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Knowledge First: UK and India Partners in Research and Innovation

# **British High Commission**

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http://ukinindia.fco.gov.uk





# **Foreword**



I am pleased to present this updated edition of "Knowledge First", which provides a short introduction to the many ways in which the UK

and India are collaborating in the field of education. I am particularly grateful to Kapil Sibal for the energy he has put into bringing our countries closer together in these areas. Our collaboration is a truly joined up effort, bringing together different parts of our governments, institutions, enterprises and people. Our Prime Ministers have put education at the top of our shared agenda. As this booklet shows. collaboration in education between the UK and India goes back over many years, but is also constantly changing and innovating. This is an exciting time to be working together. I very much welcome this booklet and look forward to many more UK-Indian success stories in the years to come.

### **RT Hon David Willetts**

UK Minister for Universities and Science



I am delighted to know that the British High Commission is publishing a small but highly informative booklet on UK-India Education Partnership. It has been my pleasure to associate closely with the efforts outlined in it, which aim to bring together our two countries in the pursuit of knowledge.

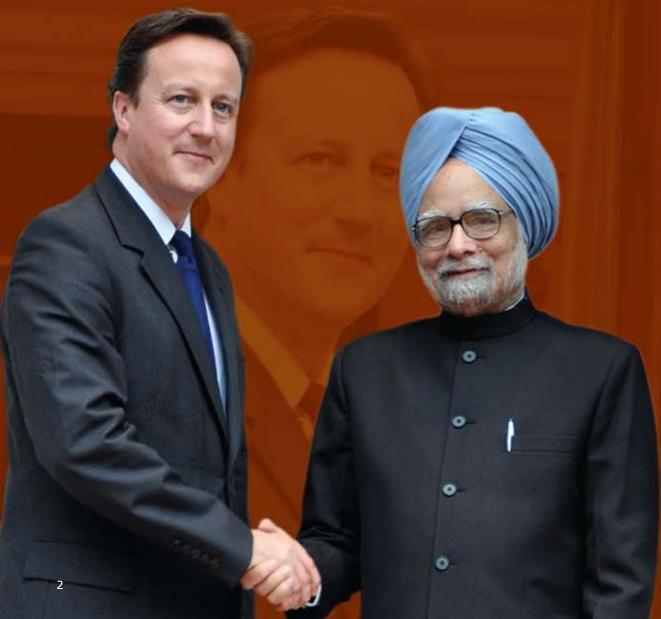
In the present age, knowledge economies address how information and ideas are created, used, circulated and adapted at an accelerating speed. These capacities are not just the property of individuals, but also of organizations, which have the capacity to share, create and apply new knowledge continuously over time. Innovation carries spin-off benefits and yields social dividends for the broader civil society. We all understand and appreciate that humanity is confronted with common, formidable and unprecedented challenges. The search for truth and the discovery of ideas cannot be bound by the limits of conventional wisdom or national boundaries. Global collaboration in creation, dissemination and extended usage of new knowledge is the key to sustaining our civilization.

The UK-India Education and Research Initiative (UKIERI) is a bold project aimed at finding mutually beneficial ways of advancing knowledge. The innovative ideas and good practices of the UK have great significance for India as we have entered a new era of reforms in the education sector. I am sure this booklet will be extremely useful to all stakeholders and will stimulate discussion for further cooperation.

Let us break barriers and join hands to become world leaders in knowledge.

### Shri Kapil Sibal

Minister of Human Resource Development, Government of India



n July 2010, the British Prime Minister brought a delegation to India without precedence in terms of its size and seniority. In Bangalore David Cameron set out his vision that the United Kingdom's relationship with India should be "stronger, wider and deeper". He identified education as an area where India and the UK could pool some of their advantages for mutual benefit. The 2010 UK-India Summit put this into action with a joint commitment from the Prime Ministers of our two countries to support a new five-year phase of the UK-India Education and Research Initiative (UKIERI).

The enhanced enthusiasm and energy which our governments, institutions and businesses have brought to UKIERI and other collaborations between the United Kingdom and India in the field of education has prompted us to publish this updated version of "Gyaan Pratham – Knowledge First".

As we illustrated in the first edition, the provision of quality education and the development of skills is essential to offering real opportunities to all our citizens, driving economic growth and overcoming poverty. India and the UK are uniquely well-placed to work together. This is partly for reasons of history, culture and language. It is also for our shared commitment to innovate in education in order to provide our populations with the knowledge they need to meet the challenges of the increasingly globalised 21st century society.

This booklet provides a picture of our rapidly expanding work together to put knowledge first at all areas of education from schools, further education colleges and wider vocational skills provision, to universities and the highest levels of research.

The framework for our collaboration is set in part by our respective governments, for example through the annual UK-India Education Forum. But as we show in the following pages, putting knowledge first is about much more than governments. It brings our societies closer through educational links between institutions, and between individuals and the communities in which they live and work.

# **UK-India Education** and Research Initiative (UKIERI)

The announcement of the second five-year phase of UKIERI is a good place to begin the story of our collaboration. Since its launch in 2006, one of UKIERI's aims has been to ensure that our two countries become each other's partner of choice in education. UKIERI has already established over

475 new partnerships between institutions in the UK and India.

Over its first five years, the UK government provided some £13million (INR 94crore) funding for UKIERI. Corporate sponsorship and Indian partnership brought the total value of the initiative to around £23million. The second phase of UKIERI will start in April 2011. Thanks to the matched funding from our two governments, it will start with

a budget of around £5million per year. We hope corporate sponsorship will again further strengthen the initiative.

The first phase of UKIERI included three strands of awards: collaboration between schools: professional and technical skills; and higher education and research. As well as these practical awards, UKIERI emphasises on consultation and knowledge exchange, including some 35 policy dialogue and network events between 2006 and 2010. These ranged from sharing the UK's experience on overcoming skills gaps and shortages in labour markets, to quality assurance in higher education. Dialogue in turn has defined further partnerships, for example on professional and technical skills, awards led to 14 new partnerships in the financial services, creative industries and petrochemicals sectors. On quality assurance, UKIERI added an even wider international dimension when British and Indian experts shared experiences with counterparts from Australia and New Zealand.

Broad consultation with stakeholder groups in the UK and India has been another feature of UKIERI. For the second phase of the initiative, consultation and rigorous evaluation has generated a consensus around four new priority strands of work: building a new generation of leaders, innovation partnerships, skills development, and building harmony, enhancing mobility. The first projects will begin

in 2011 and there will be opportunities throughout the five years for proposals under the new headings.

**Long Standing Partners** 

Alongside the new avenues of collaboration opened up by UKIERI, India and the UK have a well-established partnership focused on strengthening the education system across all states in India. The UK is India's largest country partner in education. Our collaboration

is founded on our mutual recognition that education underpins both economic and social progress. It is now celebrating its 21st year.

The most notable example of this partnership has been in primary education through

the Sarva Shiksha Abhiyan (Education for All Initiative) Since 2003, UK's Department for International Development (DFID) has supported the Government of India to put an additional 60 million children into school.

# The UK-India Education and Research Initiative (UKIERI) in numbers

#### UKIERI awards 2006-2009:

- 6 Major Research Awards (of up to £500,000 or INR 3.6cr each)
- 67 Research Awards (of up to £150,000)
- 30 DST-UKIERI Research Awards(of up to £150,000)
- 20 PhD Scholarships
- 43 Research Fellowships
- 27 Collaborative Programme Delivery (CPD) Awards
- 88 Travel Grants
- 37 Cluster School Partnerships involving over 300 schools
- 14 Linkages in Professional and Technical Skills





# UKIERI: From Rural schools to Technical Training and World Class Research

Building on the role of India's Jawahar Navodaya Vidyalaya (JNV) schools to help deliver quality education in rural areas, UKIERI's schools' strand established a partnership or "cluster" involving six Indian JNV schools and four schools in Devon, South-West England. This work helps develop mutual knowledge and awareness of India and the UK and their cultures. As well as visits, students use IT to stay in touch by email and communicate what they learn to other schools and their local community. This is one example out of a total of 375 schools linked by UKIERI school cluster projects.

UKIERI's work on higher education and research has included a direct role for corporate partners. Shell has used its Technology Centre in Bangalore to pilot delivery of an apprenticeship scheme to provide participants with vocational skills for employment in the petrochemical industry. Glaxosmithkline's contribution has included funding work placements for young Indian Chemistry postgraduate students to spend a year in the UK in its Research and Development and Global Manufacturing Departments. British Aerospace have supported schools partnerships between Bangalore and the UK, as well as top-end research in areas such as unmanned air vehicles. BP and KPMG have also supported UKIERI.

In addition, our support has enabled exchange of world-class expertise – and best practice in areas such as improving access to education, reducing inequalities between boys and girls, improving the quality of teaching and what children learn, and assessment and evaluation of the impact of quality improvements.

Building on the strength of our partnership in primary education, DFID is now looking to support the secondary level, working with both central and state governments in the development of the Government

# Sarva Shiksha Abhiyan (Education for All)

Sarva Shiksha Abhiyan (SSA) is the Government of India's flagship programme to deliver universal elementary education. SSA has been implemented in partnership with state governments to address the needs of 186 million children.

The Department for International Development (DFID) in India has invested more in this initiative than in any other flagship initiative of the Government of India. From 2003-10, DFID has provided £360 million (INR 260crore) as financial aid and technical cooperation. It has recently extended its support until 2013.

- India's elementary education system has expanded from 750,000 schools in 2002 to well over 1.25 million in 2009. This is equivalent to opening 6,000 new schools every month that's more than the total number of primary schools in England (18,000) every three months.
- Since the UK began supporting SSA (in 2003), almost 1 million additional classrooms have been built, over 1 million new teachers have been recruited. Last year, close to 2 million teachers were trained and free textbooks reached almost 98 million children.
- Over 99 per cent of children in India now live within 1 km of a primary school or Education Guarantee Centre. India now has an equal proportion of girls and boys in primary schooling (6-11).

DFID's support to SSA helps to enhance the quality of education by rigorously evaluating the impact of quality interventions such as Activity-Based Learning, which for example has been introduced in all of Tamil Nadu's 38,000 schools, successfully using innovative techniques to keep children involved and ensure they complete primary education.

India's national and state governments are allocating over 50 per cent of resources in elementary schooling for improving quality. In 2008-09, 9 year-olds showed better learning levels in national tests for language and mathematics. Attendance of students and teachers is also improving.



education and health services and to create new economic opportunities through microfinance and small businesses.

# Linking Institutions

As we have seen through UKIERI and the wide range of DFID programmes, our governments act as a catalyst for links between educational institutions in our countries. This is happening at all levels of the education system. The British Council's India partnership has a membership of 132 UK institutions and in 2008 alone, the Council administered over 140,000 UK exams in India. The Council's Connecting Classrooms' programme enables partner schools in the UK and India to work together. The programme includes collaborative curriculum projects, professional development for teachers. and using of ICT through the Connecting Classrooms

Online Community. First to sign-up was Chhattisgarh Education Department followed by Orissa, Kerala, Tamil Nadu, Maharashtra and Gujarat.

At the university level, links between the UK and India are very long-standing. Indian students have been studying at leading British universities for over 100 years, with over 50,000 Indians now studying in the UK.

These links are growing even more quickly as the Indian Government implements its plans for rapid expansion of higher education capacity, including the creation of new world-class universities and institutions. Through the UK-India Education Forum, the new Indian Institute of Science,

### Mahila Samakhya (Education for Empowerment)

Incorporated in 1989 under the National Education Policy 1986, *Mahila Samakhya* (Women Together), is the Government of India's main programme targeted at tackling gender inequality. It promotes gender equality and women's empowerment by supporting women to organise into collectives, called *Mahila Sanghas*. These help women, particularly those from socially and economically disadvantaged groups to resist violence; gain better access to education and health services; make available economic opportunities such as microfinance; and enhance women's participation in local government. The UK is proud to support this programme which operates in over 32,000 villages in over 100 districts across 10 states.

- The number of *Mahila Sanghas* increased by close to 3,300 in 2009 bringing the total number of *Sanghas* near to 39,000
- The number of women elected to local Panchayats (self-governance committees) increased from approximately 5,500 in 2008 to nearly 10,000 in 2009 in the 10 Mahila Samakhya states.
- Over 11,000 girls have already gone through Mahila Shikshan Kendras, residential bridge programmes, most of who have been mainstreamed into formal schools.
- Close to 190 Nari Adalats (Women's Courts) have been formed to deal with issues affecting women, including domestic violence.
   These courts have dealt with almost 14,000 cases to date.
- Almost 225,000 adolescent girls are members of close to 10,000 Kishori Sanghas, or adolescent girls' collectives, where they are given access to sexual and reproductive health training, classes in self defence, and assistance in accessing formal and non-formal education.

Education and Research at Pune and new Indian Institute for Technology at Ropar have set up mentoring relationships with several British universities. As well as directly supporting collaborations of this sort, UKIERI sets up models that can be replicated. Increasing numbers of British universities are setting up their own initiatives to partner Indian institutions. Many are also closely following the debate about opening up higher education to more foreign providers and other education reforms in order to see what

additional role they might play in future.

# Skills for Employability

Skills represents another very important area of collaboration. With over 65 per cent of India's

working population in the age group of 15-30 years, it is one of India's greatest challenges to ensure delivery of skills for their employment.

that every teacher and learner of English in India gets access to the skills, ideas and materials they need from the UK.

The English Language is a

hugely shared asset in all

educational collaboration

between the UK and India, and

Our collaboration on skills is about a lot more than just

the English Language. As already noted, the UKIERI's professional and technical skills projects included sharing the UK's experience with Sector Skills Councils, which act as independent, employer-driven

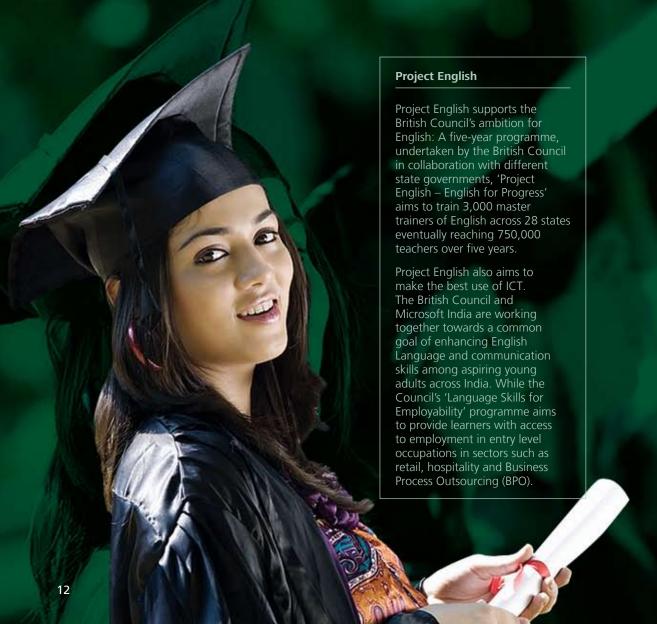
#### **British universities and India**

Many British universities are scaling up their collaborations with India, some with dedicated institutes in the UK. The Cambridge University Centre for India and Global Business, Imperial College's Rajiv Gandhi Centre for Innovation and Entrepeneurship, London School of Economics, India Observatory and Oxford University India Business Centre are just a few examples.

There is no space here to list all the British university collaborations in India. Recent examples include Lancaster University partnering with the GD Goenka Institute in Gurgaon to offer joint programmes or Queen's University Belfast launching collaborations in Delhi, Hyderabad and Kolkata. Also, just as UKIERI has supported partnerships with the new Indian Institutes of Technology (IITs) so some British universities have built direct links, for example Aston University with IIT Ropar, and Warwick University with IIT Kharagpur to support the new IIT Bhubaneswar. New UK universities' offices in India include Birmingham, Sheffield Hallam and Central Lancaster in Delhi, Oxford Brookes in Chandigarh and Edinburgh in Mumbai.

In 2009, Universities Scotland and the Association of Indian Universities signed an MoU to deepen collaboration. One year later this produced four further agreements between institutions in Dundee, Glasgow and Edinburgh with IIIT Allahabad, Sitaram Bhartia and Delhi University respectively and a tie-up between Scottish and Indian quality assurance authorities. These are practical arrangements, for example Glasgow Caledonian's agreement with the Sitaram Bhartia Institute will deliver diabetic foot-care training to 300 healthcare professionals in three Indian cities by mid-2011.





bodies to ensure that training meets the needs of business and leads to sustainable job opportunities. The British Council has applied some of the insights from the UKIERI projects in a project to replicate Sector Skills Councils and deliver training for 11,000 people in the districts of Sirsa and Sitapur near Delhi.

The close links between skills and business needs has also led to the establishment of a skills group as a part of the **UK-India Joint Economic and** Trade Committee (JETCO) which brings together business leaders and trade ministers on an annual basis. In 2010, the JETCO discussions inspired the creation of the UK-India Skills Forum by the skills providers themselves. This will further help match the respective strengths of UK and Indian businesses in delivering vocational skills training, certification and other services in India.

# **Scholarships**

For 26 years, the British Government's Chevening programme has offered highly coveted opportunities for some 2,000 of India's future leaders, decision makers and opinion formers to study in the UK. The scholarships are for outstanding individuals who are leaders in their fields and are looking to form networks and strengthen their opportunities.

- In 2010-11, the Chevening programme in India is worth some £565,000 (INR 4crore) including sponsorship contributions.
   Around 30 of the worldwide total of just over 600 scholars for that year are from India.
- Chevening Alumni activities are a key part of the programme.
   The Chevening Alumni comprises leaders from civil society, academia, government, NGOs, press and business.

Courses offered under Chevening include:

**Chevening Gurukul Scholarships** – A unique 12-week advanced leadership programme, created specifically for India's future leaders and run at the London School of Economics (LSE) since 1997.

Chevening Rolls-Royce Science and Innovation Leadership Programme – Launched in 2010 on the Gurukul model, a new programme at Oxford University for India's future leaders in areas of innovation and commercialisation of research, including links to public policy.

Full details of Chevening and many other scholarships for study at UK universities are available on the British Council's website. These include the UK Government-funded Commonwealth Scholarships, currently providing 60 annual scholarships for young Indians, and a range of another awards supported by businesses and others committed to UK India links.

# Driving Economic Growth

Putting knowledge first improves the quality of life of individuals by equipping them with skills to find jobs. Education is also a key driver of economic growth. Studies have shown that for every 1 per cent increase in the number of people benefiting from higher education, a

country's GDP also typically rises by 1 per cent, and that an additional year of education for the working-age population as a whole on an average increases GDP in the long run by 4 to 7 per cent. Similarly, equipping people with skills for employment increases their productivity. As Prime Minister Cameron has put it in a speech in Bangalore in July 2010: "Education is not just vital for

# Sector Skills Councils in Practice: Sirsa and Sitapur

In 2010 the British Council began collaboration with the Confederation of Indian Industries (CII), and City & Guilds, the UK's leading vocational skills awarding association, to deliver vocational education and training for vulnerable and marginalised groups in Sirsa and Sitapur. The programme will create a Sector Skills Council as part of a sustainable skills development network of employers, training provider, local government and community representatives in the two districts. This inclusive approach will deliver business and labour market demand-driven skills training across the manufacturing, agro-processing and tourism sectors and develop a delivery mechanism which will include English Language skills for employability. The aim is directly to improve the skills of up to 11,000 people, and create a model that can be replicated elsewhere. The programme benefits from European Union funding, and is a part of €100 million EU skills programme in India.

national success: it is one of the best growth businesses for the 21st century". Closely linked to the growth opportunities coming from education, is the challenge to fund the huge expansions of the education system planned by the Indian Government. The 2009 Yashpal Committee Report on Indian higher education made clear that the answer to that challenge must include innovative approaches to funding, for example applying the right models of Public Private Partnerships (PPP).

Exploring and applying PPP models has been another area of UK-India collaboration. The UK funded a World Bank feasibility study for PPP in education delivery in several Indian states, and has worked directly with the Indian Government to design an operational national government model for PPP in secondary education. In the area of vocational skills, several UK organisations are working closely with the Indian National Skills Development Corporation (NSDC) to identify opportunities for further joint collaboration through PPP arrangements.

# Sports and Education

British Council India has various programmes within the space of sports and physical education. International Inspiration, the London 2012 Sports Legacy Programme, works with Indian agencies including the Ministries of Youth Affairs and Sports and Human Resource Development to provide access and opportunities to high quality PE and sports to children and young people in schools and communities. We worked with bodies such as Central Board of Secondary Education, National Council of Education, Research and Training in India and the Youth Sport Trust, UK to develop resource material and training opportunities for primary school teachers in India, through a programme called Physical Education Cards (PEC) India. To date, the programme is estimated to have reached over 22 million children in India.



# The Global Dimension

Kapil Sibal, Minister for Human Resource Development, Government of India recently commented, "education

is destined to be a globally collaborative enterprise". He added that India has the potential to be a "knowledge power".

Responding to the challenges of globalisation requires us to innovate in our collaborative

delivery of education. This in turn will open up new opportunities for the UK and India not just in our two countries, but with applications across borders and continents. Several British universities have

already expressed interest in finding ways to collaborate in Indian Government's plans to create 14 world-class innovation universities.

This global dimension is a good place to end this booklet's short journey through some of the ways the UK and India collaborate on education. In our increasingly globalised world, awareness of global challenges begins at a young age. Through the DFID-funded Global Schools Partnerships programme, the British and Indian Governments plan to build a collaborative global dimension into the curriculum of 400 schools in our countries. The programme will include professional development for teachers and aim to raise young people's awareness of global development issues, equipping them with skills and knowledge to become active citizens. In higher education, the Development Partnerships in Higher Education programme

(DELPHE) collaborative the British and Indian linked to global delivery of the UN's Millennium Goals. There are currently 12 projects in the programme, ranging from women's development and public health to building sustainable communities and microfinance.

Global issues are also prominent in the growing scientific and research relationships between world-class institutions in the 17

#### **Businesses and Skills**

through Public Private Partnerships and collaborations with Indian companies. Examples include:

In a pilot project, A4e will work alongside the Ministry of Rural Development to provide employment-oriented vocational skills training, certification and job placements to 9,000 people below the poverty line between the age group of 16-35 years in Punjab, Maharashtra, Rajasthan, Bihar, Jharkhand and Orissa.

IndiaSkills, a Joint Venture (JV) between City & Guilds, UK and Manipal Education aims to deliver skills-based training, assessment and certification across 500 vocational training centres, targeting one million learners over five years. The programme will provide graduates job placements in companies which will enhance their career prospects, while creating the opportunity for enterprises to increase their productivity through a trained workforce.

I-CAN, a JV formed between Educomp India and Pearson, UK will be providing logistic skills training to 2,000 employees of Transmart. The JV trained 500 drivers and conductors of Delhi Transportation Corporation ahead of the 2010 Commonwealth Games. The aim of this JV is not only to improve skills, but also to upgrade the capability of trainers and assessors, with qualifications from Edexcel, the UK's largest awarding body for academic and vocational qualifications. This will bring them on a par with international standards.

Assisted by UK Trade & Investment (UKTI), the UK Government's business organisation, the UK's independent not-for-profit Learning and Skills Network (LSN) has brought its enterprise in project delivery, training, leadership and skills to a new partnership with Career Launcher.



education and stretches right up to collaboration between British and Indian researchers at the very top of their fields, and responding to critical challenges of the 21st century such as health challenges, renewable energy, water and

At IIT Madras in July 2010, David Willetts, Minister for Higher Education and Science recognised that "India stands on the brink of an education revolution". This makes it a particularly exciting time for us to collaborate, and underlines why the UK seeks a long-term

> India on education. As this booklet has aimed to show, the excitement is spreading and delivering innovative new partnerships with ever more shared benefits.

### **Student mobility**

To help encourage awareness of opportunities for UK students to study and get work experience in India, in 2009 and 2010 the UKIERI Study India Programme brought 200 UK undergraduates for a short programme of study and work placements. The UK Global Fellowship programme has also offered some 30 school and college leavers a six-week programme. This included learning about India's languages, culture and businesses, two weeks in a school to witness a different education system and contribute to its work, and two weeks attached to a British company with a base in India. The 2011-16 phase of UKIERI will draw on the experiences of these programmes in order to further encourage student mobility.

### **World-class Research Relationships**

Just as our governments help set the framework for educational collaboration though the UK-India Education Forum, the ministerial UK-India Science and Innovation Council (SIC) sets the agenda for bilateral research collaboration. In 2010 the SIC saw seven new initiatives being agreed for joint funding of up to £60 million (INR 430crore) over the coming years. These will help both countries to deliver sustainable energy, food security, secured water supplies and combat chronic diseases. The current partnership with India now represents one of the UK's largest bilateral research programmes globally and demonstrates the UK's recognition of and commitment to collaboration with world-class research in India.

This commitment was further strengthened during the visit of the UK Prime Minister to India in July 2010 when the accompanying UK Minister for Universities and Science and his Indian counterpart announced the details of further joint collaborations. These are for research on fuel cells, part of finding solutions to future energy needs, and a new programme Bridging the Urban Rural Divide, to address research challenges in making living rurally a sustainable option in the UK and India.

The rapidly growing cooperation in all these areas is reflected in a 150 per cent increase in UK-India joint research papers in the recent years. As well as the UK Government's Science and Innovation (SIN) Network's offices in New Delhi, Mumbai and Bangalore, the momentum has been further driven since the 2008 opening of the Research Council India Office and in 2010 through the creation of the DFID South Asia Research Hub, all based at the British High Commission, New Delhi.

# **Further Information**

	Main programmes and activities featured (includes joint programmes)	Website
British High Commission	UK-India Education Forum	
	UK-India Science and Innovation Council	Foreign & Commonwealth Office http://ukinindia.fco.gov.uk/en
	Chevening Scholarships	
	Strategic Programme Fund	
	Science and Innovation Network	
	UK Trade and Investment	
	JETCO (Skills)	
British Council India	Project English, Connecting Classrooms and Sector Skills Councils	BRITISH COUNCIL www.britishcouncil.org.in
	Chevening Scholarships	
	Development Partnerships in Higher Education Programme (DELPHE)	
	Global Schools Partnerships	
	Prime Minister's Global Fellowships	
	Scholarships and Study Opportunities (Including Education UK)	
Department for International Development (DFID India)	Sarva Shiksha Abhiyan	DFID Particular of the control of th
	Mahila Samakhya	
	Development Partnerships in Higher Education Programme (DELPHE)	
	Global Schools Partnerships	
	South Asia Research Hub	
Research Councils UK (RCUK), Indian Office	Programmes with the UK's seven Research Councils	RISSARCH CONNEGUE WWW.india.rcuk.ac.uk
	Science Bridges	
UKIERI (Managed in India by the British Council)	Policy Dialogue	UKIERI UK-India Education and Research Initiative www.ukieri.org
	Schools	
	Professional and Technical Skills	
	Higher Education and Research	

