

RESEARCH AND  
KNOWLEDGE TRANSFER  
研究与知识转移



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.

教资会积极为院校的学术研究提供各项支援，包括提供整体补助金、资助研究院研究课程学额，以及推行多项以竞逐方式分配资源的研究资助计划，例如主题研究计划、卓越学科领域计划、优配研究金、杰出青年学者计划、协作研究金、人文学及社会科学杰出学者计划，以及与内地和海外国家合办的合作研究计划。此外，教资会给予院校额外拨款，鼓励他们与本地其它院校及海外院校分享良好做法，藉此推动院校进一步加强知识转移的工作及扩大知识转移的学术范畴，使知识、技术及其它形式的研究成果能转化为实质的社会经济效益，惠及社群。

研资局负责评审参与具竞逐性研究资助计划的建议书。教资会成立的研究小组则负责就推动高等教育界研究工作的策略提供意见，以及就研究评审和资助方法进行检讨。小组的目标，是与院校紧密联系，共同探讨不同议题，包括如何分配研究拨款及研究院研究课程学额以达致最佳效益；如何鼓励院校兼顾研究与教学以取得适当平衡；如何维持及推动角色分工；以及如何制订最佳和有效的方法分配研究资源等。

研资局会继续向市民宣扬学者的研究成果，藉举办公众讲座和出版通讯，让大众了解学者的研究成果。

## RESEARCH AND KNOWLEDGE TRANSFER 研究与知识转移

### 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 资助来源		Amount (HK\$m) 金额 (百万港元)
■ UGC	教资会	4,754.0
■ RGC	研资局	660.4
■ Other Government Funds	政府其它资助计划	501.8
■ HK Private Funds	本地私人资金	1,099.0
■ Non-HK	香港以外的资金	139.6
Total	总额	7,154.9
		(Up 3.0% compared with 2010/11) (较2010/11 学年增加3.0%)
<i>Ratio of expenditure on research to Hong Kong's GDP</i>		<i>研究开支占本地生产总值的比率</i>
		0.36%

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

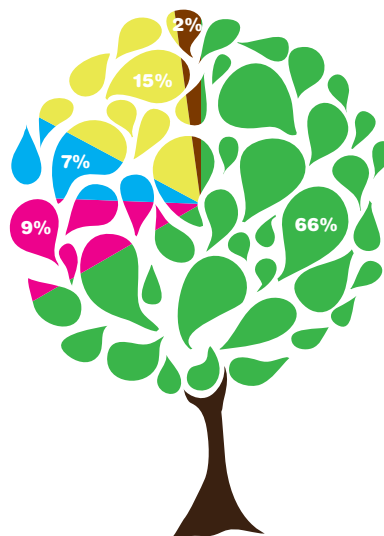
注：由于四舍五入，数字的总和可能与实际的总计略有出入。

### 教资会为院校提供的资助

#### (a) 2011/12 学年教资会资助院校的研究开支

教资会资助院校继续从事卓越研究工作。2011/12 学年，各院校据报用于研究的总开支达 71.55 亿港元，占院校学术研究总开支的 41%，相当于本地生产总值的 0.36%。教资会及研资局分别以整体补助金及具竞争性研究补助金形式提供的资助，是各院校主要的研究经费。2011/12 学年，该两种资助来源约占研究总开支的 76%，分项数字载于表 1。

**表 1：2011/12 学年教资会资助院校的研究开支**



**(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**

立法会通过拨款180亿元设立研究基金后，政府随即于2009年2月以信托基金形式在教育局常任秘书长法团下成立该基金。研究基金的投资收益取代大部分原本拨予研资局作为研究用途补助金的经常资助金，以提供更稳定明确的资助。研究基金的部分投资收益会用来资助主题研究，让各院校进行年期较长并在策略上有利于香港发展的主题研究。

行政长官于2011年10月发表的《施政报告》中，提出向研究基金注资50亿元。立法会在2012年1月通过拨款，部分新注资金额会以竞逐方式分配予自资高等教育院校，用作研究经费。

**(c) 提高研究资源分配的竞逐程度**

一如《展望香港高等教育体系》报告所述，教资会已在分配研究资源及研究院研究课程学额方面，引入更多竞逐元素，以推动资助院校进行卓越研究。杰出的研究能促进创新，造福社会，惠益经济。本港院校均期望能与世界顶尖大学竞短争长。新的资助安排根据院校申请研资局研究用途补助金的结果，分配不多于整体补助金的12.5%予院校，作为间接成本／附加行政费用拨款。新安排由2012／13学年起实施，分九年逐步推行，教资会会在第一个三年期结束前作出检讨。由2012／13学年开始，5 595个研究院研究课程学额中，透过五个竞逐方法分配的比例分五年逐步增加，到2016／17学年将有50%的学额以竞逐方式分配。

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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:

教资会在推行计划以增加研究拨款分配的竞逐元素时，注意到人文学及社会科学的项目成本一般较低，该范畴的学者也较少申请研究拨款。因此，教资会已采取多项措施，推动人文学及社会科学的研究，包括在整体补助金研究用途拨款下新设的间接成本／附加行政费用拨款中，预留18%予人文学及社会科学研究，又鉴于人文学及社会科学研究一般需要首席研究员投放较多时间，每年增拨2,000万元予研资局，以聘请替假教师的形式让有关学者腾出时间进行研究。另外，研资局亦在人文学及社会科学学科小组下设立杰出学者计划。

### (d) 2014年研究评审工作

教资会积极奖励卓越研究，同时设法分辨院校的研究表现。为此，教资会经咨询八所资助院校后，将于2014年进行下一轮研究评审工作，采用国际基准及经优化的评审机制评估院校的研究质素。教资会将根据研究评审工作的结果，分配整体补助金之中研究用途拨款的余下部分。教资会现已着手准备2014年的研究评审工作。

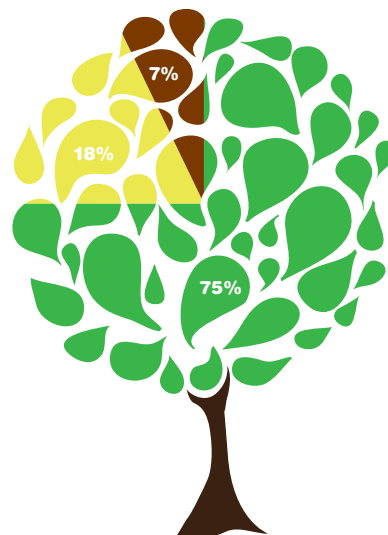
### (e) 研资局的研究资助计划

研资局管理的多项研究资助计划是教资会整体补助金之外，支持香港高等教育学术研究的最大单一拨款来源。研资局采用学者评审机制，以竞逐方式发放拨款予申请院校。教资会于2012年2月把卓越学科领域计划交由研资局管理，研资局在2012/13学年可用的年度拨款总额约为11亿元，细分如下：

Table 2 – RGC’s Research Funding Schemes

表 2：研资局的研究资助计划

Research Funding Schemes 研究资助计划		Amount Available (HK\$m) 可用金额(百万港元)
<span style="color: green;">■</span> RGC funding schemes funded by Earmarked Research Grant	由研究用途补助金资助的研资局资助计划	\$828.5
<span style="color: yellow;">■</span> Theme-based Research Scheme	主题研究计划	\$200.0
<span style="color: brown;">■</span> Area of Excellence Scheme	卓越学科领域计划	\$80.0
<b>Total</b>	<b>总额</b>	<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.

*研究用途补助金*

2012/13 学年，研资局以研究计划补助金的形式，透过研究用途补助金发放 7.9128 亿港元，较 2011/12 学年稍减 0.5%，因为 2011/12 学年发放的拨款除研究计划补助金外，还包括附加行政费用拨款。研资局透过研究用途补助金分配拨款的计划有六项：优配研究金、杰出青年学者计划、协作研究金、合作研究计划、人文学及社会科学杰出学者计划，以及研究生会议/研讨会补助金。按主要资助计划划分，财政预算的分配情况载于表 3。

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

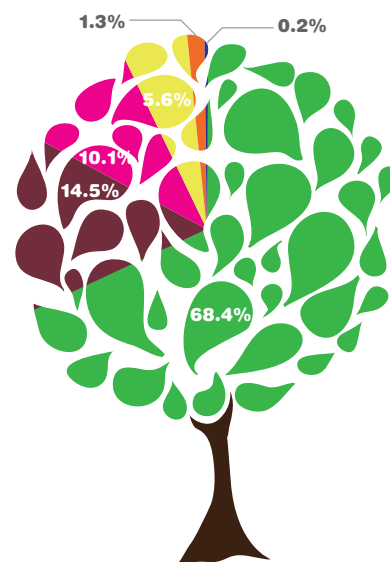
Distribution of Funding 拨款分配		Amount (HK\$m) 金额(百万港元)
GRF	优配研究金	540.9
ECS	杰出青年学者计划	114.8
CRF	协作研究金	80.0
JRS	合作研究计划	44.4
HSSPFS	人文学及社会科学杰出学者计划	10.0
PSCSG	研究生会议/研讨会补助金	1.2
Total	总额	791.3

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学年研究用途补助金的财政预算分配情况**



上述各项计划的具体运作及申请批核比率，详见研资局网站([www.ugc.edu.hk/big5/rgc/](http://www.ugc.edu.hk/big5/rgc/))或该局年报。

### *主题研究计划*

主题研究计划的经费来自研究基金不多于40亿元本金的投资收益(以5%回报率推算，每年约2亿元)。该计划旨在鼓励资助院校研究对香港长远发展有重大策略意义的主题。教育局已设立研究主题督导委员会，就选取研究主题提供意见。教育局咨询教资会、研资局及社会各界后，选定了三个主题。在该三个主题下，研资局藉征求白皮书及举行工作坊征询学术界的意见后，再定出11个具挑战性的题目。教育局考虑过督导委员会的意见后，通过建议的题目。该些主题及题目开列如下：



*Theme: "Promoting good health"*

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

*Theme: "Developing a sustainable environment"*

- Water pollution and water treatment
- Sustainable built environment
- Green Electronics \*\*
- Air quality

*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 \*

\* 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.

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

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.

*主题：促进健康*

- 传染病
- 基因组医学
- 干细胞与再生医学

*主题：建设可持续发展的环境*

- 水污染及水处理
- 可持续建筑环境
- 绿色电子\*\*
- 空气质素

*主题：加强香港作为地区及国际商业中心的策略地位*

- 香港作为国际金融中心的未来发展
- 通过网络能力推动香港商业发展
- 推动香港成为卓越的商业服务创新中心
- 企业家精神与企业组织\*

\* 经咨询各院校及得到教育局同意后，研资局从2012年7月第三轮计划起，扩大／厘清该两个题目的研究范围。

^ 在第一及第二轮计划中，本题目称为“有机光伏发光二极管”。

研资局举行过两轮研究计划，共有11个项目获得资助，拨款总额约为4.51亿元。研资局于2012年7月为第三轮计划征集申请后，收到42份初步建议书，并选出其中16份，邀请院校提交详尽研究建议。资助结果已于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 学年香港博士研究生奖学金计划的外访推广活动

### *香港博士研究生奖学金计划*

为吸引世界各地最优秀的尖子学生（不论国籍及文化背景）来港修读资助院校的博士学位研究课程及进行研究，研资局于2009年9月推出香港博士研究生奖学金计划。该计划现时每年举办一次。

奖学金计划为得奖学生提供每月2万港元助学金，以及每年1万港元的会议及研究活动交通津贴，为期三年。2012/13 学年第三届计划共收到来自超过110个地区约4,300份申请，最后有155名申请人获颁奖学金。

为推广2013/14 学年第四届奖学金计划，研资局主席联同各院校人员于2012年10月赴英国及苏格兰访问了5所顶尖院校，与当地教职员及学生交换意见。第四届奖学金计划共收到来自106个地区的4,785份申请。截至2013年3月底，已有185名申请人获颁奖学金。



*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 学年香港博士研究生奖学金计划得奖学生与部分历届得奖人、研资局成员及院校代表茶叙，交流心得及分享经验

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't 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.

奖学金计划备受推崇，把来自各地的顶尖研究生汇集于香港的世界级学府，有助香港在研究方面更上一层楼，扩大本地的人才库及联络网，推动本地高等教育院校国际化。

### 知识转移

院校既然从事教学与研究，自然会更进一步，进行知识转移。知识转移已成为香港高等教育院校的第三项核心功能。教资会深信，院校在社会上进行知识转移，不但有利民生经济，而且惠益社会及企业，更有助充实院校的研究政策方针，从而提升本地高等教育界的国际竞争力。经过多年努力，教资会喜见知识转移已在多个学科扎根，包括卫生科学、文科、人文学及社会科学、建筑、商业与经济、城市规划与环境、科学与科技，以及工程学科。知识转移活动的整体水平良好，而且还有上升趋势，令人鼓舞。

自2009/10学年起，教资会新增一项每年约5,000万元的经常补助金，供院校巩固并深化其知识转移工作。教资会欣悉各院校善用资助，在知识转移方面取得重大进展。所有院校现已把知识转移纳入使命宣言及策略文件内，而教学人员亦更积极参与这方面的工作。

所有院校或多或少都参与顾问工作、研究合约及协作研究，又或成立公司，以特许方式让其他人应用其研究成果。院校以商业或社会企业为对象，进行某种形式的持续专业发展，并采用其它多种方法进行知识转移，特别是在文科、人文学及社会科学等领域。有关方法包括设立网站传播知识，以及举办研讨会、工作坊、会议、展览和其它公众活动。

## RESEARCH AND KNOWLEDGE TRANSFER 研究与知识转移

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.

教资会提供的资助，主要旨在巩固院校的知识转移能力。事实上，各院校已成立或扩充负责知识转移的部门，从而改善协调及加强推广。此外，各院校更明白企业及企业精神在知识转移方面，发挥关键作用。教资会希望在四年制新学制下，学生会有更多机会与新创办的公司合作，培养企业精神，并期望学士学位课程学生可与研究生、研究人员、校友、教学人员及其它员工建立联系网络。

香港的院校进行具规模、兼获可观经费的研究工作，只不过是近年的事。在此背景下，院校开创新知识所带来的明显效益未有被广泛报道，因而往往被社会大众忽略。为了向公众宣扬院校在这方面的建树，教资会来年会调配额外资源进行较广泛的推广活动。

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

2012/13 学年分配予院校的知识转移经常拨款

Institution 院校		(\$ million) (百万港元)
CityU	城大	5.82
HKBU	浸大	2.80
LU	岭大	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	总额	52.8