmes. ‘So they attract many local applicants as well as non-locals. Most of the local applicants work in governmental institutions, and translation is often part of their job.’ After two years of training, the students will be able to gain a better understanding of the working languages they use and the cultures of Chinese-, English- or Portuguese-speaking countries. They will also be more skilful at using the various translation strategies and technologies to deal with translation problems in their day-to-day work. Their independent thinking, analytical, and creative skills will improve as well. ‘You could say that we are training a new generation of translators and interpreters for the market,’ says Prof Zhang.

Better Facilities and Opportunities

Both programmes contain four compulsory courses, namely Comparative Language Studies for Translation, Theoretical Concepts of Translation Studies, Research Design and Writing, and Translation Technology. In addition to these compulsory courses, students can choose from a variety of elective courses, such as Interpreting, Audiovisual Translation, Translating for the Media, Translation for Administration and Commerce, and Literary Translation.

Translation and interpreting courses offered by the two departments are becoming increasingly popular with students, driven by growing demand for professional translators and interpreters to cope with the influx of international visitors, conferences, and exhibitions. Dr Victoria Lei from the English department is one of the faculty members that teach interpreting courses. A well-known Chinese/English interpreter in Macao, Dr Lei has worked for various press conferences and other important events of the Macao SAR government, including interpreting for the SAR government during President Xi Jinping’s visit to Macao in 2014. In Dr Lei’s experience, it usually takes four to six years of on-the-job training for a master’s degree graduate to become a good interpreter. Luckily, increased resources and improved training methods have shortened the training period.



李麗青博士
Dr Victoria Lei

軟硬體提升學生能力

翻譯碩士學位課程共設立四門必修課：語言對比研究、翻譯理論與技巧、論文設計與寫作、翻譯技術。另外學生可根據自己的興趣選修各種專題翻譯，例如口譯、影視翻譯、媒體翻譯、行政管理及商務翻譯、文學翻譯、翻譯工作坊等。

隨著近年澳門經濟蓬勃發展，不少大型綜合項目相繼落成，吸引了來自世界各地的旅客到訪，越來越多的大型國際性會議展覽亦落戶澳門，對中英筆譯及口譯人才求賢若渴，因此除筆譯課外，口譯課也逐漸成為熱選課。英文系李麗青博士是其中一位口譯導師，亦是澳門出名的中英同聲傳譯員，曾參與大大小小記者會及官方活動，在2014年國家主席習近平訪澳期間亦擔任官方口譯員。李博士表示，要成為一位高質素的口譯員，在碩士課程畢業後，一

Another selling point of the programme is the compulsory course in translation technology, taught by Dr Hari Venkatesan, another experienced interpreter and language expert, who also teaches interpreting classes to master's students. The course in translation technology introduces students to the MT (Machine Translation) system and the TM (Translation Memory) system. It also teaches students how to use the internet and SDL Trados, a computer-assisted translation software suite, to improve the quality and speed of translation. In order to create a better environment for students to practice interpreting, after relocating to the new campus, the university established an interpreting training lab. 'In addition to the improved facilities, the various conferences and lectures held on the campus often require simultaneous interpreting between the Chinese and English languages, which provides excellent opportunities for students to practice their interpreting skills,' says Prof Zhang. 'Our two interpreting instructors also provide many opportunities for students to practice off the campus.'

般還需要四至六年時間累積實踐經驗，才能達到比較專業的水準；但近年來澳大課程在資源及培訓方式上不斷作出調整，現已縮短了學生的成長週期。

翻譯技術也是該碩士課程的一個賣點，使用尖端科學技術並由資深的師資隊伍負責教授，讓同學有機會接觸翻譯及傳譯多種專業領域。翻譯技術是一門必修課，由資深口譯、語言及技術專家 Hari Venkatesen 任教，讓學生瞭解機器翻譯（MT）和翻譯記憶庫（TM）兩種系統，並利用翻譯輔助應用軟件 SDL Trados 及互聯網以提高翻譯質量與速度。Venkatesen 博士同時也教授研究生口譯課程。澳大遷入新校園後，亦設立了同聲傳譯訓練室，為學生提供更好的練習場所。除了硬體配套，張教授指出，澳大舉辦的不同類型會議及主題講座，甚至校內學術委員會等會議，經常需要中英同聲傳譯服務，正好為學生提供實戰機會。該系兩位專門培訓口譯的導師，亦不時給予學生機會到校外實踐練習。

艱苦練習有助長遠發展

跟海峽兩岸暨港澳地區的中英口譯學生比較，李麗青博士覺得澳大學生的質素絕不輸蝕，其學生早前在第五屆全國口譯大賽中取得佳績就是最好的證明。該比賽是國內級別最高、影響力最大、業界最為關注的翻譯賽事，今屆比賽吸引了全國439所高校派出1,814名選手參賽。英文系語言學博士生楊嫻嫻奪得交替傳譯團體賽冠軍及個人賽優秀獎，翻譯碩士課程學生張小平也奪得同聲傳譯賽銀牌，李博士則獲大會頒發「優秀指導教師獎」。

張小平坦言，為準備參加全國比賽，每天日以繼夜在訓練室渡過多個月，「精神接近崩潰」，但要在口譯技巧上取得進步，唯一的辦法是找出自己的錯誤並加以改進，日常的艱辛訓練對其成長路上有很大幫助。

事實上，翻譯研究碩士課程的學生在全國、地區和海峽兩岸的口譯比賽中獲得過很多其他獎項。例如，喬靚瑜在第二屆中譯盃口譯大賽榮獲二等獎。周潔儀和張小平在第六屆海峽兩岸口譯大賽中獲得三等獎。錢橋在第13屆全澳英語演講大賽暨第20屆“21世紀杯”全國英語演講大賽澳門分區賽中奪得一等獎。

Intensive Interpreting Training

Dr Lei believes that UM students can hold their own when competing with their counterparts from mainland China, Hong Kong, Taiwan, and Macao, as evidenced by the good results at the Fifth All China Interpreting Contest. The All China Interpreting Contest is the most influential interpreting competition in China. It is also a competition at the highest level that attracts significant attention from both veteran and up-and-coming interpreters. This year, 1,814 students from 439 higher education institutions in China participated in the competition. Yang Shanshan, a doctoral student of linguistics from the English department, won the championship in the group category of consecutive interpreting, as the leader of a team of students from Hong Kong and Macao. She also received an Excellence Award. Zhang Xiaoping, a master's student of translation studies from the same department, won a second prize in the simultaneous interpreting section of the competition. Their instructor Dr Lei received a Distinguished Teacher Award.

To prepare for this national competition, Zhang Xiaoping went through intensive training for several months. 'Sometimes I felt like I was on the verge of a nervous breakdown,' she says. 'But the only way to get better in interpreting is to identify your mistakes and correct them. The intensive training goes a long way towards helping me grow as an interpreter.'



左起：張小平、李麗青博士、楊嫻嫻
From left: Zhang Xiaoping, Dr Victoria Lei, and Yang Shanshan



左起：博士生楊姍姍、李德鳳教授、李麗青博士、碩士生張小平
 From left: Doctoral student Yang Shanshan, Prof Li Defeng, Dr Victoria Lei, and master's student Zhang Xiaoping

卓越師資科研教學相結合

為了更清晰地理解翻譯中的認知問題及至改善教學方法，人文學院於2014年底成立了翻譯傳譯與認知研究中心，邀請了前英國倫敦大學翻譯教授李德鳳出任該中心主任，探索翻譯員的大腦如何運作，以便瞭解不同學生的特質，並定下針對性的培訓方法。李教授解釋：「當口譯員聽到澳門大學，他們可以將這個詞語說成 University of Macau、Macao University 或 Aomen University，我們的研究就是探究大腦如何在當下作出抉擇。」

李教授從事翻譯教學研究工作多年，先後在香港中文大學、南京師範大學及山東大學任教翻譯課程，他指出澳大翻譯課程有三大特點：其一是積極回應市場需求及本澳經濟發展需要；其二是結合課堂理論及實踐經驗；最後是以科研成果配合教學方法。澳大另一優勝之處是其師資團隊擁有較多的實戰經驗，這對學生尤其重要，特別是傳授臨場應變能力等技巧。

In fact, students from the MA in Translation Studies programme have won many other prizes at national, regional, and cross-strait interpreting competitions. For example, Stacey Qiao Liangyu won a second prize at the All China Interpreting Contest 2012; Anita Chao and Zhang Xiaoping won a third prize at the Sixth Cross-Strait Interpreting Contest; Ted Qian Qiao won the first prize at the 13th Macao-wide English Speech Contest and the 20th '21st Century Cup' National English Speaking Competition Macao Regional Contest.

Advantages of the Programmes

In late 2014, the Faculty of Arts and Humanities established the Centre for Studies of Translation, Interpreting, and Cognition, in order to better understand the cognitive process of translation so that teaching methods can be improved scientifically. Prof Li Defeng, formerly a professor of translation studies at the University of London and currently a professor in the English department at UM, was appointed the director of the centre. One of main the tasks of the centre is to explore how the brain of a translator/interpreter works in the process of translating/interpreting. Prof Li hopes that by understanding the different

把握豐富資源擴闊文化視野

除了發展為世界旅遊休閒中心，中央政府於國家十二五規劃亦明確澳門的定位為中國與葡語國家商貿服務平台，因此本澳近年需要大量的中葡翻譯人才。今年九月新上任的澳大葡文系主任姚京明副教授表示：「作為培養中葡雙語翻譯人才的平台，這裡有很多葡萄牙人、葡文電視台、電台及報章，整個語言環境十分良好，我們的課程將更好地利用這些優厚的資源。」

現時葡文系學士課程主要為學生打好葡語基礎，而葡漢翻譯碩士課程則讓學生進一步認識中葡翻譯理論及技巧。該碩士課程學生李曉彤表示，自小便喜歡學習外語，中學時曾修讀兩年葡語，大學則在台灣主修英語，但每逢暑期回來澳門，都會把握機會增進葡語知識，曾經參加澳大葡萄牙語暑期課程及澳門特區政府高等教育輔助辦公室主辦的「葡語達

cognitive processes of different translators/interpreters, tailor-made training methods can be developed to achieve optimum outcomes. 'For example, when an interpreter hears the name of the University of Macau in Chinese, they could translate it into "the University of Macau", "Macao University", or "Aomen University". We want to know how the brain makes that split-second decision,' explains Prof Li.

Having worked at the Chinese University of Hong Kong, Nanjing Normal University, Shandong University, and the University of London, as a professor and researcher in translation studies for many years, Prof Li notes that the translation courses offered by UM have three distinctive characteristics. 'First, our courses are designed to meet market demand and to support the economic growth of Macao,' he says. 'Secondly, our courses give students both theoretical knowledge and practical experience. And thirdly, we use the insight gained from scientific research to improve our teaching methods.' Another advantage of the courses is that the instructors possess a wealth of practical experience, which allows them to pass on critical skills, such as how to think on one's feet when doing interpreting, to the students.



張小平為太湖世界文化論壇第四屆年會
提供傳譯工作。
Zhang Xiaoping works as an interpreter at the Fourth
World Cultural Forum held in Taihu



李曉彤
Jovita Li



姚京明副教授：「文化視野對學習葡語及中葡翻譯十分重要。」

Prof Yao Jingming stresses the importance of cross-cultural literacy in learning Portuguese and translation skills

人——里斯本夏令營活動」。除了對語言的興趣，她選擇進修中葡翻譯是因為看好澳門未來的市場發展，「不論是政府部門或是法律界都需要大量的中葡翻譯人才。」這項技能亦有助她現時在酒店業的工作，向世界各地旅客推介澳門及進行文化交流。

出版過多部中葡文詩集和十餘部翻譯作品，以及曾出任澳門文化局副局長的姚京明副教授強調，文化視野對學習葡語及中葡翻譯十分重要，「因為語言是一個文化載體，如果你對文化一無所知，你學的语言也只是皮毛。」故此，葡文系從

Abundant Resources

In its pursuit to become a world tourism and leisure hub and a business service hub between China and Portuguese-speaking countries, a goal that has been included in the Chinese government's 12th Five-Year Plan, the city is hungrier than ever for high-calibre translators and interpreters who are proficient in both Chinese and Portuguese. 'Macao has a very good language learning environment,' says Prof Yao Jingming, who assumed office as the head of the Department of Portuguese in September 2016. 'There are a lot of Portuguese people, TV and radio programmes, and newspapers here. Our courses will make good use of these resources.'

The bachelor's degree programme currently offered by the Portuguese department aims to give students a grounding in the Portuguese language, while the master's degree programme introduces students to translation theories and practical skills. Jovita Li, a master's student from the Portuguese department, has enjoyed learning foreign languages since her childhood. She studied Portuguese for two years in middle school. After she went to college in Taiwan, she majored in English. But every summer holiday, she would return to Macao to polish her Portuguese. She has participated in the Portuguese summer course offered by UM and a Portuguese summer camp organised by the Tertiary Education Services Office of the Macao SAR. Apart from her strong interest in language, another reason she chose to study Chinese/Portuguese translation studies at UM is because she is confident about the future of Macao and foresees great demand for translators and interpreters. 'Both the government and the legal sector need a large number of translators and interpreters,' she says. 'The language skills also help my current job in the hospitality industry, where I need to promote Macao and its culture to visitors from around the world.'

The former deputy director of the Cultural Affairs Bureau and a prolific poetry writer and translator, Prof Yao Jinming stresses the importance of cross-cultural literacy in learning the Portuguese language and translation skills. 'Language is the carrier of culture. If you know nothing about the culture, then you are merely scratching the surface of the language,' he says. For this reason, earlier this year, the Portuguese department selected five first-year students for a one-year exchange programme at Beijing Foreign Studies University (BFSU). The department hopes that BFSU's experience in training language professionals and the healthy competition with the local students will broaden the students' horizons. Prof Yao also notes that in view of the growing importance of training competent translators for society, the Portuguese department will study how to improve the current translation courses.

2016／2017學年開始，挑選五名大一學生前往北京外國語大學進行為期一年的交流，憑藉北外在培育外語人才的豐富經驗，與當地學生作良性競爭，擴闊他們的視野。另外，他指出葡文系也意識到翻譯課程對社會日益增長的重要性，所以未來將研究如何提高現有翻譯課程的質量。

知識薪火相傳

隨著政府致力打造澳門為中葡平台，以及中國內地與葡語國家日益頻繁的經貿往來，姚副教授稱，中葡翻譯學生有很好的就業前景，勉勵學生「對自己有要求，利用好澳門的優勢去多聽多講葡語，提高自身的葡語水準。」

張美芳教授認同，未來不論是澳門或大中華其他地區，對筆譯及口譯人才的需求將不斷加大，

「以往中國著重翻譯外國文學及社會文獻來向西方學習，但現在隨著中國成為全球第二大經濟體，強調要說好中國故事，把自己的文化故事翻譯出去，所以翻譯人才缺口將會很大。」

不僅要成為出色的中英口譯員，張小平同學亦深受李麗青博士的啟發，立志要成為口譯導師。

「李博士曾經跟我們說，當時候到了，我們要記得將自己的經驗及知識傳授予下一代，我認為這是成為口譯員的真正意義。」

Passing Down Knowledge to the Next Generation

The government's plan to develop Macao into a business service hub between China and Portuguese-speaking countries, and the increasing economic collaboration between mainland China and Lusophone countries, combine to promise rosy employment prospects for graduates who are proficient in Chinese and Portuguese. 'I hope our students set high standards for themselves, and take advantage of the good language learning environment in Macao to improve their Portuguese skills,' says Prof Yao.

His feelings are echoed by Prof Zhang Meifang from the English department, who also foresees growing demand for professional translators and interpreters in the future, both in Macao and in the rest of Greater China. 'In the past, China mainly focused on translating foreign literature or books in the field of social sciences, from foreign languages into Chinese, with the hope of learning from the West. But now with China becoming the second largest economy in the world, China wants to tell its own story to the outside world by translating its history and culture into foreign languages,' she says. 'So there is a great gap between demand and supply.'

This is a gap students like Zhang Xiaoping are determined to fill. Inspired by Dr Victoria Lei's example, Zhang Xiaoping has made up her mind to become a good interpreter and an interpreting instructor. 'Dr Lei once told us, when the right time comes, we must remember to pass down our experience and knowledge to the next generation, and I think this is the most meaningful contribution an interpreter can make,' she says.



短片：一人一個翻譯故事

Video: The Stories of Professional Translators



短片：澳大培育翻譯人才助澳門建構中葡橋樑

Video: UM Trains Professional Translators to Promote Sino-Portugal Communication

湯子康教授： 把澳門納米科技研究引向世界

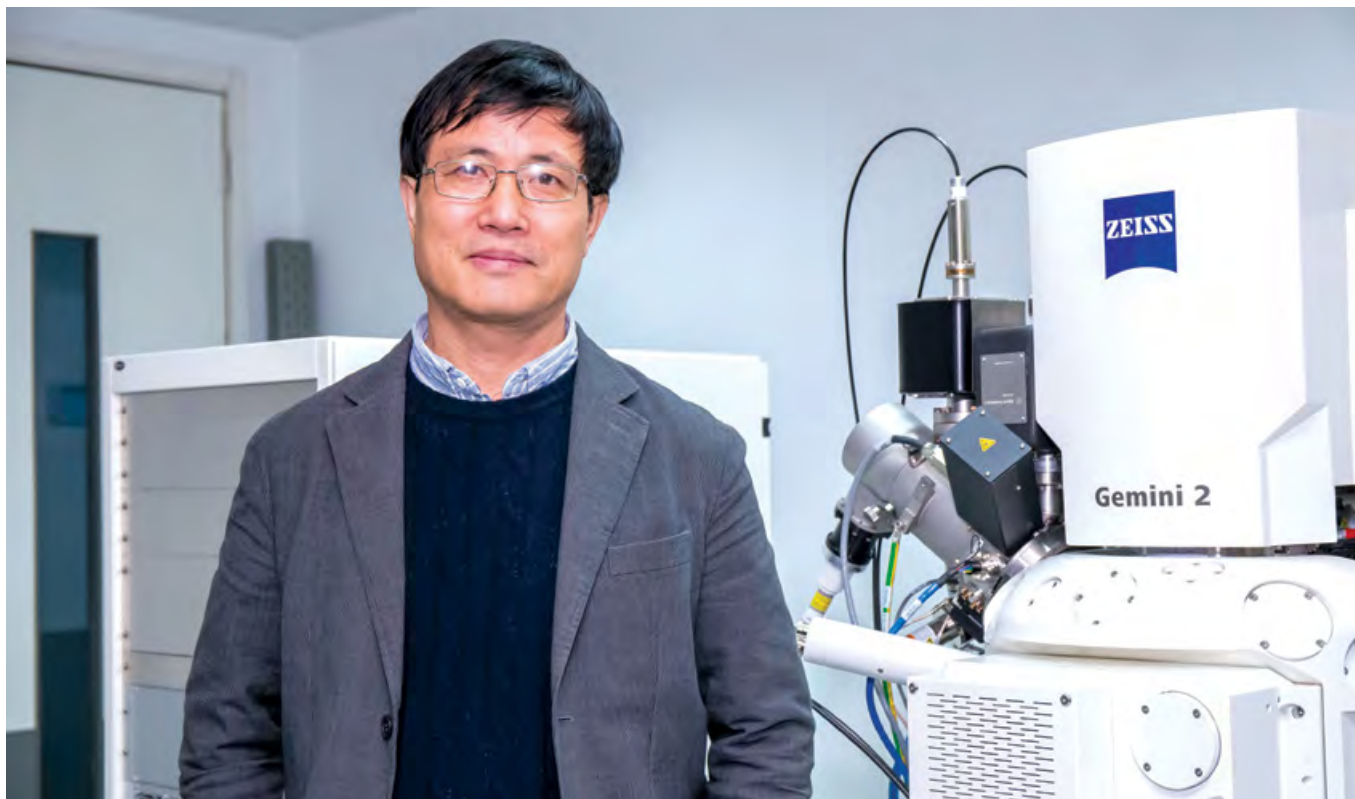
Prof Tang Zikang:

'I hope to let the world know there is cutting-edge nanotechnology research in Macao'

文Text | 張愛華 Ella Cheong 圖Photo | 譚金榮、部分由受訪者提供 Eric Tam, with some provided by the interviewees

納米科技產品在日常生活上的應用越來越廣泛，納米產品的問世不僅帶來了巨大的經濟效益，改善人們的生活質素，更把人們的視野帶進了全新的納米世界。國際知名納米光電子材料領域領軍人物湯子康教授2016年1月獲聘為澳門大學應用物理及材料工程研究所（以下簡稱研究所）所長，對於研究所的定位，他說：「研究所的創立提供了一個前沿科學和技術應用研究的平台，希望能把散落在世界各地的澳門優秀理科人才吸引回到澳門，也讓世界對澳門有一個新的認識。」

Nanotechnology is being used more and more in everyday products. Nano-products not only create enormous economic benefits and improve people's quality of life, but have also generated widespread interest in the fascinating nanoscale world. Prof Tang Zikang, a world-renowned expert in the field of nano-optoelectronic materials, joined the University of Macau in January 2016, as the director of the Institute of Applied Physics and Materials Engineering (IAPME). 'The institute provides a platform for cutting-edge applied research,' says Prof Tang. 'There are many outstanding scientists from Macao who are now scattered all over the world, and I hope we can attract these people so that the world may gain a new understanding of Macao.'



湯子康教授冀讓全世界知道澳門也有尖端的科學研究

Prof Tang Zikang hopes to let the world know there is cutting-edge scientific research in Macao

由零開始

湯子康教授上任以來，一直很忙碌，研究所一切由零開始，從籌建實驗室、購買設備儀器到全球招聘專家學者，他都親力親為。「在籌備過程中遇到很多之前沒想像到的困難。許多仍在沿用的80年代之前制定的規章制度已經明顯無法適應現代科學技術快速變化的步伐，所以很多事情進展得非常緩慢。」

研究所的實驗室在熱火朝天地籌建中。跟湯教授訪問的地點位於科研大樓N23的實驗室，只擺放了數台實驗儀器。「它們都是最尖端的儀器設備，比如這台聚焦離子束（FIB）設備功能非常強大。不但具備普通的掃描電子顯微鏡（SEM）功能，能用離子束流對材料表面進行原子級別的剝離和澱積，從而對材料進行納米級的形貌加工，還能對材料的元素進行實時分析。」湯教授說。

研究所現有10餘位科研和教學人員，分別來自美國、歐洲、日本、內地、香港等國家和地區。各人的研究背景有所不同，有些物理較強，有些化學較強，湯教授刻意聘請不同領域不同背景的專家學者組成研究所的團隊，他是想通過這樣的組隊方式激發更多創造性的研究。



研究所擁有最尖端的儀器設備

The institute boasts state-of-the-art equipment

Starting From Scratch

Since he became the director of the IAPME, Prof Tang has been personally involved in every aspect of the unit, from preparing to establish a laboratory, to purchasing equipment, to recruiting international scholars. 'We've encountered many unforeseen difficulties in the process,' he says. 'Many of the university rules and regulations were created in the 1980s, and they are clearly outdated in the face of rapidly advancing science and technology. As a result, many things are progressing very slowly.'



研究所現有10餘位來自世界各地的科研和教學人員，當中包括副校長（學生事務）程海東教授（左7）

Currently there are more than ten research and teaching staff in the institute, including Vice Rector (Students Affairs) Prof Haydn Chen (7th from left)

納米碳管研究開拓者之一，著名物理學家麻省理工大學 M. Dresselhaus 教授夫婦參觀湯子康教授的實驗室（香港科技大學）

Prof Mildred Dresselhaus from the Massachusetts Institute of Technology, a renowned physicist and one of the pioneers in carbon nanotube research, and her husband, visit Prof Tang Zikang's laboratory at the Hong Kong University of Science and Technology



初生之犢

大學畢業後，對物理有強烈興趣的湯子康考取了中國科學院長春光學精密機械與物理研究所的研究生，畢業後赴日本東北大學繼續深造，並在1992年取得了日本東北大學的理學博士學位。1994年，香港科技大學物理系面向全球招聘教師，湯子康教授受聘後赴該校開始從事納米技術的專項研究，一直在香港工作了21年。

湯教授讀大學的那個年代有一句話流傳甚廣：「學好數理化，走遍天下都不怕。」當年很多年輕人紛紛湧向物理等理工科專業，但他選擇物理卻是出於自己對物理的濃厚興趣。「小時候我對各種各樣的自然界現象有一種天生的好奇：碳為甚麼是黑的？雪為甚麼是白的？天為甚麼是藍的？」大學畢業後，他有機會對材料的特性和功能進行專門的研究，發現一些材料在變成納米尺度後，它的特性與塊狀體材料相比會非常不同，甚至會出現一些全新的功能。由於這些新特性新功能可以用來開發全新用途的新器件，吸引湯教授在研究上不斷探索。

1998年，湯教授帶著納米碳管研究的新成果參加了美國物理學界知名的物理學會年會，並在會上發表論文。回憶當時情景他至今仍歷歷在目，「會場主持人以及聽眾席上坐著的是當時納米碳管領域最權

The institute's laboratory is currently under construction. Our interview took place in a laboratory in the Research Building N23. 'These are all state-of-the-art devices,' says Prof Tang. 'Take this focused ion beam (FIB) system for example. It is very powerful. Not only can it serve as a scanning electron microscope to perform atomic-scale ablation and deposition of materials; it can also conduct real-time analysis of the elements of materials.'

Prof Tang recruits staff with different academic backgrounds, in an effort to inspire more innovative research. Currently there are more than ten teaching and research staff at IAPME, from different countries and regions, including the United States, Europe, Japan, Hong Kong and mainland China.

Fearless Rookie

Prof Tang has had a strong interest in physics since he was a child. After graduating from college, Prof Tang went on to pursue further studies, first at the Changchun Institute of Optics, Fine Mechanics and Physics, Chinese Academy of Sciences, and later at Tohoku University in Japan. In 1992, he received a doctoral degree from Tohoku University. In 1994, the Department of Physics at the Hong Kong University of Science and Technology (HKUST) began to recruit faculty members from abroad, and Tang joined the institution. Over the past 21 years at HKUST, he mainly focused on nanotechnology research.

In Prof Tang's college days, a popular piece of advice for students said, 'Learn mathematics, physics, and chemistry well, and you will never have to worry about finding a good job no matter where you go.' Indeed, many of Tang's contemporaries were drawn to subjects

威的大人物。當時學術界有一種共識，即單壁納米碳管最小只能做到直徑0.7納米。但我們宣稱我們的單壁納米碳管直徑只有0.5nm（後來證實直徑實際上只有0.4nm）。我在講台上還未宣讀完論文，下面已經開始一片質疑：這麼小的單壁納米碳管絕對不可能存在。我當時很尷尬，但還是硬著頭皮把論文繼續宣讀完畢。」

湯教授原來在香港科技大學的辦公室裡貼了一張愛因斯坦的照片，「愛因斯坦是很值得崇拜的一個人，他剛發表相對論的時候，很少人能理解相對論奧妙，但是後來很多實驗證明，相對論是正確的。」

發現劃時代新材料

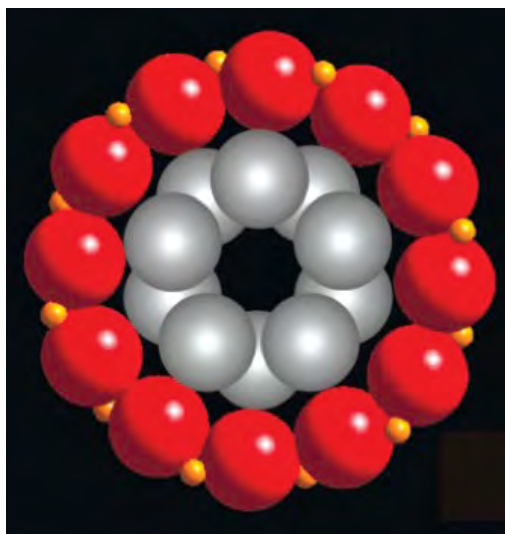
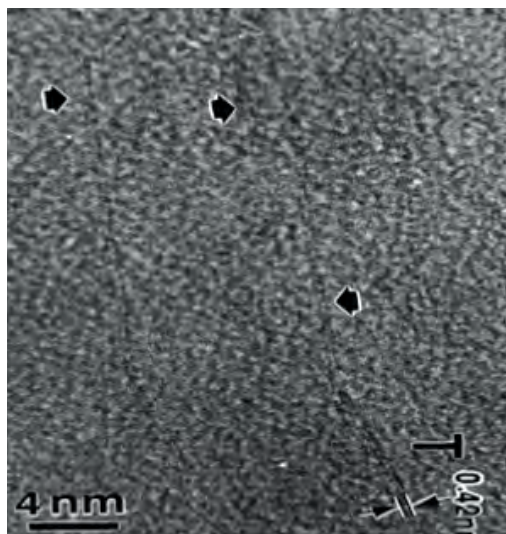
2000年，湯子康教授成功研製出世界最細單壁納米碳管（直徑0.4納米），並發現其獨特的一維超導效應，此成果被譽為「劃時代的革命性材料」，震驚全球，後被列為2001年物理學界11項最主要成就之一。

從事物理材料研究30多年，湯教授最深的體會是：「物理是所有理工學科應用的基礎。現在你能看到的幾乎所有的材料與器件都跟物理有關，比如廣泛應用在電視機、手機、計算機等芯片裡的晶體管，就是半導體納米材料的最典型應用。科學研究人員與工程技術研究人員有時關注的角度會很不一樣。」

like maths and physics because of practical considerations of career prospects. But Prof Tang chose to study physics purely out of a genuine interest. 'When I was a child, I felt an innate sense of curiosity about the various natural phenomena,' he says. 'Why is coal black? Why is the snow white? And why is the sky blue? I would wonder about these questions.' After graduating from college, he had the opportunity to study the properties and functions of materials. He discovered that nano-scale materials sometimes have radically different properties compared to the same materials at bulk scale; sometimes completely new functions emerge at nano-scale. This phenomenon begs the question: How can these new properties and functions that emerge at nano-scale be applied to develop new devices?

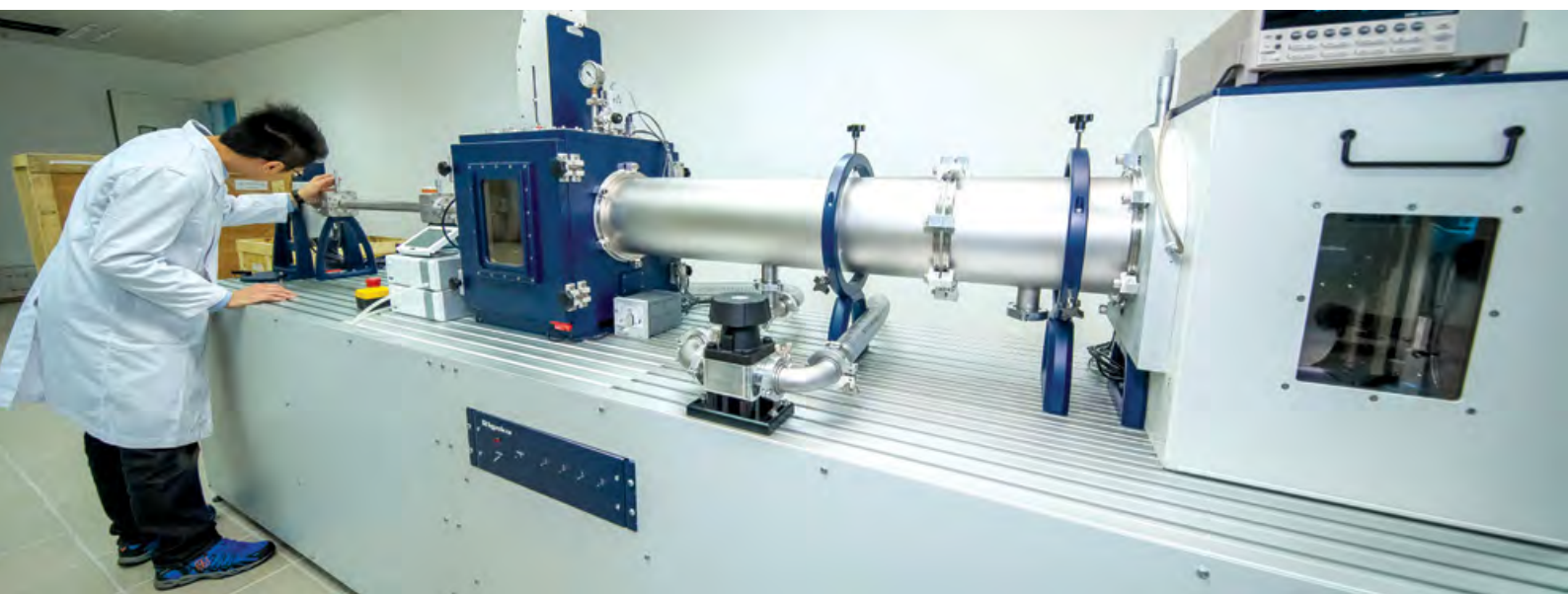
In 1998, Prof Tang attended the annual meeting of the American Physical Society and presented a paper on his newly developed carbon nanotubes. 'The chair of the meeting and those in the audience were all leading authorities on carbon nanotubes,' he recalls. 'The smallest single-walled carbon nanotubes (SWNT) at the time had a diameter of 0.7 nanometers, and the general consensus in the scientific community was that it was impossible to develop SWNTs with a diameter smaller than that. But we announced that our SWNTs had a diameter of only 0.5 nanometers [which later measurement showed to be only 0.4nm]. While I was still giving my presentation at the podium, I heard voices of doubts rippling through the audience. People were saying, producing an SWNT with a diameter of less than 0.7nm was impossible. I felt very embarrassed, but I had to bite the bullet and finish my presentation.'

Prof Tang used to have a picture of Albert Einstein hanging on the wall of his office at HKUST. In the face of doubts, he would use Einstein's example to motivate himself. 'Einstein is my hero,' he says. 'When he first published his theory of relativity, few people could appreciate its profound beauty, but later the theory was experimentally verified.'



世界最細單壁納米碳管（直徑0.4納米）

The world's smallest single-walled carbon nanotubes (with a diameter of 0.4nm)



小角散射X射線衍射儀

A small-angle x-ray scattering system

科研人員更多地著重於發現新現象，開發新功能，合成新材料。而發現的這些新功能新現象在當時的技術條件下不一定能馬上付諸實際應用。

湯教授舉例指出，上世紀30、40年代根據量子力學理論發現了一個被稱之為「量子糾纏的重要現象」，但過了半個世紀，科學家一直都不知道如何把量子糾纏現象與實際應用相聯繫。直到最近幾年，隨著納米加工技術的突破，量子糾纏現象的研究才獲得了突飛猛進的發展，現已經在量子計算機，量子保密通訊，甚至生物信息傳遞等領域獲得廣泛的應用。他強調說：「科學與技術的研究是相輔相成的，科研的成果能改變人們的生活方式，給人們帶來生活上的便利，同樣重要的是，科學研究的態度和科學觀能改變人們的思維方式，提升整個社會的科學素養。」

湯教授涉足的科研領域頗為廣泛。除了破世界紀錄最細單壁納米碳管的研究，另一項有關氧化鋅的研究也引起了世界矚目。1998年湯教授首次在納米結構的氧化鋅半導體薄膜中觀測到了室溫紫外激光發射。這一發現發表後立即引起了世界同行們的極大興趣，無意之間觸發了全球氧化鋅研究的熱潮，對氧化物半導體在紫外激光二極管的實際應用研究中產生了深遠的影響。湯教授1998年發表在美國《應用物理快報》的開拓性論文迄

Discovering Epoch-making New Material

In 2000, Prof Tang successfully developed the world's smallest SWNTs with a diameter of 0.4nm, and observed novel one-dimensional superconductivity in these ultra-small SWNTs, causing a stir in the global scientific community. His discovery was hailed as one of the 11 most important achievements in physics in 2001.

As a veteran expert on materials research, Prof Tang considers physics to be the foundation of all sciences. 'Almost all the materials and devices you see today have to do with physics,' he says. 'For example, the transistors in the chips in the TV sets, mobile phones and computers are a typical application of semiconductor nanomaterials. Unlike engineers and technicians, scientists focus more on making new discoveries and developing new materials. But sometimes, because of technological constraints, new discoveries cannot be converted to practical applications right away.'

Prof Tang cites the physical phenomenon known as 'quantum entanglement' as an example. Quantum entanglement was discovered in the 1930s. For half a century after its discovery, scientists struggled to find practical applications. It wasn't until recent years, when new breakthroughs were achieved in nano-machining technology, that research on quantum entanglement was finally able to progress significantly. Now quantum entanglement has found applications in various fields, including quantum computing, secure quantum communication, and even biological information transfer. 'Scientific research is important because the results of scientific research can change our way of life and make our lives easier, but what's equally important is that a scientific mindset can change people's way of thinking, which in turn helps to improve the scientific literacy of the citizens,' says Prof Tang.

今已經被引用超過2100次，2012年這篇開創性論文被《應用物理快報》創刊50週年紀念刊收錄為過去50年被引用率最高的前50篇論文之一。

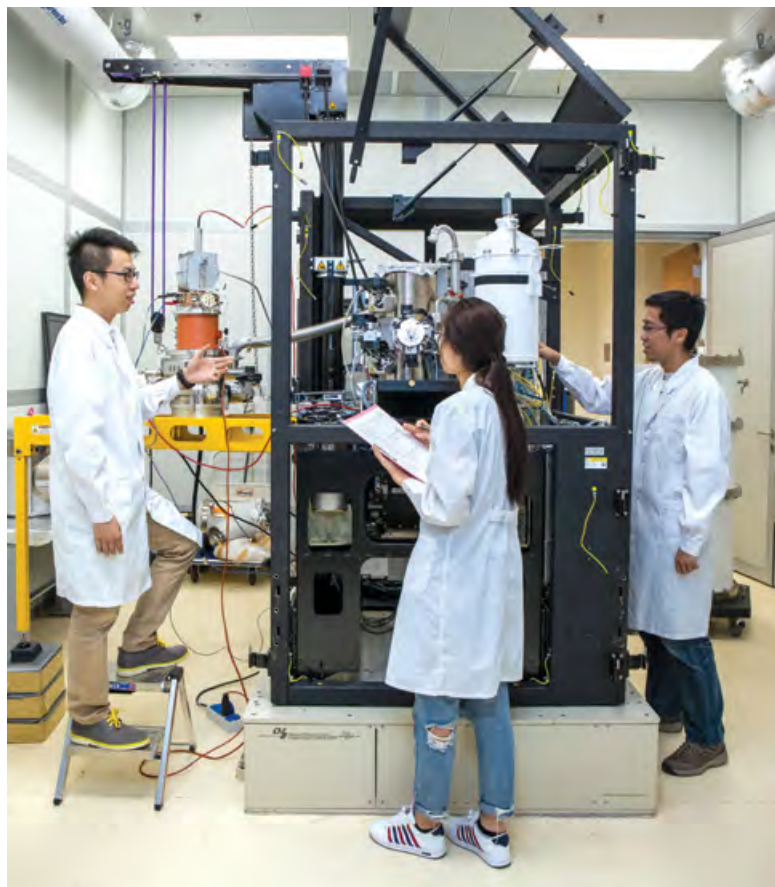
優先研究應用性材料

應用物理及材料工程研究所這個名稱的背後隱含了澳門政府及社會大眾對澳門大學的期望和要求。帶著這使命，湯教授和團隊會優先進行一些跟澳門居民生活息息相關的應用性研究，例如有關新能源新材料領域的研究。「這樣就能對社會產生一些積極正面的影響，至於純物理的基礎研究，在做好應用研究的基礎上我們也會朝這方向去努力。」

Prof Tang's research interests cover a wide range of areas of physics. In addition to the world's smallest SWNTs, his research on zinc oxide has also attracted considerable attention worldwide. In 1998, Prof Tang discovered room-temperature ultraviolet laser emission from self-assembled zinc oxide (ZnO) microcrystallite thin films. The subsequent paper he published on the subject immediately generated significant interest from scientists around the world. The groundbreaking discovery not only ignited a worldwide interest in ZnO research, but also opened up a wide range of potential applications for ZnO semiconductors in UV laser diodes. The pioneering paper he published in 1998 in the *Applied Physics Letters* of the American Institute of Physics, has been cited more than 2,100 times. In 2012, the same paper was listed as one of the 50 most cited papers over the past 50 years in *Applied Physics Letters*.

Prioritising Research on Applied Materials

The IAPME will prioritise applied research that is of direct relevance to Macao residents, such as research on new energies and new materials. 'This way we can create some positive effects on society,' he says. 'We will also conduct basic research once we have attained satisfactory results in applied research.'



新添置的TALOS穿透式電子顯微鏡需花一個月進行組裝，TALOS能夠分辨尺寸小於1納米，即人體髮絲直徑1/100000倍特徵的穿透式電子顯微鏡。強大的功能不僅能夠研究新型材料的納米級結構，而且能夠研究原子級別非凡性質的機制。這對於新一代設備的設計和優化至關重要。例如：太陽能電池、超級電容器、儲氫等。

The new TALOS transmission electron microscope takes a month to assemble. The TALOS is a transmission electron microscope capable of resolving features of less than 1 nanometer, which is 1/100000 times the diameter of a strand of human hair. The powerful tool enables researchers to study not only the nanoscopic structures of novel materials but also the mechanisms of extraordinary properties at atomic scale. This is ultimately critical for the design and optimisation of the next-generation devices, such as solar cells, supercapacitor, and hydrogen storage.



短片：湯子康教授：從大學帶動社會 開拓不一樣的思維
Video: Tang: University Education, Catalyst for Sociocultural Change

授之以魚，更要授之以漁—— 專訪鄧景濱榮休教授

*Why Just Give Fish When You Can Teach
the Art of Fishing?*

***Interview with Emeritus Professor
Tang Keng Pan***

Text | 特約記者黎祖賢 Tony Lai (Stringer) 圖Photo | 譚金榮、張愛華，部分由受訪者提供 Eric Tam, Ella Cheong, with some provided by the interviewee

「學習之乎者也可以是很枯燥，亦可以是很生活化及簡單明瞭。」澳門大學中國語言文學系榮休教授鄧景濱如是說。在數十載的教學生涯中，他一直重視課堂設計，配合其研究成果，與學生教研相長；更重要的是不止令學生明白問題的答案，還掌握解決問題的方法。他也強調學術研究與社會實際相互結合，多年來不遺餘力推動粵語及澳門學研究。

Learning classical Chinese can be mind-numbingly boring. Or, it can be straightforward and fun, if you are a student of Tang Keng Pan, a professor emeritus from the Department of Chinese Language and Literature at the University of Macau (UM). By incorporating his latest research findings and interesting real-life examples into the classroom, Prof Tang turns an otherwise mundane learning experience into an educational treasure hunt, in which the students are not just spoon fed information, but are taught how to discover answers on their own.



熱愛教學研究著作豐碩

驅使鄧教授走上漢語研究及教學這條路的原因很簡單：對中華文化及文學的熱愛之情。走進他的辦公室，猶如進入浩瀚書海一樣，一本本書籍陳列在大型的書櫃內，沒有書櫃的角落也堆著「數座書山」。從古今中外的漢語書、鄧教授出版的多部著作，以至其學生發表的論文刊物都成為他的珍藏，部分藏書更是絕版書籍。言談間亦喜歡引經據典，從明代作家蒲松齡的寫作風格至澳門世遺景點媽祖廟詹項亭的用字語境，鄧教授均一一道出自己的見解。

他笑言，小時候的理科成績十分優異，本可選擇其他領域發展，但由始至終對文學抱有最大興趣，故此最後修讀中山大學中文系。於1967年畢業後，從事中文教學工作並繼續進修，然後輾轉加入澳大服務至今23年，視大學為第二個家。「是澳大把我從講師、助理教授、副教授、正教授、博士生導師一路培養，直至現在為榮休教授。」



鄧景濱教授最新出版的《語壇探新錄》（合著）
The latest book co-authored by Prof Tang Keng Pan

Passionate Teacher and Prolific Writer

Prof Tang's office is like a mini-library, with every corner chock-full of books. Among his treasured collection are ancient and contemporary Chinese books, his own published books, works published by his students, and out-of-print books. An avid reader and independent thinker, he has insightful views on just about any subject, from the writing style of the Ming dynasty writer Pu Songling to the meaning of the words on a stone memorial arch at A-Ma Temple, a UNESCO World Heritage site in Macao.

When he was young, Tang excelled at science subjects and could have pursued a science major in college. But because literature has always been his greatest passion, he chose instead to study at the Department of Chinese at Sun Yat-sen University. After graduating from the university in 1967, he worked as a Chinese teacher and pursued further studies simultaneously. Later, he joined UM. Having now worked at UM for 23 years, he considers the university to be his second home. 'I started here as a lecturer. Thanks to the trust and support of the university, I was promoted to assistant professor, associate professor, full professor, PhD supervisor, and now an emeritus professor,' he says.

Since joining UM, Prof Tang has published 32 books, some of which he co-authored with his students. These books cover a wide range of topics, including dialectology, philology, exegetics, phonology, writing, and Macaology. His books and papers have won numerous national and international prizes. In 2014, he received the first Research Contribution Award in Practical Writing from the Association of Chinese Practical Writing. In addition to being a prolific writer, he has also supervised 28 master's students and two doctoral students, including the first doctor of linguistics in the Chinese department. In 2012, he received the Medal of Merit-Culture from the Macao SAR government, in recognition of his outstanding contributions to Chinese teaching and research.

Competing with Established Scholars

Prof Tang likes to incorporate his own research findings and real-life examples he has collected from the various tourist attractions in Macao into his teaching. He also draws upon the latest developments in various disciplines and involves students in his research. He believes these strategies not only help to enhance the students' learning experience, but also improve their analytical skills.

'Of all the teaching strategies I've used, I believe involving students in my research has been the most productive,' he says. 'Every year, I take some students to national academic conferences, where they present papers alongside established scholars and win prizes.' So far

在澳大期間，鄧教授一共出版了32本著作，部分更是與學生合著，範圍涵蓋方言學、漢字學、訓詁學、音韻學、寫作學及澳門學，包括最新出版的《語壇探新錄》（合著）及《鄭觀應叢考》，其書籍及論文先後獲得多個全國及國際性學術獎項。他更於2014年獲中國應用寫作研究會頒發首屆「中國應用寫作研究貢獻獎」。鄧教授桃李滿門，指導及培養了28位澳大碩士生及兩位博士生，當中一位更是中文系首位語言學博士。為表揚他多年在中文教學及研究上的貢獻，澳門特區政府於2012年向鄧教授頒發文化功績勳章。

指導學生越級挑戰

多年來，鄧教授在學術研究方面取得卓越成績。他指出自己一直堅持學術研究四結合：結合教學內容，每當有新的研究成果便反饋到教學課程，讓學生瞭解；結合社會實際，部分研究與澳門的文學、文化和歷史相關，亦糾正了以往人們對澳門景點文物字詞內容的錯誤理解；結合學科前沿，與時並進，吸收各領域的最新知識及研究成果；結合學生同研，研究過程是最能提高學生分析力的方法，也能激發學生對學科的興趣。

「結合學生同研這點我覺得是最有成效，基本上每年都能夠帶領學生出去參加全國性的學術研討會，越級挑戰全國在相關領域的頂尖教授及副教授，並且能夠成功獲獎。」他至今指導澳大學生發表論文共52篇，其中5篇刊登在全國核心期刊，榮獲17項全國性學術獎項。

與全國學者同場競技「拗手瓜」，鄧教授認為澳門學生有其優秀之處，屢獲國內學者的認同。「第一選題出色，第二材料豐富，澳門學生不僅擅於搜集海峽兩岸暨港澳地區的資料，亦能搜尋外國資料去互相補充，第三澳門學生比較有批判性思維，不會先入為主，能夠以科學客觀態度，公正地分析研究材料，在求真的基礎上創新。」中國應用寫作研究會副秘書長張江艷亦曾在全國核心期刊《應用寫作》中高度讚揚鄧教授，表示其學生做研究能從原始材料入手、細處著眼、紮實規範，而鄧教授對學生後輩的獎掖扶助，是紮紮實實地做好了一個教授該做的工作，讓學生真正享受到了認真付出後獲得學界前輩認可的開心和自信。



鄧景濱教授教學今古結合，生動有趣，深受學生歡迎。
Prof Tang Keng Pan's class is very popular with students

his students have received 17 national academic prizes and published 52 papers, five of which were published in key national journals.

Prof Tang believes that UM students can hold their own when competing with established scholars from around the country. Indeed, they repeatedly earn praise at the conferences they attend. 'Our students stand out in three ways,' he says. 'First, the topics they select are excellent. Secondly, they aim for variety when collecting material; they collect material from different sources and in different languages. Thirdly, they think critically. They analyse the material they collected in a scientific and unbiased manner, without any pre-existing assumptions. In other words, they innovate on the basis of facts.' Zhang Jiangyan, deputy secretary general of the Association of Chinese Practical Writing, once wrote an article in *Practical Writing*, a key national journal, in which she highly praised Prof Tang and his students. Zhang said in the article that Prof Tang's students use raw data for their research, give sufficient attention to details, and conduct research in a meticulous and professional manner. She added that Prof Tang is the type of professor who would do everything within his ability to help students grow, and because of his dedication, his students have been able to gain the confidence and experience the joy that come from being recognised by established scholars.

Training Through Research Articles

Prof Tang stresses the importance of training students through research articles, because the process of writing and revising a research article can prepare them for the more serious thesis writing. Many students from his class derived their thesis topics from the research articles they wrote in their second or third year. In the process, devoting time and energy to revising the articles is the key.

指導學生以小論文打好基礎

鄧教授表示，傳授學生撰寫小論文技巧可為學生打好日後的研究基礎，讓他們懂得寫小論文的結構，然後不斷修改，很多中文系同學的學位論文也是從大二、大三時的小論文延伸發展出來。要從同輩間及全國學者中脫穎而出，關鍵還是學生投入的精力及時間。最近，他帶領學生楊馥嘉及吳思微出席於重慶舉行的全國應用寫作第21屆學術研討會，兩位學生分別獲得優秀論文二等獎和三等獎，而她們的作品分別修改了九次及八次。

每當個別同學在研討會中獲獎，亦可以在同儕間產生積極的推動作用。他稱，「一位老師時間精力有限，不能每一位學生都去參加全國性學術會議，所以我一直強調要在學生中培養榜樣，讓榜樣對其他學生產生影響，讓學生見到只要自己同樣地努力及付出，也能夠達到他們的境界。」

以人為本引入活水激發興趣

由上世紀至今，不少澳門的中學生、大學生及至研究生皆受過鄧教授的薰陶，而他的教學理念一直堅持「以學生為本，關愛扶掖學生」。他以教授古代

Recently, he attended a national academic conference on practical writing held in Chongqing with his students Yang Fujia and Ng Si Mei. The articles that earned Yang and Ng prizes had been revised nine and eight times, respectively.

Students like Yang and Ng who have received prizes at academic conferences can serve as role models to the other students. 'As a teacher, you only have so much time and energy. It's impossible to take every student to national academic conferences,' he says. 'So I always try to find student models to inspire the other students. I want them to know that as long as they work hard, they can get to the same place.'

Stimulating Interest with Real-life Examples

During his teaching career spanning several decades, Prof Tang has taught middle school students, college students, and graduate students. Regardless of the level of his students, he always follows a student-centred approach. 'Take teaching classical Chinese as an example,' he says. 'For those students who don't have a decent amount of knowledge about classical Chinese, if I start with texts from the most ancient times, they are bound to find learning difficult and boring. That's why it's important to start with the easy and well-known and then progress to the difficult and unknown.' He likes to collect real-life examples from the memorial arches, couplets, and stone tablets found in tourist attractions and use them as teaching materials. These examples are easier for the students to digest as they already have some pre-existing knowledge of them. This way, students not only learn classical Chinese; they also learn more about the history and culture of Macao.

In addition to using real-life examples to make the learning process more engaging, Prof Tang also uses computer-assisted teaching methods, with a focus on physical objects and photographs. 'Today's students generally lack knowledge about classical Chinese, so I have to put some extra thought into designing the teaching content and methods,' he says. 'For example, I can't just read from a textbook. I would organise field trips or lectures to expose them to knowledge that can't be learned from textbooks. It's also important to let them know that knowledge is everywhere, and there are practical applications in our everyday life.'



鄧景濱教授指導的中文系學生楊馥嘉（左二）及傳播系學生吳思微（左一）出席全國應用寫作第21屆學術研討會，兩位學生分別獲得優秀論文二等獎和三等獎。

Prof Tang Keng Pan's students, Yang Fujia (2nd from left) from the Department of Chinese, and Ng Si Mei (1st from left) from the Department of Communication, receive a second prize and a third prize, respectively, at a national academic conference on practical writing.



鄧景濱教授常鼓勵學生在學術上追求創新

Prof Tang Keng Pan always encourages his students to be innovative in academic research

漢語為例，「對沒有一定古文修為的學生，如果課程由最遠古開始說起，對他們來說一定是非常艱辛而枯燥，所以我們要由淺入深，從已知到未知，好好利用澳門景點內牌坊、對聯及石刻上的文字作活教材，學生普遍對相關材料有一定認識，比較容易消化，而且他們不僅學懂了古代漢語知識，亦進一步了解澳門的文化歷史。」

這正是他一直反覆論述的「在課堂上引入活水」，以生動的課堂形式激發學生興趣。隨著科技日新月異，他亦使用簡報軟件、音效及短片作為輔助教材，亦強調會盡量使用實物和照片。「現在學生對古文的知識比較貧乏，所以需要在課程設計上多花心思，不要依書直說，例如多帶學生去實地考察、參加講座，使學生學到書本以外的知識，而且要讓學生知道這些知識就在身邊，是非常實用的。」

正如其教學箴言「既要授之以魚，更要授之以漁」，以及「既要知其然，更要知其所以然」，鄧教授希望通過在課堂上的個案分析及其他方法

Prof Tang's motto is 'Why just give fish when you can teach the art of fishing?' He believes imparting knowledge is necessary, but teaching students how to find answers on their own is even better. That is why he makes a point of using case studies and other methods in class to help students develop problem-solving skills.

Promoting Cantonese as a Carrier of Chinese Culture

Prof Tang has published many books and papers on Macaology and Cantonese. His papers *Yue Gang Ao Fang Yan Xin Ci Yu Tan Yuan* (Tracing the Roots of New Words in Hong Kong, Macao, and Yue Dialects), and *On the Optimization of Chinese Characters and Provincialism Characters for Yue Dialects*, received a second prize in the papers category at both the first and second Macao Outstanding Research Achievement Award in Humanities and Social Sciences. He has also participated in the standardisation of the pronunciations of Cantonese words for a dictionary.

Cantonese is one of the seven major Chinese dialects. But in Prof Tang's eyes, it is more than a dialect. 'It's precious cultural heritage,' he says. 'It inherited more from the ancient Chinese language than any other Chinese dialect. It maintained many phonological features of the ancient Chinese language. So in this way it is a carrier of the Chinese culture.' He adds that if famous poets from ancient China such

等等，創造平台，令學生不止學懂一個問題的答案，而是學懂解決問題的方法，以後面對相同問題時，能夠學以致用，舉一反三。

推廣粵語傳承中華文化

在數十載的教研生涯，鄧教授也發表了不少與澳門學及粵語相關的著作和論文，例如，其論文《港澳粵方言新詞語探源》及《粵方言字的優化》分別獲首屆及第二屆澳門人文社會科學優秀研究成果論文二等獎，也曾參與《廣州話正音字典》之審音工作，將教研成果與社會結合。

作為漢語七大方言，他認為粵語十分珍貴，是承傳古漢語和中古漢語最多的一種方言，保存了很多古時的音韻，是中華文化的載體之一，並舉例說假如古代著名詩人李白和杜甫死而復生，他們不一定能夠聽懂普通話，但他們應可聽懂七至八成現代人說的粵方言。「目前國家政策除了大力推廣普通話，也致力保護各地方言，所以我們要同樣地珍惜我們的母語粵方言。」

做學問做事做人一體化

鄧教授坦言，要兼顧教學及研究的工作並不容易，經常要週末及公眾假期回校工作，但每當學生取得佳績時，便會覺得當中的辛苦有價值，比自己在研究上獲認可更為高興，且自己對教學和研究工作仍抱有高度熱忱和責任感。除了教授學生學問，更重要的是做人道理。他指出，做學問與做事、做人是相通的，「最重要是依之有據，言之成理，擁有獨立思考及批判能力，敢於向失實表述說不。」

「一間大學的主要任務是培養學生，所以我不能夠只顧自己的研究工作，忽略對學生的指導，且每一年教學上都會引入新內容，既能夠提高學生的水平，也能夠充實自己，使自己不斷進步。」他笑言與學生相處，亦使自己變得更年輕。「在這程中，很開心及感激多年來的老師、學生、同事、學校及家人的支持，我到現在都覺得自己很幸運，可以將興趣、職業及事業三者結合。」

as Li Bai and Du Fu were to come back from the dead, they might not understand Mandarin, but they should be able to understand 70 to 80 per cent of modern Cantonese. 'The current policy of the Chinese government is to vigorously promote Mandarin, while also preserving the various dialects. So we should treasure our own dialect,' he says.

Applying Principles of Good Scholarship in Life

Prof Tang admits that it is not easy to juggle teaching and research. He often needs to work on the weekends and public holidays. But whenever he sees his students making progress or receiving an award, he feels all his effort was worth it; indeed, during those moments, he feels happier than when he himself receives recognition. In his students' eyes, he is not just a passionate professor and researcher, he is also a life mentor. He often tells his students that the principles of good scholarship, such as sticking to facts, making reasonable arguments, thinking independently and critically, and having the courage to say no to false narratives, would also serve them well in life.

'Education is the main mission of a university, so I can't just focus on my research and neglect teaching,' he says. 'Every year, I will introduce something new into the class. This not only helps the students to learn more; it also allows me to make continuous progress.' He says spending time with the students keeps him young at heart. 'I'm really grateful to my colleagues, students, the university, and my family, for their support over the years. To this day I still feel that I'm very lucky, because I have made a career out of doing what I love,' he says.



澳門行政長官崔世安向鄧景濱教授頒授文化功績勳章
Macao SAR Chief Executive Chui Sai On presents a Medal of Merit-Culture to Prof Tang Keng Pan



短片：鄧景濱研究四大結合指導學生
Video: Prof Tang Keng Pan's Four Student-Centred Teaching Strategies

10年追尋 改寫中國近代報 業的起點 專訪林玉鳳博士

*Redefining the Origin
of China's Modern
Newspaper Industry*
**An Interview with
Dr Agnes Lam lok Fong**

文Text | 張愛華 Ella Cheong 圖Photo | 何杰平、張愛華，
部分由受訪者提供 Jack Ho, Ella Cheong, with some provided
by the interviewee



中國近代報業的起點——澳門新聞出版史 (1557-1840)》

The Beginning of Modern Chinese Press History: Macao Press History 1557-1840

因為碩士論文答辯老師的一個提問：「澳門的報業史由葡文報刊開始，但為甚麼是1822年而不是更早？」觸發澳大社會科學學院助理院長、傳播史研究學者林玉鳳博士之後用了10年時間為澳門追尋歷史真相。她像偵探般翻查和考證中外文獻，抽絲剝繭，終於為這問題找到答案，並因此改寫中國近代報業的起點。

考研觸發研究興趣

林玉鳳博士最早對新聞史產生興趣始於考研究生的時候。當年準備入學考試期間，她首次在中國新聞史的專著中讀到「澳門」兩個字，那是敘述1822年出版的《蜜蜂華報》的一段紀錄，當時她覺得很震撼，「因為從來沒有想過自己出生成長的澳門，居然曾經出版過中國領土上最早的近代報刊。」

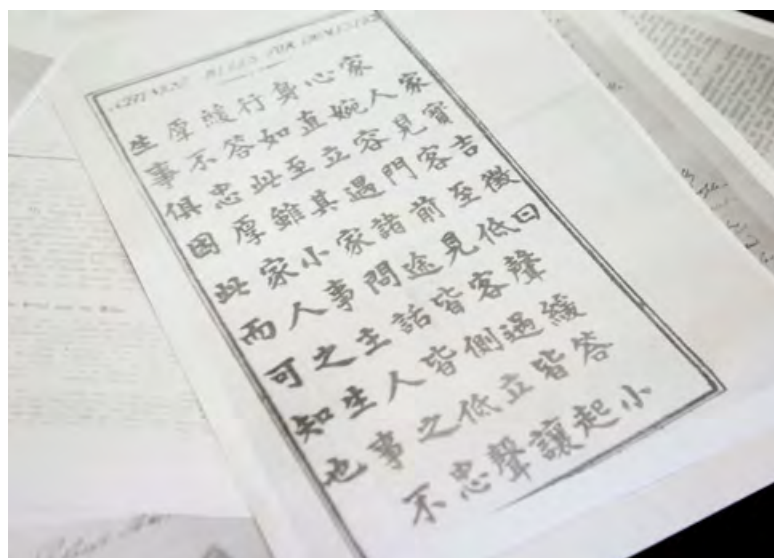
為了尋找篇首的答案，林玉鳳博士後來在決定博士論文題目時，決定放棄以《蜜蜂華報》為起點，將研究的時間軸定於澳門開埠前期至鴉片戰爭前，即16世紀中葉到19世紀初這一段澳門出版史。而她最近完成的研究專著《中國近代報業的起點——澳門新聞出版史(1557-1840)》就是在博士論文的基礎上再經過10年的搜證而成。

‘The newspaper industry in Macao started with the publication of a Portuguese newspaper. But why was it in 1822 and not earlier?’ This question, asked during Dr Agnes Lam Iok Fong’s oral defense for her master’s thesis, reverberated in Lam’s head long after the defense was over. Indeed, it inspired her to spend the past decade seeking an answer, an answer that would reshape understanding of the origin of China’s modern newspaper industry.

Interest Kindled while Preparing for Graduate Studies

Dr Lam is an expert on the history of communication and the assistant dean of the Faculty of Social Sciences at the University of Macau (UM). Her interest in the history of journalism was kindled by a book she read while preparing for the admission examination for graduate school. In an account of the history of *Abelha da China*, a Portuguese newspaper published in 1822, she was amazed to see the word ‘Macao’. ‘It was the first time I had ever seen the mention of ‘Macao’ in a book about the history of journalism in China,’ she recalls. ‘Up until that time, I had never thought that the first modern newspaper in China was published in Macao, a city where I was born and raised.’

When contemplating a topic for her doctoral dissertation, Lam decided to answer the question, ‘Why did the newspaper industry in Macao start in 1822 but not earlier?’ She decided to abandon the presumption that *Abelha da China* was the first modern newspaper in China. Instead, she extended the historical period of her study and combed through historical data published between the mid-16th century, after Macao became a free port, and the early 19th century, before the start of the Opium War. Her latest work, *The Beginning of Modern Chinese Press History: Macao Press History 1557-1840*, is an expansion of her doctoral dissertation based on ten years of research.



《家寶吉徵曰》一文在1831年刊登於由傳教士馬禮遜創辦的中文刊物《雜聞篇》，教外國人如何訓練華人家傭。

An article that teaches foreigners how to train Chinese domestic servants, which was published in 1831 in *A Miscellanea Paper*, a Chinese newspaper founded by the Protestant missionary Robert Morrison.

赴歐洲尋澳門歷史

搜集資料初時，林玉鳳博士發現不少歷史上曾在澳門出版的刊物原件以及相關的原始記載不在澳門，而是散落在不同地方的檔案館和圖書館，像傳教士馬禮遜曾經在澳門出版的中文報刊——《雜聞篇》和中英文雙語報刊《傳教者與中國雜報》（*The Evangelist and Miscellanea Sinica*）原稿都在英國，因此觸發她向世界各地尋找澳門歷史的動機。

在新聞史上，《蜜蜂華報》一直被指是第一份報紙，林玉鳳博士推斷若是這樣，報紙印刷就應該開始於那個時候（1822），但為何從16世紀傳教士來到澳門到1882年的200年間卻沒有任何印刷品出現？

由上世紀90年代開始，林玉鳳就為此展開調查，追尋在《蜜蜂華報》出版以前，澳門是否曾出版過一份叫《消息日報》的報刊的蛛絲馬跡。這位曾當過記者的獨行俠，帶著疑問，輾轉到各地尋找答案，「2005年第一次去大英圖書館閱讀手稿開始，之後每年我都曾到歐洲各地的圖書館翻查資料，先後去過



為了找出歷史真相，林玉鳳博士需要考證的資料量十分龐大。
To uncover historical truth, Dr Lam verified an astounding amount of data.

Searching for Macao's History in Europe

When Dr Lam began collecting data for her doctoral dissertation, she found that the original editions of many publications and related records originally published in Macao, were now scattered all over the world, housed in the archives and libraries in different countries. For example, *A Miscellaneous Paper*, a Chinese newspaper founded by the Protestant missionary Robert Morrison in Macao, and *The Evangelist and Miscellanea Sinica*, a Chinese/English bilingual newspaper also founded by Morrison, are now housed in libraries in the United Kingdom. This discovery sparked the idea to search around the world for original historical records of Macao.

For a long time, scholars considered *Abelha da China* to be the first newspaper in China. If that was true, Dr Lam reasoned, then it stood to reason that newspaper printing started in 1822. But that begs the question of why there were no publications during the preceding 200 years—that is, from the 16th century, when foreign missionaries first arrived in Macao, to 1822, when *Abelha da China* was published.

In the 1990s, Dr Lam began to investigate whether there was a newspaper called *Diário Noticioso* in Macao before *Abelha da China* was published. A one-time journalist, she put her journalistic experience to work in her research. She travelled around the world and left no libraries unvisited in her search for evidence of the existence of this newspaper. 'In 2005, I visited the British Library to study the manuscripts there. That was the first time I went on an overseas trip in search of historical records of Macao,' she says. 'Since then, I've been to different European libraries, including those in Italy, Germany, France, Spain, and Portugal, all by myself. Some people didn't know the real reason I went to Europe again and again; they thought I went there every summer for holiday.' Before obtaining research grants from UM, Dr Lam paid for these trips out of her own pocket. Now she feels very grateful that the university provides research grants to support her work.



《雜聞篇》創刊號。該刊經林玉鳳博士查證是澳門史上首份中文報刊，中國境內出版的第一份近代化中文報刊。

The maiden issue of *A Miscellaneous Paper*, the first Chinese newspaper ever published in Macao, and also the first modern Chinese paper published in China.

意大利、羅馬、梵蒂岡、德國、法國、西班牙、葡萄牙等地方。當年去做這件事時也有一點單打獨鬥的感覺，有些人不清楚還以為我每年暑假去歐洲玩呢。」早期還未能向大學申請研究經費時，林玉鳳博士都是自掏腰包去，她很感激大學後來提供研究贊助。

把核實資料視為寫偵探小說

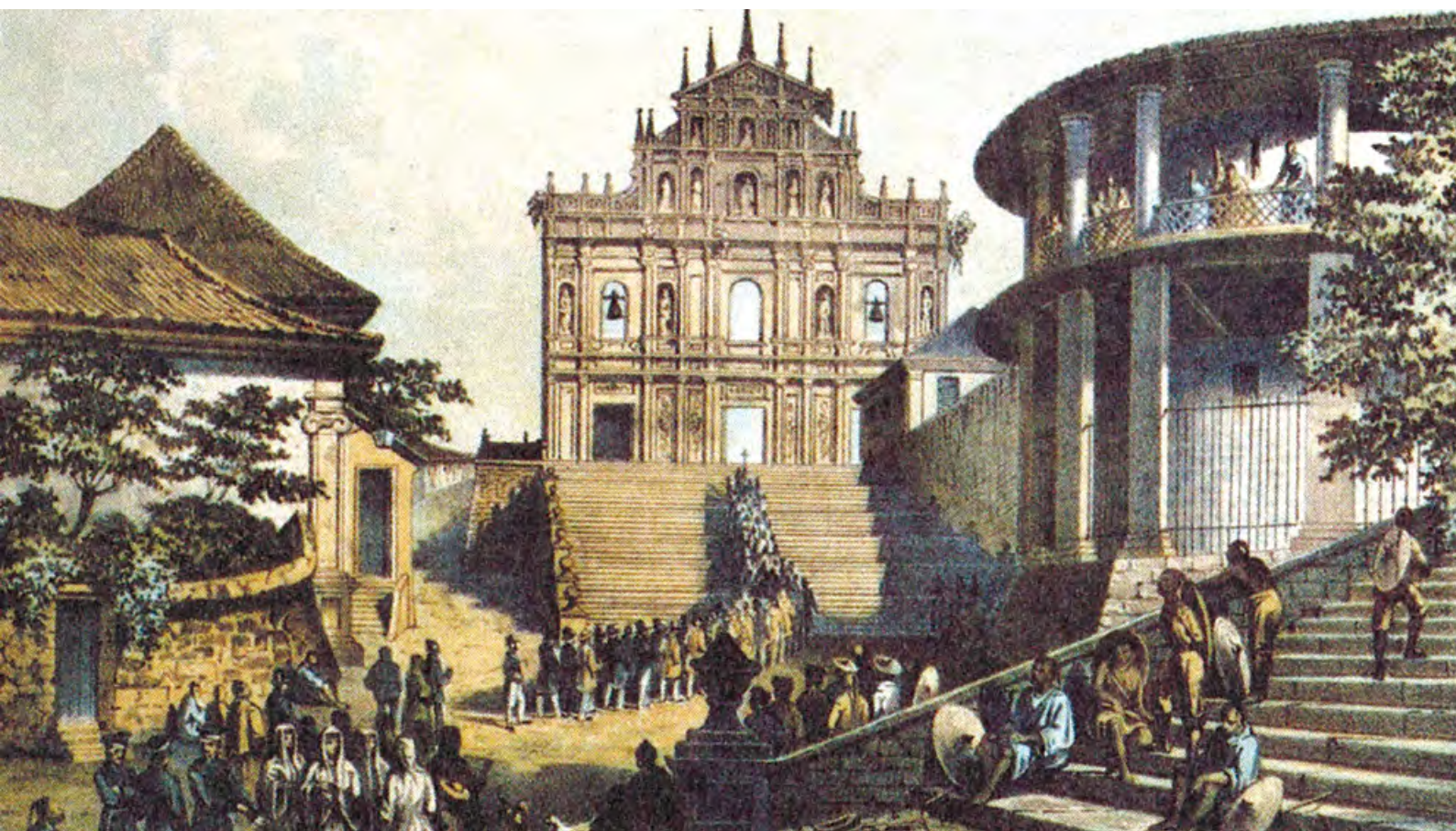
《中國近代報業的起點——澳門新聞出版史(1557-1840)》一書是林玉鳳博士前後累積了十年材料的基礎上寫成的，搜集資料過程異常艱辛，當中的報刊、書籍、日記原件以及部分古籍，都是來自澳門、英國、葡萄牙、法國、羅馬等的圖書館，需要查閱的資料有英文、葡文，甚至有拉丁文。她家裡備有各種語言的字典，遇不明處，便逐字查證，因語言問題處理不到的資料，就請教大學的語言專家。

林玉鳳博士10年來，大部分時間都是孤身一人在龐雜的資料堆中搜證、爬梳。曾當記者，熱愛文學創

Like Writing Detective Novels

The Beginning of Modern Chinese Press History: Macao Press History 1557-1840, is based on the historical data Dr Lam collected over the past decade, a process that was fraught with difficulties. The original editions of the newspapers, books, and diaries, as well as some of the ancient books, used in the writing, were scattered around the world. To make matters worse, many of the documents she studied were written in English, Portuguese, or even Latin. Undaunted by the linguistic barriers, she bought dictionaries for different languages and waded through pages upon pages of abstruse documents, one word at a time. For those parts she failed to understand even with the help of the dictionaries, she consulted language professionals at the university.

Dr Lam likens the process of verifying an astounding amount of historical facts to writing detective novels. 'Every time I encountered a piece of information, I would wonder if this would be the answer I was looking for,' she says. 'If someone mentioned a book, I would go find that book to read. If the book I was reading mentioned some people, I would find those people's diaries. I used a lot of imagination in the process. I would imagine having conversations



大三巴和耶穌會的印刷所。圖中可見當年聖保祿教堂的遺址及其周邊建築，耶穌會早期的印刷品在此刊行。

The printing place of St Paul's Cathedral and the Society of Jesus (SJ). Pictured are the ruins of the cathedral and the nearby buildings. The SJ's early publications were printed here.

报业的起点——澳门新闻出版史 (1557-1840)



於北京舉行的新書發佈會上，林玉鳳博士向恩師方漢奇教授贈書。

Dr Lam presents a copy of her book to her doctoral supervisor Prof Fan Hanqi, at her Beijing book launch.

作的她把核實資料的做法當成寫偵探小說，「每碰到一個細節就會想是不是在這裡呢？有人提到這本書我就去找那本書看，書中提到的每個人，我就找他們的日記看。同一時間在寫作的過程中我用了很多想像力，我會幻想我在和那些古人對話。有一段時間我考證不了馬禮遜出版物的一些史料，我會走到他的墳前哭，叫他晚上報夢告訴我。這樣做可能有些怪異，但我認為這是有趣的，它給了我一個和歷史人物對話的空間。

10年心血改寫新聞史

澳門是林玉鳳博士生於斯長於斯的地方，在這裡，她完成了小學、中學和大學課程。她於澳大本科學業，其後於1997年進入澳大傳播系任教後，一直從事傳播史、傳媒與社會變遷以及澳門問題等研究。她傾注十年心血完成的新書，一方面是為了填補中國新聞史上澳門部分的一段歷史空白，另一方面也是因為出於一份澳門這塊土地的深厚感情，才會尋根究底，鍥而不捨為澳門尋找歷史的真相。

with people from the past.’ For a time, she was unable to verify some of the historical facts mentioned in the books published by Robert Morrison. So she visited Morrison’s grave, cried, and asked him to visit her in her dreams to reveal the answers. ‘It may sound a little bizarre, but I think it was fun, it gave me a chance to converse with historical figures,’ she says.

Fruit of Ten Years’ Research Revising the History of Journalism

Dr Lam completed her primary, secondary, and college education in Macao. She received her bachelor’s degree from UM. In 1997, she joined UM’s Department of Communication as a faculty member. Since then, she has focused on the study of the history of communication, media and social change, and Macao-related issues. She never regrets spending ten years to complete the book, because her deep love of Macao made her want to uncover the historical truth and return the city to its rightful place in the history of journalism in China.

Dr Lam believes that the history of Macao’s publishing industry and the history of China’s modern publishing industry are closely related. ‘Macao’s modern publishing industry actually started earlier than we had imagined. In fact, the earliest publication in China originated in Macao instead of Guangzhou, as previously thought,’ she says. ‘As Macao natives, we should understand our own history, because if we don’t, then no one else will

她說，澳門整個出版史和中國近代出版史有很大的關係，澳門近代的出版業其實比我們想像中更早，中國最早的出版物是在澳門誕生而不是廣州。

「身為澳門人應該要弄清楚自己的歷史，別人是不會幫我們弄清，但既然歷史是這樣發生了，我們就需要還原它，把它弄清楚，這很重要。以前的澳門是一個多元族群，包容共存的地方，容許不同的人在澳門以西方印刷術出版中文刊物，最終令這個地方產生了很多歷史上的第一。」

林玉鳳博士還考證了在《蜜蜂華報》出版前，澳門已有多種印刷出版活動，大部分都是和宗教的活動有關，其次也確認了馬禮遜創辦的《傳教者與中國雜報》與《依淫雜說》、《澳門雜文篇》屬同一份刊物，是中國首份中英文合刊的報刊，又發現馬禮遜曾經在1833年創辦澳門首份的中文報刊《雜聞篇》。另外，還確認拉匝祿修士賴特曾經在澳門聖若瑟修院編寫《消息日報》。「澳門當時是一個中西文化相當包容的地方，讓不同的人在澳門以中文出版刊物，從而令到澳門產生了很多歷史上的第一。」

過去10年，林玉鳳博士經歷千辛萬苦，甚至曾差點跟倫敦忍氣擦肩而過，但都沒有阻擋她解開這一歷史疑團的決心。在該書定稿出版後，她笑言只是完成了追尋歷史足跡的第一步，而此刻她最想說的是，「感謝我的博士導師方漢奇教授，他常常讓我發現問題的新角度，另外還要多謝多年來在背後協助、指導和啟發我的朋友、同學和大學的同事！」。

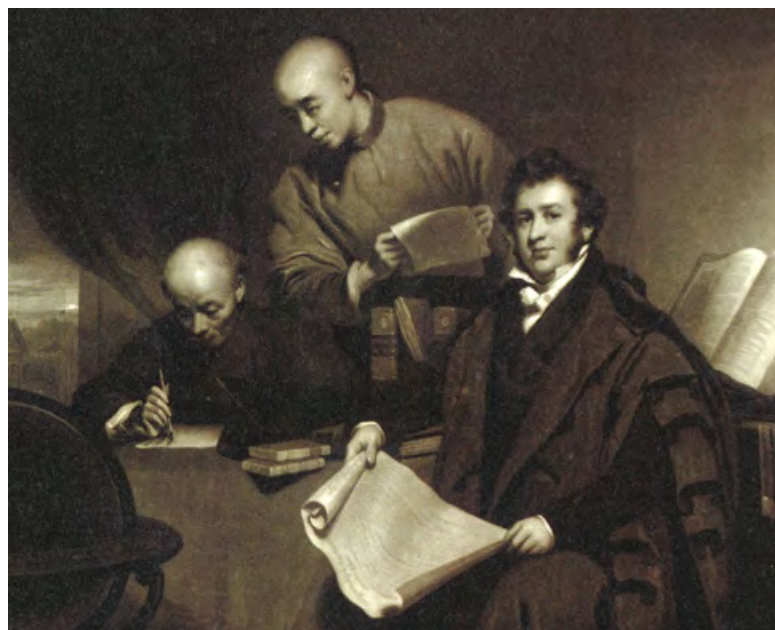


林玉鳳博士向已故的歷史學家文德泉神父請教
Dr Lam consults the late historian Monsignor
Manuel Teixeira

help us to. History is what has happened. But did it happen this way or that way? It's important for us to find out the truth. Macao used to be an ethnically diverse and tolerant place where people were allowed to publish Chinese publications with Western printing technologies. And because of that, this city has witnessed many historical firsts.'

Dr Lam has verified that *Abelha da China* was predated by many other publications in Macao, most of which had religious undertones. She has also verified that *The Evangelist and Miscellanea Sinica* and another newspaper are in fact the same publication, the first Chinese/English bilingual newspaper in China. Other historical facts Dr Lam has verified include Robert Morrison's publishing Macao's first Chinese newspaper, *A Miscellaneous Paper*, in 1833, and Joaquim Jose Leite's creating *Diário Noticioso* in Seminário e Igreja de São José.

Despite the many difficulties she encountered in writing the book, Dr Lam never wavered in her determination to finish the project. Now that the book has finally been published, she feels she has just completed the first step on the long journey of tracing Macao's historical roots. 'I want to thank my doctoral supervisor Prof Fang Hanqi for always inspiring me to look at a question from a fresh angle,' she says. 'I also want to thank my friends, classmates, and work colleagues at the university, for their support, guidance, and inspiration over the years.'



馬禮遜翻譯聖經的情景，這是林玉鳳博士在英國的維多利亞與艾伯特博物館找到的相片。

A picture of Robert Morrison translating *The Bible*. Dr Lam found this picture in the Victoria and Albert Museum in the United Kingdom.



短片：澳大林玉鳳改寫中國近代報業的起點
Video: Dr Agnes Lam Redefines the Origin of China's
Modern Newspaper Industry

關懷少數族群——促進社會和諧之道

'Open to Others' – Pathways for Social Harmony

文 English Text | 余偉業、澳大校園記者 Cheila Alexis C. Pangan, Kelvin U, UM Reporter Cheila Alexis C. Pangan

圖 Photo | 譚金榮、黃詠豪 Eric Tam, Fernando Wong

翻譯 Chinese Translation | 蘇恩霆 Anthony Sou

在全球化進展迅速的年代，澳門已經成為不同文化族群的家，各文化族群人口的數量亦隨著經濟發展不斷增加。可是，由於惡劣的生活及工作環境，一些族群人口患上心理及身體疾病的風險較其他族群高。身為臨床心理學家、流行病學家及全球公共健康專家，社會科學學院心理學系助理教授賀佰恩博士對研究影響人口健康的社會因素特別感興趣。他的研究團隊目前正與本地及國際上各非政府組織合作，希望為澳門的邊緣社群開展健康介入計畫。

In an era of rapid globalisation, Macao has been home to culturally diverse groups and it continues to grow as the economy prospers. However, certain populations are prone to higher risks of mental and physical health problems due to their deteriorating living and workplace conditions. As a clinical psychologist, an epidemiologist, and an expert on global public health, Dr Brain Hall, assistant professor from the Department of Psychology, Faculty of Soical Sciences, is particularly interested in understanding the social determinants of population health. In collaboration with various local and international non-governmental organisations, Dr Hall and his research group are currently developing health intervention programmes for marginalised communities in Macao.





賀佰恩博士
Dr Brian Hall

數據分析以外的挑戰

移居澳門之前，賀博士曾在非洲生活過一段時間，在埃塞俄比亞和剛果民主共和國與不同的人群接觸，收集研究數據，並為當地的社區醫療保健人員提供健康介入培訓。但那時他無法長期留在非洲，對於這種必須經常在美國和非洲兩地遊走的研究方式，他並不是很滿意。賀博士表示：「我在非洲逗留的時間太少了，未能為當地社區帶來長遠影響。身為一名公共健康研究員，我希望為有需要的人士帶來持久的利益，而非只是短時間收集數據來撰寫學術論文。」賀博士認為能為社會帶來實際影響的科學研究才是有價值的研究。

之後，賀博士來到中國，開始研究與國內遷徙有關的心理疾病。他在2012年首次到訪澳門，瞭解到澳門在心理健康領域的發展相對落後，需要更完善的心理健康系統及循證心理療法。賀博士說：「我覺得自己的專業及技能在澳門能派上用場。」因此，他在澳門揭開人生新一頁，開始從事新的研究項目。

Challenges Beyond Data Analysis

Before coming to Macao, Dr Hall travelled to Africa, where he worked with various peoples in Ethiopia and the Democratic Republic of the Congo to collect research data and train community health workers to carry out interventions. But he was unable to stay in Africa for long periods of time, and had to frequently travel between Africa and the United States; this left him feeling dissatisfied with this way of conducting research. 'I didn't actually spend enough time in the community to make a long-term difference,' he says. 'As an engaged public health researcher, I want to provide sustainable benefit for people in need, rather than just harvesting the collected data for academic publication.' Dr Hall believes in a science of consequence.

Subsequently, Dr Hall travelled to China and began to study mental health disorders in relation to internal migration. When he made his first visit to Macao in 2012, Dr Hall not only enjoyed his stay but also discovered that the field of mental health was a relatively underdeveloped area and that Macao was in need of a more complete mental health system and evidence-based psychotherapy methods. 'I felt like some of my expertise and skills could be applied here,' he says. And thus, he began a new chapter in his life and embarked on new research projects in Macao.

從澳門本地居民及外地勞工身上，賀博士及他的研究團隊收集到不少數據，這些數據可為相關領域的學者和機構進一步研究提供參考。例如，賀博士的團隊進行了澳門本地第一個憂鬱症流行病學研究，以及第一批針對澳門家庭傭工的研究。賀博士指出，研究數據不但能夠為澳門政府提供參考，而且對一些有意改善澳門居民健康的機構很有用處，例如本地非政府組織、領事館、以及神職人員。這些數據涉及勞工狀況和僱主態度，提供了減少不同族群健康差距的一種可能途徑，賀博士希望研究可以對政府決策者、社區或個人產生正面的影響。

關懷邊緣社群

賀博士除了指出澳門本地心理健康服務供需之間的巨大缺口之外，也十分重視本地家庭傭工所面臨的健康問題。他指出，就保障和權利而言，家傭處於所有外來移民中的底層，在澳門屬於邊緣社群。

與很多其他職業一樣，家傭是一份壓力很大的工作。這些壓力如果得不到及時恰當的疏導，將可能引起嚴重的心理及身體健康問題。但家傭不像其他行業的從業人員那樣享有社會福利計劃及健康計劃，所以當工作環境可能影響心理健康時，法律政策亦未足以保障他們。

賀博士表示：「家傭可能會想方設法減少日常開支，他們大部分會選擇含有味精的食品，只因為這些食品價格低廉。這些不良的飲食習慣會增加患上糖尿病和心血管疾病的風險。除此之外，家傭有時候可能會與遠方的家人之間發生磨擦，也要應付日常壓力和在澳門受到的歧視，當這些壓力因素長期存在的時候，心理上就會很難承受。」

正如很多其他職業，家傭工作需要大量體能及專注力，所以保持心理及身體健康是提高工作效率的關鍵。賀博士表示：「從僱主的觀點來看，為了自身利益，理應希望僱員身體健康、工作效率高。因此，假設我身為僱主，若必須增加工資，或在其他方面幫助僱員，例如為他們購買健康保險，才能發揮僱員最大的工作效能，從自身利益考慮我也會這樣做。」僱主的心態是賀博士目前另一個研究



賀博士在埃塞俄比亞工作時接觸不同的群體
Dr Hall working with various peoples in Ethiopia

The data that Dr Hall and his team have collected from local Macao people and migrant workers can be used for further study by all local stakeholders in Macao. For example, Dr Hall's research team conducted the first epidemiological study of depression in Macao and the first studies of Macao's domestic workers. 'Not only could the government refer to the data but also other entities such as local NGOs, consulates and priests in favour of improving the health of Macao people. These data concerning the circumstances of workers and the attitudes of employers are potential pathways for improvements to critical health disparities. The objective is to influence policy making, the community, or even the individuals through our research,' he says.

Care for Labourers on the Periphery

Apart from articulating the unfulfilled demand for local public mental health services, Dr Hall also emphasises the health issues faced by domestic workers living in Macao. He explains that, in terms of protection and rights, domestic helpers are at the lower end of the migration or globalisation continuum; and they are therefore considered a marginalised community in Macao.

As with many other professions, domestic workers sometimes experience significant stress at work, which may lead to serious mental and physical health problems if it is not properly treated in a timely manner – the difference is that domestic workers are typically excluded from local social welfare and health schemes, and may lack sufficient legal protection from the workplace conditions that create health problems, Dr Hall notes.

'Domestic helpers might be challenged by daily expenses. Most of them usually opt to eat MSG food products as they are much cheaper. Their poor eating habits would increase their risk of diabetes and

項目，希望瞭解本地人如何看待家傭的健康問題。他表示：「所有為社會作出貢獻的人士都應該受肯定。外地勞工為澳門貢獻很大。」

流動健康介入服務

由於憂鬱症及焦慮症等心理疾病愈來愈普遍，很多臨床專家開始利用流動應用程式作為治療工具。這種流動健康介入服務也是賀博士團隊的其中一個研究項目，他們開發的名為 mHealth 或 eMental Health 的電子介入服務計劃，希望讓心理病患者能夠隨時隨地獲得治療，加強治療的功效。

賀博士指出，這計劃按循證心理療法的原理建立流動平台。包括家傭在內的年輕人有時會因為過分依賴高科技產品與他人溝通而患上心理疾病，mHealth 對治療這類心理疾病特別有幫助。透過應用程式，患者可以接觸和學習各種實用的心理治療技巧，健康介入專員亦會每週打電話瞭解患者的康復進度。

賀博士表示：「流動應用程式不但能讓那些不願意或者沒有能力進行面對面治療的病患受益，而且可以在療程之間為病人提供協助。對於需要應付大量病人的治療師來說，這種應用程式可以減輕其工作量。」

cardiovascular health problems as a consequence; what's more, they might also suffer from conflicts with family members living far away, and experience daily stressors and discrimination in Macao. When these stressors become chronic, it can be overwhelming,' Dr Hall says.

Like many other occupations, domestic helpers require much energy and presence of mind – such mental and physical wellness is the key for work efficiency. 'If you create a selfish argument, as an employer, I want the people who work for me to be healthy and productive. So selfishly, if achieving effectiveness means I need to increase their wage or I help them in other instrumental ways, like providing health insurance, then I'll do it,' he says. That sort of mentality is another research project that Dr Hall is currently working on – understanding what local people think about the health and wellbeing of the domestic workers they employ. 'A city should recognise the significance of contributions of all people to society. Migrant workers do make a great contribution to Macao.'

Macao-based Mobile Health Intervention

As the prevalence of mental illnesses like depression and anxiety continues to grow, many clinicians have turned to mobile applications as tools for treatment. Such mobile health intervention is one of the projects that Dr Hall's research team is currently addressing: mHealth or eMental Health, an electronic intervention programme that makes therapy more accessible, efficient, and portable.



賀博士現正進行一項研究，瞭解本地人如何看待家傭的健康問題。

Dr Hall is conducting a research project to understand how local people view the health issues faced by domestic helpers

由於 mHealth 會發送短訊提醒病人按時吃藥，對糖尿病和愛滋病患者也很有幫助，讓他們按指示完成整個藥物療程。

當然，在開發 mHealth 的過程中，必須考慮文化差異及語言障礙等問題，因為賀博士希望能開發出滿足不同群體需要的方案。賀博士指出，計劃需要經過很多階段，例如，研究人員必須與本地專家討論心理健康及治療的相關問題，還要與目標人群合作，以確保開發出來的產品適合不同文化背景的群體。

賀博士表示：「這樣，mHealth 就不再是一個普通平台，而是變成一個不斷改善的服務站，服務特定的族群。我們必須使應用程式穩定運作，同時增加人們使用這個應用程式的興趣。」因此，這個研究計劃不單只服務本地社群，亦希望幫助澳門的其他族群。賀博士期望 eMental 健康計劃在三年內能夠發展成一個治療心理疾病的有效工具。

和學生一起將希望帶到社群

世界瞬息萬變，賀博士因此常常鼓勵學生幫助不同文化語言背景的社群掌握自己的命運。若只是封閉在大學這個象牙塔裡，對普通人的需要便一無所知。因此，賀博士帶領他的學生走入社區，去接觸本地非政府組織和族群，與他們建立關係。



研究團隊進行數據收集
Dr Hall's research team is collecting data



賀博士帶領學生走進社區，建立聯繫。

Dr Hall goes out into the community with his students

According to Dr Hall, this programme will adapt the principles of evidence-based psychotherapy into a mobile platform. mHealth can be especially helpful for teenagers and young adults, such as domestic workers, suffering from mental illness due to their reliance on technology to communicate. The end users will be exposed to various practical skills which are derived from a particular therapy programme, and this training will also be combined with weekly supportive phone calls to monitor their progress.

‘The apps can be helpful as a way to engage people who may be unwilling or unable to attend face-to-face therapy, and they can also provide support in between sessions. It will also help lessen the burden of clinicians attempting to work with a substantial number of people in need,’ says Dr Hall.

The mHealth app also messages users to remind them to stick to their medication schedules. It can be of significant help to people with health problems such as diabetes or HIV.

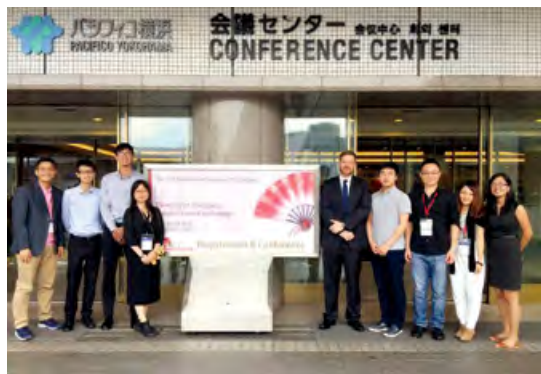
Certainly, challenges such as cultural differences and language barriers have to be taken into consideration whilst developing mHealth, because Dr Hall also aims to adapt the programme to meet the needs of specific cultures or ethnic groups. According to Dr Hall, the programme has to go through many formative research processes, for instance, consultation with local experts to discuss mental health and treatments as well as collaboration with target populations, in order to establish cultural appropriateness and sensitivity.

‘By doing so, mHealth will morph from a generic platform into a dynamic hub with a particular focus on certain populations,’ says Dr Hall. ‘We have to get to a point where everything is consistent and

賀博士表示：「面對面的溝通是建立互信和尊重的第一步。我們想盡力提供協助，希望帶來改變，因此所做的並不單是收集數據。研究的目的是幫助決策訂者及社區瞭解現時迫切的需要，並尋找方法改善人口的健康。」因此，賀博士要求他的學生在不同的非政府組織工作或當義工，作為訓練的一部分。他也讓學生提出有利澳門文化共融的研究項目或提案，希望藉此幫助他們擴闊眼界，瞭解同在澳門居住、每日所見的多元族群。

賀博士指學生一開始比較害羞，但當參與文化活動時，例如在美食節或一些社交活動他們都很快適應，學生更反映活動為他們帶來正面影響。賀博士表示：「透過這些活動，學生能夠親身瞭解外地勞工在澳門打工的經歷，以及亞洲豐富的民族多樣性。」

賀博士又表示：「我也鼓勵學生獲取一些實際經驗，而不是只在課堂靠書本認識世界。」帶領學生參與外展服務的過程中，他發現年青一代擁有豐富潛能，有能力為社會做貢獻，這正是澳門大學獨特的四位一體教學模式一個很好的例證。賀博士總結時表示：「我們必須培養學生成為世界公民，並讓他們知道，世界就好像一個由不同族群組成的相互關聯的網絡。」



賀博士及其研究團隊在日本參加一個國際會議
Dr Hall and his research team participating in an international conference in Japan

the app is something that people will want to use.’ Therefore, the goal of this ambitious research programme is not only to serve the local community but to also reach the ethnically diverse populations of Macao. Dr Hall expects that such an eMental health programme will be developed as an effective tool within three years’ time.

Bringing Light to Community with Students

Living in a world on the move, Dr Hall often encourages his students to empower communities composed of people with culturally and linguistically diverse backgrounds. Instead of sitting in an ivory tower, divorced from the lives of ordinary people, Dr Hall engages with the community, and works together with the students from his classes and research team to establish relationships with local NGOs and cultural groups.

‘Showing your face is the very first step to building up mutual trust and respect,’ Dr Hall says. ‘We want to do our best and help, making an impact – it’s not just about collecting the data. Research should be used to inform policy makers and the broader community about the critical community needs, and develop pathways to improve population health.’ That is why he urges his students to work and volunteer in various NGOs as part of their training. The students can also propose their own projects or initiatives that strive to build a more inclusive Macao. This will hopefully grant them a broader perspective about the diverse groups of people we live with and encounter daily in the territory.

Dr Hall describes his students as initially shy, but says that they warm up quickly when they join cultural activities such as food festivals or social gatherings. He also reports the positive experiences that the students relay to him. ‘By doing so, they gain a better understanding of the unique experiences of migrant workers and the rich cultural diversity of people from across Asia, on a more personal level.’

‘Students are then prompted to get real world experience instead of simply being in the classroom and learning about the world from a textbook,’ Dr Hall says. By engaging students in the learning process through outreach services, he observes that the wealth of potential that the younger generations possess can contribute to the community and society. This exemplifies the University of Macau’s unique 4-in-1 educational model. ‘It’s essential to prepare our students to be global citizens and recognise our world as an increasingly complex web of connections among diverse peoples,’ he concludes.

好基因、好資源、好父親 女性擇偶偏好的根源

Good Genes, Good Providers, and Good Fathers: Why Women Have These Mate Preferences

撰文 English Text | 張雷 Chang Lei 翻譯 Chinese Translation | 陳靜 Ruby Chen 圖Photo | 傳訊部 Communications Office

女性喜歡選擇甚麼樣的男性作為長期伴侶？具有這些擇偶偏好的原因又是甚麼？我的研究顯示女性的擇偶偏好可以歸納為：好基因、好資源、好父親。這些擇偶偏好並非社會化過程的結果，而是具有深刻的進化根源。此外，在當今的發達國家中，若要在能成為「巢中幫手」的男性和富有或英俊的男性之間做選擇，女性更願意選擇前者作為長期伴侶。

What types of men do women prefer as long-term mates and why do they have such mate preferences? My research shows that women prefer good genes, good providers, and good fathers. These mate preferences are not socialised, but bear deep evolutionary roots. Moreover, in today's developed economies, women prefer a helper at the nest over the rich or the handsome.



擁有資源的雄性，對雌性更具有吸引力

Females are drawn more to males who have access to resources than those who do not



張雷是心理學系主任及講座教授。他的主要研究領域包括進化心理學（包括文化進化、生命史策略、交配研究）、發展心理學（重點研究父母教養與兒童和青少年的社會發展）、應用心理計量學和統計學。目前的主要研究領域為進化心理學。他出版過八本中文書籍，有150篇論文發表在同行評審的期刊上。他同時也是多份國際期刊編輯委員會的成員。

Chang Lei is a chair professor of psychology and the head of the Department of Psychology. His research interests include evolutionary psychology (cultural evolution, life history strategies, and mating research), developmental psychology (with a focus on parenting and child and adolescent social development), and applied psychometrics and statistics. Chang's current research interest is in the area of evolutionary psychology. He has published eight books in Chinese and 150 papers in refereed journals. He has served on the editorial boards of many international journals.

好基因

雌性動物在擇偶過程中最重要的考慮因素是雄性是否擁有優良的基因，因為這關係到雌性的親代投資能否獲得理想的回報。但問題是：基因的優劣無法用肉眼直接觀察。幸好大自然這個盲眼鐘錶匠想出了一個完美的解決方案。它賦予擁有優良基因的雄性動物某些生理和行為特徵。這些特徵增加了雄性的生存成本，消耗大量能量，卻對雄性的存活毫無益處，有時甚至有害，不過這些特徵讓雌性能夠輕易篩選擁有優良基因的配偶。低頻鳴叫、鮮豔的色彩和羽毛、冒險行為……這些代表優良基因的裝飾品在很多昆蟲、魚類、鳥類和哺乳動物中都可以看到。孔雀的尾巴是最有名的一種裝飾品。孔雀尾打理起來非常消耗體力，但在求偶儀式之外卻是一無用處。吹噓、炫耀、創造力、幽默感則是人類社會中雄性的孔雀尾。男性其他一些類似孔雀開屏的行為包括炫耀式物質消費、慷慨的金錢捐贈、不考慮未來、豪賭、冒險、獨特不從眾、英雄救美等利他行為，這些都是獲女性青睞的代表好基因的裝飾品。

好資源

雌性擇偶過程中另一個重要考慮因素是雄性能否為下一代提供充足的資源和保護，而雄性用來贏得雌性芳心的資源則是通過同性競爭獲得的。雄性之間互相競爭資源，包括雌性賴以覓食和生存的領地，因為擁有資源的雄性對雌性更具有吸引力。在人類社會中，受雌性青睞的資源包括土地、財產、財富、成功的事業、技能、教育程度

Good Genes

The most essential female mate choice involves that of good genetic stock to ensure the ideal outcome of a female's obligatory parental investment. Good genes are not directly observable. Nature, the blind watchmaker, has tinkered out the perfect solution: physiological and behavioural characteristics that are costly to their male bearers but do not contribute to the bearers' fitness (except for the purpose of attracting mates) become indicators of good genes preferred by females. Also known as 'ornaments', indicators of good genes in various insects, fish, birds, and mammals include low-frequency calls, vibrant colours, bright plumage, and risk-taking behaviours. A peacock tail, which is useless outside of courtship rituals and costly to sustain, is the most famous example of an ornament. Bragging, showing off, creativity, and a sense of humour are the human equivalents of this ornamentation. Other studied ornament-like behaviours in men include conspicuous material consumption, generous financial donations, discounting the future, gambling large wagers, risk-taking, being unique and non-conforming, and exhibiting heroic altruism, all of which are preferred by women.

Good Providers

Another mate choice among women entails a preference for indirect paternal care in the form of resources, provisioning, and protection, which male animals acquire through intrasexual competition. Males compete for resources, including the territories in which females feed and subsist. Females are drawn more to males who have access to resources than those who do not. Among humans, resources include land, property, and wealth. They also include successful careers, skills, education, and social status, all of which are helpful for acquiring further resources. Because resources are the target of male intrasexual competition, resource holders possess personalities and other characteristics that enable them to defeat the competition. Such resources, which are known as 'weapons', include canine teeth, horns, claws, and the sheer size and strength of the males of certain species. In addition, behavioural weapons among humans and other



女性的擇偶偏好可以歸納為：好基因、好資源、好父親。

When seeking long-term mates, women prefer good genes, good providers, and good fathers.

和社會地位。因為資源是雄性同性競爭的目標，擁有資源的雄性通常具備能幫助他們在競爭中獲勝的武器，例如犬齒、尖角、利爪等。甚至某些物種雄性動物的身型和力量本身就是一種武器。人類和其他動物的行為武器包括侵略、競爭、獲勝的動機。這些武器可以保護雌性不受掠食者和其他同種雄性侵略者的傷害。因此，雄性是否具有提供資源和保護的能力以及是否擁有可以獲得這些資源的武器，是雌性在選擇長期配偶過程中優先考慮的因素。這種重視雄性資源供應能力的傾向在實行一夫多妻制的物種中尤為明顯。人類歷史有百分之八十以上的社會實行一夫多妻制，儘管這些社會中的大多數婚姻依然遵從一夫一妻制（這是因為大多數男性並不具備同時養活幾個配偶的資源），演化心理學和實驗心理學研究顯示，受女性青睞的男性行為特質包括面對挑釁敢於做出直接的還擊，擁有社會支配地位和強健的體格，具備競爭力、獲勝的動機、勇敢無畏的精神以及好戰的態度。

animals include aggression, competitiveness, and motivation to win. These intrasexual competitive attributes are also used to provide women with protection against predators and other conspecific male aggressors. Thus, both provisioning and protection, and the attributes required to acquire and provide them, are favoured by women as preferred attributes of a long-term mate. Being a good provider is particularly preferred by women in resource-based polygyny, which is practiced by more than 80 per cent of human societies, although marriages within such polygynous societies are mostly monogamous because most men do not have the resources to maintain multiple wives. Evolutionary and experimental psychological research has shown that women prefer such weapon-like behaviours as physical or direct aggression in response to provocation, social dominance and formidability, competitiveness and motivation to achieve, and bravery and warring attitudes.

Good Fathers

A third female choice that has evolved recently in mammalian terms—most likely coinciding with human monogamy—is the choice of resident fathers who help to raise young. Premature birth puts selective pressure on alloparenting, or parenting by relatives.

好父親

雌性動物的第三個擇偶偏好是尋找能夠共同撫養下一代的「居家父親」。從哺乳動物進化史的角度來看，這個擇偶偏好出現的較晚，極有可能是伴隨人類社會一夫一妻制的出現而產生的。早產的現象迫使動物界演化出異親撫養（也就是由親戚來撫養）的方式。而父親是承擔異親撫養這個任務的最佳人選，因為父親是所有親戚中最關心基因能否成功傳遞給下一代的一方。處於泌乳期的雌性由於覓食能力減弱，更加需要一個巢中助手的父親角色。不過巢中父親的主要作用不是提供資源，而是為下一代提供直接的照顧，比如擁抱幼崽、幫助幼崽的生活起居等。此外，父親還可以幫助子女培養社會競爭力，建立社會地位。在親代貢獻中，這種直接照顧後代的方式和通過供應資源間接照顧後代的方式是同樣重要的，雖然後者未必一定能實現。

「居家父親」並非人類社會特有的現象，其他一些哺乳動物和靈長類動物中雄性也經常扮演這個角色。在所有雄性靈長類動物中，「最佳父親」獎非大猩猩莫屬。大猩猩會照顧幼崽、擁抱幼崽、幫幼崽理毛。至於人類社會中「后宮佳麗無數」的一夫多妻制、女性的「秘密排卵」方式以及父親身份的高度確定性，這些相信都是起源自一個更類似於大猩猩而非黑猩猩的共同祖先。和大猩猩社會一樣，人類社會中能同時為後代提供資源和直接照顧的雄性是雌性擇偶過程中的首選對象。例如，博茨瓦納共和國的桑人族和中非的巴卡矮人族都會為其嬰兒和子女提供直接的照顧。這種親代投資有助於降低嬰兒死亡率和提高後代競爭力，尤其是在等級制社會環境中。因此，具有好父親溫柔慈愛特質（例如關愛子女、渴望家庭、善良、熱心、溫柔）的男性，不管是否具備提供資源的能力，都會成為女性擇偶過程中的首選對象。

A father is particularly suited to be an alloparent because no other relatives share the same extent of genetic interest. The presence of a father at the nest is especially crucial during lactation, when women's foraging abilities are compromised. However, the adaptive function of a father at the nest is not provisioning per se, but is direct paternal care: domestic fathers help at the nest by holding, grooming, babysitting, and being proximal to offspring. Fathers also help children to gain social competitiveness and establish social status. Such direct care is as crucial in defining paternal contribution as providing indirect care through provisioning is, although the latter might not always materialise.



具有好父親溫柔慈愛特質，不管是否具備提供資源的能力，都會成為女性擇偶過程中的首選對象。

The attributes of being a good domestic father and exhibiting underlying soft, fatherly characteristics have been selected by women regardless of whether the man is a good provider.



在所有雄性靈長類動物中，「最佳父親」獎非大猩猩莫屬。

Gorilla fathers are the most domestic among the primates.

最受青睞的巢中幫手

雌性的「三好」擇偶偏好中，「好基因」和「好資源」是通用於不同物種的。從進化的角度來看，這兩種擇偶偏好出現的時間也早於「好父親」的擇偶偏好。這兩個擇偶條件相輔相成。優良的基因可以幫助下一代對抗病菌侵害，從而增加其存活繁衍的機會；而獲得資源的能力在資源枯竭的時候則意味著生存和死亡之間的差別。在人類社會，和過去相比，現代社會中人們對環境的控制能力大大增強，特別是在公眾保健和疾病控制領域。因此，現代女性（特別是發達國家的女性）在擇偶偏好上也發生了變化，從原本看重男性是否擁有優良的基因到更加看重男性是否具備好父親的特質和提供資源的能力。現存數據似乎也證實了這種轉變趨勢。這種轉變是與經濟發展緊密相連的。例如，與英國的女性相比，在坦桑尼亞、牙買加、拉脫維亞等欠發達國家的女性更關注具有代表優良基因的陽剛面部特徵。

Although almost unique to humans, domestic paternal roles are also exhibited by a few mammalian and some primate fathers as well. Gorilla fathers are the most domestic among the primates. They care for, play with, and protect their young by holding, cuddling, nuzzling, and grooming them. In terms of such reproductive practices as harem polygyny, concealed ovulation, and a high degree of paternity certainty, humans are believed to share a common ancestor that is more similar to gorillas than chimpanzees. Like gorillas, human fathers who provide domestic parenting in addition to provisioning are selected through female choice. For example, fathers among the Kung San in Botswana and Aka pygmies in central Africa provide direct parental care to their infants and children. Such paternal investment helps to reduce infant mortality and improve offspring competitiveness, particularly in hierarchical social settings. Therefore, the attributes of being a good domestic father and exhibiting underlying soft, fatherly characteristics, such as loving children, desiring a home, and being kind, warm, and gentle, have been selected by women regardless of whether the man is a good provider.

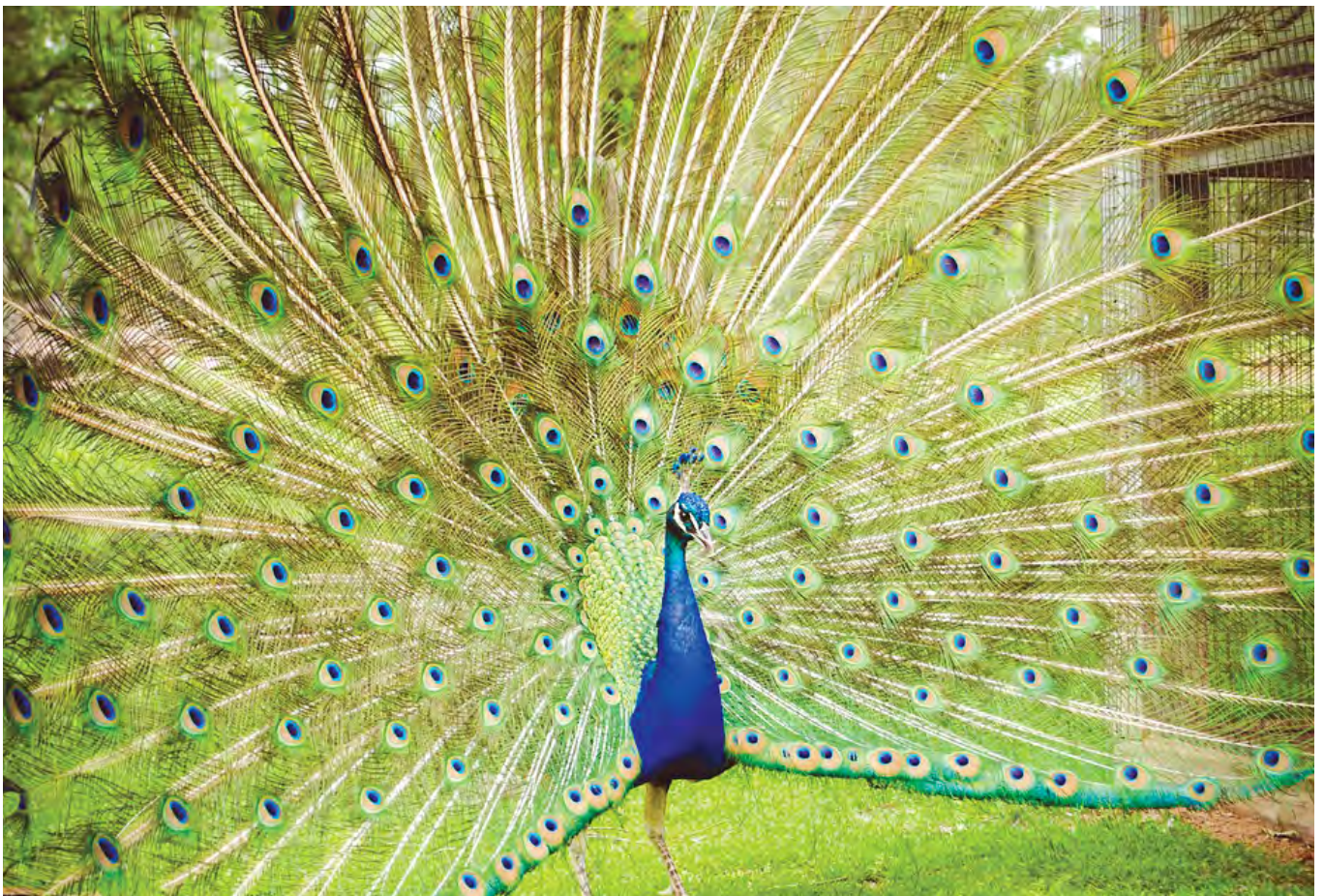
The Most Preferred Helper at the Nest

Among the 'three Gs', good-genes and good-provider male mate attributes and female mate choices are species-general and evolutionarily older than the good-father mate choice. They are selected to protect against harsh environment in terms of pathogen prevalence (good genes) and resource depletion (good providers). Compared with the past, however, modernity and contemporary living facilitate greater control over the environment, especially regarding public health care and disease control. Modern women, particularly those from developed economies, are expected to shift their focus in mate preferences from good-genes attributes (indicating good genetic stock) to good postnatal care, including paternal care and provisioning, and the underlying good-father and good-provider attributes. Extant data appear to corroborate a mate preference shift from good-genes attributes, and this shift in preferences correlates with economic development. For example, compared with women in the United Kingdom, those in countries with relatively less developed economies, such as Tanzania, Jamaica, and Latvia, exhibit stronger preferences for male faces with symmetrical and masculine features in addition to other good-genes indicators.

Another relevant change in the ecological conditions of modern economies is the fact that, compared with their predecessors, contemporary women have greater and more gender-equal resource-capturing capacities and are considerably less reliant on men for provisioning. Furthermore, women's participation in the labour force increases their need for paternal involvement in raising young. An earlier series of surveys conducted in 37

現代社會的另一個變化是男女之間的性別不平等有了顯著的改善，女性獲得資源的能力大大提高，對男性供應資源的依賴程度也顯著下降。此外，女性加入勞動力市場也提高了她們對男性參與撫養下一代的需求。早前在37個國家進行的一系列問卷調查以及之後在中國、新加坡和美國開展的類似問卷調查顯示，「善良」不僅是女性擇偶過程中最重視的品德之一，而且據統計數據顯示，其在女性心目中的重要性高於「外表的吸引力」和「收入能力」。這個結果再一次證實了比起是否具備優良的基因和提供資源的能力，女性在擇偶過程中更看重男性是否具有成為一個好父親的特質。我和學生進行的一系列其他相關研究也顯示中國女性具有同樣的擇偶偏好。這個應該不難理解。當女性將越來越多的時間和精力投入到有償勞動上，她們對男性提供資源的依賴程度自然降低，與此同時對男性參與撫養下一代的需求卻不斷增加。生活在這種環境中，女性自然會越來越重視男性是否具備成為一個好父親的特質，而非提供資源的能力或基因的優良。🌿

cultures and more recent ones conducted in China, Singapore, and the United States have shown that not only was 'kindness' rated among the highest-valued traits, it was rated statistically higher than 'attractiveness' or 'earning capacity', supporting women's mate preference for good-father attributes over good-provider and good-genes attributes. Other studies conducted by me and my students have shown that Chinese women prefer good-father attributes over good-genes and good-provider male mate attributes. Once a woman devotes time and energy to paid labour, her dependence on resources is reduced, and her need for a helper at the nest to ensure reproductive success increases. Living in such an environment, women's mate preferences could be expected to centre around good-father attributes and move away from good-provider and good-genes attributes. 🌿



代表優良基因的裝飾品在很多昆蟲、魚類、鳥類和哺乳動物中都可以看到。

Ornaments that are indicators of good genes can be found in various insects, fish, birds, and mammals.

聯繫教育工作者

Connecting Teachers

撰文English Text | 李重恩 Joshua Lee 翻譯Chinese Translation | 陳靜 Ruby Chen

圖Photo | 由英語中心提供 Provided by the English Language Centre

很多決策制定者和利益相關者都在討論如何改善澳門語言教育的質量。澳門在提升英語教育方面已經取得了重大進展。但是討論不是重點，重點是要分享成果和持續改善的方法。澳門大學人文學院英語中心在提升英語教育質量中一直發揮積極的作用。早前，英語中心承辦了2016年英語教學會議。該會議為澳門本地教師提供了一個分享研究成果和教學方法的難得平台，大大增強了其自信心。教學不應是一種孤立的個人活動，而應通過借鑒其他人的經驗而不斷提升。

Many policymakers and stakeholders seek to improve the quality of language education in Macao. Important local progress has been made in improving English language education. However, the key is not simply to discuss strategies, but also to share achievements and enhance gains. The English Language Centre (ELC) in the Faculty of Arts and Humanities (FAH) plays a productive role in enhancing the English language quality, in part by recently sponsoring the 2016 English language teaching conference 'Bringing Teachers Together: From Monologues to Multilogues'. Many local Macao teachers used the platform provided to present research and techniques for the first time, which greatly increased their confidence. Indeed, teaching is not a solitary activity, and can be greatly enriched by the experiences of others.



2016年英語教學會議
The 2016 English language teaching conference



工作坊
A workshop

實用的教學理念

該會議由澳門提升英語教育協會主辦，由澳大英語中心承辦。主題是「聯繫教育工作者：從獨白到多邊對話」。主講者討論了多個話題，包括借助小組討論來提升閱讀成效，網上自學英語材料、將歌曲融入課堂教學、利用電子教學來學習英語詞彙、文學圈、任務導向教學法、使用繪畫記憶英語詞組、雅思考試的準備工作、針對學生英語口語和寫作給予反饋的各種方法等等。講者準備了很多有用的材料和資源，也啟發其他教師思考如何將類似資源應用於自己平時的教學當中。

Practical Teaching Ideas

The conference was hosted by the ELC and organised by the Macau Association for the Advancement of English Language Teaching (MAELT). Thus the local public was able to benefit from the sharing of facilities and human resources. The theme was, 'Bringing Teachers Together: A Conference for Local Teachers from Monologues to Multilogues'.

The diverse presentations reflected the diversity of approaches and contexts. Subjects of presentations included using group work to facilitate reading, online self-access English materials, using songs in the classroom, the role of e-learning in teaching vocabulary, literature circles, task-based learning, using drawings to help in the retention of word collocations (words that go together), preparing for the IELTS



李重恩自舊金山州立大學獲得對外英語教學的碩士學位。目前在澳門大學人文學院英語中心任教。

Joshua Lee holds a master's degree in Teaching English to Speakers of Other Languages from San Francisco State University. He currently teaches in the English Language Centre, Faculty of Arts and Humanities

共同體驗

在該次會議上發表報告的本地中學英語教師的人數是澳門有史以來最多的。大部分講者都是土生土長的澳門人並在澳門本地學校教學。此外，會議還探討了如何達到澳門教育暨青年局制訂的「基本學力要求」。這些要求已經通過立法程序，將於2016/2017學年正式實施。很多中學教師將會面臨統考帶來的挑戰，因此很多講者就如何激勵學生迎接統考這一話題進行了深入討論。

交流合作

會議最重要的作用是促進了教師之間的交流。澳門提升英語教育協會展示了澳門本地中小學在英語教學方面取得的進步，提供了一個讓本地教育機構交流分享成果心得的平台。與會者希望澳門從事中葡等其他語種教育的工作者也可以開展類似的交流和合作，從而令教師之間的交流更加富有成效。📌

(International English Language Testing System), various methods for providing corrective feedback about speaking and writing, and a variety of other topics. Many presenters provided useful handouts and resources that teachers could apply to their own individual contexts.

Common Experiences

The conference included presentations from the most English language teachers from Macao secondary schools in living memory. The presenters' biographies indicate most teach in Macao and are also Macao locals.

The conference also helped prepare teachers to meet the 'Requirements of Basic Academic Attainments' established by the Education and Youth Affairs Bureau of Macau (DSEJ), a new legal framework which will be implemented in the 2016/2017 academic year. Many secondary school teachers will also face the challenge of the coming Joint Admission Examination, and therefore made presentations about motivating students for exam performance.

Together as One

Finally, the most important development of the conference was the facilitation of a conversation among different instructors at different levels. The MAELT helped to highlight the positive progress already being made in local secondary and primary schools and provided a place to share this progress with various local institutions. Participants also hope this level of collaboration and communication might eventually occur with other languages that are widely taught in Macao, such as Chinese and Portuguese. This will hopefully be the beginning of more fruitful and productive conversations among teachers. 📌



會議組委會成員

The organising committee of the conference



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