

PolyU receives strong boost from Industry Support Fund

In the recent allocation exercise of the Industry Support Fund (ISF), the Government's Industry and Technology Development Council has recommended a grant of \$15.91 million to support the PolyU to carry out five initiatives that would enhance the competitiveness of local industry.

These projects should be completed within a period of four years, and funding committed for the year 1998/99 amounts to \$5.75 million.

With this grant, the PolyU, again, will be hosting the Asian Industrial Technology Congress in January 1999 to promote technology transfer in the Region. Moreover, research teams from three academic departments

will embark on their respective endeavours, and the Institution's unique Teaching Company Scheme (TCS) will continue to operate for another four years.

The Congress will comprise three symposia focusing on different technology areas, and more than 120 readily transferable new technologies will be introduced to 700 key industrial executives from Hong Kong and the Region.

With funding support from the ISF,



The Material Research Centre.

three different initiatives undertaken by the Institute of Textiles and Clothing (ITC), the Department of Applied Physics and the Department of Manufacturing Engineering will

理大獲工業支援撥款 進行五項大型計劃

在最新一輪公布的政府工業支援資助計劃撥款名單中，香港理工大學有五個項目通過工業及科技發展局評選，所涉總費用達一千五百九十一萬元。獲批計劃需要在四年內完成，而政府會在九八至九九年度首先向理大撥款五百七十五萬元。

理大將運用這項撥款，於一九九九年一月再次舉辦亞洲工業科技大會。此外，該校三個不同學系的研究小組並將展開有關其學科的應用研究項目，而理大獨有的廠校合作研究計劃，亦得以在未來四年繼續進行。

由理大所舉辦的亞洲工業科技大會，目的為提高亞洲區工業的生產力及競爭能力。會期內將舉辦三個大型研討會，討論不同範疇的科技發展，並向與會者介紹超過一百二十種可即時應用的新穎科技及產品。預期活動會吸引到超過七百位來自香港及亞洲其他地區的工業家參與。

透過工業支援資助計劃的撥款，來自理大紡織及製衣學系、應用物理學系及製造工程學系的研究人員將會積極展開三項大型應用研究。其中，理大紡織及製衣學系與製衣業訓練局將攜手合作，籌辦全港第一所紡織科技研發中心。

身兼研究項目負責人的理大紡織及製衣學系主任莊德虎博士表示，該中心將協助本港從事紡織品生產與貿易有關的商戶推行品質評估，推廣品質保證的概念。據莊博士估計，現時業內不同種類的商戶幾達三萬家，它們都可以受惠於品質評估的技術應用。

莊博士表示現階段獲得的撥款會用作中心第一期的發展，並集中研究有關紡織品質素保證的技術轉移。他說：「在這個階段成立的品質評估實驗室及電子聯繫設施，可以為業內的長遠發展奠下穩固的基礎，將本港紡織及成衣行業的水平進一步提升，加強在國際市場的競爭力。」

同期間，理大應用物理學系的陳王麗華教授與系內材料研究中心的工作人員，將研究使用「智能」材料，用作具有廣泛用途及高度經濟效益的製造傳感器與機電器件上，例如將壓電與熱釋電材料應用於醫學上的超聲圖像。

另一方面，製造工程學系的文效忠博士及其研究人員，正鑽研發展鐘錶、眼鏡及首飾製造業所需之無鍍防擴散層技術，以符合歐洲經濟共同體所制訂有關出口貿易條例的嚴格要求。

文博士稱：「鑑於歐共體禁止飾物用鍍與人皮膚有直接接觸，對本地製造業及金屬業構成了嚴重的影響。因此，這項研究對製造業可以帶來莫大的裨益。」

此外，由理大一手創辦，深受工商界歡迎的廠校合作研究計劃，亦再度獲得工業支援資助計劃撥款繼續推行。

be launched. Firstly, the ITC and the Clothing Industry Training Authority will join hands in establishing the territory's first Textile Manufacturing Technology Centre.

Project leader and Head of ITC, Dr. Patrick Chong Tak-fu, said the new Centre will help Hong Kong's textile and clothing industry, which consists of nearly 30,000 manufacturing and trading firms, develop and upgrade their employees' skills in quality evaluation.

The ISF funding will support the first phase of this major project. According to Dr. Chong, this phase will focus on technology transfer with reference to the quality aspects of textiles. "A textile quality evaluation laboratory and electronic communication systems will be established in this phase, and these will form a solid foundation for the long-term development of the industry and enhance its competitiveness in the global context," he said.

Meanwhile, Prof. Helen Chan Wong Lai-wah from the Department of Applied Physics and her co-researchers from the Materials Research Centre will investigate the use of "smart" materials for fabricating sensors and mechatronic devices which have broad applicability and high economic potential. One such example based on the use of piezoelectric and pyroelectric materials is found in medical imaging.

At the Department of Manufacturing Engineering, Dr. Man Hau-chung and his team members are investigating the use of nickel-free barrier coatings for the manufacturing of watches, spectacles and jewellery in an attempt to meet the stringent requirements of export trade regulations enforced by the European Economic Community (EEC).

"The EEC controls the use of nickel in accessories in direct contact with skin, and this move has a serious impact on our manufacturing industry and metal industry," Dr. Man said. "Thus the findings of this applied research project will benefit the industry immensely."

In addition, the PolyU's highly successful Teaching Company Scheme has also received ISF funding in support of its further operation for another four years.

The TCS was launched by the Institution in 1990 to provide quality graduate support for research and development projects carried out in industry. In 1994, the TCS received a significant boost with a funding injection of \$17 million from the ISF. Under the scheme, 34 projects have been completed, and currently a total of 15 projects are being undertaken. ❖

Stronger ties forged with mainland institutions

The Department of Nursing and Health Sciences (NHS) recently entered into an agreement with the prestigious Tianjin Medical University, heralding a series of collaborative research and academic exchange in fields of nursing, optometry, radiography and biomedical science. This is already the sixth co-operative agreement which NHS has signed with a mainland partner institution.

Prof. George Woo, Chair of Optometry and Dean of the Faculty of Health and Social Studies, said the agreement, signed between NHS and the Nursing Department of Tianjin Medical University, will facilitate for both parties exchange of faculty and students, curricula development as well as the recruitment of graduates.

As part of the agreement, Ms. May Fok, NHS Assistant Professor, will launch a collaborative research project which studies the self-care ability of patients in major Tianjin hospitals who are undergoing haemodialysis — one of the dialysis methods used in the treatment of patients with renal failure.

Prof. Ida Martinson, Chair of Nursing and Head of NHS further disclosed that the two partners were already exploring the scope for research and academic exchange initiatives in radiography and biomedical science. Joining her in the working out these plans in the trip were Associate Head Dr. Thomas Wong, Ms. May Fok and Dr. Danny Gohel from NHS and Ms. Maria Law from the Department of Optometry and Radiography.

Tianjin Medical University is the first higher learning institute of medical science established after the founding of the PRC and is one of the highly ranked institutes of medical sciences in China. ❖



The delegation poses with senior staff of Tianjin Medical University.

Hong Kong's first postgraduate scheme in industrial safety sends forth 40 graduates

The territory's first distance learning postgraduate scheme in Occupational Safety and Health (POSH), jointly offered by the PolyU and the University of Western Sydney, Hawkesbury (UWS-H), sent forth its first cohort of 40 graduates at a ceremony on March 28.

These graduates, after completing an 18-month part-time programme, received the Graduate Diploma of Applied Science in Occupational Safety and Health at the ceremony. The majority is proceeding to the second part of the scheme, which is a one-year part-time

programme leading to the award of Master of Applied Science (Safety Management) — the highest academic qualification awarded locally in the discipline of occupational safety and health.

The ceremony was officiated at by UWS-H's Deputy Chancellor, Prof. Geoffrey Roberson, and Acting Vice Chancellor, Prof. John Clark; PolyU's Vice-President, Prof. Leung Tin-pui, Director of Industrial Centre, Dr. Chris Wong, and Director of the Centre for Professional and Continuing Education, Dr. Anthony Tam. Deputy Commissioner for Labour, Dr. Lee Kai-fat, attended the ceremony as guest-of-honour.

Since its launch in 1996, the scheme has received extremely favourable response every year with an over-subscription of several times of the intake quota. The key objective of the scheme is to provide advanced management studies for practitioners aspiring to positions of leadership in the field of occupational safety and health.

The scheme is jointly organized by UWS-H's Faculty of Science and Technology, and PolyU's Industrial Centre and Centre for Professional and Continuing Education.



The postgraduate scheme in industrial safety produces 40 graduates this year.

工業安全深造課程舉行首次畢業禮

香 港理工大學與澳洲西悉尼大學於三月二十八日為其合辦的香港首項遙距「工業安全深造課程」舉行首屆畢業典禮。

這四十位畢業生已完成為期年半的兼讀課程，於畢業典禮上獲頒應用科學（職業健康及安全）深造文憑學銜。大部分畢業生將會繼續修讀是項深造課程的第二部分，學員成功修畢這為期一年的兼讀課程後，便可獲頒授應用科學（安全管理）碩士學位。

畢業典禮由兩所大學的高級行政人員主禮，其中包括西悉尼大學副校長羅拔臣教授及署理校長郭約翰教授，以及理

大副校長梁天培教授，工業中心總監黃河清博士，及專業及持續教育中心總監譚展雲博士。此外，勞工處副處長李啟發博士亦應邀為畢業典禮的嘉賓。

「工業安全深造課程」自一九九六年開辦以來，廣受業內人士歡迎，每年的超額報名高達幾倍之多。該課程為工業安全界在職人士提供進修機會，讓他們可晉身該專業的高級管理階層。

是項為期兩年半的兼讀課程由西悉尼大學科技學院及理大的工業中心和專業及持續教育中心合辦。

Teaching innovations on top agenda

A total of 29 initiatives that would enhance the quality of teaching and student learning were presented at a mini-Conference titled "Showcase '98: Teaching Innovations for Promoting Student Learning at PolyU" held from June 9 to 10.

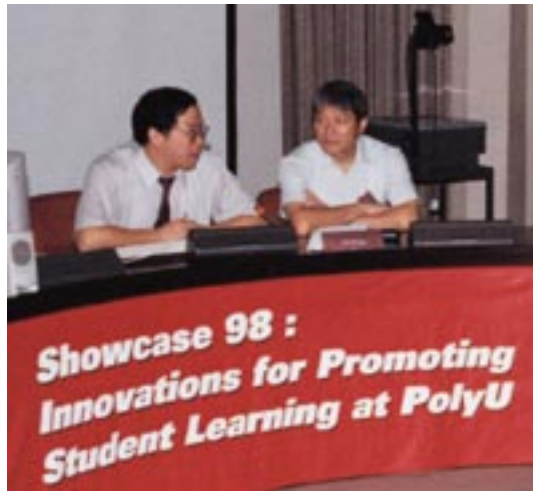
Addressing the opening ceremony, Vice-President (Quality Assurance) Prof. Leung Tin-pui said the two-day function "provides a valuable opportunity for PolyU staff to explore new teaching methods and to introduce fresh ideas for improving the students' learning process".

The function has received overwhelming response from teaching staff. Notably, staff members from 16 academic departments and the Educational Development Unit presented their innovations which were grouped into four broad areas: new approaches to teaching; enhancement of students'

learning; interactive multi-media teaching; enhancement, development and implementation of curriculum.

The mini-conference also addressed important issues like the use of information technology in teaching, communication skills in different learning context as well as problem-based learning. Participants also shared their views on matters related to good teaching practices.

The teaching innovation projects were supported by the PolyU's Learning and Teaching Development Grants. Meanwhile, the Educational Development Unit is also organizing a series of conferences and workshops to promote teaching quality. ❖



The meeting in session.

Distinguished alumnus comes home

The Hon. Leung Chun-ying, a highly respected surveyor and a graduate in 1974, brought his latest research findings on housing supply in Hong Kong to the Alma Mater in a public lecture held on June 1 on the university campus.

The lecture attracted a full-house audience of senior personnel in the real estate and surveying professions, not to mention the huge number of media representatives who flocked to the venue to gather first-hand information on the hot topic.

Mr. Leung is a Member of the First Executive Council of the Hong Kong Special Administrative Region. He has long dedicated his professional expertise to serving the community, and has served on nearly all land-related committees of the Government.

The function was organized by the Department of Building and Real Estate. ❖



Mr. Leung presents his research findings on housing supply.

Landmark Fashion Foundation helps groom design talent

The School of Design has received a strong boost from the Landmark Fashion Foundation, a new educational trust which will sponsor fashion design students of the School on various occasions in the coming years.

On May 28, the Foundation announced that funding amounting to \$1 million will be granted to provide the following sponsorships to design students:

- The Landmark Fashion Foundation Creativity Award at the 1998 Graduation Fashion Show;
- A 10-day study trip for final-year students to visit couture houses and trade exhibitions in the fashion centres of Europe in October this year;
- An outstanding student to pursue a Master's degree at the Royal College of Art in London.

Mrs. Clara Weatherall, Chairman of the Foundation, said: "We believe that the development of young local talent is vital to the future of Hong Kong's fashion industry. Hong Kong has some extremely gifted individuals and we hope these grants will enable them to maximize their potential."

The endowment of the Foundation was donated by retail fashion tenants located principally in The Landmark, and also by its owner Hongkong Land. ❖



Course Leader Ms. Sheila Cooke (right) receives a donation cheque from Mrs. Weatherall.

Roadshow highlights research and consultancy



The PolyU exhibition booth on display.

To keep the public abreast of its latest research and consultancy activities, the PolyU mounted a series of roadshows at seven bustling locations in town from April 18 to May 16.

On display were the PolyU's research and consultancy achievements, as well as the university's wide range of services and facilities for supporting the development of business and industry. Brochures on the services provided by the PolyU Technology and Consultancy Company Limited were distributed to visitors. ❖

PolyU offers new postgraduate programmes



The PolyU will continue to consolidate its taught postgraduate programmes by introducing course-based programmes up to the doctorate level to meet the surging needs of the community for professional manpower development.

In the coming academic year, the PolyU will offer a total of 20 programmes, including the popular course-based Doctor of Business Administration (DBA) programme. A new distance learning programme leading to the Master of Science/Postgraduate Diploma in Project Management will also be introduced for the first time.

Since the first local DBA programme was launched in 1996, competition for admission has been keen. In view of the popularity of course-based doctoral programme, the PolyU plans to offer another new programme leading to the degree of Doctor of Engineering in the 1999/2000 academic year.

The Master of Science/Postgraduate Diploma programme in Project Management is targeted for construction professionals in Hong Kong and the Mainland.

Mr. Francis Wong Kwan-wah, Programme Leader and Associate Professor of the Department of Building and Real Estate, said the programme will provide a study opportunity for construction managers, engineers and other related professionals in the construction industry to broaden their knowledge in project management.

“Considering the massive expansion and the increasing complexity of infrastructure development in Hong Kong and the Mainland, there is an urgent need for construction professionals to upgrade their knowledge and develop innovative approaches to project management,” he stressed.

The programme will adopt a distance learning mode to provide more flexibility for construction professionals who need to constantly travel between Hong Kong and the Mainland. ❖

Novel initiatives in business English launched

The Centre for Professional and Business English (CPBE) has launched two significant initiatives in the area of workplace language training to meet the increasing demand of the public and of corporate clients.

CPBE has begun to work with a number of professional associations to introduce a new style of training for their members. Under the concept of “Tailored-Opens”, the new courses address the language needs of a particular professional group, and are made available to members through individual subscription. Relevant courses have already been developed for company secretaries and accountants.

This year CPBE has also introduced the Cambridge Business English Certificate to Hong Kong. This relatively new qualification is offered by the University of Cambridge Local Examination Syndicate, one of the world’s leading examination authorities. The Certificate can be taken at three levels, based on robust and well-researched grading of language proficiency, and in contexts that reflect a business environment.

Meanwhile, the Centre is in the process of developing a distance learning programme for graduate engineers and self-guided materials for use on a company Intranet. ❖

World-class experts to speak at Asia Pacific Conference on Co-operative Education

專家學者八月雲集亞太合作教育會議

More than 80 papers on issues concerning co-operative education will be delivered by international experts from more than 10 countries at the 1998 Asia Pacific Conference on Co-operative Education, to be held from August 24 to 28 this year.

Hosted by the PolyU and co-organized by China Association for Co-operative Education, the Conference will focus on the theme "The Industry and Academic Symbiosis — a Global Partnership". It will be made up of two sections: a three-day programme in Hong Kong and a one-and-a-half day excursion to Guangzhou organized by South China University of Technology.

The Conference will consist of keynote and other paper presentations in four sub-themes, namely "Interactive Partnerships: Employers/Educationists/Students"; "Challenges and New Trends"; "Problems and Opportunities for Developing Economies"; and "Management and Marketing Issues".

Eminent keynote speakers who will speak at the Conference include:

- Prof. Brian Low, Deputy Vice-Chancellor (Academic) of the University of Technology, Sydney, Australia;
- Dr. David Lowry, Vice-President, Social and Developmental Programs of Freeport — McMoRan Services Company, USA;
- Dr. Ng Tat-lun, Deputy Chairman of the Vocational Training Council, and Managing Director of Eveready Battery Co. Inc. Hong Kong, China;

- Prof. A. A. Sfeir, Dean of the School of Engineering and Architecture, Lebanese American University, and General Secretary (1992-1997) of the International Association for the Exchange of Students for Technical Experience (IAESTE), Lebanon; and
- Dr. Zhang Weijiang, Director-General of Education Commission of Shanghai Municipal People's Government, China.

Under the auspices of the World Association for Co-operative Education (WACE), the regional Conference is held biennially to provide an opportunity for educationists and employers to interact

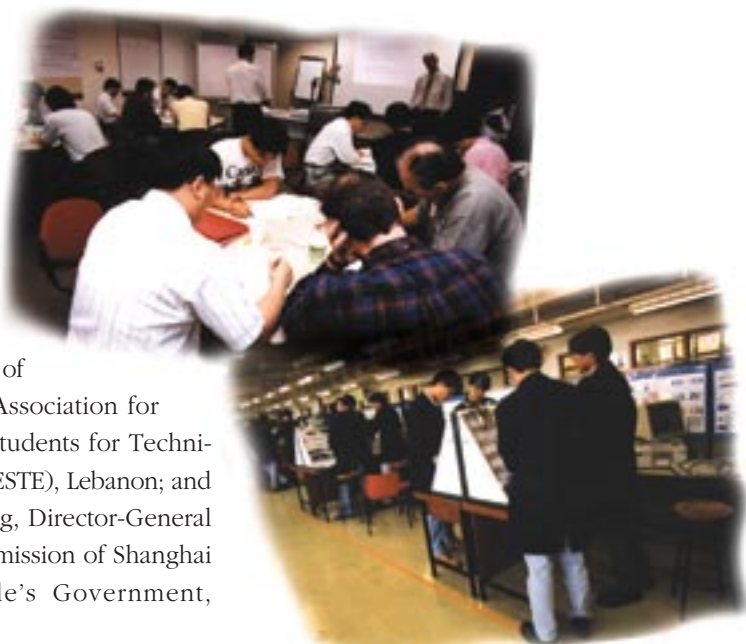
今年八月，來自超過十個國家的教育工作專家與工商界領袖將雲集香港，參加由香港理工大學主辦的亞太區合作教育會議，在會上會發表超過八十份有關合作教育發展的論文。

大會以「工商界與學術界的全球性合作互助關係」為主題，並由中國產學研合作教育協會合辦。會議將於八月二十四至二十八日舉行，共分兩部分：包括為期三天在香港進行的會議，及由華南理工大學舉辦的一天半廣州考察團。

是次會議將有多份論文及交流報告作公開發表，內容環繞「互動式的合作夥伴：僱主／教育工作者／學生」、「挑戰與新趨勢」、「發展中國家的問題與契機」及「管理和市場推廣的問題」四個分題。應邀發表主題演講的知名專家包括：

- 澳洲悉尼科技大學副校長（學術）盧拜仁教授 (Prof. Brian Low)；
- 美國 Freeport-McMoRan Services Company 社會及發展計劃副總裁羅大衛博士 (Dr. David Lowry)；
- 職業訓練局副主席暨永備電池有限公司董事總經理伍達倫博士；
- 黎巴嫩美國大學 (Lebanese American University) 工程及建築學院院長兼國際技術交換生協會秘書長 (1992-1997) 薛斐亞教授 (Prof. A. A. Sfeir)；及
- 中國上海市教育委員會主任張偉江博士。

大會將會安排工作坊及討論小組，協助與會人士了解如何策劃及籌組合作教育計劃，或就特定議題作交流經驗，以及討論發展合作教育之當前趨勢。



with one another and discuss issues of common interest. This is the second time for the PolyU to host the WACE conference following the Seventh World Conference in 1991. ❖

Technical tour to Tangshan unfolds post-earthquake developments

A 16-man delegation led by staff of the Department of Civil and Structural Engineering (CSE) and comprising members from seven other establishments visited Tangshan with a view to understanding the impact of earthquake and meeting mainland experts involved in this field of study.

The technical tour, conducted in late 1997, was jointly organized by CSE and the Institute of Engineering Mechanics (IEM) of the State Seismological Bureau in Harbin, China. Participants included government officials from four different departments, members of the Structural Division of the Hong Kong Institute of Engineers and three tertiary institutions. Prof. Ko Jan-ming, Chair and Head of CSE, was Chairman of the Tour; Dr. Eddie Lam Dr. Y.L Wong and Dr. K.T. Chau of the Department also joined the tour.

During the six-day tour, members conducted field investigations on some of the remains of the 1976 Tangshan earthquake and reviewed the re-development of the city after the disaster. The field trip was followed by

visits to construction site and residential developments. Technical sessions organized by IEM provided participants with understanding on preventive measures and future directions of R&D.

Reflecting on the tour, Prof. Ko commented that “earthquake engineering is an art as well as a science which we still do not fully comprehend”, and “learning from the past is probably the best source to explain the principles and theories of this important subject”.

“The visit has provided an excellent opportunity for us to meet world-renowned mainland scholars and researchers responsible for post-earthquake investigations and design practice,” Prof. Ko added. The technical tour was concluded with a final session on earthquake resistance design.



The delegation listening to a briefing at the Tangshan Earthquake Rehabilitation Memorial Museum.

According to a review conducted by the Government's Geotechnical Control Office on seismic activities within 350 km of Hong Kong, the territory is subject to potential seismic hazard. In a quest to study the issue, a seismic study group was formed within the Department. Currently the group is conducting some collaborative researches with IEM and other researchers from New Zealand and the United States. ❖



The cast steel workshop of the Tangshan Rolling Stock Plant.



Site visit: at the library of the Institute of Mining and Metallurgy.

兒童閱讀障礙非蠢鈍 適當教導亦可成大器

科學家愛因斯坦被公認為天才，他所提出的相對論對近代科學的影響極其深遠；但有多少人知道，愛因斯坦在年幼時曾被學校老師視為無藥可救的蠢材？愛迪生在世時發明了電燈及多項產品，但在孩提時代也曾遇上學習問題，究竟他們出了甚麼毛病？

假如你的孩子平常表現得聰明伶俐，卻在閱讀、書寫、拼字或算術方面遇上特別困難，寫字部首顛倒、漏筆畫、漏字、詞不達意；他們可能是患了「閱讀障礙症」(dyslexia)。據理工大學護理及醫療科學系副教授黎程正家博士稱，按西方文獻所載，正常人口中大約有十分一人患有不同程度的閱讀障礙症。其實，這些兒童的腦袋並沒有問題，甚至有許多是絕頂聰明，只不過他們的學習方法有異於一般兒童，在處理抽象的事物時會遇上困難。

甚麼是閱讀障礙症？

一九八六年，一位英國學校校醫詹姆士卡爾 (James Kerr) 發現有些視力沒有問題的孩子閱讀有障礙，便把這些症狀稱為「字盲」。後來一位德國教授 Karl Kussran 正式將這徵狀稱為「閱讀障礙症」，而美國心理學會在一九九四年再將這些徵狀歸類分為「閱讀異常」(Reading Disorder)，「書寫異常」(Writing Disorder) 和「數學異常」(Mathematic Disorder)。(有關症狀可參閱附表。)

據黎程正家博士解釋，患閱讀障礙症的兒童在語言組織能力方面有特別困難，雖然這些孩子很聰明，但在學校的成績表現上遠低他們的智力。他們的腦子好像沒有組織能力，不能將訊息吸收分門、歸類、處理，及準確和迅速地應用出來，所以在學習表現上，很多時都及不上同班的同學，令他們的自尊受到損害，在交朋友方面遇到排斥，加上他們內心深處的失敗感，更令他們在學習方面表現得被動、缺乏興趣、粗心大意，及不願意提起學校裏的事情。其實這些反應，在教師及父母適當的幫助下是可以避免的。

黎博士說：「患閱讀障礙症兒童和普通兒童最不同的地方，是他們需要用具體的形式來做心智運作，依靠具體的實物來得到意念。」



Dr. Alice Lai 黎程正家博士

研究工作

自一九九四年底開始，黎程正家博士便一直開始搜集本地患閱讀障礙症兒童的個案，並先後獲得校內外研究撥款共四十多萬元，建立全港首個有關特殊需要的兒童個案資料庫，從心理學的行為及認知角度研究這些兒童。

為了使各界人士更深入了解有關閱讀障礙的兒童所面對的困難，黎博士所搜集的每一兒童個案都包括三部分：(一) 兒童、家長及學校老師對兒童學習困難的訪問資料及評語；(二) 分析兒童在學習上所犯的錯誤；(三) 兒童智力及讀寫測試的評估報告。

此外，由黎程正家博士負責，設於理大護理及醫療科學系的兒童發展研究中心，每天都會接到很多來自學校、家長及老師的查詢，要求替個別兒童評估是否有閱讀障礙症。而黎博士會採取五個步驟，來確定兒童是否患上閱讀障礙症。首先，中心人員會嘗試了解兒童的學校生活，例如在學習方面是否遇上特別問題，覺得哪些科目最難等。患閱讀障礙症的兒童因為不想被人視為愚笨，通常會對自己的學習困難自圓其說，比方說：「我的老師太老了，都忘記怎樣教授學生」，「我心裏掛念着家中的小狗，所以腦子什麼都裝不進，學不到任何東西。」

經過第一步驟以後，中心人員會研究兒童的家庭歷史，例如兒童的父母和近親是否有閱讀障礙。然後，研究人員會評估兒童的智力。通常有閱讀障礙的兒童會害怕任何形式的測試，所以測試的結果往往不理想，但是如果適當的幫助，兒童的智力測試表現會有大幅度的改善。第四個步驟給予兒童一個口頭讀出的閱讀測試，用以評估兒童閱讀的進度、質素和記憶力。確定的第五步驟會評估兒童書寫和英文拼字的能力，讓兒童抄寫或拼寫他所屬年級範圍的英文字。

直至目前為止，黎博士已搜集到超過一百五十個個案，這些資料正用作理工大學的深造課程教材，修讀者包括現職社工、護士、治療師和各種醫護人員。由於現存的文獻絕大部分以西方兒童為案例，而中文與英文的語言架構大有不同，再加上不同的華人地區有不同方言，所以建立一套本地的個案資料庫實在刻不容緩。

現況及前景

黎程正家博士表示，由於香港人對兒童閱讀障礙症的認識不多，而家長與學校又非常重視語文學習的成績，社會環境對患有此症狀的兒童非常不利。她希望政府能夠將這課題列為師資培訓的必修科目，讓新一代的教育工作者對處理這問題有更深認識。另一方



Helping children with learning disabilities

The word “dyslexia” may sound strange to most of the teachers and parents in Hong Kong. But in fact this learning disability problem is commonly found among 10 per cent of a normal population, according to Dr. Alice Lai, Associate Professor of PolyU’s Department of Nursing and Health Studies (NHS).

Children suffering from dyslexia have difficulty with reading because of a slight disorder in the sensory part of their brains. Contrary to common belief, dyslexic children are not dumb — they can be very creative with an IQ above average. However, they have problems decoding words and phrases. Even the great scientist Albert Einstein experienced this learning problem in his childhood.

Since 1994, Dr. Alice Lai has been building up a case bank on children with dyslexia and other special needs like Attention Deficiency or Hyperactive Disorder. So far she has collected more than 150 cases on the subject, which was introduced as a module in the University’s postgraduate programmes for social workers and health care professionals.

“In the past most of the teaching materials are based upon western sources, and these illustrations are not familiar to our students,” said Dr. Lai.

Every day the Child Development Research Laboratory housed under NHS receives eight to ten calls from parents and teachers requesting dyslexia

assessment for individual child. In order to promote the concept, Dr. Lai is applying for funding to develop a dyslexia screening test that would help school teachers identify dyslexic pupils. In the long run, Dr. Lai hopes that the subject can be made mandatory in curriculum for local teachers training.

“Hong Kong people know too little about dyslexia, but the local examination system put a heavy strain on dyslexic children who are generally weak in languages,” she said. To help children lead a fruitful life, she strongly urges parents to recognize their children’s strength and potential in areas other than language.



(Illustrations by dyslexic children)

面，黎博士呼籲政府為學校提供更多支援，使有學習障礙的兒童可以在校內參加特別班，按其學習模式跟上課程進度。

有閱讀障礙的孩子是不能從傳統或一般的課室教學法有效地學習，但這並不代表這些孩子不能夠學習和閱讀；只要透過適合個人的學習方法，每一個孩子都能學習閱讀、書寫和算術。通常這種障礙是出現在有平均智力，甚至是智商在一般水平的孩子身上，但閱讀障礙對孩子的自尊心往往做成很大的打擊。所以，黎程正家博士鼓勵家長和老師對這些兒童的功課作彈性或個別處理，讓兒童發揮所長，特別是非語言方面的技能，幫助他們建立自信和學習的動機。

目前政府處理閱讀障礙症兒童的方法，主要依靠衛生署轄下的五個兒童智能測試中心進行測試，及教育署轄下的三個輔導中心為有閱讀障礙的兒童開辦輔導班。然而，家長及老師普遍對閱讀障礙症的認識仍是非常有限。有見及此，黎程正家博士正積極申請外界撥款資助，設計一套簡單易用，可以協助家長和老師評估小一至中三程度的孩子是否患有閱讀障礙症及症狀類型的甄別測試，及制訂教師訓練手冊。若然這項研究順利得到撥款，日後可以大大提高社會人士和教育工作者對兒童閱讀障礙症的認識。

現時香港的教育制度側重中、英、數三方面的能力，未能特別照顧有閱讀障礙的兒童的需要。因此，黎程正家博士寄望家長和老師多欣賞兒童在藝術、音樂和體育其他方面的才華，幫助這些學習有困難的兒童建立自信和自尊，過一個豐盛的人生。

附表：閱讀障礙症的症狀

以下是一個簡單的測試表；如果你或你的孩子、學生有下列的症狀的話，有可能是「閱讀障礙症」患者。

你會不會……

- 認為別人看你很懶惰？
- 經常在同一時間內看到不同的畫面？
- 有發白日夢的傾向？
- 經常有方位失誤的感覺？
- 在讀、寫或串字方面有困難？
- 在數學方面有困難？
- 在表達自己方面有困難？
- 認為專注是很困難的事？
- 經常坐立不安？
- 很難與人保持眼神的接觸？
- 記不起剛才讀過的東西？
- 經常讀字母或數字次序顛倒？
- 有時忘記你身在何處或是要往哪裏去？
- 在街上走路時常碰撞倒別人？
- 認為別人看你是一個非常大意的人？
- 閱讀時會覺得頭痛？

Innovative method produces torque free single yarns

*Single yarns prepared by traditional methods are easily deformed and can cause trouble in subsequential processing as well as fabric appearance. Supported by the University's Industry-Guided Applied Research and Development (IGARD) Fund, a team of researchers from the Institute of Textiles and Clothing has successfully developed a mechanical method for mass production of single yarns that have significant market potential. The following is a report contributed by the Principal Researcher **Dr. Tao Xiaoming**.*

A lot of the clothing we wear are made of fabrics, and knitted fabrics in fact are made from yarns formed by twisting short fibres together. During twisting, the constituent fibres are deformed, and a torque is generated and stored in the yarn. The torque stored, also known as "yarn residual torque", is the major cause of fabric spirality, a defect in weft-knitted fabrics. Fabric spirality is a distortion of a circular knitted fabric in which the wales follow a spiral path around the axis of the knitted fabric tube. This kind of distortion affects both aesthetics and functional performance of the knitted material and the garments produced.

The residual torque in twisted yarns, contributed by fibre bending, torsion and tension as well as inter-fibre friction, is

directly related to the yarn structure. The traditional ring spun yarns have a predominant coaxial helical geometry, in which most fibres are arranged in concentric helix forms. Thus all fibres will contribute positively to the generation of the residual torque. If the fibres are orientated in a different way so that the effects of fibre deformation are balanced within the yarn, a torque free yarn as well as zero fabric spirality can be achieved.

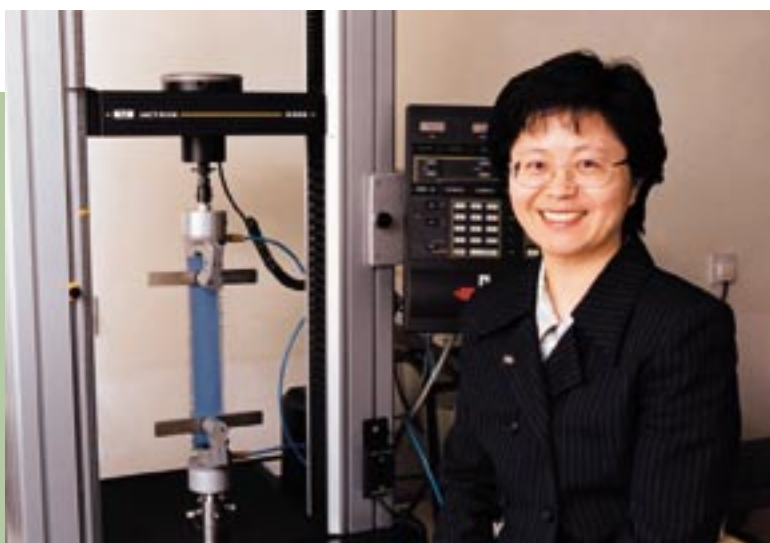
Based on this principle, a new processing technique has been recently developed by a research team at the Institute of Textiles and Clothing (ITC). This technique modifies the yarn structures, in either continuous or batch process, and reduce the residual torque of single yarns to such an extent that the

modified single yarns can be used for knitting single jersey fabrics without spirality. Laboratory trials have produced 100 per cent cotton single jersey fabrics, knitted from the modified yarns, which have zero spirality and a soft handle.

The novel technique will possibly create a new market area for single rotor yarns, as presently two-ply yarns or ring spun yarns are used. The current annual yarn production in Hong Kong is nearly 370 million pounds, 99 per cent being pure cotton yarns. According to the estimation by one of the largest textile companies in Hong Kong, potential saving on yarn cost by adopting the ITC technique is \$3.3 per pound of yarn. Even if the market penetration of this technique reaches just five per cent, a substantial amount of \$61,000,000 per year can be saved for the industry.

This newly developed technique is purely mechanical, not involving any chemical, wet or heating treatment. The batch process configuration can be implemented on most industrial machinery with minimum alternation. Therefore, comparing to other existing methods, it has a number of advantages in terms of environment, capital investment and energy.

Furthermore, this technique can be used to produce 100 per cent cotton single knitting yarns with zero residual torque, while the other existing



Dr. Tao Xiaoming

technologies are only applicable to cotton or polyester blends. In addition, this yarn modification technique is applicable to most unconventional spinning processes including friction, air-jet and rotor-jet spinning. In a global perspective, the potential market is very large and far-reaching.

The ITC torque free yarn technique has many advantages comparing to existing methods. The existing methods adopted by industry can be divided into two main categories: (a) setting of single yarn to reduce its residual torque; and (b) balancing the yarn torque by various means.

Setting is an effective way to reduce the residual torque in yarns and normally requires heat or chemical treatment. Heat setting has been used successfully for certain blend yarns like cotton or polyester rotor yarns. However, natural fibres like cotton cannot be set by heating and have to be prepared by chemical setting process. Even so, the chemical setting cannot achieve 100 per cent reduction in the yarn residual torque while the ITC technique is capable to achieve torque free status.

To balance the torque, industry personnel normally use two single yarns with the same twist direction which are twisted together in the opposite direction; or knit two single yarns with opposite twist directions by feeding them into one feeder on the knitting machine. Two single yarns have to be produced and then twisted, by using these two balancing methods, thus leading to a high production cost. The third approach is to knit alternative course with single yarns of opposite twist, which produces an undesirable zigzag pattern on the fabric surface. The fourth balancing method is to vary the fabric structure such as using double jersey instead of single jersey structure. However, in most situations,



The sophisticated equipment in use.



the fabric structure is dictated by the end use and one may not have the choice. In stark contrast, the ITC technique only produces one single yarn which can be knitted into any knit structures.

The research team at ITC has successfully produced zero-spirality knitted fabrics made from the modified single rotor yarns. Based on the technology developed in ITC laboratory, a large-scale project is currently funded by IGARD. The project is mainly concerned with further development of the yarn

modification method and optimization of the whole textile processes, including dyeing and finishing. In collaboration with the local industry, the research team is optimizing the technique for modification of rotor spun single yarns in real life circumstances. Hopefully the team will develop a set of design criteria, quality control tools as well as guidelines on the engineering design and quality control of the knitted fabrics in commercial environment. ♦

Highlights of major academic activities

Academic exchange in Hotel and Tourism

Fifteen delegates from various mainland universities offering degree programmes in hotel and tourism attended the First Academic Exchange Meeting of China Hotel and Tourism Schools hosted by the Department of Hotel and Tourism Management (HTM) from April 28 to May 1.

The major objectives of this event were to establish strategic alliances between HTM and selected institutions, and to identify key issues and demands for tourism and hospitality programmes at tertiary level. Some of those issues identified and discussed in the area of education in hotel and tourism in China included: staff development and practical experiences; teaching directions, construction of courses, and teaching methods; and the combination of theoretical and practical issues in teaching and research.



A group photo of the participants

Conference on midwifery practice

About 200 academics and practitioners in midwifery care from Hong Kong and the US gathered at the PolyU on April 24 to present their latest research findings at a conference on "Contemporary Midwifery Practice: Steps into the 21st Century".

Jointly organized by the Department of Nursing and Health Sciences (NHS) and Queen Elizabeth Hospital (QEH), the Conference aimed to provide an opportunity for practitioners to share their experience in contemporary practice; to disseminate research findings; and to explore current issues and future developments of the subject.

Prof. Ida Martinson, Chair of Nursing and Head of NHS, further disclosed that the PolyU and QEH were working closely to develop a programme that would move midwifery training from the hospital to the University.

Conference on Pacific Basin Business, Economics and Finance

More than 200 academics and practitioners from the financial, banking, securities investment and accounting fields from all over the world gathered in Hong Kong from May 28 to 29 to present the latest development of their respective fields and their research findings in the Sixth Conference on Pacific Basin Business, Economics and Finance.

Jointly organized by the PolyU and the Rutgers University in the US, the Conference focused on the impact of the Asian financial crisis on the region's financial services industry. The two-day event featured many keynote presentations by prominent speakers from the Securities and Futures Commission, Hong Kong Society of Accountants, Hong Kong Monetary Authority, the Stock Exchange of Hong Kong, Hong Kong Futures Exchange Ltd, the Hong Kong Mortgage Corporation Ltd and many other major financial institutions in Hong Kong and the Region. ❖



President Prof. Poon Chung-kwong presents a memento to Mr. Anthony Neoh, Chairman of the Securities and Futures Commission.