

RESEARCH AND  
KNOWLEDGE TRANSFER  
研究與知識轉移



The UGC supports the institutions' academic research activities through the allocation of the block grant, funding for research postgraduate places and various competitive research funding schemes such as the Theme-based Research Scheme, Areas of Excellence Scheme, General Research Fund, Early Career Scheme, Collaborative Research Fund, Humanities and Social Sciences Prestigious Fellowship Scheme and Joint Research Schemes with the Mainland and overseas countries. Through financial incentives and encouraging sharing of best practices among institutions and with overseas counterparts, the UGC also encourages institutions to further strengthen and broaden their endeavors in transferring knowledge, technology and other forms of research outputs into real socio-economic benefits and impacts for the community and society.

While the RGC is responsible for carrying out assessment of research grant proposals for competitive projects, the UGC established a Research Group to advise on the strategy to promote excellence in research and review the research assessment and funding methodology. Its objective includes working closely with institutions on issues such as how the research funding and research postgraduate places should be best distributed to drive excellence, how to encourage research while keeping an appropriate balance with teaching, how to maintain and promote role differentiation, what is the best and most effective way to allocate the research resources, *etc.*

The RGC has continued its efforts in taking the research results to the community by organising lectures and publishing newsletters to share the research findings with the community.

教資會積極為院校的學術研究提供各項支援，包括提供整體補助金、資助研究院研究課程學額，以及推行多項以競逐方式分配資源的研究資助計劃，例如主題研究計劃、卓越學科領域計劃、優配研究金、傑出青年學者計劃、協作研究金、人文學及社會科學傑出學者計劃，以及與內地和海外國家合辦的合作研究計劃。此外，教資會給予院校額外撥款，鼓勵他們與本地其他院校及海外院校分享良好做法，藉此推動院校進一步加強知識轉移的工作及擴大知識轉移的學術範疇，使知識、技術及其他形式的研究成果能轉化為實質的社會經濟效益，惠及社羣。

研資局負責評審參與具競逐性研究資助計劃的建議書。教資會成立的研究小組則負責就推動高等教育界研究工作的策略提供意見，以及就研究評審和資助方法進行檢討。小組的目標，是與院校緊密聯繫，共同探討不同議題，包括如何分配研究撥款及研究院研究課程學額以達致最佳效益；如何鼓勵院校兼顧研究與教學以取得適當平衡；如何維持及推動角色分工；以及如何制訂最佳和有效的方法分配研究資源等。

研資局會繼續向市民宣揚學者的研究成果，藉舉辦公眾講座和出版通訊，讓大眾了解學者的研究成果。

## RESEARCH AND KNOWLEDGE TRANSFER 研究與知識轉移

### UGC Funding Support for institutions

#### (a) Research Expenditure of UGC-funded Institutions 2011/12

The UGC-funded institutions continue to pursue excellent research. Their reported aggregate expenditure on research in 2011/12 amounted to HK\$7,155 million, representing 41% of the total expenditure in academic research of the institutions, and 0.36% of Hong Kong GDP. UGC and RGC funding, in the form of block grants and competitive research grants respectively, constituted the bulk of research funding for the institutions. Together, the two sources of funding made up about 76% of the total research expenditure in 2011/12- breakdown is at Table 1.

**Table 1 – Research Expenditure of UGC-funded Institutions 2011/12**

Source of Funding 資助來源		Amount (HK\$m) 金額 (百萬港元)
■ UGC	教資會	4,754.0
■ RGC	研資局	660.4
■ Other Government Funds	政府其他資助計劃	501.8
■ HK Private Funds	本地私人資金	1,099.0
■ Non-HK	香港以外的資金	139.6
Total	總額	7,154.9
		(Up 3.0% compared with 2010/11) (較2010/11學年增加3.0%)
<i>Ratio of expenditure on research to Hong Kong's GDP</i>		研究開支佔本地生產總值的比率 0.36%

Note: Figures do not add up to the total due to rounding.

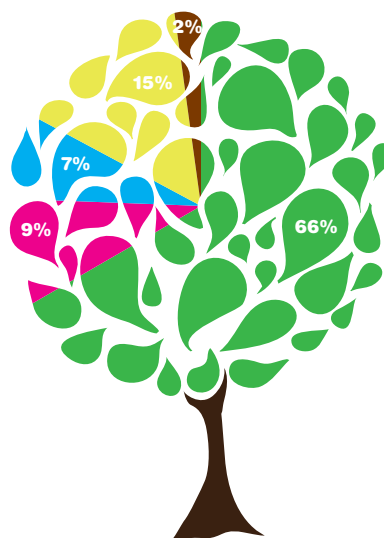
註：由於四捨五入，數字的總和可能與實際的總計略有出入。

### 教資會為院校提供的資助

#### (a) 2011/12學年教資會資助院校的研究開支

教資會資助院校繼續從事卓越研究工作。2011/12學年，各院校據報用於研究的總開支達71.55億港元，佔院校學術研究總開支的41%，相當於本地生產總值的0.36%。教資會及研資局分別以整體補助金及具競逐性研究補助金形式提供的資助，是各院校主要的研究經費。2011/12學年，該兩種資助來源約佔研究總開支的76%，分項數字載於表1。

**表1：2011/12學年教資會資助院校的研究開支**



**(b) Research Endowment Fund**

The \$18 billion Research Endowment Fund (REF) was established in February 2009 after approval was granted by the Legislative Council. The Fund has been set up as a trust under the Permanent Secretary for Education Incorporated. Its investment income replaces a large portion of recurrent subvention originally allocated to the RGC as Earmarked Research Grant, thus providing greater funding stability and certainty. A portion of its investment income will also support theme-based research, thus allowing the institutions to work on research proposals on themes of a more long-term nature and strategically beneficial to the development of Hong Kong.

An injection of \$5 billion into the Research Endowment Fund was proposed in the Policy Address delivered by the Chief Executive in October 2011 and approved by the Legislative Council in January 2012. Of that, a portion of the injection will provide research funding to the self-financing tertiary institutions on a competitive basis.

**(c) Greater Competitiveness on Allocation of Research Resource**

As elucidated in the “Aspirations for the Higher Education System in Hong Kong” report, the UGC has introduced greater competitiveness in allocating research funding and research postgraduate places in order to promote excellent research in UGC-funded institutions. It is the outstanding research that drives innovation contributing to society and the economy. All our institutions aspire to be able to compete with the best in the world. The new funding arrangement of using institutions’ achievement in RGC’s Earmarked Research Grant to determine the distribution of up to 12.5% of the Block Grant as indirect/on-costs has been implemented progressively over a period of nine years starting from 2012/13, and will be reviewed before the end of the first triennium. Over a period of five years starting from 2012/13, an increasing portion of the 5 595 research postgraduate places has been allocated through five competitive methods, and 50% of such places will be competitively allocated by 2016/17.

**(b) 研究基金**

立法會通過撥款180億元設立研究基金後，政府隨即於2009年2月以信託基金形式在教育局常任秘書長法團下成立該基金。研究基金的投資收益取代大部分原本撥予研資局作為研究用途補助金的經常資助金，以提供更穩定明確的資助。研究基金的部分投資收益會用來資助主題研究，讓各院校進行年期較長並在策略上有利於香港發展的主題研究。

行政長官於2011年10月發表的《施政報告》中，提出向研究基金注資50億元。立法會在2012年1月通過撥款，部分新注資金額會以競逐方式分配予自資高等教育院校，用作研究經費。

**(c) 提高研究資源分配的競逐程度**

一如《展望香港高等教育體系》報告所述，教資會已在分配研究資源及研究院研究課程學額方面，引入更多競逐元素，以推動資助院校進行卓越研究。傑出的研究能促進創新，造福社會，惠益經濟。本港院校均期望能與世界頂尖大學競短爭長。新的資助安排根據院校申請研資局研究用途補助金的結果，分配不多於整體補助金的12.5%予院校，作為間接成本／附加行政費用撥款。新安排由2012／13學年起實施，分九年逐步推行，教資會會在第一個三年期結束前作出檢討。由2012／13學年開始，5 595個研究院研究課程學額中，透過五個競逐方法分配的比例分五年逐步增加，到2016／17學年將有50%的學額以競逐方式分配。

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In the course of implementing its plan to enhance competitiveness in allocating research funding, the UGC noted that humanities and social sciences (HSS) projects generally have a lower project cost and that HSS academics are less active in applying for research grants. The UGC has taken certain measures to strengthen research in such disciplines, including ring-fencing 18% of the new indirect/on-costs element in the research portion of the Block Grant for HSS research and providing additional annual funding of \$20 million to the RGC for HSS research, in particular to recognise the greater need of HSS projects for Principal Investigator's time (in the form of teaching relief) and to set up the Prestigious Fellowship Scheme for Humanities and Social Sciences Panel.

### (d) Research Assessment Exercise 2014

The UGC seeks to reward excellent research and strengthen differentiation. To this end, in consultation with the eight UGC-funded institutions, the UGC will conduct the next Research Assessment Exercise (RAE) in 2014. The RAE 2014 will use international benchmarks and sharpened measures to assess the research quality of the institutions. Results of the RAE will form the basis of the distribution of the remaining part of the research funding in the Block Grant. Preparatory work for the RAE 2014 is under way.

### (e) RGC's Research Funding Schemes

Apart from the block grants allocated by the UGC, the various funding schemes administered by the RGC together represent the largest single source of funding for supporting academic research in Hong Kong's higher education. These funding schemes are managed by the RGC based on competition and peer review. With the transfer of administration of the Areas of Excellence Scheme to the RGC in February 2012, annual research funding available to the RGC amounted to about \$1.1 billion in 2012/13, as follows:

教資會在推行計劃以增加研究撥款分配的競逐元素時，注意到人文學及社會科學的項目成本一般較低，該範疇的學者也較少申請研究撥款。因此，教資會已採取多項措施，推動人文學及社會科學的研究，包括在整體補助金研究用途撥款下新設的間接成本／附加行政費用撥款中，預留18%予人文學及社會科學研究，又鑑於人文學及社會科學研究一般需要首席研究員投放較多時間，每年增撥2,000萬元予研資局，以聘請替假教師的形式讓有關學者騰出時間進行研究。另外，研資局亦在人文學及社會科學學科小組下設立傑出學者計劃。

### (d) 2014年研究評審工作

教資會積極獎勵卓越研究，同時設法分辨院校的研究表現。為此，教資會經諮詢八所資助院校後，將於2014年進行下一輪研究評審工作，採用國際基準及經優化的評審機制評估院校的研究質素。教資會將根據研究評審工作的結果，分配整體補助金之中研究用途撥款的餘下部分。教資會現已着手準備2014年的研究評審工作。

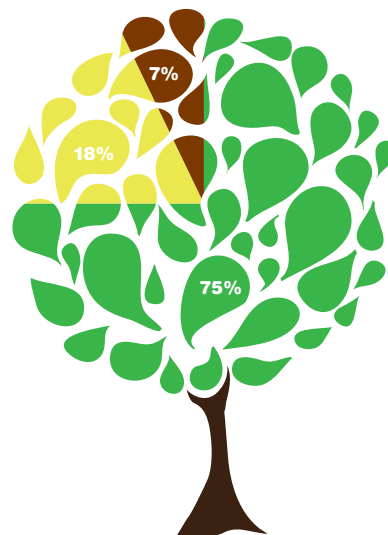
### (e) 研資局的研究資助計劃

研資局管理的多項研究資助計劃是教資會整體補助金之外，支持香港高等教育學術研究的最大單一撥款來源。研資局採用學者評審機制，以競逐方式發放撥款予申請院校。教資會於2012年2月把卓越學科領域計劃交由研資局管理，研資局在2012/13學年可用的年度撥款總額約為11億元，細分如下：

Table 2 – RGC’s Research Funding Schemes

表 2：研資局的研究資助計劃

Research Funding Schemes 研究資助計劃	Amount Available (HK\$m) 可用金額(百萬港元)
<b>RGC funding schemes funded by Earmarked Research Grant</b> 由研究用途補助金資助的研資局資助計劃	\$828.5
<b>Theme-based Research Scheme</b> 主題研究計劃	\$200.0
<b>Area of Excellence Scheme</b> 卓越學科領域計劃	\$80.0
<b>Total</b> 總額	<b>\$1108.5</b>



*Earmarked Research Grant*

For 2012/13, the RGC distributed HK\$ 791.28 million through the Earmarked Research Grant in the form of research project grants, representing a slight decrease of 0.5% when compared with 2011/12 where funds distributed included both research project grants and on-costs. There are six funding schemes under the RGC Earmarked Research Grant: the General Research Fund (GRF); the Early Career Scheme (ECS), the Collaborative Research Fund (CRF); the Joint Research Schemes (JRS), the Humanities and Social Sciences Prestigious Fellowship Scheme (HSSPFS) and the Postgraduate Students Conference/Seminar Grants (PSCSG). The budgeted distribution amongst the major funding schemes is set out in Table 3.

*研究用途補助金*

2012/13學年，研資局以研究計劃補助金的形式，透過研究用途補助金發放7.9128億港元，較2011/12學年稍減0.5%，因為2011/12學年發放的撥款除研究計劃補助金外，還包括附加行政費用撥款。研資局透過研究用途補助金分配撥款的計劃有六項：優配研究金、傑出青年學者計劃、協作研究金、合作研究計劃、人文學及社會科學傑出學者計劃，以及研究生會議／研討會補助金。按主要資助計劃劃分，財政預算的分配情況載於表3。

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**Table 3 – Budgeted Distribution of Earmarked Research Grants 2012/13**

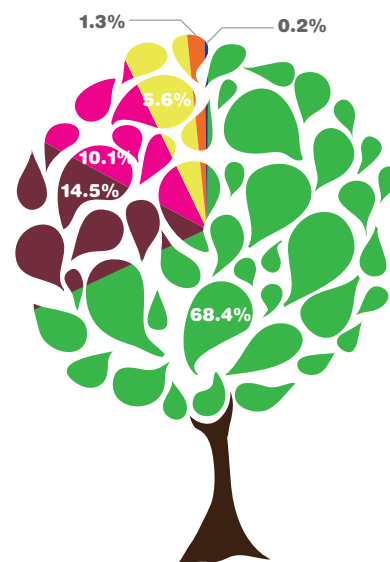
Distribution of Funding 撥款分配		Amount (HK\$m) 金額(百萬港元)
GRF	優配研究金	540.9
ECS	傑出青年學者計劃	114.8
CRF	協作研究金	80.0
JRS	合作研究計劃	44.4
HSSPFS	人文學及社會科學傑出學者計劃	10.0
PSCSG	研究生會議／研討會補助金	1.2
Total	總額	791.3

Details of how these schemes operate and the success rates can be found on the RGC website ([www.ugc.edu.hk/eng/rgc](http://www.ugc.edu.hk/eng/rgc)) and in its Annual Report.

### *Theme-based Research Scheme*

The Scheme is funded by the investment income from up to \$4 billion of the Research Endowment Fund (*i.e.* about \$200 million per annum assuming a 5% return). The objective of the scheme is to focus academic research efforts of the UGC-funded institutions on themes of strategic importance to the long-term development of Hong Kong. The Education Bureau has established a Steering Committee on Research Themes to advise on the selection of themes. After a series of consultation, including with the UGC, the RGC and the community, three themes were selected. Under these themes, 11 grand challenge topics have been identified by the RGC in consultation with the academic community through invitation of white papers and holding of workshops. These topics have been endorsed by the Education Bureau upon the advice of the Steering Committee. The themes and topics are set out below:

**表3：2012/13學年研究用途補助金的財政預算分配情況**



上述各項計劃的具體運作及申請批核比率，詳見研資局網站([www.ugc.edu.hk/big5/rgc/](http://www.ugc.edu.hk/big5/rgc/))或該局年報。

### *主題研究計劃*

主題研究計劃的經費來自研究基金不多於40億元本金的投資收益(以5%回報率推算，每年約2億元)。該計劃旨在鼓勵資助院校研究對香港長遠發展有重大策略意義的主題。教育局已設立研究主題督導委員會，就選取研究主題提供意見。教育局諮詢教資會、研資局及社會各界後，選定了三個主題。在該三個主題下，研資局藉徵求白皮書及舉行工作坊徵詢學術界的意見後，再定出11個具挑戰性的題目。教育局考慮過督導委員會的意見後，通過建議的題目。該些主題及題目開列如下：

*Theme: "Promoting good health"*

- Infectious diseases
- Genomic medicine
- Stem cells and regenerative medicine

*主題：促進健康*

- 傳染病
- 基因組醫學
- 幹細胞與再生醫學

*Theme: "Developing a sustainable environment"*

- Water pollution and water treatment
- Sustainable built environment
- Green Electronics <sup>\*\*</sup>
- Air quality

*主題：建設可持續發展的環境*

- 水污染及水處理
- 可持續建築環境
- 綠色電子 <sup>\*\*</sup>
- 空氣質素

*Theme: "Enhancing Hong Kong's strategic position as a regional and international business centre"*

- Hong Kong's future as an international financial centre
- Promoting Hong Kong's business through networking capability
- Promoting Hong Kong as a centre of excellence for business services innovation
- Entrepreneurship and enterprise organization <sup>\*</sup>

*主題：加強香港作為地區及國際商業中心的策略地位*

- 香港作為國際金融中心的未來發展
- 通過網絡能力推動香港商業發展
- 推動香港成為卓越的商業服務創新中心
- 企業家精神與企業組織 <sup>\*</sup>

<sup>\*</sup> The scope of these two topics was broadened/clarified with effect from the third round exercise in July 2012 after consulting the institutions and obtaining endorsement of the Education Bureau.

<sup>\*</sup> 經諮詢各院校及得到教育局同意後，研資局從2012年7月第三輪計劃起，擴大／釐清該兩個题目的研究範圍。

<sup>^</sup> This topic was named "Organic photo-voltaic and light emitting diodes" in the first and second round exercises.

<sup>^</sup> 在第一及第二輪計劃中，本題目稱為“有機光伏發光二極管”。

Two rounds of exercises have been conducted under which 11 projects were awarded funding totaling some \$451 million. The third round was launched in July 2012 with 42 preliminary proposals received and 16 shortlisted for submission of full proposals. Grants were awarded in July 2013.

研資局舉行過兩輪研究計劃，共有11個項目獲得資助，撥款總額約為4.51億元。研資局於2012年7月為第三輪計劃徵集申請後，收到42份初步建議書，並選出其中16份，邀請院校提交詳盡研究建議。資助結果已於2013年7月公布。



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### *Hong Kong PhD Fellowship Scheme*

To attract the best and brightest students in the world, irrespective of their country of origin and cultural background, to pursue their PhD studies and research in UGC-funded institutions, the RGC launched the annual Hong Kong PhD Fellowship Scheme in September 2009.

The Fellowship provides a monthly stipend of HK\$20,000 and a conference and research-related travel allowance of HK\$10,000 per year for the awardees for a period of three years. 155 candidates among some 4,300 applicants from over 110 regions received the award in the third round exercise for 2012/13.

To promote the fourth round of the Scheme for 2013/14, Chairman, RGC and colleagues from institutions conducted outreach visits to the United Kingdom and Scotland in October 2012 and visited 5 top-tier institutions to exchange views with university staff as well as students. There were 4,785 applicants from 106 regions for the fourth round. By the end of March 2013, 185 candidates accepted the offer of fellowship.



*Outreaching visits for promotion of the 2013/14 Hong Kong PhD Fellowship Scheme*

2013/14 學年香港博士研究生獎學金計劃的外訪推廣活動

### *香港博士研究生獎學金計劃*

為吸引世界各地最優秀的尖子學生（不論國籍及文化背景）來港修讀資助院校的博士學位研究課程及進行研究，研資局於2009年9月推出香港博士研究生獎學金計劃。該計劃現時每年舉辦一次。

獎學金計劃為得獎學生提供每月2萬港元助學金，以及每年1萬港元的會議及研究活動交通津貼，為期三年。2012/13學年第三屆計劃共收到來自超過110個地區約4,300份申請，最後有155名申請人獲頒獎學金。

為推廣2013/14學年第四屆獎學金計劃，研資局主席聯同各院校人員於2012年10月赴英國及蘇格蘭訪問了5所頂尖院校，與當地教職員及學生交換意見。第四屆獎學金計劃共收到來自106個地區的4,785份申請。截至2013年3月底，已有185名申請人獲頒獎學金。



*The awardees of the 2012/13 round of the Hong Kong PhD Fellowship Scheme, RGC Members, and representatives of institutions together with some past awardees met at a tea reception on 21 November 2012 to exchange views and share experiences.*

2012年11月21日，2012/13學年香港博士研究生獎學金計劃得獎學生與部分歷屆得獎人、研資局成員及院校代表茶敘，交流心得及分享經驗

This prestigious Scheme unites top international research postgraduate students and Hong Kong's world-class research institutions. It helps Hong Kong to excel at research and widen our pool of talent and contacts. This also furthers internationalisation of the higher education sector.

### Knowledge Transfer

As a natural extension of institutions' teaching and research activities, KT has become the third core function of Hong Kong's higher education institutions. The UGC strongly believes that the transfer of knowledge between institutions and the society would help bring about socio-economic impact and improvements to the community and businesses. This in turn would also help enrich institutions' research mission, thereby enhancing the international competitiveness of the local higher education sector. The UGC is encouraged to note that over the years, knowledge transfer activities haven taken roots in multiple disciplines, including health sciences, arts and humanities and the social sciences, architecture, business and economics, city planning and the environment, science and technology as well as engineering. The overall level of KT activity is healthy and there are positive indications that it is increasing.

Since 2009/10, the UGC has introduced an additional stream of recurrent funding of around \$50 million per annum earmarked for the institutions to strengthen and broaden their endeavours in KT. It is welcoming to see that considerable progress has been made by all institutions which have made good use of the funding. All institutions have now included KT in their mission statements and strategic documents while academic staff has also manifested a higher degree of commitment to the initiative.

All institutions have engaged to some degree in consultancy, research contracts and collaborative research, spin out companies and licensing. They have all engaged in some form of Continuing Professional Development which was directed at business or social enterprises. Institutions have also employed a variety of other mechanisms to particularly cater for KT in the arts, humanities and social sciences. These include the setting up of websites for dissemination of knowledge, organization of seminars, workshops, conferences, exhibitions and other public events.

獎學金計劃備受推崇，把來自各地的頂尖研究生匯集於香港的世界級學府，有助香港在研究方面更上一層樓，擴大本地的人才庫及聯絡網，推動本地高等教育院校國際化。

### 知識轉移

院校既然從事教學與研究，自然會更進一步，進行知識轉移。知識轉移已成為香港高等教育院校的第三項核心功能。教資會深信，院校在社會上進行知識轉移，不但有利民生經濟，而且惠益社會及企業，更有助充實院校的研究政策方針，從而提升本地高等教育界的國際競爭力。經過多年努力，教資會喜見知識轉移已在多個學科扎根，包括衛生科學、文科、人文學及社會科學、建築、商業與經濟、城市規劃與環境、科學與科技，以及工程學科。知識轉移活動的整體水平良好，而且還有上升迹象，令人鼓舞。

自2009/10學年起，教資會新增一項每年約5,000萬元的經常補助金，供院校鞏固並深化其知識轉移工作。教資會欣悉各院校善用資助，在知識轉移方面取得重大進展。所有院校現已把知識轉移納入使命宣言及策略文件內，而教學人員亦更積極參與這方面的工作。

所有院校或多或少都參與顧問工作、研究合約及協作研究，又或成立公司，以特許方式讓其他人應用其研究成果。院校以商業或社會企業為對象，進行某種形式的持續專業發展，並採用其他多種方法進行知識轉移，特別是在文科、人文學及社會科學等領域。有關方法包括設立網站傳播知識，以及舉辦研討會、工作坊、會議、展覽和其他公眾活動。

## RESEARCH AND KNOWLEDGE TRANSFER 研究與知識轉移

Much of the UGC funding was intended to be used for building institutions' capacity for knowledge transfer and that has indeed been the case with all of them having established or reinforced their knowledge transfer offices for better coordination and promotion. There has also been increased recognition of the importance of enterprise and entrepreneurship as an integral element of knowledge transfer. It is hopeful that the promotion of entrepreneurship would resonate with the new 4-year academic structure with students to be given with more opportunities to work with start-ups and networks could be formed to link undergraduate and postgraduate students, researchers, alumni, faculty members and other staff.

As has often been noted, the history of significant research activity and funding in Hong Kong institutions is comparatively short. Thus it is unsurprising that many of the demonstrable impacts of the creation of new knowledge have not been widely reported and thus unnoticed by society in general. In order to increase public awareness of the good work that has been done by institutions in this area, the UGC would deploy additional funding to carry out more extensive communication activities in the coming year.

教資會提供的資助，主要旨在鞏固院校的知識轉移能力。事實上，各院校已成立或擴充負責知識轉移的部門，從而改善協調及加強推廣。此外，各院校更明白企業及企業精神在知識轉移方面，發揮關鍵作用。教資會希望在四年制新學制下，學生會有更多機會與新創辦的公司合作，培養企業精神，並期望學士學位課程學生可與研究生、研究人員、校友、教學人員及其他員工建立聯繫網絡。

香港的院校進行具規模、兼獲可觀經費的研究工作，只不過是近年的事。在此背景下，院校開創新知識所帶來的明顯效益未有被廣泛報道，因而往往被社會大眾忽略。為了向公眾宣揚院校在這方面的建樹，教資會來年會調配額外資源進行較廣泛的推廣活動。

### Allocation of Knowledge Transfer Recurrent Funding to Institutions, 2012/13

2012/13 學年分配予院校的知識轉移經常撥款

Institution 院校		(\$ million) (百萬港元)
CityU	城大	5.82
HKBU	浸大	2.80
LU	嶺大	1.09
CUHK	中大	13.41
HKIEd	教院	1.53
PolyU	理大	7.43
HKUST	科大	7.11
HKU	港大	13.61
Total	總額	52.8