

Annual Report 2008-2009



Higher Education Commission - Pakistan

Annual Report

2008-2009



Higher Education Commission - Pakistan

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Chairman's Message



It is now an established fact that the economic prosperity of a country is determined by the quality and quantity of knowledge capital available. The developed countries have progressed through harnessing their human resource, and its quality is judged by the excellence of its education system. The HEC has implemented a comprehensive programme of higher education reforms and institutional building that has transformed the higher education sector, and bodes well for Pakistan's future economic prosperity and growth.

The new education policy has ensured increase in the education budget, which demonstrates the Government's commitment to support the much needed reforms. There is now a realization that higher education is the only solution to a myriad of problems, including slow economic growth, extremism, increasing dependence, transfer of resources to developed countries and so on. Only technological advancement can assure our prosperity and sovereignty: a goal we can achieve only through quality higher education.

The Government has wholeheartedly supported the mission of HEC and ensured that progress made during the previous years is not just sustained but enhanced. The increase in the budget of HEC has brought considerable improvement in the sector. Although the last two years were constrained because of the financial crunch, HEC has successfully coped with the situation and turned challenges into opportunities. Through a focus on quality that is internationally benchmarked, significant progress

has been made towards the development of a higher education system in the country that is responsive to national needs and produces research and human resource of high quality. The Commission has worked with institutions of higher education to truly own quality and processes that ensure continuous internal review along with external assessment. In this regard, the Quality Enhancement Cells established at the universities have just started delivering, even though the way to improvement is long and hard. Different programmes initiated by the HEC have provided an excellent opportunity to faculty members, researchers and students to acquire up-to-date knowledge and conduct quality research in their field of interest.

There is a tangible excitement in the air since our students and faculty members are working in an environment conducive to knowledge acquisition and creation. This positive trend is reflected by the increased number of publications in journals of international repute, enhancement in the number of joint publications with international partners, as well as the launch of joint degree partners with renowned universities abroad. Good progress has been made towards the implementation of the second generation end-to-end IP based Pakistan Education and Research Network (PERN) linking all the higher learning institutions, and allowing the establishment of a broad-band video conferencing networking facility at more than 70 universities.

I personally believe that there is always room for further improvement and growth. Much work has been done, however, we need to work harder and explore newer opportunities to make our institutions the best in the world.

A handwritten signature in black ink, appearing to be 'J. Laghari', written in a cursive style.

Dr. Javid R. Laghari
Chairperson

Executive Summary



It is clear now that the investments made in the higher education sector are beginning to pay significant dividends as the faculty members and researchers make their mark at the national and international levels. Sharp rise in the research output, no compromise on quality, increasing access, enhanced academia-industry linkage, growing number of highly-qualified faculty members, and strengthening of universities' physical and technological infrastructure are just a few of the proud achievements of the Higher Education Commission responsible for these dividends.

Despite the global financial crunch and paucity of resources in the last couple of years, the activities of the Commission have not decelerated. The year 2008-09 witnessed the continuation of ambitious faculty and human resource development programmes. During this period, 931 scholars were sent abroad to pursue PhD studies in various disciplines while 930 scholars were awarded indigenous scholarships in local universities. Two hundred and fifty-six HEC scholars completed their PhD degrees from abroad and 179 scholars successfully received their doctorate from local universities. In addition to this 110 researchers from universities and research organizations were sent abroad for post-doctoral studies.

To facilitate scholarship holders graduating with a PhD from the renowned universities of the world, a placement program was initiated providing immediate employment

to these graduates at the universities in Pakistan. On the domestic front, in order to improve access to the quality education, a special scholarship scheme was launched for students from Federally Administered Tribal Areas (FATA) and Balochistan for higher education within the country, under which 127 scholarships were awarded.

The continued efforts and commitment of the Government to enhance research activities has resulted in a commendable increase in research articles published in the journals of international repute by 50 per cent from 2474 in 2007 to 3639 in 2008. Travel grants to more than 600 researchers were provided to present their work at leading conferences while more than 60 grants for organizing seminars/conferences /meetings were sanctioned to reinforce the research culture inside the country. The investment in indigenous PhD research over the past 5 years also finally began to show results as the number of PhDs produced in Pakistan increased from 419 to 613. To improve the relevance of research to the national economy, five pacts, protocols and linkages were established with different countries while eight linkages were developed with the foreign universities. In addition, 30 projects were approved for the promotion of university-industry linkages in the country.

Teacher Training in pedagogical skills is vital to transfer knowledge to the students effectively. To support this activity a comprehensive exercise was undertaken to develop a comprehensive teacher training module focusing on all aspects of teaching including computer literacy, assessment, research and enhancement of pedagogical skills. 793 faculty members of the public universities were trained in pedagogical skills, besides training 275 faculty members in English language Teaching.

To ensure quality of education at the universities, Quality Enhancement Cells (QECs) were established at 30 public sector universities. Program level accreditation was supported through the establishment of four Accreditation Councils in Computing Education, Agriculture Education, Teacher Education and Business Education. So far, 21 Computer Degree Programmes and 12 Agriculture Programmes have been accredited by their respective councils.

Every public sector university in the country has been equipped with state-of-the-art video conferencing system, which will enable the

instantaneous communication of remote lectures to and from any university in Pakistan. The facility has resulted substantial cost saving and time which was otherwise required on travelling to attend the events physically.

Recognizing the importance of grooming youth for science education, Pakistani students were selected to participate in International Science Olympiads in Mathematics, Physics, Chemistry and Biology, where they won two silver medals, one bronze medal and two honorable mentions.

A number of development projects were undertaken to enhance the quality of education in Bahawalnagar, Rahim Yar Khan, Khairpur, Nawabshah, Bannu, Kohat, Malakand and other underdeveloped regions of the country. Besides, 20 projects were approved for the institutional strengthening and upgradation of laboratories and libraries of the universities.

To strengthen the financial position of the universities and reduce dependency on the public exchequer, the Higher Education Commission-Financial Aid Development (HEC-FAD) Programme was launched so as to enable the universities to generate resources for themselves by working in collaboration with HEC. To further escalate the efficiency of the universities, Higher Education Management Information System (HEIMS) was proposed and accepted by the donor for further negotiations. Moving ahead, it is imperative to consolidate these gains and continue the development of our institutions for higher learning to boost the socio-economic development of the country.

The universities in Pakistan are playing their due role in guiding Pakistan on its path towards sustainable prosperity. It is important that we continue on our path of progress.



Prof. Dr. S. Sohail H. Naqvi
Executive Director

Members of the Commission 2008-09



Ms. Shahnaz Wazir Ali
Chairperson (During 2008-09)



Dr. Javaid R. Laghari
Current Chairperson



Engr. Dr. Muhammad Akram Sheikh
Deputy Chairman
Planning Commission, Government of
Pakistan



Mr. Ajmal Khan
Vice Chancellor
Gomal University,
D. I. Khan



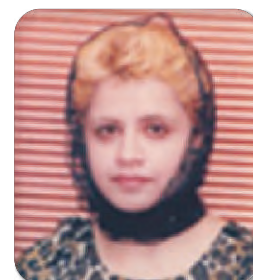
Mrs. Razina Alam Khan
Former Chairperson, Senate
Standing Committee on Education
and S&T



Mr. Abdul Rauf Chaudhry
Federal Secretary
Ministry of Education, Islamabad



Mr. Mazharul Haq Siddiqui
Vice Chancellor
University of Sindh, Jamshoro



Ms. Nadira Panjwani
Social Worker,
Philanthropist



Mr. M. Kashif Murtaza
Secretary
Ministry of Science and
Technology, Islamabad



Prof. Dr. M. Qasim Jan
Vice Chancellor
Quaid-i-Azam University,
Islamabad



Dr. Masood Hameed Khan
Vice Chancellor
Dow University of Health
Sciences, Karachi



Ms. Noorjehan Bilgrami
Researcher, Textile Designer
and Founder Executive
Director, Indus Valley School
of Art and Architecture



Dr. Shams Kassim Lakha
Federal Minister of Education
Ex-President and Trustee, The Aga Khan
University, Karachi



Prof. Dr. Syed Mohsin Raza
Dean, Faculty of Physical Sciences,
University of Balochistan



Ms. Sadia Rashid
President
Hamdard Foundation,
Karachi



Lt. Gen.(R) Syed Shujaat Hussain
Rector
National University of Sciences and
Technology (NUST), Rawalpindi



Mr. Abdul Razak Dawood
Rector
Lahore University of Management
Sciences, Lahore



Mr. Ahad Khan Cheema
Acting Secretary, Higher Education,
Punjab



Prof. Dr. S. Sohail H. Naqvi
Executive Director
Higher Education Commission

GLOSSARY

ABL	Allied Bank Limited	FANA	Federally Administered Northern Areas
ACMA	Associate Cost and Management Accountant	FAQs	Frequently Asked Questions
ACS	Access Control System	FAST	Foundation for Advancement of Science and Technology
ADDS	Active Directory Domain Services	FATA	Federally Administered Tribal Areas
AERO	Advanced Engineering Research Organization	FFHP	Foreign Faculty Hiring Programme
AGPR	Accountant General Public Revenues	FJWU	Fatima Jinnah Women University
AIOU	Allama Iqbal Open University	FY	Financial Year
AIT	Asian Institute of Technology	GCU	Government College University
AJK	Azad Jammu and Kashmir	GIKI	Ghulam Ishaq Khan Institute
APQN	Asia Pacific Quantity Network	GoP	Government of Pakistan
APUIP	Association of Private Universities and Institutes of Pakistan	GRE	Graduate Record Examination
ASSM	Abdul Salam School of Mathematics	HEC	Higher Education Commission
AVS	Attendance and Visitor Record System	HEI	Higher Education Institution
BA	Bachelor of Arts	HEJ	Hussain Ebrahim Jamal
BBA	Bachelor of Business Administration	HR	Human Resource
BC	British Council	HRD	Human Resource Development
BoG	Board of Governors	IAESTE	International Association for the Exchange of Students for Technical Experience
BNU	Beaconhouse National University	IBA	Institute of Business Administration
BoQ	Bill of Quantity	ICT	Information and Communication Technologies
BSc	Bachelor of Science	IEEE	Institute of Electrical and Electronic Engineers
BUAA	BeiHang University	IIU	International Islamic University
BUITEMS	Balochistan University of Information Technology, Engineering and Sciences	IMU	International Mathematical Union
BZU	Bahauddin Zakariya University	INQAHE	International Network of Quality Assurance Agencies of Higher Education
CALL	Computer Assisted Language Learning	IOK	Indian Occupied Kashmir
CASE	Centre for Advanced Studies in Engineering	IP	Internet Protocol
CDA	Capital Development Authority	IPFP	Interim Placement of Fresh PhD Programme
CDWP	Central Development Working Party	IRSIP	International Research Support Initiative Programme
CFA	Chartered Financial Analyst	IST	Institute of Space technology
CIEC	Charter Inspection and Evaluation Committee	ISESCO	Islamic Educational Scientific and Cultural Organization
CIIT	COMSATS Institute of Information Technology	IUB	Islamia University Bahawalpur
CMS	Campus Management Solutions	JHELP	Joint Higher Education Link Programme
CSE	Communication System Engineering	JMC	Joint Ministerial Commission
DAI	Degree Awarding Institution	KAIST	Korea Advanced Institute of Science and Technology
DAS	Degree Attestation System	KCCI	Karachi Chamber of Commerce and Industries
DDWP	Departmental Development Working Party	KIU	Karakorum International University
DRS	Disaster Recovery System	KMU	Khyber Medical College
DUHS	Dow University of Health Sciences	LAN	Local Area Network
ECNEC	Executive Committee of National Economic Council	LCWU	Lahore College for Women University
EDA	Electronic Design Automation	LID	Learning Innovation Division
ELTR	English Language Teaching Reforms	LMS	Learning Management Solution
EMS	European Mathematical Society	LUMHS	Liaquat University of Medical and Health Sciences
ERP	Enterprise Resource Planning	LUMS	Lahore University of Management Sciences

MA	Master of Arts	SOPs	Standard Operating Procedures
MBA	Masters of Business Administration	STEM	Science, Technology, Engineering and Management
MCU	Multipoint Conferencing Units	SZABIST	Shaheed Zulfiqar Ali Bhutto Institute of Science and Technology
MFR	Medical First Respondents	TEFL	Teaching English as a Foreign Language
MIT	Massachusetts Institute of Technology	TESL	Teaching of English as a Second Language
MPhil	Master of Philosophy	TESOL	Teaching English to Speakers of Other Languages
MRI	Magnetic Resonance Imaging	TLR	Teaching Learning Resource
MS	Master of Science	TOEFL	Test of English as a Foreign Language
MSc	Master of Science	TTS	Tenure Track System
MoST	Ministry of Science and Technology	UET	University of Engineering and Technology
MSU	Michigan State University	UNDP	United Nations Development Programme
MTDF	Medium-Term Development Framework	USAID	United States Agency for International Development
MUST	Mirpur University of Science and Technology	VAS	Value Added Services
MoU	Memorandum of Understanding	VoIP	Voice over Internet Protocol
NAHE	National Academy for Higher Education	VLAN	Virtual Local Area Network
NCE	National Committee on English	VLSI	Very Large Scale Integration
NCES	National Committee on Examination System	VMS	Visitor Management System
NCRC	National Curriculum Review Committee		
NIP	National Internship Programme		
NIBGE	National Institute for Biotechnology and Genetic Engineering		
NOC	Network Operation Centre		
NOP	National Outreach programme		
NQAC	National Quality Assurance Committee		
NRPU	National Research Programme for Universities		
NSPP	National School of Public Policy		
NSTC	National Science Talent Contest		
PAEC	Pakistan Atomic Energy Commission		
PCEPT	Professional Competency Enhancement Programme for Teachers		
PCP	Pharmacy Council of Pakistan		
PEC	Pakistan Engineering Council		
PERN	Pakistan Education and Research Network		
PFF	Pakistan Football Federation		
PhD	Doctor of Philosophy		
PIEAS	Pakistan Institute of Engineering and Applied Sciences		
PMDC	Pakistan Medical and Dental Council		
POP	Point of Presence		
POTS	Plain Old Telephone Service		
PRR	Pakistan Research Repository		
PSDP	Public Sector Development Programme		
PSEB	Pakistan Software Export Board		
PTCL	Pakistan Telecommunication Company Limited		
QAA	Quality Assurance Agency		
QEC	Quality Enhancement Cell		
R&D	Research and Development		
RFID	Radio Frequency Identification		
SAC	Self Access centre		
SAP	System Application Product		



Human Resource Development



PhD Fellowship for 5000 Scholars

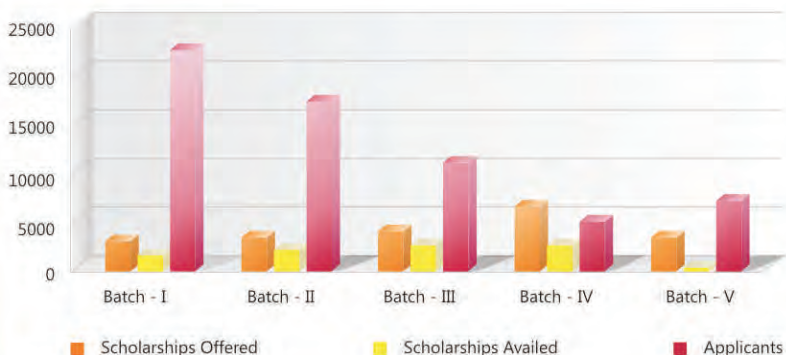
This Project was approved by ECNEC in November 12, 2007. A total of 5000 scholarships are to be awarded over a period of 5 years. The Project is focused at diversified disciplines belonging to all fields of Science and Technology as well as Social Sciences, Humanities and Life Sciences. To enhance the research facilities in these fields the Higher Education Commission has funded many Departments/Universities to establish research labs. The specific objective of the 5000 Indigenous Scholarship Scheme is to create a critical mass of highly qualified human resources in all fields of studies taught at the advanced level in local universities. These locally qualified academics and researchers will improve the R&D potential of local universities (public as well as private).

Achievements:

With the launching of the Scheme, the research culture in public/private sector universities has improved in accordance with international norms/ standards. The Scheme has helped to overcome the deficiency of highly qualified human resources in universities/ research organizations. So far, the progress under this scheme is as follows:

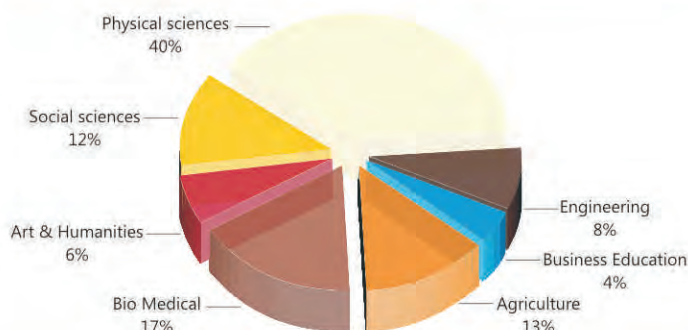
■ 3765 awardees have been enrolled in the various universities fellowships out of whom 1739 candidates have completed MS/MPhil. Furthermore, 1593 provisional offers have been issued under Batch-V. They will be finally awarded after completion of necessary documents.

Physical Statistics



Batch	Total No. of Applicants	No. of scholars Awarded	No. of Scholars Awaiting
Batch-I (2003-04)	22,000	1,297	605
Batch-II (2004-05)	16,000	1,621	806
Batch-III (2006-07)	9,321	2,231	832
Batch-IV (2007-08)	6,100	3,572	1,399
Batch-V (2008-09)	5,500	123 (awarded) 1470 in documentation stage	123
Total	58,921	8,844	3,765

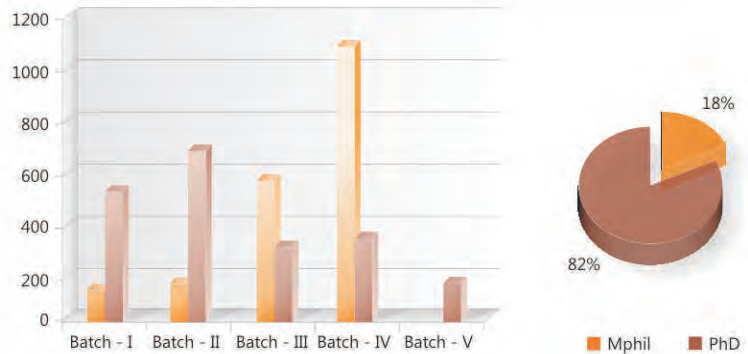
Discipline wise Statistics



Discipline	Total
Agriculture & Veterinary Science	495
Biological & Medical Sciences	643
arts & Humanities	240
Social sciences	465
Physical Sciences	1472
Engineering & Technology	298
Business Education	152
Total	3,765

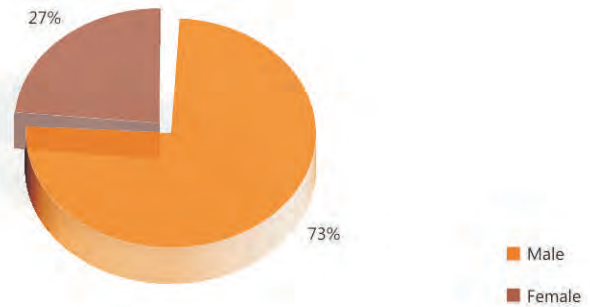
- 65 candidates have completed PhD programme.
- 629 research papers have been published in national/international Journals which addressed social/economic problems of the country.
- First-ever PhD in Total Quality Management
- PhD in Nuclear Engineering.

Statistics of M Phil & PhD



Batch	M Phil	PhD	Total
Batch-I	107	498	605
Batch-II	146	660	806
Batch-III	518	314	832
Batch-IV	1065	334	1,399
Batch-V	0	123	123
Total	1836	1929	3,765

Batch wise Gender Distribution



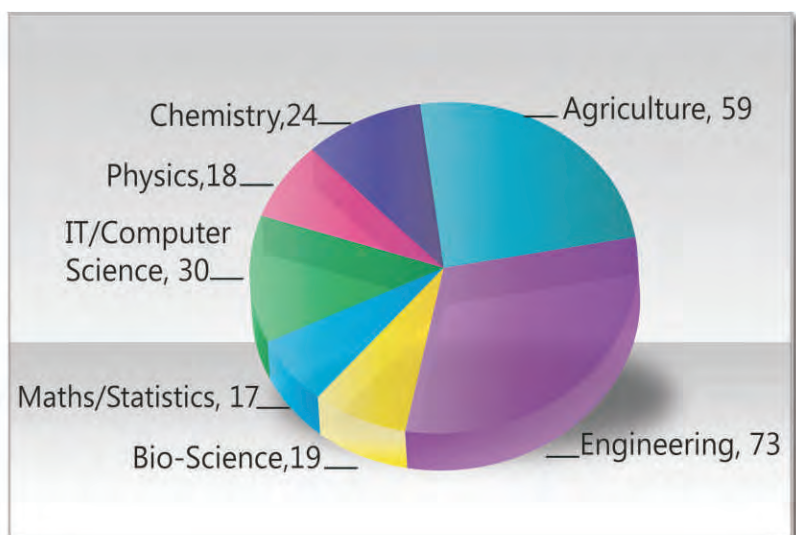
Gender	Male	Female	Total
Batch-I	526	79	605
Batch-II	629	177	806
Batch-III	627	205	832
Batch-IV	988	411	1,399
Batch-V	93	30	123
Total	2,863	902	3,765

Development of S&T Manpower through Indigenous PhD (300 Scholarships)

The Scheme was approved by ECNEC in October 1999. The main objective of the Scheme was to produce 300 PhD scholars in various fields of science and technology. Out of 300 scholarships 240 scholars were enrolled in PhD programmes. Later on the Scheme was closed, after it produced a sizeable body of researchers / scholars in various critical areas of national importance.

Distribution of Scholars by Area of Specialization:

The chart shows the enrolment of 240 scholars in various area of specialization:



Overall Physical Progress and Achievements:

- 130 scholars working on their research
- 98 scholars have completed their doctorate programme and joined their parent departments
- 12 scholars have submitted their theses for external review
- One scholar has been included in the international journal, Science Direct at Sr. No. 12.
- One scholar has completed his PhD from Balochistan province

Equipment, consumable items are purchased through university research support to improve scholars' standard of research

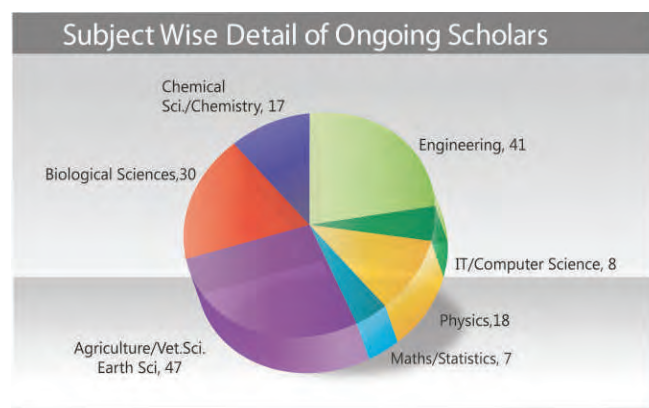
Physical Progress and Achievements in Year 2008-09:

During the year, a total of 42 scholars completed their doctorate and 12 submitted their theses for external review.

Merit Scholarship Scheme for PhD Studies in Science and Technology (200 Scholarships)

The Project has in its last year of execution helped to fully exploit potential of the various Departments/ Institutes of universities and Centre of Excellence having sufficient infrastructure for high level teaching and research in new and emerging scientific fields.

It has helped to augment PhD programme in universities and higher education institutions in Pakistan and provided 200 fresh and in-service scholars for utilizing their talent fully in universities, colleges, centres of excellence and R&D bodies. The Executive Committee of the National Economic Council (ECNEC) approved the project in April 2001.

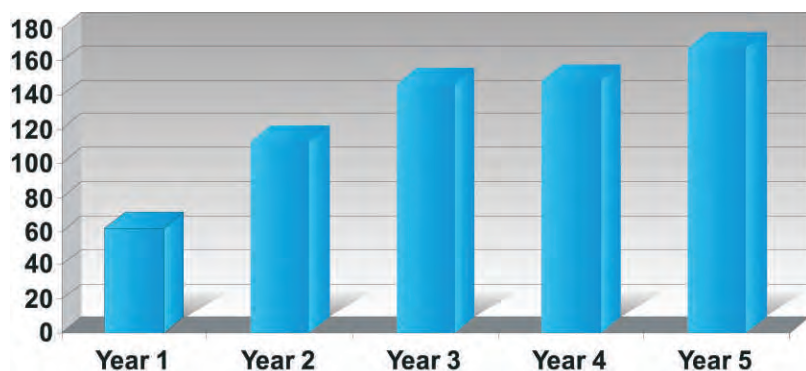


Distribution of Scholars by Area of Specialization:

(The chart below shows the enrolment of 168 scholars in various area of specialization)

Overall Physical Progress and Achievements:

- 78 Scholars are working on their research work
- 80 scholars have completed their doctoral programme and joined their parent departments
- 10 scholars have submitted their theses for external review
- 01 scholar has been selected as a best researcher of the university



Physical Progress and Achievements in Year 2008-09:

During year 2008-09 total 29 scholars completed their doctorate and 10 submitted their thesis for external reviewers.

Overseas Scholarships in MS/MPhil Leading to PhD in Selected Fields, Phase-II

The Scheme provides PhD level training of 2000 candidates in leading foreign universities. This nine year programme was approved by ECNEC in August 2006.

The Scheme has generated considerable intellectual activity as groups of scientists, technologists and social scientists are engaged in publishing their research work and a good number of papers and studies being produced

annually. Major organizations and universities have registered increase in their R&D by absorbing specialized trained manpower. Under this programme 2000 scholarships are being awarded into following two broad categories:

90% Overseas Scholarship Category

In the 90 percent category, 450 scholarships are awarded every year for Master / MPhil leading to PhD programme in technologically advanced countries e.g, Austria, China, France, Germany, Netherlands, Norway, Sweden, Thailand, Italy, New Zealand etc. that have no/nominal/special tuition fee rates for HEC. Scholars have proceeded for higher studies in two batches. Details are as follows:

	Awarded	Proceeded	In-Process	Regretted
Batch-I	1268	886	30	352
Batch-II	305	177	66	62
Total	1573	1063	96	414

The details of scholars who have proceeded abroad are as follows:

Scholars Proceeded Abroad for Higher Studies		
S. No.	Country Name	Departure Year
		2008-2009
1	Austria	17
2	France	7
3	Germany	41
4	Sweden	24
5	Netherlands	12
6	China	0
7	AIT-Thailand	6
8	Norway	36
9	Massey University, New Zealand	15
10	University of Auckland, New Zealand	18
11	GDU, Australia	0
12	South Korea	3
13	Italy	0
Total		179

Due to financial constraints, overseas scholarships were withheld last year so Batch-3 could not advertised in 2008.

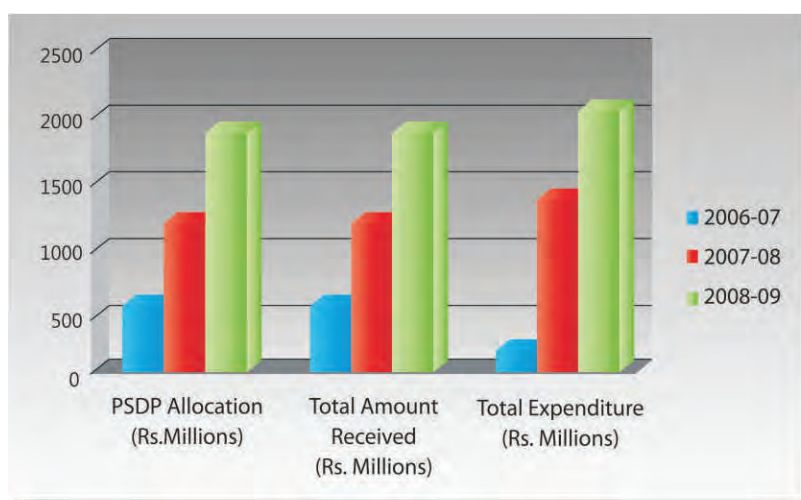
10% Overseas Scholarship Category:

In the 10 percent category, 50 scholarships every year are awarded for PhD programme in discipline wise world top ranking 50 universities of advanced countries e.g, UK, USA, Canada, Australia, Singapore, Japan etc. The scholars have proceeded for the scholarship in five batches. The details are as follows:

	Awarded	Proceeded	In-Process	Regretted
Batch-I	70	62	0	8
Batch-2	83	59	1	23
Batch-3	47	19	3	25
Batch-4	30	4	19	7
Batch-5	13	0	13	0
Total	243	144	36	63

The details of scholars who have proceeded abroad are as follows:

Scholars Proceeded Abroad for Higher Studies			
S. No.	Country Name	Departure Year	
		2008	2009
14	Australia	1	14
15	USA	0	5
16	Canada	0	2
17	Singapore		0
18	UK	13	104
Total		14	125



Master Leading to PhD Scholarships in Economics and Finance

The Scheme was approved by the Executive Committee of the National Economic Council (ECNEC) in January 2005.

The scholarship ensures training and research opportunities to the regular public sector employees in the fields of Economics and Finance. Returning scholars have helped to promote international cooperation in Economics and Finance through harnessing training opportunities offered by selected countries. The Scheme has provided opportunities to young talented economists of Pakistan for training/research work at advanced institutes and reputed universities abroad and interaction with foreign financial experts and economists working at frontiers of knowledge. It has also improved production in economy in Pakistan through addition of PhDs in Economics and Finance.

Physical Progress and Achievements:

Year	Scholars Proceeded Abroad	Admission & Visa in Process
2008-09	12	5
Total	12	5

Completion of PhD in Record Time

Mr. Abdul Hamid, HEC scholar under the programme, has successfully completed his PhD in Economics from Vienna University of Economics and Business Administration (WU-Wien), Austria in two years record time. This is the minimum time in which any Pakistani scholar in Austria has ever completed his doctoral studies. Mr. Abdul Hamid worked on the topic "Macro Determinants of Growth in Purview of New (Endogenous) Growth Theory". Professor Dr. J. Hanns Pichler, a renowned economist, supervised his studies as well as acclaimed the work of Mr. Hamid. His research is ranked among the top 10 percent research work done in Vienna University.

MS-Level Training in Korean Universities/Industry

In Pakistan, the universities, especially the technical ones, need to have strong linkages with local industrial sector too. Technical universities need trained work force which has the exposure of both the academic as well as industrial domains. Keeping this objective in mind, HEC has designed a unique HRD project, targeted towards graduate engineers, whose ultimate objective is to prepare high-tech work force, to be deployed in the industrial sector of Pakistan.

This HRD Project provides scholarships to young engineers, for doing MS-Engineering studies in world class, top-ranking universities alongwith hands-on industry training opportunities, in South Korea. This project was initially rolled out in September 2006.

The Project is helping build the capacity of universities/industries in Pakistan through addition of 40 Masters per year for six years in Engineering and Technological fields. It facilitates assimilation, absorption and transfer of important and promising technologies to get high-tech products and achieve rapid economic progress. It also provides opportunities to young talented engineers for training/research work at industries / advanced research laboratories and reputed universities abroad and interaction with foreign engineers working at frontiers of knowledge. It also encourages international cooperation in engineering and technology through harnessing training opportunity offered by South Korea.

Physical Progress and Achievements

Financial Year	Target	Scholarships Availed
FY-2005-06	40	0
FY-2006-07	40	77
FY:2007-08	40	54
FY:2008-09	40	28
Total	160	159

South Korean Industry-University Linkage Model

The engineering graduates from Pakistani universities are enrolled in MS (Engineering) programmes of the top ranking universities of South Korea, which are also amongst the top 100 or top 200 of the world. Through this programme, the HEC scholars, after their MS-Engineering degree, may get six month training opportunity in leading Korean Industries like LG, Samsung, KIA, Daewoo, Hyundai etc. The successful scholars will be able to replicate the same in Pakistan's industrial sector.



Linkages between Local Universities and Reputed Korean Universities, through HEC

The existing linkages of HEC, with reputed South Korean Universities are further extended, through the platform of HEC. The Institute of Space Technology, Islamabad, is the third university in Pakistan to have signed an MoU with Korean universities, after NUST and LUMS.

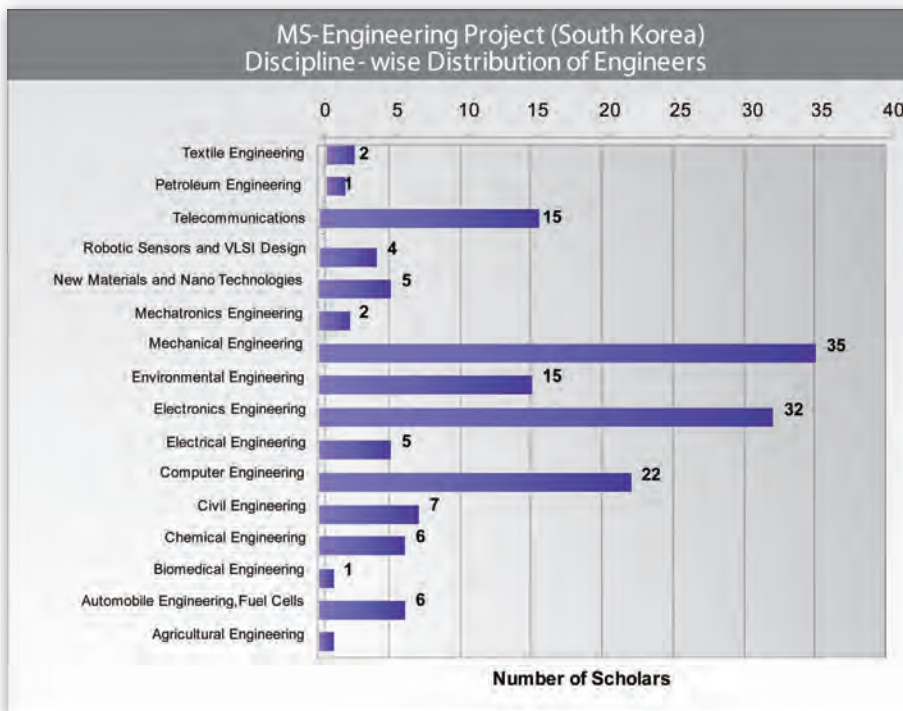
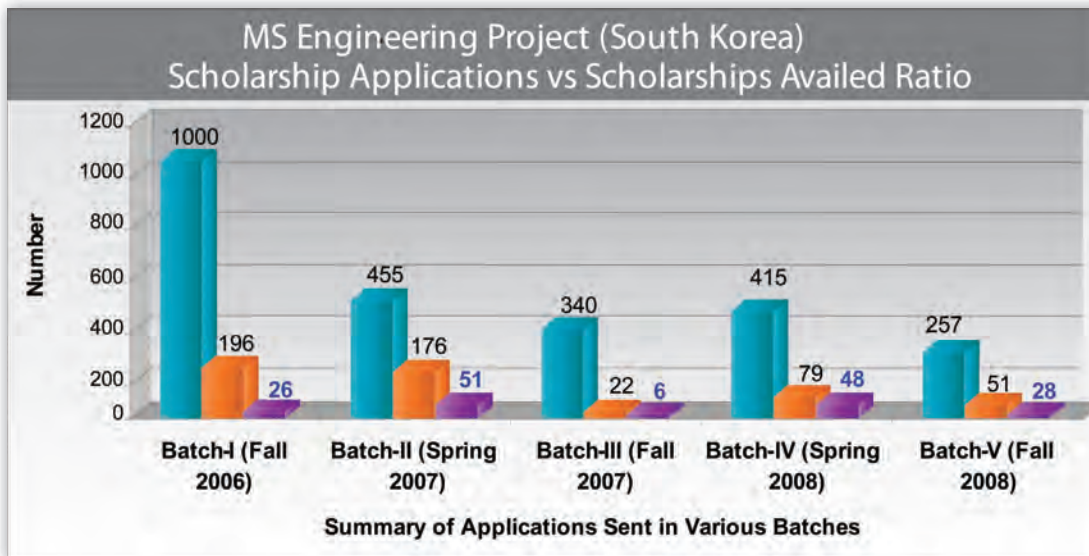
By the close of financial year 2008-09, HEC has sent 159 engineers to South Korea. They are receiving state-of-art education/training in three top universities of South Korea i.e Seoul National University, Hanyang University and KAIST. They are doing research in diversified fields of engineering and have produced 177 research publications. Nearly all HEC scholars are working, under supervision of Korean professors on R&D projects, and these projects are sponsored by leading Korean Industries (e.g. L.G, Samsung, Hyundai etc).

The Project is being implemented, ahead of

schedule, as evident from physical progress made. Till date, 83 MS-engineering graduates of HEC have been produced by the PMU.

Organizations in the field of Sciences, Engineering and Technology at the Asian Institute of Technology in Thailand. Now 16 Masters and 9 PhD scholarships will be awarded.

and the PhD level education of 10 university faculty members and employees of Research Organizations in the field of Sciences, Engineering and Technology at the Asian Institute of Technology in Thailand. Now 16 Masters and 9 PhD scholarships will be awarded.



Total Scholars proceeded to Thailand: Master-16 and PhD-09

Total numbers of scholars currently abroad: PhD-05

Total numbers of scholars who have completed studies: 20 (PhD-04 / Master-16)

Joint Scholarships Programme of HEC and Asian Institute of Technology, Thailand

The programme which was initiated in September 2003 has provided Masters level education to 20 and PhD level education of 10 university faculty members and employees of Research

Discipline wise distribution of scholarships:

S.No	Name of Discipline	Total No. of Scholarships
1	Agriculture and Veterinary Science	2
2	Engineering and Technology	23
Total		25

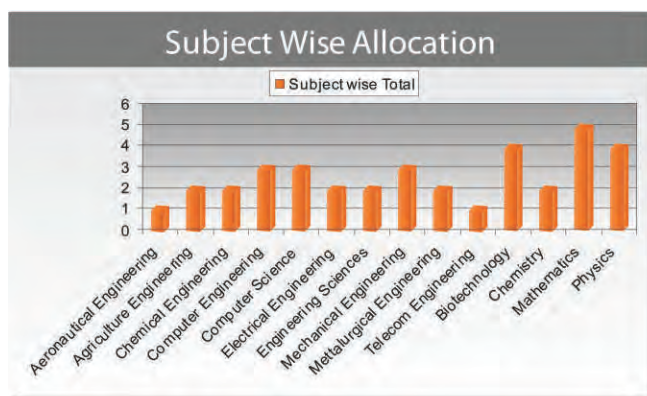
Under this scheme following 20 scholars successfully completed their studies and have joined their parent organizations.

S.No.	Name	Name of Organization/ University	Discipline	Field of Study	Programme Admitted to	Host University	Country
1	Rashid A. Majeed	National Agriculture and Research Council, Islamabad	Engineering and Technology	Water Engineering Technology and Management	Masters	Asian Institute of Technology (AIT)	Thailand
2	Amanullah Marri	NED University, Karachi	Engineering and Technology	Geotechnical and Geo-Environment Engineering and Technology	Masters	Asian Institute of Technology (AIT)	Thailand
3	Aneel Kumar	Mehran University of Engineering and Technology, Jamshoro	Physics Science	Geotechnical and Geo-Environment Engineering and Technology	Masters	Asian Institute of Technology (AIT)	Thailand
4	Jawed Qureshi	Mehran University of Engineering and Technology, Jamshoro	Engineering and Technology	Structural Engineering and Technology	Masters	Asian Institute of Technology (AIT)	Thailand
5	Agha Faisal Habib	Mehran University of Engineering and Technology, Jamshoro	Engineering and Technology	Structural Engineering and Technology	Masters	Asian Institute of Technology (AIT)	Thailand
6	Malik Asif Hameed	University of Engineering and Technology, Lahore	Engineering and Technology	Water Engineering and Technology Management	Masters	Asian Institute of Technology (AIT)	Thailand
7	Ihsan ul Haq Kakar	Ministry of Food Agriculture and Livestock, Quetta	Agriculture Sciences	Agriculture System and Engineering and Technology	Masters	Asian Institute of Technology (AIT)	Thailand
8	Syed Hassan Mujtaba	University College of Engineering and Technology, Mirpur, AJK	Engineering and Technology	Micro-Electronics	Masters	Asian Institute of Technology (AIT)	Thailand

9	Shazim Ali Memon	Mehran University of Engineering and Technology, Jamshoro	Engineering and Technology,	Structural Engineering & Technology	Masters	Asian Institute of Technology (AIT)	Thailand
10	Iqbal Shahid	Advanced Engineering Research Organization (AERO), Wah Cantt..	Engineering and Technology,	Network	Masters	Asian Institute of Technology (AIT)	Thailand
11	Junaid Ali Qureshi	Advanced Engineering Research Organization (AERO), Wah Cantonment	Engineering and Technology,	Telecommunication	Masters	Asian Institute of Technology (AIT)	Thailand
12	Jawaad Ullah Khan	Advanced Engineering Research Organization (AERO), Wah Cantonment	Engineering and Technology,	Telecommunication	Masters	Asian Institute of Technology (AIT)	Thailand
13	Naveed Ul Islam	Advanced Engineering Research Organization (AERO), Wah Cantonment	Engineering and Technology,	Microelectronics	Masters	Asian Institute of Technology (AIT)	Thailand
14	Shaukat Nawaz	Project Management Organization, Rawalpindi	Engineering and Technology,	Mechatronics	Masters	Asian Institute of Technology (AIT)	Thailand
15	Syed Azkar Ul Hasan	Project Management Organization, Rawalpindi	Engineering and Technology,	Mechatronics	Masters	Asian Institute of Technology (AIT)	Thailand
16	Muhammad Musharaf Nadeem	Project Management Organization, Rawalpindi	Engineering and Technology,	Mechatronics	Masters	Asian Institute of Technology (AIT)	Thailand
17	Sher Jamal Khan	NUST, Rawalpindi	Engineering and Technology,	Environmental Engineering and Management	PhD	School of Advanced Technology (AIT)	Thailand
18	Noor Muhammad Khan	UET Lahore	Engineering and Technology,	Water Resources Engineering	PhD	Asian Institute of Technology (AIT)	Thailand
19	Javed Anwar	FG College	Engineering and Technology,	Energy Technology	PhD	Asian Institute of Technology (AIT)	Thailand
20	Zulfiqar Ali Soomro	Quaid-e-Awan University of Eng.	Engineering and Technology,	Mechatronics	PhD	Asian Institute of Technology (AIT)	Thailand

PhD Scholarships in Engineering and Sciences in Germany

The Scheme was approved in July 2003. The project envisages to provide doctoral level training to 40 university/college teachers. At present 37 students are pursuing their studies



and are engaged in advanced research in fields of science and technology at renowned universities in Germany. The Scheme ensures training and research opportunities to the university/college teachers and R&D employees in high-tech fields.

Twelve of the scholars have completed their studies this year and returned to Pakistan and joined their parent organizations. Their association with foreign academic/research institutes have begun to bring collaborative research projects and benefits of promising technologies to the country. Following are the University / Institute wise details of HEC scholars who have completed their degrees:

Name of University/Institute	Number of Scholars (returned in each dicipline)			
	Engineering Science	Physical Science	Information Technology	Total
International Islamic University, Islamabad	1		1	2
University of Peshawar		1		1
Govt. College University, Lahore		2		2
University of Engineering and Technology, Lahore	1			1
University of the Punjab, Lahore	1			1
NED Karachi	1			1
COMSATS Institute of Information Technology	2			2
Government Gordon College, Rawalpindi		1		1
Government Islamia College, Lahore	1			1
Total	7	4	1	12

PhD Scholarships in Natural and Basic Sciences, Austria

The Project envisages PhD level training of 45 outstanding public sector university /college teachers and employees of research organizations in the field of Basic and Natural Sciences at reputed universities in Austria. The Project ensures an adequate supply of teachers, engineers and technicians with appropriate skills to meet the changing needs of Pakistan's economy and to support technological advancement.

Quantified Results:

Targets and Achievements:

S.No	Total No. of Scholarships	Total No. of scholars proceeded to Austria
1	45	43

Discipline wise distribution of scholarships:

S.No	Name of Discipline	Total No. of Scholarships
1	Biological and Medical science	4
2	Physical Science	36
3	Engineering and Technology	3
Total		43

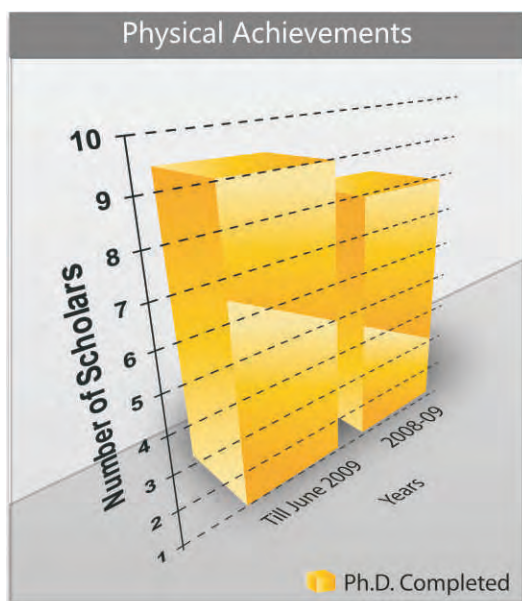
PhD Scholarship for Natural and Basic Sciences, France

The Project has helped build the capacity of Universities and Industries in Pakistan through addition of 40 PhDs in Natural and Basic Sciences. It has facilitated assimilation, absorption and transfer of important and promising technologies to get high-tech products and achieve rapid economic progress. It also provides opportunity to young talented scientists for training/research work at advanced research laboratories and reputed universities abroad and to interact with foreign scientists working at frontiers of knowledge. A total of 40 scholarships are to be awarded to the candidates. So far, 33 scholarships have been awarded.

Achievements (2008-09):

Eight scholars have returned and joined their parent organizations in Pakistan. The details are as under:

Organizations	Total Scholars Proceeded to their Host Universities	Total Scholars Returned and Joined their Parent Organization	Proceeded to their Host Universities in (2008-09)	Returned and Joined their Parent Organization in (2008-09)	Country
Teaching Staff of University and Colleges	33	09	0	08	France
Total	33	09	0	08	



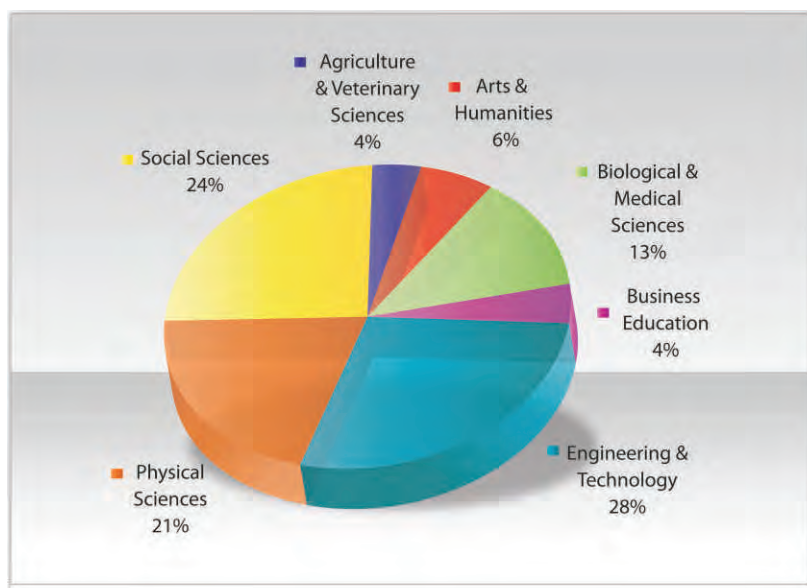
HEC-USAID Fulbright Scholarship Support Programme

The Project provides PhD/MPhil/Masters scholarships to reputed US universities. Its major objective is to facilitate assimilation, absorption and transfer of important and promising technologies to get high-tech products and achieve rapid economic progress.

A major part of the scholarship is funded by USAID through foreign aid. Under the Scheme 400-450 candidates are awarded with Masters/MPhil scholarships while 240-265 are awarded PhD scholarships depending on tuition fee at US Universities. Scholarships are awarded mainly in Engineering, Medicine, Science and Technology.

Physical Progress/ Achievements:

Cumulative Physical Progress (September 2005 to June 2009)	
Total Masters scholarships awarded	384
Total PhD scholarships awarded	199
Physical Progress in FY 2008-09	
Total Masters scholarships awarded	91
Total PhD scholarships awarded	61
Grand Total	152



PhD Scholarships for Basic Sciences, China

The Scheme launched in July 2003 supports PhD level training of 50 outstanding public sector university teachers / researchers in advanced fields of Basic Sciences. This supplements our efforts to provide opportunities to teachers and researchers for higher education abroad. It facilitates assimilation and transfer of important and promising scientific knowledge and information to achieve rapid economic progress.

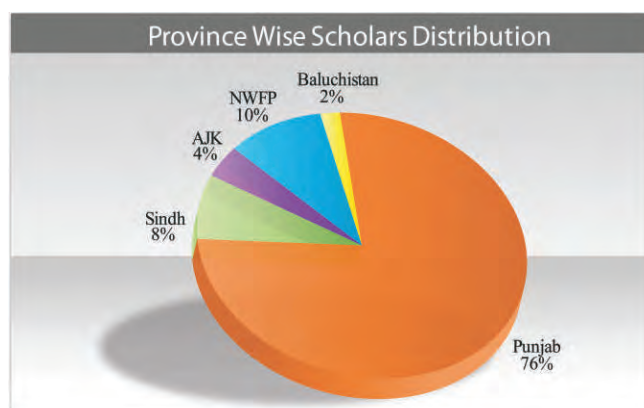
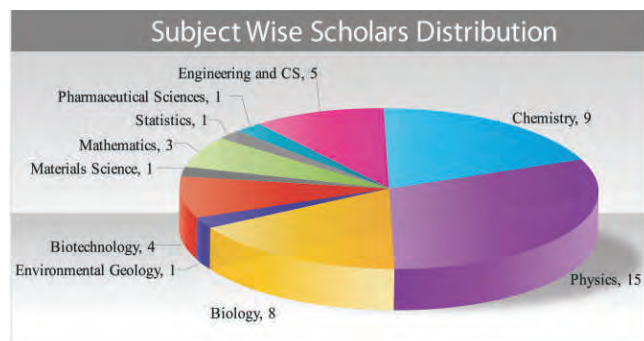
Physical Progress:

Out of the 50 scholarship slots available, 48 candidates were selected and proceeded to China.

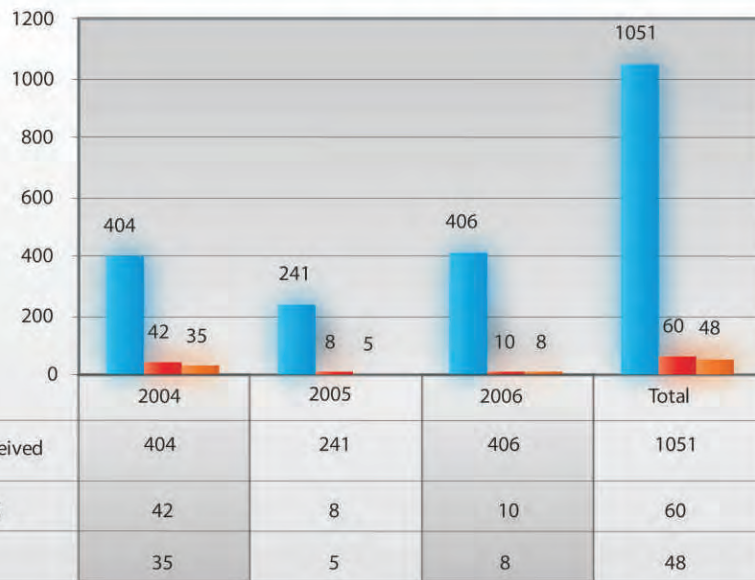
Batch I 35 candidates were selected during the year 2004. Out of these 35 scholars, 34 have graduated, returned and have joined their parent organizations. The last remaining scholar will hopefully graduate by Dec 2009.

Batch II Five candidates were selected during the year 2005 and all of them have graduated and returned to Pakistan.

Batch III Eight candidates were selected during the year 2006. Out of eight scholars, two have graduated and returned while one could not complete his PhD due to medical reasons and the remaining five are in their third year of study.



Year Wise Details of Scholarships



scholars had proceeded to Austria, France and Germany till July 2008.

Following number of scholars have proceeded abroad to their respective countries.

- Germany-42
- France-45
- Austria-11

Achievements:

A total of 41 scholars have graduated till June 2009 and have returned and joined their parent organizations.

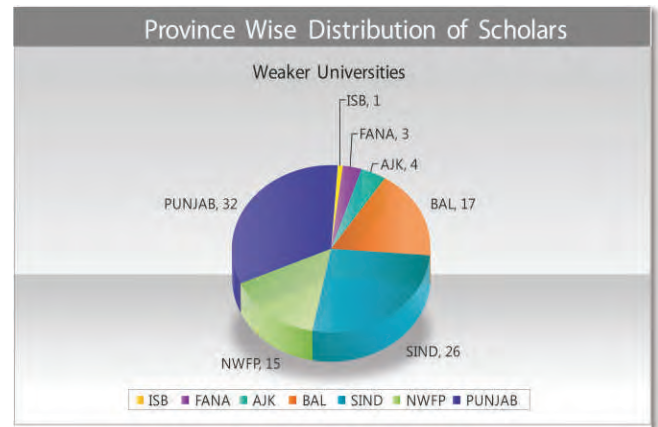
MS/MPhil leading to PhD Scholarship in Engineering, Natural and Basic Sciences/ Humanities/ Social Sciences for the teachers of Weaker Universities

This Project was launched in August 2004 and is a part of the overall vision of perspective plan 2001-2011. The basic objective is to create a critical mass of highly qualified Natural and Basic Sciences, manpower in high-tech fields and to build capacity of Weaker Universities in Pakistan through addition of 100 PhDs in priority Natural and Basic Sciences and Social Sciences/ Humanities field.

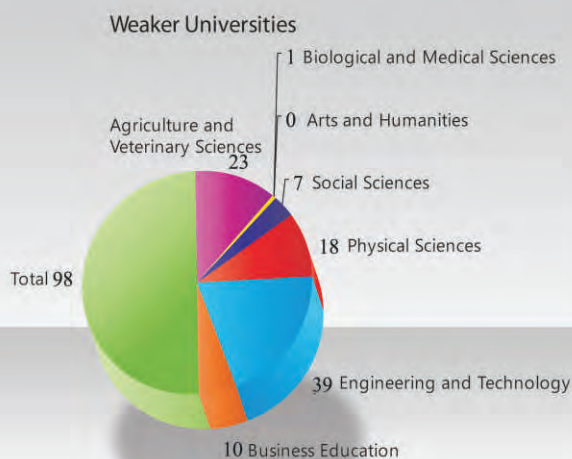
Physical Progress:

Out of the 100 scholarship slots available, all slots were filled by November 2007. Incidentally, two scholars refused to avail at the last moment and thus the project was capped at 98 scholars. All 98

Province Wise Distribution of Scholars

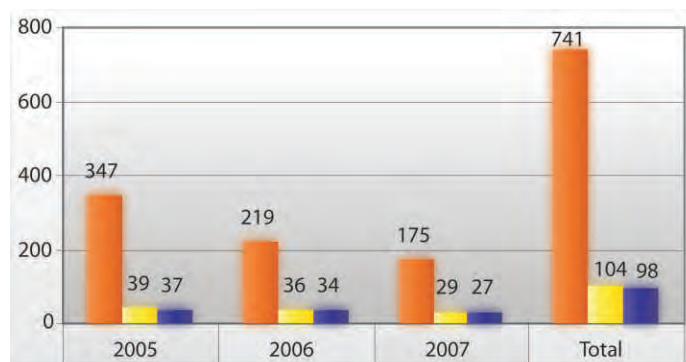


Discipline Wise Distribution of Scholars



Achievements:

A total of 98 scholars proceeded to Austria, France and Germany while 6 scholars have returned without completion due to medical and health related problems. So far, only one scholar has successfully completed his PhD degree and has graduated, returned and joined his parent university.



Teachers who have been awarded the scholarships under this programme were selected from the following universities:

S.No	University	Place
1	Hazara University	Dhodial, Mansehra
2	Gomal University	D.I. Khan
3	Kohat University of Science and Technology	Kohat
4	Karakoram International University	Gilgit
5	University of Malakand	Chakdara, Malakand
6	University of AJK	Muzaffarabad
7	Quaid-e-Awam University of Engineering, Science and Technology	Nawabshah
8	Shah Abdul Latif University	Khairpur, Sindh
9	Sindh Agriculture University	Tandojam
10	Government College University	Faisalabad
11	Islamia University	Bahawalpur
12	University of Sargodha	Sargodha
13	University of Balochistan	Quetta
14	Balochistan University of Engineering and Technology	Khuzdar, Balochistan
15	Balochistan University of Information Technology, Engineering and Management Sciences	Quetta

Success Stories

Bilal Shams Khattak

As I had opted to go to France for MS and PhD, therefore the first challenge was to learn the French language. HEC had arranged special intensive French language courses at the various centres of Alliance Française in Pakistan. After completing the language course, I got admission at Université de Bretagne Occidentale (UBO) in the Masters-2 research programme of Signaux et circuits (Signals and Circuits). After the course work, I did my Masters thesis under the supervision of Dr. Christophe Laot and we worked on "MMSE Equalization for a CDMA receiver".



After successful completion of my Masters from UBO, I was able to secure a CIFRE

scholarship (a French acronym for 'Industrial training through research'), the most prestigious and highest paid scholarship in France. It is jointly funded by the French government and the industry.

For my PhD I got admission at Université de Cergy-Pontoise, situated in the northern suburbs of Paris and my area of research was "New Generation Error Correcting LDPC Codes". I am in the first year of my PhD and I am working with Dr. David Declercq, one of the few specialists of LDPC codes in France. By working on an industrial research project I will not only be able to learn modern research methodologies but will also provide me with the opportunity to get hands-on experience with the latest trends in the communication and electronics industry. And I hope, the people of my country will benefit from my experiences.

Zahoor Ahmed Baloch

My name is Zahoor Ahmed Baloch and I am serving Balochistan University of Engineering and Technology, Khuzdar as Assistant professor.



In June 2006 I came to France for pursuing higher studies through HEC's Weaker University Scholarship Programme. After going through a language course of two months at Colmar, I started my study for M2R (Master-2 Research) in September 2006 in the Université de Limoges (University of Limoges, a city in centre of France) in Computer Science and Science of Information and communication.

By the grace of Almighty Allah I completed my M2R securing third highest position in class and was awarded admission in PhD in September 2007 by the same university at the School of Engineers (ENSIL, Ecole Nationale Supérieure d'Ingénieurs de Limoges).

I am working on Space Time Block code and Cooperative Communication with Professor Jean Pierre Cances and V. Meghdadi. I presented my first paper "On Capacity of Gaussian Light' Relay Channel" in International Wireless Communications and Mobile computing conferences (IWCMC) held by IEEE in Crete Greece in 6-8 August 2008. I presented my second paper "Cryptographic Spread Spectrum Relay Communication" in second International Conference on Next Generation Mobile Applications, Services and Technologies (NGMAST) held by IEEE in Wales UK from 16-19 Sept 2008. I am thankful to HEC for providing me the opportunity to seek knowledge and allow me to broaden my academic horizon.

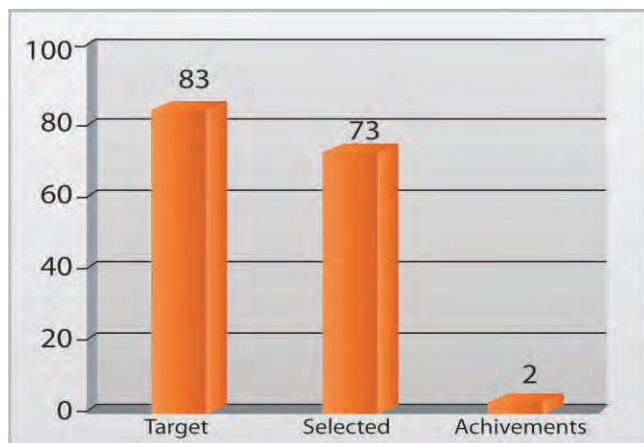
Partial Support for PhD Studies Abroad

"Partial Support Sponsorship for PhD Studies Abroad", approved in September 2004 envisages to provide financial assistance to final year PhD scholars who are studying abroad. A total of 47 scholars were selected under the programme, 20 of whom were faculty members. Realizing the success of the programme and acute shortage of highly qualified faculty, on the proposal of HEC, DDWP approved second and third phases of the programme.

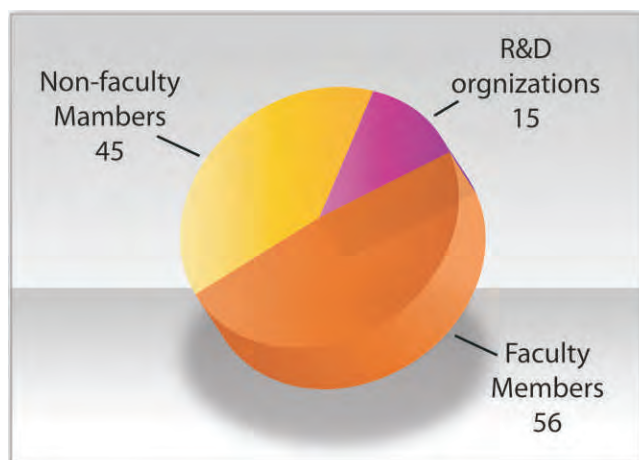
The Project provides financial support of which ranges from US \$ 9000/- to US \$ 15000/- to Pakistani scholars, with preference to faculty members of public-sector universities/degree awarding institutions/R&D organizations, who are in the final stages of completion of their PhD studies abroad and need partial support (e.g. tuition, thesis evaluation/submission fee, living expenditure etc) without which their PhD degree programme will remain incomplete. Such an initiative has helped to establish long term research collaboration between Pakistani and foreign universities.

Progress in FY 2008-09

Total number of scholarships awarded	25
Previous scholars who returned after completing PhD	26



Since faculty members of public sector universities are given preference, most of the awards (56 percent) have been awarded to this category of applicants. The details are shown by the pie chart below:



Provision of Higher Education Opportunities for the Students of Balochistan and FATA

The Project was approved by the ECNEC in October, 2007. The Project will provide educational opportunities to students belonging to Balochistan and FATA and will enhance participation rate at different levels of education. It will also provide opportunities to the talented students coming from marginalized areas. It is expected that the project will ensure a micro and macro economic change and social uplift of the area.

Quantitative Targets for (2010 Scholarships):

- **1300 Scholarships for Undergraduate Studies** (4-year programme)
- **700 Scholarships for Postgraduate Studies** (2-year programme)
- **10 PhD scholarships** for journalists belonging to FATA

These scholarships are distributed with a ratio of 60:40 for Balochistan and FATA respectively.

Batch-I

Foundation Course

A crash programme was arranged for Batch-I (2008-09). A total of 2322 applications were received for one-week foundation course, out of 140 candidates were selected.

Final Selection of Batch-I

A total of 3517 applications were received against 140 slots of Batch-I (100 for Undergraduate and 40 for postgraduate programme). It has been further distributed between Balochistan In/Out and FATA In/Out in 90:10 ratios. Project Steering Committee of Scholarship Programme finalized the selection process and awarded 140 scholarships for postgraduate and undergraduate programme on merit within each District/Agency/FRs. Details of scholarships awarded to the students of Balochistan and FATA are as under:

A total of 126 scholars joined out of the 140. Fourteen vacant scholarship slots will be transferred to Batch II for re-award of scholarship in same agency or district. Discipline wise list of 126 scholars is as under:

S.No.	Programme	Balochistan	FATA	No. of Scholarships
i	MBBS	31	26	57
ii	BDS	2	1	3
iii	BE	17	8	25
iv	Managment	13	4	17
v	MS/MSc/ME	10	7	17
vi	BSc/BA (Hons)	4	3	7
Total		77	49	126

Scholarship Awarded to the Students of Balochistan Batch-I

S.No.	Programs	No. of Scholarships Awardees
1	Kalat (7)	16
2	Makran (3)	9
3	Naseerabad (4)	12
4	Quetta (5)	20
5	Sibi (5)	8
6	Zhob (6)	11
7	Outside Residents	8
Total		84

Scholarship Awarded to the Students of FATA Batch-I

S.No.	Agencies / FR	No. of Scholarships
1	Bajaur	10
2	North Waziristan	6
3	South Waziristan	7
4	Mohmand	5
5	Khyber	8
6	Orakzai	3
7	Kurram	7
8	6 Frs	4
9	FATA Out (Outside Residents)	6
	Total	56

Development of Departments of Social Sciences/Humanities

The Scheme was approved in October 2003. 13 departments of 10 public sector universities were selected in this project for infrastructure/institution and faculty development. The project aims at the development of institutions through strengthening and upgrading of the existing facilities in the Departments, Centres of Excellence and Area Study Centres of Social Sciences and Humanities. Additionally, the project also provides funding for holding conferences, research grants and PhD Scholarships.

Achievements:

S.No	Key Components	Achievements
(i)	Construction of seminar room	10 out of 13 seminar rooms have been constructed and remaining are under construction.
(ii)	Development of Networking and data Base	11 departments have utilized funds for development of networking and database
(iii)	Equipment	95 percent procurement has been completed by the respective department
(iv)	Seminars and Conferences	Thirteen seminars/conferences have been organized by the selected departments
(v)	Provision of Research funds to Institution/Individual	29 faculty members belonging to 11 departments have completed research projects
(vi)	Expenditure on PhD Scholars	3 more scholars have been selected for PhD scholarship and funds were released to 11 ongoing scholars.

HRD Programme for Strengthening of Universities/Institutes of Higher Learning

Masters' level degree training of 75 meritorious public sector faculty members in the field of engineering. The Scheme aims to improve local capacities to meet the changing needs of Pakistan's economy and to support technological advancement in both institutions and industry.

This Scheme was approved in October 2004. The major objective of the Scheme is to fund the

Quantified Results (Targets and Achievements):

S.No	Total numbers of scholarships	Total numbers of scholarships availed
1	75	23
2	Number of scholars currently abroad	08
3	Number of scholars who have completed their Master studies	15
3-B	Number of scholars who have completed their Master studies in 2008-09	08 (Sweden)

Under this Scheme, following 15 scholars successfully completed their Master studies within time frame and joined their parent organization.

S.No	Name	Name of Organization/ University	Discipline	Field of Study	Programme Admitted to	Host University	Country
1	Mohsin Ali	University of Punjab, Lahore	Engineering and Technology	Nano materials and Nano Technology	Masters	Royal Institute of Technology (KTH)	Sweden
2	Sadeeq Jan	University of Engineering and Technology Peshawar	Engineering and Technology	Information and Communication Systems security	Masters	Royal Institute of Technology (KTH)	Sweden
3	Omer Malik	COMSATS, Islamabad	Engineering and Technology	System on Chip Design	Masters	Royal Institute of Technology (KTH)	Sweden

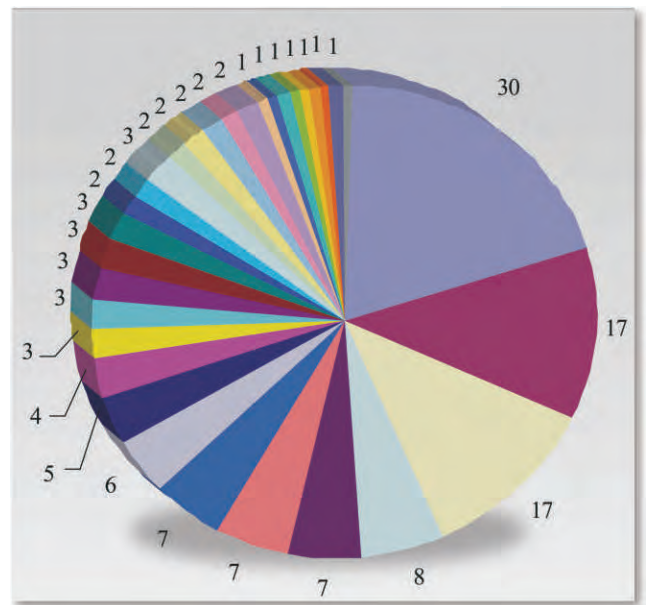
4	Adeel Tajammul	COMSATS, Islamabad	Engineering and Technology	System on Chip Design	Masters	Royal Institute of Technology (KTH)	Sweden
5	Mirza Tayyab Mehmood	COMSATS, Islamabad	Engineering and Technology	Telecommunications	Masters	Asian Institute of Technology	Thailand
6	Muhammad Irfan Abid	University of Faisalabad	Engineering and Technology	Microelectronics	Masters	Asian Institute of Technology	Thailand
7	Khurram Shahzad	University of Engineering and Technology Lahore	Engineering and Technology	Geotechnical and Geo Environmental Engineering	Masters	Asian Institute of Technology	Thailand
8	Zulfiqar Khalid	Institute of Space Technology Islamabad Suparco	Engineering and Technology	Control of Dynamical System	Masters	Dalarna University,	Sweden
9	Farooq Ahmad	Technical Education and Manpower Etc/Para China	Engineering and Technology	Sustainable Energy Engineering	Masters	The Royal Institute of Technology (KHT)	Sweden
10	Shahzad Asif	COMSATS Institute of Information Technology	Engineering and Technology	System-on-chip (socware)	Masters	Linkoping University	Sweden
11	Syed Muhammad Yaseer Sherazi	COMSATS Institute of Information Technology	Engineering and Technology	System-on-chip (socware)	Masters	Linkoping University	Sweden
12	Sadiq Ali	UET, Mardan Campus III, Bannu	Engineering and Technology	Digital Communication Systems and Technology	Masters	Chalmers University of technology	Sweden
13	Syed Abdullah Nauroze	University of Engineering and Technology Taxila	Engineering and Technology	Wireless System	Masters	The Royal Institute of Technology (KTH), Stockholm	Sweden
14	Muhammad Mubeen Masud	COMSATS Institute of Information Technology	Engineering and Technology	Wireless System	Masters	The Royal Institute of Technology (KTH), Stockholm	Sweden
15	Waqas Ahmad Khan	COMSATS Institute of IT	Engineering and Technology	Electrical Engineering	Masters	Kalmar University, Sweden	Sweden

Expansion Programme for Hiring of Eminent Educationist and Researchers

Project for Hiring of Eminent Educationists and Researchers having PhD Degree was approved in June 2005. The objective of the Project was to overcome the shortage of PhD teachers in the public universities/higher learning institutions by hiring of eminent and experienced retired scholars. The scholars were selected for a period of two years on the basis of their experience and active research. 147 scholars have been selected under the subject project.

Achievements

- 147 retired PhD Professors and researchers were selected and placed in different public sector universities. So far, 139 faculty members who were selected under the Project have completed their tenure of appointment. The selected professors joined the public sector universities in Pakistan.
- Selected professors have supervised 150 PhD scholars and 26 MPhil students. Two hundred and twenty six research papers have been written by these eminent educationists.
- In the year 2008-09, nine applicants were selected out of 60 applications.



- University of Karachi
- University of Agriculture, Faisalabad
- University of the Punjab, Lahore
- Quaid-i-Azam University, Islamabad
- University of Arid Agriculture, Rawalpindi
- University of Education, Lahore
- University of Sindh, Jamshoro
- University of Veterinary and Animal Sciences, Lahore
- Allama Iqbal Open University, Islamabad
- University of Peshawar
- Bahauddin Zakariya University, Multan
- Fatima Jinnah Women University, Rawalpindi
- Federal Urdu University, Karachi
- NWFP Agriculture University, Peshawar
- University of AJK, Muzafarabad
- COMSATS, Islamabad
- Gomal University, D. I. Khan
- HEJ Research Institute of Chemistry, Karachi
- Lahore College for Women University, Lahore
- PIEAS, Islamabad
- University of Balochistan, Quetta
- University of Health Science, Lahore
- University of Sargodha
- Air University, Islamabad
- DUHS, Karachi
- Government College University, Faisalabad
- International Islamic University, Islamabad
- Kohat University of Science and Technology
- Mehran UET, Jamshoro
- Sindh Agriculture University, Tandojam
- UET Taxila
- University of Gujrat

Development of High Level Manpower S&T through Split PhD Programme

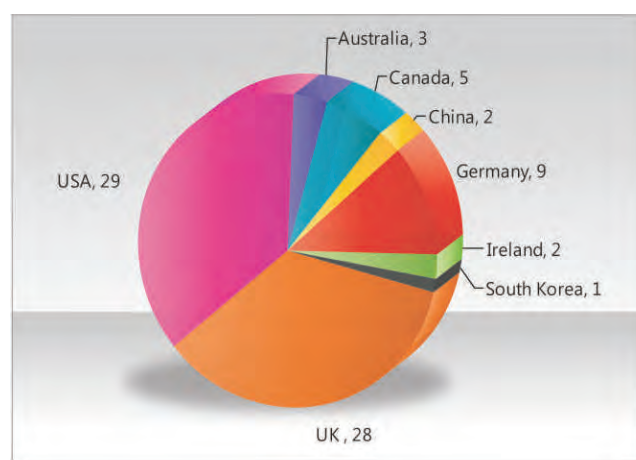
Recognizing the importance of the Human Resource Development in the high tech fields, and to build up a minimum level of expertise and knowledge in high technology and subjects that were new to Pakistan education system, the Scheme was launched to train 100 teachers/researchers in Science and Engineering through Split PhD programme. Under this Scheme, arrangement has been made for the scholars to undertake a part of their studies/research work in the Pakistani Universities (1-2 years). They will undertake some part of their studies/research work in a good foreign university (2-3 years).

Mainly the scholars selected under this Scheme are likely to be placed for PhD at accredited universities in Pakistan initially for 1-2 years course work/research for PhD in an area of study directly relevant to our national requirements. Later, they will then be placed at universities abroad for a 2-3 years further research/training under collaboration between

required to complete their research work and submit PhD thesis either in the foreign university or the Pakistani university.

The Scheme has currently been extended till December 2011. The total 98 scholars have been selected out of which only 86 are on board. The last inducted batch of the scholars will complete their local session (1-2 Years) as well as foreign session in (2-3 Years) by 2011.

Graphical Representation of the Enrolment in the Advance Countries of the World



Physical Progress

Total number of slots available	100
Total number of scholars awarded	98
Cancellation of Awarded Scholarship	15
Total number of availing scholarship	83
Total number of scholars availing Foreign Session	79
Closed at MS level at Local University	02
awarded but not proceeded abroad	02
Case closed at MS level at Foreign University	01
Number of scholars still studying abroad in the reputed foreign universities of the advanced countries of the world	52
Total number of PhD Completed and resume their duties again in their parent organization	26

Physical Achievements

Until June 2009, 86 scholars have been awarded for 1-2 years local studies and 2-3 years foreign session study. Out of them, 79 scholars have completed their local session successfully and enrolled abroad in reputed foreign universities of the advanced countries of the world for the completion of foreign session. 26 scholars have resumed their duties again in their parent organizations after completing PhD till June 2009.

Total Publication/ International Conferences by Split PhD scholars:

Local	Foreign	Total
50	400	450

Achievements of some of the scholars

- Awais M. Kamboh is a member of the IEEE Communications Society, IEEE Circuit and Systems Society, and the IEEE Engineering in Medicine and Biology Society
- Sohail Ahmed has served as the secretary of the IEEE student chapter of the University. He was also chosen to represent his university in a workshop conducted jointly by University of Southampton, Technical University of Munich and American University of Beirut under the auspices of the European Commission's TEMPUS programme

Foreign Faculty Hiring Programme (FFHP) (Long-Term)

In Pakistan, there is huge shortage of PhD faculty members in higher education institutions, so HEC has put all its efforts to reduce this shortage and provide supervisors for indigenous PhD scholars in all disciplines. In view of that the Scheme was launched to bring faculty members from abroad who could serve in various public/private educational institutions, and act as change agent specifically creating research environment and

provide research topic in cutting edge technology relevant to our society and social economic development. HEC credibility has attracted almost 300 experts from various countries, which include expatriates as well as foreign nationals and are placed in 41 Pakistani educational institutions in a period of five years.

The over all achievements of the foreign professors hired under FFHP can be appraised against the job descriptions assigned to the foreign professors which comprise of courses taught and curriculum revision, students supervision and research activities. Two of the major quantifiable tasks assigned to the foreign professors are number of students supervised and number of research papers published. The following tables give the total for the year 2008-2009 as well as the cumulative total since the inception of the programme for the said components:

Table 1.1

Students Supervised by Foreign Professors		
Level	Graduate students supervised (2008-2009)	Graduate Since joining FFHP
MS	63	366
MPhil	52	154
PhD	67	112

As per Table 1.1, it is evident that the number of students supervised by the foreign professors shows a rising trend with every passing year.

Table 1.2

Research Papers by Foreign Professor		
	(2008-2009)	Since joining FFHP
Papers presented in Conferences/ Seminars	63	578
Research Papers in International Journals	260	1425

It may be mentioned here that most of the research papers by the foreign professors are published in ISI listed Journals (having significant impact factor).

Success Stories

- 1. Prof. Dr. Khalida Inayat Noor** who holds a doctorate degree in Mathematics from University of Wales, UK has contributed significantly to COMSATS Institute of Information Technology, Islamabad by publishing 30 papers in International Journals (with total impact factor of 23.158) during the year 2008-2009. The total number of publications since her joining the programme however amount to more than 100 papers. She has supervised 20 MSc students and 16 MPhil students and 5 PhD students who have successfully graduated whereas one MS student and 8 PhD students are still under her supervision.
- 2. Prof. Dr. Abad Ali Shah** working at University of Engineering & Technology, Lahore holds a PhD from Wayne State University, Detroit. He has published 57 research papers along with supervising 43 MPhil/PhD students where as four of his PhD students have graduated during 2008-2009. He has also published 5 papers in International journal (with an impact factor of 2.27) during the year 2008-2009. He has also established a Bioinformatics laboratory at UET while a research project in collaboration with Broad Institute MIT, USA is underway.
- 3. Prof. Dr. Robert Briddon** working at NIBGE Faisalabad since March 2004, has published 47 research papers in his area of research i.e. Investigation of the diversity, Origin and Function of the Begomovirus DNA satellites and Development of Diagnostic Techniques for Agriculturally Important Viruses

- 4. Prof. Dr. Moinuddin Ahmed** who received his PhD from University of Auckland, New Zealand has been extensively engaged in research activities at Federal Urdu University of Arts & Technology, Karachi since he joined FFHP while publishing 19 research papers and supervising 6 MS students who have graduated. Currently, he is supervising 3 MPhil and 5 PhD students. A few of the research projects undertaken by him comprise of Weed Management, Dendrochronology Potential of some Pine Tree Species of Pakistan and Various Topics of plant ecology, Population dynamics and Multivariate Analysis of Vegetation Community.

A number of foreign professors have been awarded with research grants amounting more than Rs. 1 million.

- 1. Dr. Ishtiaq Qadri** has been engaged in 6 research projects at National University of Sciences and Technology where the topics range from Enhancing Binding Protein to interaction of hepatocyte. He has secured several research grants (for the year 2008-2009) such as "Pak-US Science and Technology Cooperative Programme: Hepatitis C Virus (HCV) Management in Pakistan and "Procurement of a high speed centrifuge".
- 2. Dr. Waseem Mirza** at University of Engineering and Technology, Lahore is engaged in research under the Pakistan-US Science and Technology Cooperative Programme. The research is supported by the United States Agency for International Development, the Ministry of Science and Technology and the Higher Education Commission.
- 3. Dr. Yaseen Iqbal Yousafzai**, at University of Peshawar has been engaged since November 2008 in development of Materials Connection Centre under Pak-US S&T Cooperative Programme. He has

also been engaged in research effects of various substitutions on the microstructure and properties electro-ceramics for microwave application.

- 4 .Dr. Mohammad Maroof Shah** at COMSATS Institute of Information Technology has been awarded various research grants during 2007-2008 where the research grants include various projects such as identification of PCR-based primers for the detection of Ph1 gene region in wheat Sponsoring agency. Genotypic and Phenotypic Response of Vegetables to Pesticides . Identification of PCR-based molecular markers for the detection of potato late blight disease in Abbottabad Region and effects of environment on prevalence and distribution of potato leaf roll virus (PLRV) disease in Hazara division.

Abdus Salam School of Mathematical Sciences (ASSMS) deserves a special mention here, as out of the 49 experts at ASSMS, 33 professors have been hired through FFHP. With the active cooperation of the foreign professors under FFHP, ASSMS has managed to regularly organize International Research Schools for young scientists in collaboration with International Mathematical Union (IMU), European Mathematical Society (EMS), Abdus Salam International Centre for Theoretical Physics (ICTP)-Italy and Centre International de Mathématiques Pures et Appliquées (CIMPA)-France. During the year 2008-2009, nine such schools were organized. The diligent supervision by the foreign professors at ASSMS has led to successful completion of PhD degrees of 22 students (during the year 2008-09) who have been subsequently appointed at prestigious institutions in Pakistan.

International Research Support Initiative Programme

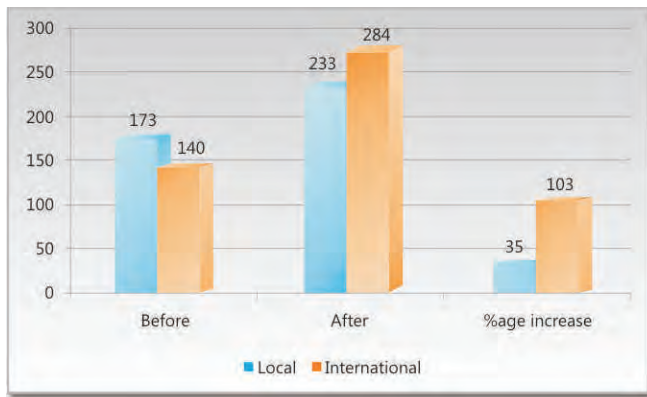
The Programme offers a six month research fellowship abroad to full time PhD students enrolled in Pakistan to enhance their research capabilities. It is of utmost importance that the doctoral studies carried out in Pakistan are of a standard that is at par with any internationally reputed institution. This is only possible if candidates are provided with adequate support in research projects. This may be a problem because of the paucity of resources in Pakistan therefore the Scheme is helping to provide doctoral students exposure internationally so they may carry out research projects of high standard.

The Scheme is also assisting ongoing Indigenous PhD programmes by providing a mechanism for PhD scholars to travel abroad and conduct research in advanced industrialized countries for a period up to six months. This provides exposure to the PhD scholars which in turn enhances the quality of research that they conduct in Pakistan. It also serves to develop linkages between Pakistani and foreign institutions. So far, 668 scholarships have been awarded out of which 338 have returned successfully.

Progress in FY 2008-09:	
Scholarships awarded	208
Scholars proceeded for research	153
Scholars returned	95
Scholars withdrawn	02
Scholars still to proceed	133

IRSIP Scholars' Research Achievements

PhD scholars returning from abroad have shown satisfactory research performance in terms of international as well as local research papers published. On average, every scholar succeeds in publishing at least one international research paper. Some of the awardees have published more than three papers during such a short span of time. The figure below presents the summary of the performance in terms of number of research papers published.

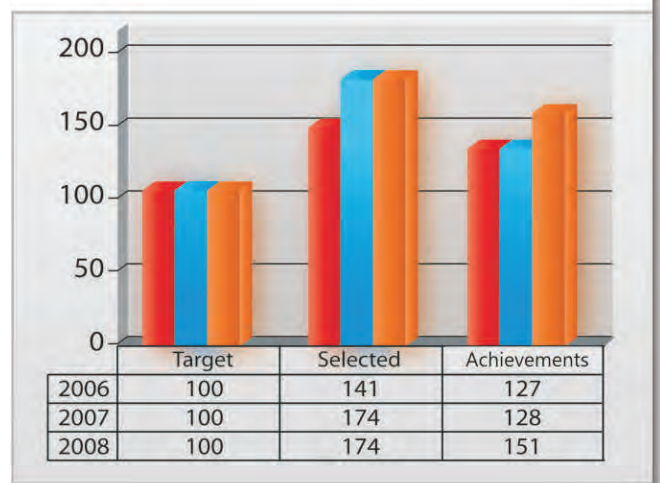


Post-Doctoral Fellowship Programme

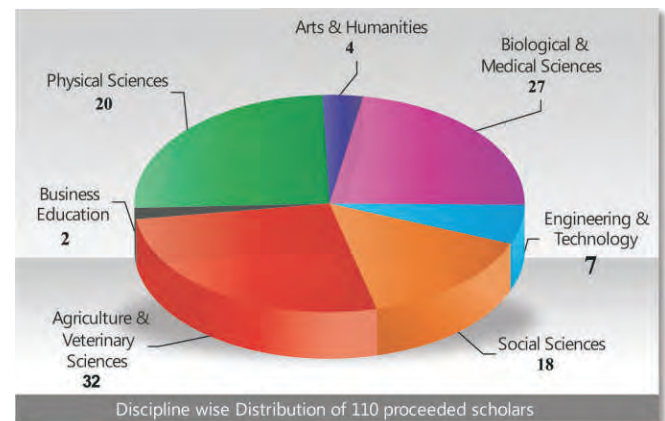
Like many other programmes of the Higher Education Commission launched for the uplift of higher education and R&D sectors in the country, Post-Doctoral Fellowship Programme has also played a pivotal role in bringing about the much-needed revolution in these areas. The Programme is providing 700 slots to the faculty members and researchers, holding PhD degrees, to work in the top-notch universities and state-of-the-art laboratories in technologically advanced countries.

These fellowships are offered on national basis and open merit. 70 percent slots are reserved for faculty members of public sector universities and institutes, whereas private universities are given 20 percent slots. Ten percent of these scholars belong to the public sector R&D organizations. Special consideration is given to those scholars who have no prior academic exposure abroad.

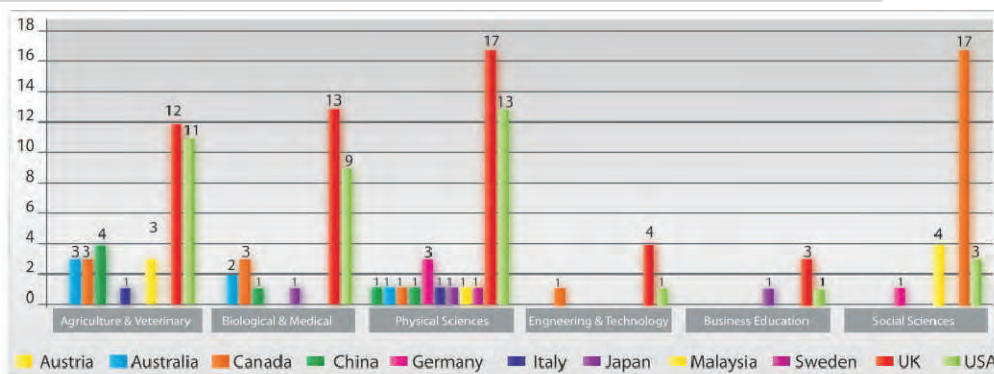
S. No.	Batch	Targets as per PC-I	No of Applications received	Selected	Departed	Completed	Currently Abroad
1	Batch-II	0	0	0	6	119	6
2	Batch-III	100	273	174	104	13	80
	Total	100	273	174	110	132	86



In the year 2008-09, 110 scholars proceeded for the fellowship in Basic and Applied Sciences, Agriculture, Information Technology, Social



Sciences, Arts, etc. So far, 132 have completed the fellowship from previous batches. The achievement of the Programme is as under for the year 2008-09:



Publications:

447 publications have been produced by 210 scholars of the first two Batches. Resultantly, the basic concept of making the higher education sector an engine of socio-economic change is rapidly materializing.

Number of Scholars	Publications during post doc	Publications Submitted/ under process	Publications published
210	447	325	122

Success Stories



**Dr. Mehboob
Ur Rehman**

He has worked on Genomics of crop plants from University of Georgia, USA. During his Post Doc he has published three papers. He has been awarded Outstanding Scientist: Biotechnology (first position) by Ministry of Food and Livestock and Gold Medal from PAEC due to his research during Post Doc. During his stay at the University of Georgia, he, along with Prof Andrew H Paterson published two chapters in two books published by the Springer books. The University has discussed beginning a joint collaborative project entitled "Integrated genetic/physical mapping of Gossypium".



**Dr. Muhammad
Iqbal**

He has carried out his post doc at University of Putra Malaysia, where he developed a new technique on "Equitable irrigation water allocation under continuous supply system". In this regard HEC has requested Dr Iqbal to deliver a lecture to benefit the faculty and students



Dr. Amir Ali

He has successfully managed an agreement between University of Wisconsin-Madison, USA and University of Sargodha (UoS) for exchange of students and teachers for research activities and collaborative projects. Second joint venture between University of Sargodha and USDA-ARS (United States Department of Agriculture, Agriculture Research Services) for the exchange of germplasm and hybrid seed development is in pipeline.



**Dr. Waqas Ali
Asad**

He has acquired the academic license of the Mine Sight, a commercial mine design software from Mintec, Inc, Tucson, Arizona for the Department of UET form University of Mining Engineering Colorado School of Mines. USA. His research has been implemented on an existing cement manufacturing operation in Pakistan.

Interim Placement of Fresh PhDs Programme (IPFP)

In order to impart quality education to the students of Pakistani universities, HEC is attracting qualified and experienced fresh scholars to place them in Pakistani educational institutions. The Interim Placement of Fresh PhDs Programme has been specifically launched to provide a platform to these young PhD professionals to return home with confidence. This Programme will ensure an added advantage to the universities and DAI's in getting back these Pakistani fresh PhDs from abroad who will immediately meet the short-fall of qualified faculty.

This Programme is designed to provide an Assistant Professor position for one year which permits to join Tenure Track System after passing through the proper screening process. The Programme offers Assistant Professor PKR 80,000 per month fixed salary and a 0.5 million startup research grant. They are also encouraged to provide a larger research proposals for issuance of bigger research grants through HEC R&D

Division. Scholars are only placed in those institutions which have opted for tenure track system and are willing to induct the scholars after completion of one year tenure under IPFP against the vacant positions of Assistant Professors.

Targets and Achievements:

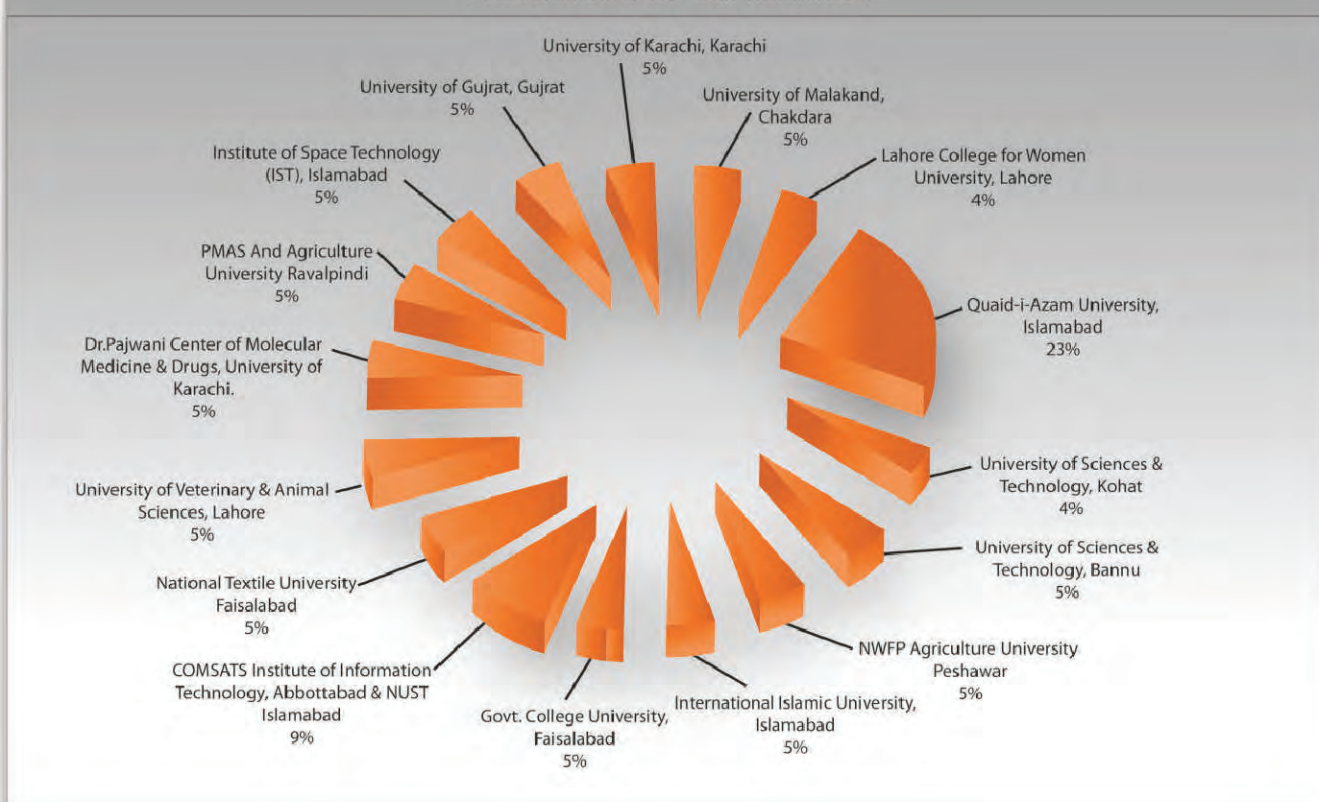
Applications received during July 2008 to June 2009	:	30
Applications Process and Placements Matured	:	21
Applications Regretted	:	09

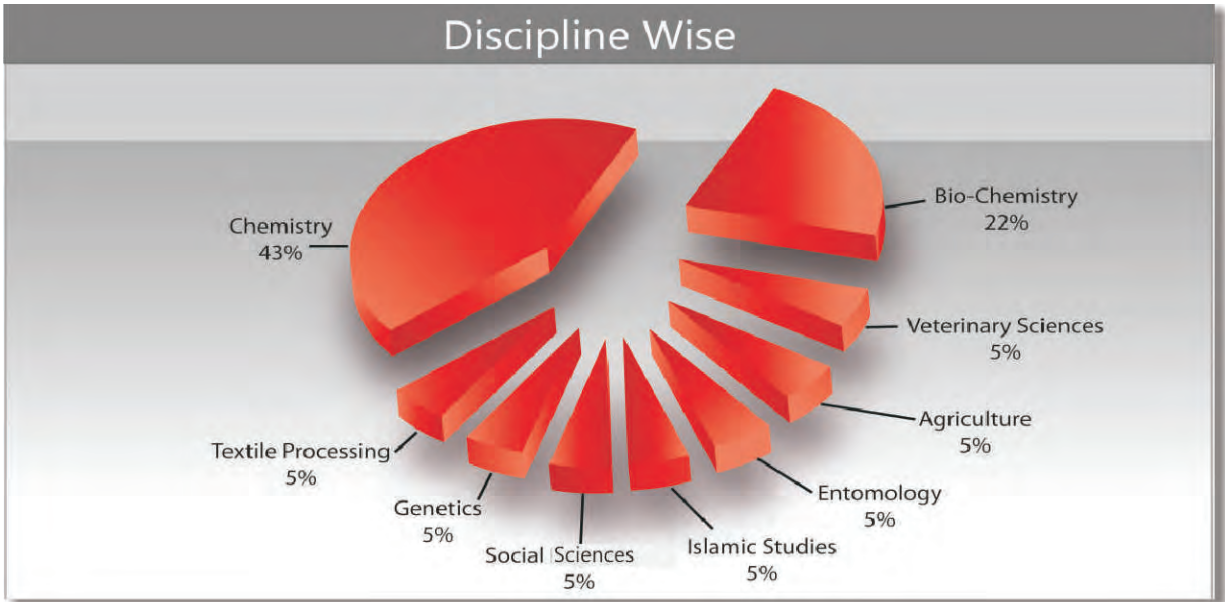
Scholars who have joined under the programme

S.No.	Name of Scholar	PhD Discipline	Year of PhD	PhD Country	Host Institution
1	Muhammad Atiq ur Rehman	Social Engineering	2004	Japan	Lahore College for Women University
2	Bilal Haider Abbasi	Plant Biotechnology	2008	China	Quaid-e-Azam University, Islamabad
3	Salma Bilal	Physical Chemistry	2007	Germany	University of Science and Technology Kohat
4	Mushtaq Ahmed	Biochemistry and Toxicology	2007	Brazil	University of Science and Technology Bannu
5	Zahid Hussain	Agronomy	2004	UK	NWFP Agriculture University, Peshawar
6	Juniad Ahmad Hashmi	Islamic Studies	2008	Tunas	International Islamic University Islamabad
7	Sajjad Karamat	Organic Chemistry	2008	Austria	Quaid-e-Azam University, Islamabad
8	Amir Ali Abbasi	Human Genetics	2008	Germany	Quaid-e-Azam University, Islamabad
9	Nasir Rasool	Chemistry	2008	Germany	Govt. College University, Faisalabad
10	Amir Habib	Physical Science	2008	Austria	COMSATS Institute of Information Technology, Abbottabad and NUST, Islamabad

11	Abdul Matin	Biochemistry/Molecular and Cellular Biology	2007	UK	COMSATS Institute of Information Technology Abbottabad
12	Iram Abdullah	Textile Processing	2008	UK	National Textile University, Faisalabad
13	Aqeel Javeed	Veterinary Sciences (Cell Biology)	2008	China	University of Veterinary and Animal Sciences, Lahore
14	Rizwana Sanaullah	Life Sciences (Biochemistry)	2008	Germany	Dr. Panjwani Centre of Molecular Medicine and Drugs, University of Karachi
15	Muhammad Farooq Nasir	Agriculture	2005	Germany	PMAS Arid Agriculture University, Rawalpindi
16	M. Usman Anwar	Organic Chemistry	2008	Germany	Institute of Space Tech. (IST) Islamabad
17	Adeel Afzal	Analytical Chemistry	2007	Austria	Quaid-i-Azam University, Islamabad
18	Iram Murtaza	Bio-Chemistry	2008	China	Quaid-i-Azam University, Islamabad
19	Sumera Tahir	Entomology	2008	China	University of Gujrat, Gujrat
20	Jamshed Hasim	Physical Science (Chemistry)	2008	Austria	University of Karachi, Karachi
21	Ezzat Khan	Physical Science (Chemistry)	2008	Germany	University of Malakand, Chakdara

Placement of Candidates

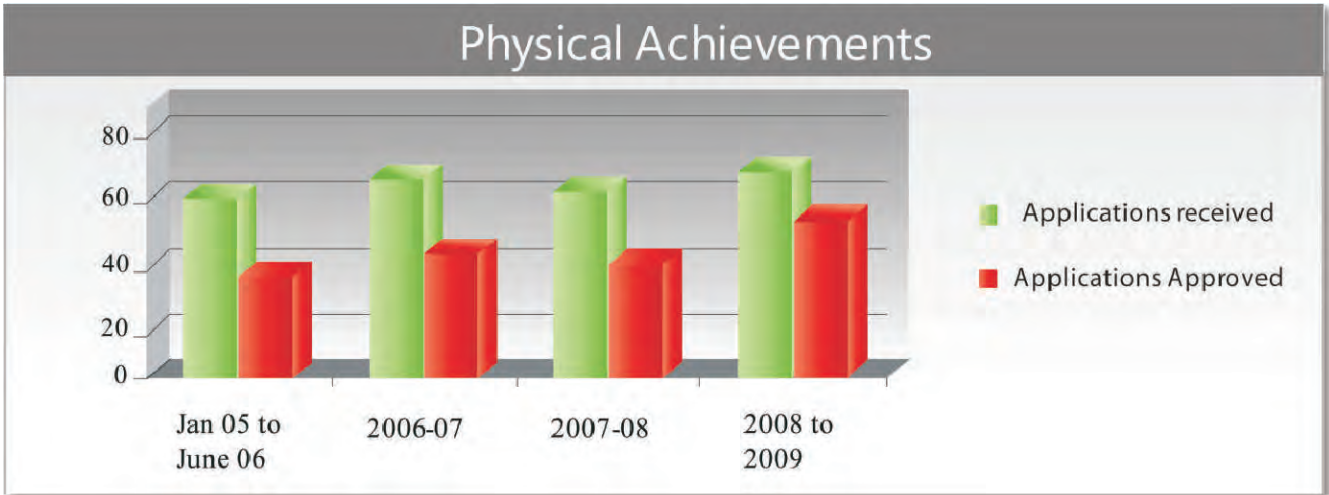




In-country Short-term Teacher Exchange Programme

The Short-term Teacher Exchange Programme was launched by HEC to impart quality education to students of small and newly established universities. The Project facilitates the movement of faculty members and professionals to teach in public sector universities / degree awarding institutions for duration of one to four weeks.

Year	Applications received	Applications approved
Jan 05 to June 06	55	31
2006-07	61	38
2007-08	57	35
July 08 to March 09(8 Months)	63	47
June 09 to sep 09	7	In-process
Total	243	151



1000 Cuban Scholarships for Studies in General Comprehensive Medicine

After the devastating earthquake in October 2005, a large number of Cuban medical specialists joined hands with Pakistani counterparts to support the earthquake affected population of

AJK and NWFP region. The Cuban Government, in a goodwill gesture wanted to reduce scarcity of qualified medical professionals and the magnitude of health assistance required in the country.

Therefore, the Cuban Government offered 1000 scholarships for Pakistani students. The programme '1000 Cuban Scholarships for Studies in General Comprehensive Medicine' [equivalent to MBBS] was approved by the ECNEC in November 2006, providing monthly stipend @

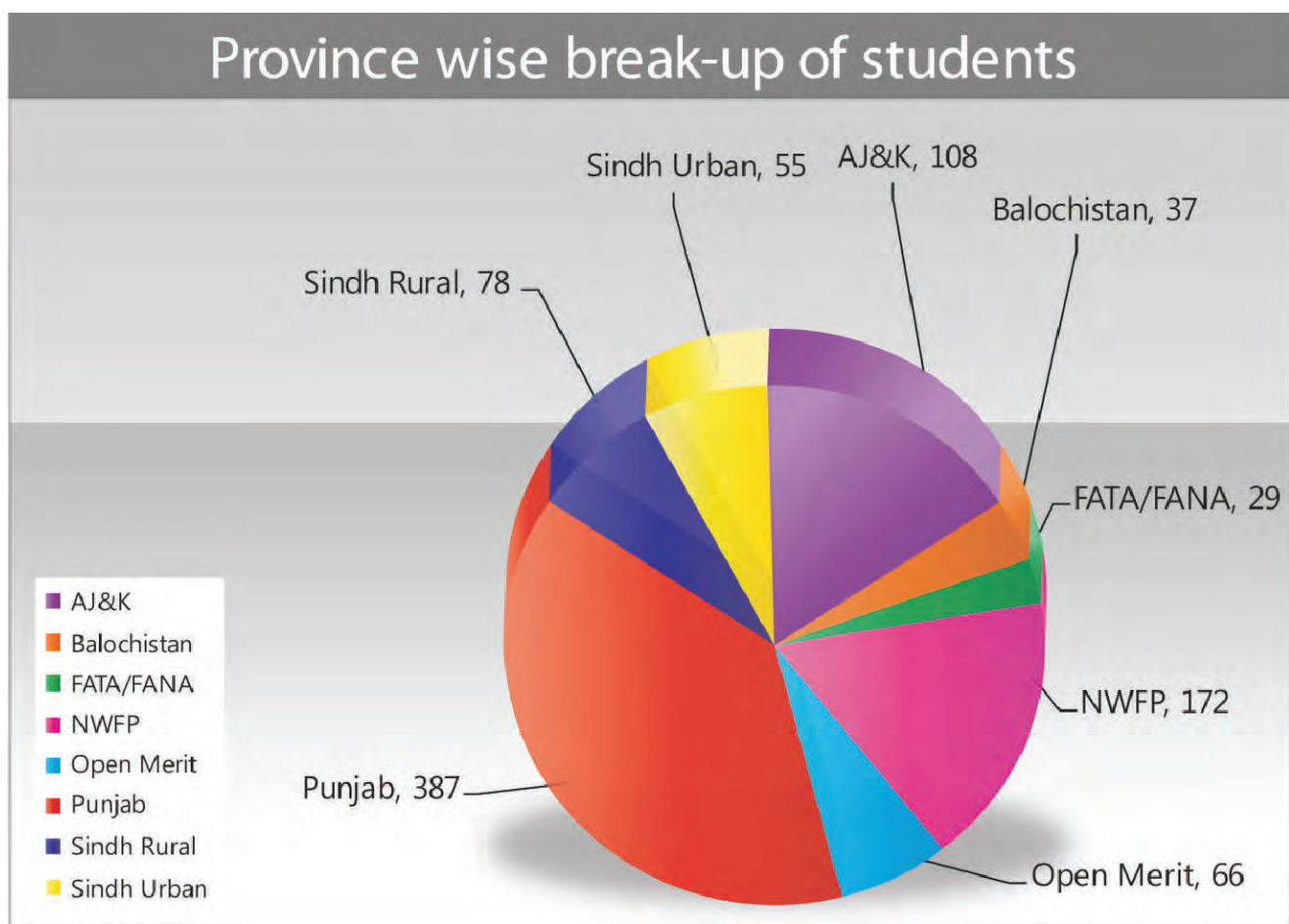
Commission Islamabad to invite applications and select students. The Embassy of Pakistan at Cuba has opened three bank accounts specifically for the stipend of the students. Our Embassy remains in close contact with relevant Cuba Authorities and

Name of school	No. of School	Duration of Department	Current Academic Status
Maximo Sattiago Haza Grande (Batch - I)	326	11 th Feb 2007 to 28 th April 2007	Completed Spanish language Course on December 17, 2007. Completed First Medical Year on November 8, 2008. Second Medical Year in Progress
Jose Maria Aguirre (Batch - II)	293	28 th June to 13 th July 2008	Completed Spanish language Course on March 7, 2009 and First Medical Year in Progress
Antonio R. Horta (Batch - II)	313	19 th July to 7 th Sep 2008	Completed Spanish language Course on April 4, 2009 and First Medical Year in Progress
Total	932		

Euro 50/- per month to the students and two times return air ticket .

The Government of Pakistan accepted this offer in recognition of the cordial and mutually beneficial bilateral relationship between Cuba and Pakistan and directed Higher Education

Pakistani students in order to resolve the day to day administrative matters.



STEM Careers Programme

The Programme is a joint venture of Higher Education Commission (HEC) and Pakistan Institute of Engineering and Applied Sciences (PIEAS). Beside organizing annual National Science Talent Contest (NSTC) for selecting and grooming talented students in collaboration with home institutions of NIBGE, HEJ, SMS and PIEAS for participation in International Science Olympiads in Biology, Chemistry, Mathematics and Physics, STEM Career Programme also organizes annual National Engineering Competitions in collaboration with NUST and GIKI. These events are also becoming popular among the young engineering students and play an important role in promoting research culture in the country in emerging fields.

The Programme is on its way to inspire



Pakistani IPhO-2009 Team: Standing from Left: Mr. M Zain Ul Abideen Ali Khas (Bronze Medalist), Mr. Musab Jilani (Honorable Mention), Dr Masroor Ikram, DCS, PIEAS, the Pakistani Team Guide, Mr. Aamir Ayub (Honorable Mention), Dr. Shahid Qamar (Team Leader), Sitting from Left: Mr. Harres Bin Tariq (Bronze Medalist) and Ms Anum Jang Sher., 19 July-2009,

the youth of the nation to opt for careers in Science, Technology, Engineering and Mathematics and preparing them for participation in the annual International

Olympiad in Physics, Chemistry, Biology and Mathematics. The annual International Olympiads provide pre-university science students from around the world an opportunity to compete in solving challenging theoretical and experimental science problems that only the most talented youth of their age can answer.

This year the Pakistani Teams of talented students selected by the STEM Careers Programme and its home Institutes, represented Pakistan in the 20th International Biology Olympiad (IBO) in Tsukuba, Japan, 41st International Chemistry Olympiad (IChO) in Cambridge, UK, 50th International Mathematics Olympiad (IMO) in Bremen Germany and 40th International Physics Olympiad (IPhO) in Merida Mexico in July, 2009. The dedication and hard work of members of the SCP, HEC, home Institutes i.e. NIBGE, HEJ Research Institute, ASSMS and PIEAS in selecting and preparing these students paid dividends when seven students won Bronze Medals and two students won Honorable Mentions in these competitions.

A total of 221 students representing 56 countries participated in IBO, 258 students representing 64 countries participated in IChO, 565 students representing 104 countries in IMO and total of 317 students representing 72 countries participated in IPhO.

The 4th Design Build and Fly Competition (DBFC-IV) in collaboration with Faculty of Mechanical Engineering (FME) of Ghulam Ishaq Khan Institute (GIK-I) on 4-5th April-2009 at GIK-I was also organized by STEM. 45 Teams were registered for DBFE and 19 teams competed in the final event.

During the year SCP also sponsored another project for participation in Shell Eco Marathon. The project was carried out by a team of eight young under-graduate engineering students of GIK-I This was the first time that Pakistan was selected to compete in the Shell Eco-marathon, which was held in May, 2009 in Germany.



Research and Development



National Research Grants Programme for Universities

The objective of the National Research Grants Programme for Universities (NRPU) is to promote scientific research to strengthen the indigenous capacity of faculty members and reduce the exodus of such talent from Pakistan. Lack of basic equipment, laboratory supplies, scientific

literature and financial resources is often a great impediment for innovation and research. HEC has initiated this programme under which creative faculty members and researchers are awarded grants to conduct research.

Status of NRPU in 2008-09

Projects received	187
Projects in process	120
Recommended projects	84
Projects not recommended	99

Projects Completed in 2008-09

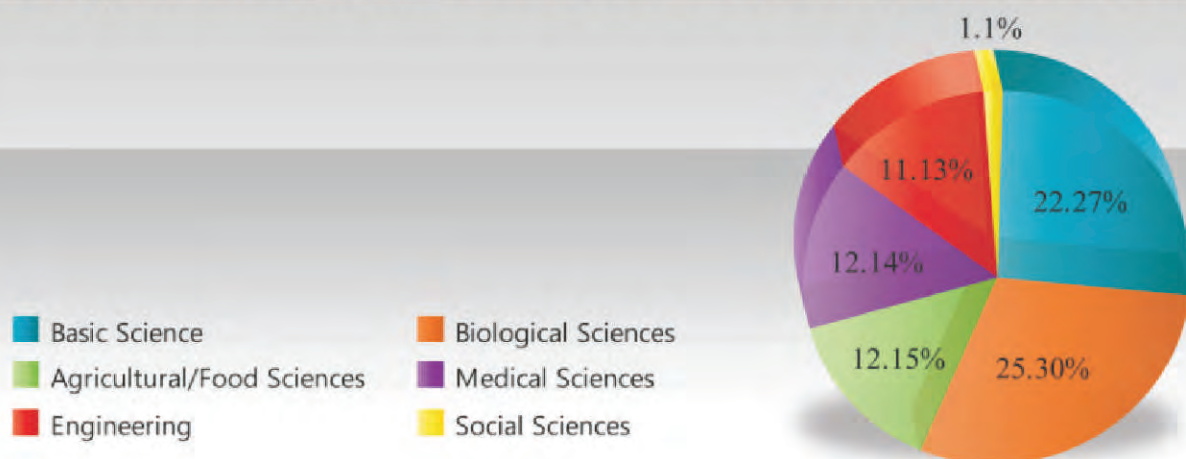
S. No.	Principal Investigator	Project	Total Award	Duration	University
1	Dr. Tayyeb Akram	Slope stability study in Galiat area	1,948,200	One year	National University of Sciences and Technology, Rawalpindi
2	Dr. Khan Gul Jadoon	Investigation into the incidence of pneumoconiosis and other related occupational diseases among coal mine workers of NWFP	730,000	Two years	NWFP University of Engineering and Technology, Peshawar
3	Dr. Bina S. Siddiqui	New anticancer agents from indigenous resources	969,000	Two years	University of Karachi
4	Dr. Najma Sultana	Interaction studies of diltiazem and verapamil with H ₂ -receptor antagonist, NSAID's, fluoroquinolones and metals essential to human body	1,579,860	Two years	University of Karachi
5	Dr. Arshad Ali	Grid enabled applications for handheld devices	1,073,290	One year	National University of Sciences and Technology, Rawalpindi
6	Dr. Masood Khan Khattak	Effect of <i>neem</i> products on some economically important insect pests of cotton, gram and muskmelon and their natural enemies	1,195,500	Three years	Gomal University, D. I. Khan
7	Dr. Arshad Saleem Bhatti	Growth and characterization of magnetic and semi-conductor nanoparticles	5,748,000	Three years	COMSATS Institute of Information Technology, Islamabad
8	Dr. Abdul Khaliq	Biosystematics of dragonflies (odonata) of Pakistan	1,405,560	Three years	University of Arid Agriculture, Rawalpindi

S.	Principal Investigator	Project	Total Award	Duration	University
9	Dr. Ahmad Ali Shahid	Biosafety studies of genetically modified crops	1,234,000	Three years	University of the Punjab, Lahore
10	Dr. Farooq Anwar	Analytical characterization of some non-conventional oil seed crops of Pakistan for promoting their conservation, utilization and potential oil production	1,598,340	Two years	University of Agriculture, Faisalabad
11	Dr. M. Inam ul Haq	Utilization of plant growth promoting and nodule forming rhizobacteria in the integrated control of root infecting fungi of sunflower and soybean	1,436,160	Three years	University of Agriculture, Faisalabad
12	Dr. Amanullah	Impact of agronomic practices on water use efficiency of rain fed wheat	1,083,240	Three years	NWFP Agriculture University, Peshawar
13	Dr. Muhammad Ashraf	Identification of biochemical indicators for salt tolerance and their genetic basis in potential oilseed crops: canola and sunflower	5,760,040	Three years	University of Agriculture, Faisalabad
14	Dr. Khalid Iqbal Talpur	Prevalence of primary open angle glaucoma in a population based urban and rural study of Sindh Province LUMHS study	727,630	One year	Liaquat University of Medical and Health Sciences, Jamshoro
15	Dr. Talat Afza	Women entrepreneurship: tool for sustainable development of remote areas	1,219,917	16 months	COMSATS Institute of Information Technology, Islamabad
16	Dr. Javid Hussain	Isolation structure elucidation and biological activity of some medicinal plants belonging to the family labiatae, and compositae	1,893,000	Two years	Kohat University of Science and Technology
17	Dr. Abdul Razzaq	Development of in plant transformation system for wheat	1,892,600	Two years	University of Arid Agriculture, Rawalpindi
18	Dr. Hafiz Farooq Ahmad	Multi agent system for ad-hoc applications (distributing and computing)	425,304	Two years	National University of Sciences and Technology, Rawalpindi

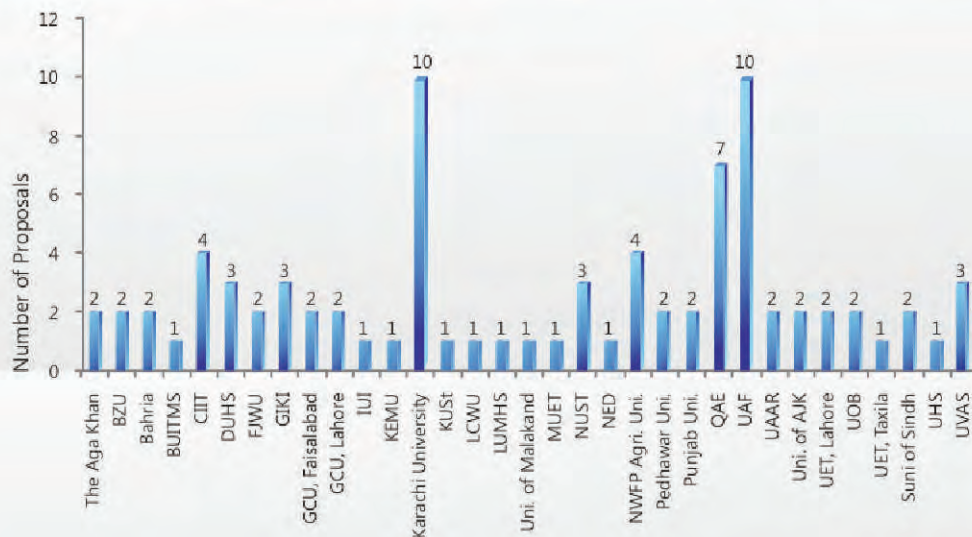
S.	Principal Investigator	Project	Total Award	Duration	University
19	Dr. Fauzia Y.Hafeez	Biocontrol of pathogenic infection through competition using plant growth promoting rhizobacteria (PGPR)	2,673,150	Three years	Quaid-i-Azam University, Islamabad
20	Dr. Muhammad Mazhar	Production of hydrogen and nanocarbons from light hydrocarbons contained in coal	2,012,695	Three years	Quaid-i-Azam University, Islamabad
21	Dr. Azam Ali Khawaja	Seismic hazard assessment of Azad Kashmir using deterministic and probabilistic approach	1,623,662	One year	Quaid-i-Azam University, Islamabad
22	Dr. Naghmana Rashid	Syntheses, biological and chiroptical studies of some new rigid steroidal aza-heterocycles	1,988,360	Two years	Allama Iqbal Open University, Islamabad
23	Dr. Tahira Nasreen Arshed	Training Physics graduates for the teaching profession using research-based interactive techniques in quality education	3,723,500	Three years	Federal Urdu University of Arts, Sciences and Technology, Islamabad
24	Dr. Shahid Hameed	Synthesis, characterization and biological screening of chiral five-membered heterocycles	1,747,372	Two years	Quaid-i-Azam University, Islamabad
25	Dr. Muhammad Ashraf	Gaseous exchange and photosystem II fluorescense as premier determinants of drought tolerance in maize (<i>Zea mays</i> L).	4,421,547	Two years	University of Agriculture, Faisalabad
26	Dr. Fouzia Sultana Rehman	Synthesis and bioactivity of siderophore metal complexes as a drug and structure activity relationship of their analogs	1,516,210	Two years	University of Karachi
27	Dr. Muhammad Aslam	Effect of visfatin on hyperglycemia and dyslipidemia in obese and diabetic mice	693,710	Two years	National University of Sciences and Technology, Rawalpindi
28	Mr. Shadiullah Khan	Local government and peoples' participation: a case study of district govt. in northwestern Pakistan	484,000	1,698,800	University of Peshawar

S.	Principal Investigator	Project	Total Award	Duration	University
29	Brig. Liaqat Ali Minhas	A histological study of human olfactory muesa	9,65,000	Two years	National University of Sciences and Technology, Rawalpindi
30	Dr. Muhammad Zakria Zakir	Development of farmers competencies through information technology in the district Shikarpur	474,000	Two years	University of the Punjab, Lahore
31	Dr. Said Mir Khan	Integrated management of aphid in canola in D. I. Khan	812,000	Three years	Gomal University, D. I. Khan
32	Dr. Nizamuddin Memon	Comparative study of radiological versus chronological age from birth to 22 years	654,100	Three Years	Liaquat University of Medical and Health Sciences, Jamshoro

Discipline-wise Research Grant Under NRPU in F.Y. 2008-09



University-wise Number of Research Grant Proposals Approved



Pak-US Joint Academic and Research Programme

In 2003, the Ministry of Science and Technology of the Government of Pakistan and the United States Department of State signed a comprehensive Science and Technology Cooperation Agreement that established a framework to increase cooperation in science, technology, engineering and education for mutual benefit and peaceful purposes between the science and education communities in both countries.

In 2005, the United States Agency for International Development (USAID) joined hands with the Ministry of Science and Technology (MoST) and the Higher Education Commission (HEC) to support the joint Pakistan-US Science and Technology Cooperation Programme.

Basically the idea of the programme was to share the benefits of research in the field of science and technology through the mutual cooperation of scientists of both countries. This amalgamation of intelligence was focused to cater a strong base as well as a change flexible environment to uplift the research sector in Pakistan.

million. However in 2008, realizing the importance of the programme, the State Department has also joined the programme and contributed US \$ 1.2 million in addition to US \$ 2.0 million from USAID. The funding from Pakistan remains almost \$ 3 million every year.

PHASE-I

Phase-I of the programme was approved at a cost of Rs.203.508 million. Eight research projects from private and public sector universities of USA and Pakistan were approved for funding. One project has been completed while seven projects are near completion.

Approved Projects of Phase-I

Title	Principal Investigator (Pakistan)	Institution	Principal Investigator (USA)	Institution
Development of strategic model for improvement of construction project management education, research and practice in Pakistan	Dr. Sarosh Lodi	NED University of Engineering and Technology, Karachi	Dr. Syed Mohammad Ahmed	Florida International University, USA
Development of guidelines for asphalt pavement recycling in Pakistan	Dr. Tayyab Akram	National University of Sciences and Technology, Rawalpindi	Prof. Gilbert Y. Baladi	Michigan State University E. Lansing, MI
Development of computational mechanics infrastructure and human resources for advancing engineering design practices in Pakistan industry	Dr. Muhammad Abid	GIK Institute of Engineering Science and Technology, Swabi	Prof. Arif Masud	University of Illinois at Chicago, USA

Title	Principal Investigator (Pakistan)	Institution	Principal Investigator (USA)	Institution
Establishment of extrusion centre at Institute of Food Science and Technology, University of Agriculture Faisalabad	Dr. Faqir. Muhammad Anjum	University of Agriculture, Faisalabad	Dr. Mian Nadeem Riaz	Texas A & M University System, USA
Determination of heavy metals and PAHs in airborne particulates in Lahore, Pakistan and Madison, WI, USA	Dr. Tauseef A. Qureshi	University of Engineering and Technology, Lahore	Dr. James Jay Schauer	University of Wisconsin-Madison USA
Antimicrobial resistance in Pakistan: a programme to develop and strengthen capacity for surveillance and diagnosis through public-private sector	Dr. Rummana Hassan	Aga Khan University, Karachi	Mary Brandt	Centre for Disease Control and Prevention, Atlanta
Improving lifestyles of villagers in remote areas of Federally Administrated Tribal Areas of Pakistan by using renewable energy	Dr. Ishtiaq A. Qazi	Institute of Environmental Science and Engineering, NUST, Rawalpindi	Johnny Weiss	Solar Energy International, Colorado
Capacity building for research, education and training in water resources management in Pakistan	Dr. Muhammad Latif	University of Engineering and Technology, Lahore	Dr. M. Hanif Choudhary	University of South Carolina, USA

PHASE-II

Phase-II was approved in September 2006 and nine research projects were approved for funding under the programme.

Approved Projects of Phase-II

Title	Principal Investigator (Pakistan)	Institution	Principal Investigator (USA)	Institution
Building molecular biology capacity for preventing tick transmitted diseases	Dr. Abdullah G. Arijjo	Sindh Agriculture University, Sindh	Thomas N Mather	University of Rhode Island, Kingston, USA
Multiplex immunoassays for detection of tuberculosis	Dr. Azra Khanum	University of Arid Agriculture Rawalpindi	Paul A. Luciw	University of California, USA

Title	Principal Investigator (Pakistan)	Institution	Principal Investigator (USA)	Institution
Development of biosecure, sustainable and cost-effective culture technologies for edible shrimp (<i>Fenneropenaeus merguensis</i>) in Pakistan	Dr. Zarien Ayub	University of Karachi	Dr. Tzachi M. Samocha	Texas A &M University System Texas
Nanomedicine for cancer research	Atiya Abbasi	HEJ Research Institute of Chemistry, University of Karachi	Kenneth Watkin	College of Applied Health Sciences, University of Illinois
Association of particulate matter with daily morbidity in urban population	Dr. Zafar Fatmi	Aga Khan University, Karachi	David O. Carpenter	University at Albany
Secure Pakistan wheat production through controlling rusts	Dr. Muhammad Ashraf	Quaid-i-Azam University, Islamabad	Dr. Xianming Chen	Washington State University, USA
Assessment and development of renewable groundwater resources in the Quetta Valley, Pakistan	Dr. Abdul Salam Khan	University of Balochistan, Quetta	Dr. Muhammad Sultan	Western Michigan University, MI
Capacity building in research ethics and for research on ethics	Dr. Aasim Ahmad	Aga Khan University	Adnan A. Hyder	Johns Hopkins University, USA
Development of an ITS-based traffic management model for metropolitan areas of Pakistan with Karachi as a pilot study	Dr. Mir Shabber Ali	NED University of Engineering and Technology, Karachi	Dr. Waheed Uddin	University of Mississippi, USA

Major Achievements up to 2008 (Phase I and II)

Phase	Research Papers Published	Workshops / Symposia	Short Exchange Visits	MPhil /PhD Students Enrolled
Phase-I	76	28	42	17
Phase-II	13	13	5	14

PHASE-III

Phase-III of the Pak-US Joint Academic and Research Programme was approved with a capital cost of Rs.205.203 million and 14 projects were approved under this Phase.

Title	Principal Investigator (Pakistan)	Institution	Principal Investigator (USA)	Institution
Synthesis and characterization of smart polymer microgels for biomedical applications	Dr. Muhammad Siddiq	Department of Chemistry, Quaid-i-Azam University, Islamabad	Shuiqin Zhou	Department of Chemistry, The City University of New York
Hepatitis C virus (HCV) management in Pakistan	Dr. Ishtiaq Qadri	National Centre of Virology and Immunology, NUST	Charles M. Rice	The Rockefeller University Laboratory of Virology and Infectious Disease, Centre for Study of Hepatitis
Novel triple acting chimeric antimicrobials for eradication of multi-drug resistant strains of staphylococcus aureus	Dr. Sheikh Riazuddin	Centre of Excellence in Molecular Biology University of the Punjab, Lahore	David M. Donovan	Agricultural Research Service, USDA
Upper Indus river flow reconstruction using tree-rings implications for agriculture and hydroelectricity	Dr. Moinuddin Ahmed	Department of Botany, Federal Urdu University of Arts, Science and Technology, Karachi	Dr. Edward R. Cook	Trustee of Columbia University in the City of New York
Bioremediation of chromium and arsenic from industrial wastewater	Dr. Shahida Husnain	Department of Microbiology and Molecular Genetics, University of the Punjab, Lahore	Dr. Michael J. McInerney	Department of Botany and Microbiology, University of Oklahoma
Enhance sugarcane production in Pakistan by modern breeding technology	Dr. Javed Iqbal	School of Biological Sciences, University of the Punjab, Lahore	Dr. Yong -Bao Pan	Research Plant Molecular Geneticist, USDA-ARS, Sugarcane Research Laboratory
Implementation of superpave binder and asphalt mix specifications to improve pavement	Dr. M. Waseem Mirza	Department of Transportation Engineering and Management, UET Lahore	Dr. Gilbert Y. Baladi	Department of Civil and Environmental Engineering, Michigan State University
Capacity building of lady health workers in rural Mardan, through use of ICT based telemedicine	Prof. Arshad Ali	School of Electrical Engineering and Computer Science (SEECS), NUST	Dr. Rizwan Naeem	APPNA,6414 South Cass Avenue, Westmont

Title	Principal Investigator (Pakistan)	Institution	Principal Investigator (USA)	Institution
Response modification factors of typical Pakistani reinforced concrete and masonry buildings for the Pakistan seismic code development	Prof. Dr. Qaisar Ali	Department of Civil Engineering, UET, Peshawar	Dr. Baseem Andrawes	Newmark Civil Engineering Laboratory, University of Illinois at Urbana-Champaign
Telephone-based speech interface for access to information by non-literate users	Prof. Sarmad Hussain	National University of Computer and Emerging Sciences, Lahore	Prof. Roni Rosenfeld	School of Computer Science, Carnegie Mellon University
Management of greening by producing healthy plants, plants, monitoring vectors and identification of tolerance	Dr. Iqrar A. Khan	University of Agriculture, Faisalabad	Dr. Richard F. Lee	Research Plant Pathologist USDA ARS National Clonal Germplasm Repository for Citrus and Dates 1060 Martin Luther King Blvd. Riverside, California
Technology for Poor: Low-cost information and computing technology for the masses in Pakistan	Dr. Umar Saif	Lahore University of Management Sciences	Prof. Eric Brewer	Soda Hall University of California at Berkeley
Development of materials connection centre	Dr. Yaseen Iqbal	Department of Physics University of Peshawar	Dr. Rick Ubic,	Department of Materials Science and Engineering Boise State University
Discovery of genetic variation that enhances improvement of dairy production and health in cattle and buffalos	Prof. Dr. Masroor Ellahi Babar	Department of Livestock Production, University of Veterinary and Animal Sciences, Lahore	Dr. Tad S. Sonstegard	Research Geneticist USDA, ARS, BFGL Bldg, 200 Rm 2A; BARC – East Beltsville

PHASE-IV

The Phase-IV of the programme will be launched in August 2009. A review meeting between representatives of USAID, US State Department, HEC and Ministry of Science and Technology for the progress of all three phases and decisions about new phase will be held in March 2010.

Pakistan Programme for Collaborative Research

Pakistan Programme for Collaborative Research (PPCR) provides one window facility through which the academia from around the world can collaborate with researchers in Pakistan. This programme, which is primarily targeted at the faculty members and researchers of Pakistani origin serving at premier teaching and research institutions of the world, aims to strengthen the indigenous capacity in all the disciplines of academic research and to raise the overall standard of teaching and research.

The experts from universities are involved in developing curriculum, updating laboratory techniques and providing guidance to postgraduates students. Scholars are encouraged to develop joint research programmes with local faculty.

Grants are provided to the scholars for travel and short-term visit of each other's institutions/ laboratory for advance research or take up joint research studies. Such visits may also be used for development of joint research proposals which may be submitted to internal and external funding agencies.

The Programme also provides an opportunity to foster collaboration between the universities/ DAIs and research organization in Pakistan and the academics abroad to advance research, higher education and high tech industry in Pakistan.

Foreign Experts' Visit to Pakistan (maximum of three months) aims to

- foster collaborative research efforts among the host institute and parent organization by initiating at least one joint research proposal
- conduct at least two workshops/ seminars during the visit
- organize lectures/courses train the host institution's faculty
- help in curriculum development/course contents
- develop shared resources update laboratory techniques and provide guidance to postgraduate students, and
- participate in policy guidelines and/or standards of education in the host institute

Foreign Visit of Local Faculty Members (maximum of one month) aims to

- develop/initiate at least one joint research proposal in the relevant field for submission to any funding agency
- develop collaborative programmes with foreign university
- sign MOUs/agreements
- establish linkage between foreign institution and the Pakistani university
- learn, exchange, collaborate and share related information
- share national and international educational and research activities
- seek external grants to support faculty development initiatives
- seek federal, foreign and non-governmental organizational funding for joint programme

Short-term (maximum of four months)

Consultant at HEC for PPCR

- to help in curriculum development
- to provide consultancy in the specific field as desired
- to conduct workshops / seminars / symposia etc.

Achievements

So far, six foreign experts have visited Pakistani universities to deliver lectures, develop curriculum, and conduct workshops etc. Five Pakistani faculty members have been facilitated to visit foreign universities for development of their research proposals, develop shared resources, sharing knowledge and develop collaborative programmes with foreign university etc.

Foreign Experts' Visit to Pakistan			
S. No.	Principal Investigator	International Collaborator	Project Title
1-	Dr. Waqar Mehmood, Director , Al-Khawarizmi Institute of Computer Sciences (KICS) UET, Lahore	Dr. Jianxun " Jason" Ding, Sr. Technical Leader, CISCO System, San Jose, California, USA	Summer short course on playstation 3: high performance software development on cell BE based workstation
2-	Mr. Rauf Ahmed Shams, Lecturer , Department of Computer Sciences and Engineering, Bahria University (Karachi Campus)	Dr. Akria Kinjo, Associate Professor, Institute for Protein Informatics, Osaka University, Japan	1. Biological databases integration 2. Gene regulatory network
3-	Dr. Iqrar Ahmed Khan, Vice Chancellor, University of Agriculture Faisalabad	Fahiem Elborai, Assistant Professor, Citrus Research and Education Center, University of Florida	Identification mass production, storage and formulation of entomo-pathogenic nematodes for the development of bio- pesticides
4-	Dr. Abdul Hakeem Sheikh, Chairman, Department of Botany, Federal Urdu University of Arts, Science and Technology, Karachi	Dr. Jonathan Palmer, Director , Gondwana Tree-Ring Laboratory School of Geography and Environmental Sciences, University of Auckland, New Zealand	1. Upper Indus River flow reconstruction using tree-ring implication for agriculture and hydroelectricity 2. Dendro- climatic investigation of Himalayan range of Pakistan
5-	Dr. Waqar Mahmood, Director , Al-Khawarizmi Institute of Computer Sciences, UET Lahore	Mr. Raza Shaikh, Associa te Director of Informatics, Board Institute of MIT and Harvard USA	Summer short course on business opportunities in life science, drug discovery and bioinformatics
6-	Dr. B. S. Chowdhry, Director, Institute of Information and Communication Technologies, MUET, Jamshoro	Dr. D.M. Akber Hussain, Associate Professor, Aalborg University, Denmark	Research and teaching collaboration

Foreign Visit of Local Faculty Members			
S. No.	Principal Investigator	International Collaborator	Project Title
1-	Dr. Shahid Naveed, Department of Chemical Engineering, UET Lahore	Dr. A.P. Roskilly, Dean of Research, Faculty of Sciences, Agriculture and Engineering, Newcastle University, UK	Hydrogen recovery from synthesis gas
2-	Dr. Amer Jamil, Associate Professor of Biochemistry, University of Agriculture, Faisalabad.	Dr. Harold G. Martinson, Professor and Chairman, University of California	Initial work on poladenylation as pre-requisite for a collaborative research project with the University of California
3-	Mr. Abdullah Shah, Assistant Professor, Department of Mathematics, COMSATS Institute of Information Technology, Islamabad	Prof. Li Yuan, Chinese Academy of Sciences, Institute of Computational Mathematics(ICMSEC), Beijing	Numerical methods for incompressible multiphase flows problems

S. No.	Principal Investigator	International Collaborator	Project Title
4-	Mr. Ajmal Khan, Vice Chancellor, Islamia College University, Peshawar	Andrew Geddes, Director of EURASIA Institute, Berlin, Germany	University Linkages
5-	Mr. Muhammad Jalaluddin, Assistant Professor, Islamia College University, Peshawar	Andrew Geddes, Director of EURASIA Institute, Berlin, Germany	University Linkages

International Linkages of Pakistani Universities with Foreign Universities

This Project has been initiated to create at least 25 academic linkages between Pakistani higher learning institutions and foreign universities in various fields. An institution-to-institution linkage has the potential for broader participation than through an individual level exchange. Since its beginning, this linkage project is providing

opportunities for faculty and researchers of collaborating institutions to share knowledge in each other's country.

A total number of 31 academic linkages have been established with foreign universities; out of which the following eight linkages were established in the year 2008-09:

Pakistani University		Foreign University		Total Cost (Rs in million)	Field of Study
Link Coordinator	University Name	Link Coordinator	University Name		
Dr. Hassan Mehmood, Department of Electronics	Quaid-i-Azam University, Islamabad	Mr. Hafiz Malik, Electrical and Computer Engineering Department	University of Michigan, USA	4.418	Electronics
Dr. Mazhar Hussain, Department of Chemistry	Quaid-i-Azam University, Islamabad	Prof. Nina Orlovskaya, Mechanical, Material and Aerospace Engineering	University of Central Florida	11.90	Chemistry
Dr. Qaisar Abbas Naqvi, Department of Electronics	Quaid-i-Azam University, Islamabad	Prof. Akhlesh Lakhtakia, Department of Engineering Science and Mechanics	Pennsylvania State University, USA	2.17	Electronics
Dr. Muhammad Ajmal Khan, Department of Botany	University of Karachi	Prof. Dr. B Huchzermeyer, Institute of Botany	Faculty of Natural Sciences, Gottfried Wilhelm Leibniz University, Germany	15.11	Botany
Dr. Muhammad Arshad, Department of Environmental Sciences	University of Agriculture, Faisalabad	Dr. David Crowley, Department of Environmental Sciences	University of California, USA	9.256	Environmental Sciences

Pakistani University		Foreign University		Total Cost (Rs in million)	Field of Study
Link Coordinator	University Name	Link Coordinator	University Name		
Dr. Viqar-ud-din Ahmed	HEJ Research Institute, University of Karachi	Prof. Dr. Karsten Krohn, Department of Chemistry	University of Paderborn, Germany	6.53	Chemistry
Prof. Dr. S. Riazuddin, Department of Plant Molecular Biology	National Centre of Excellence in Molecular Biology, Lahore	Dr. Hans J Bohnert, Department of Plant Biology	University of Illinois at Urbana-Champaign, Urbana, USA	13.225	Plant Molecular Biology
Prof. Dr. Nasim Hassan Rama	Quaid-i-Azam University, Islamabad	Prof. Dr. Peter Langer, Institute of Chemistry	University of Rostock, Germany	3.54	Chemistry

Talent and Training Programme for Scientific and Technical Staff

A major problem faced by universities is the lack of trained technical personnel capable of operating sophisticated equipment or carrying out technical tasks in laboratories. The programme for training of scientific, technical staff and researchers is launched by HEC to support short-term hands on training in public sector universities.

The programme has been designed with the objective to accelerate research and

development in universities/degree awarding institutions through research-need and equipment based short term trainings that are catalytic to the technological and socio-economic development of the country.

So far, 168 faculty members have been facilitated to attend training courses relevant to their fields out of which 125 applicants have acquired training abroad while the remaining 13 faculty members availed the local training.

Cases Approved in 2008-09			
Name	Parent Organization	Host Institution	Training
Ms. Ruqia Suliman, Research Scholar	Institute of Mycology and Plant Pathology, University of the Punjab, Lahore	Plant Pathology Laboratory, Department of Applied Biology, University of Helsinki, Finland	Molecular characterization and host-pathogen interaction of Phytopathogenic bacteria
Mr. Zafar Siddiq, Assistant Curator	Department of Botany, Government College University, Lahore	Royal Botanic Gardens, Kew, UK	Botanic garden management
Dr. Tariq Mahmood, Assistant Professor	Quaid-i-Azam University, Islamabad	Institute of Molecular Plant Sciences, The University of Edinburgh, UK	Biochemical analysis of plant cell wall

Cases Approved in 2008-09

Name	Parent Organization	Host Institution	Training
Mr. Safeer Ahmed, Lecture	Department of Chemistry, Quaid-i-Azam University, Islamabad	Department of Chemistry, University of Bath, UK	Bath electrochemical impedance spectroscopy (EIS) summer school
Mr. Farook Ahmed Shah, Assistant Professor	Department of Electrical Engineering, COMSATS Institute of Information Technology, Islamabad	Department of Electrical Engineering, Queen Mary University of London, UK	Hardware and software used in RF antenna
Dr. Muhammad Mahmood-ul-Hassan, Associate Professor	Wildlife and Ecology, University of Veterinary and Animal Sciences, Lahore	School of Biological Sciences, University of Bristol, UK	Ecology, behaviour and conservation biology of bats
Dr. Samina Naem, Professor	Department of Pathology, King Edward Medical University, Lahore	Department of Cellular Pathology / Hope Hospital, Manchester, UK	Lymphoma diagnosis by molecular genetic analysis
Mr. Ehsan Ullah Mughal, Lecturer	Department of Chemistry, University of Gujrat	Department of Pharmaceutical Sciences Biomedical Science, University of Pittsburgh, USA	Rapid template-directed generation of FKBP inhibitors by multi component reaction chemistry and mass spectrometry
Mr. Haider Abbas, Assistant Professor	Dr. A.Q. Khan Institute of Biotechnology and Genetic Engineering, University of Karachi	Royal Botanic Gardens, Hamilton, Canada	Studies on ex-sit conservation strategies, management of botanic garden and development of research programme
Mr. Ghulam Razaque, Lecturer	Department of Pharmacy, University of Balochistan, Quetta	School of Pharmacy and Chemistry, Liverpool John Moores University	Synthesis, evaluation and drug coupling of biodegradable polymer
Mr. Zahid Hussain Khand, Assistant Professor	Sukkur Institute of Business Administration	Computer and Automation Research Institute, Hungarian Academy of Sciences, Laboratory of Parallel and Distributed Systems, Hungary	Grid computing
Mr. Muhammad Arshad, Assistant Professor	Department of Electrical Engineering, COMSATS Institute of Information Technology, Islamabad	Department of Electrical Engineering, Queen Mary University, London	Hardware and software of network and communication equipments
Mr. Muhammad Jamil Khan, Assistant Professor	Department of Soil Science, Faculty of Agriculture, Gomal University, D. I. Khan	Environmental, Agricultural and Analytical Chemistry, Glasgow University, UK	Analysis of heavy metals/trace metals in soils: techniques and analytes extraction procedure

Cases Approved in 2008-09

Name	Parent Organization	Host Institution	Training
Dr. Abdul Mateen, Assistant Professor	Department of Zoology and Fisheries, University of Agriculture, Faisalabad	World Fish Centre, Abu-Hammad, Sharkia, Egypt	Hatchery and farming technologies for Nile Tilpoa and African catfish
Dr. Abdul Ghaffar, Assistant Professor	Department of Meteorology, COMSATS Institute of Information Technology, Islamabad	Norwegian Mapping Authority, Honefoss, Norway	New advances in geology of the earthquakes including seismtectonics
Mr Mohan Soothar, Technical Officer	Department of Agronomy, Sindh Agriculture University, Tandojam	Department of Environment Sciences, University Putra, Malaysia	Training on meteorological observatory/weather station
Mr Abdul Razaq, Lecturer	Department of Zoology, University of Gujrat	Department of Animal Ecology, University of Lund, Sweden	DNA sampling, primer design, PCR, DNA sequencing, microsatellite typing and the phylogenetic and population genetic analyses of obtained genotypes and sequences using programmes such as MEGA, PAUP, MrB ayes, Genpop, DnAsp, Structure
Dr. Rao Saeed Ahmed, Assistant Professor	Department of Pharmacy, Islamia University of Bahawalpur	HEJ Research Institute of Chemistry, University of Karachi	Separation, purification and characterization of natural products
Muhammad Shoaib Bhatti, IT Manager	IT Department, FAST Lahore	Corvet Systems, Lahore	CCIE (routing and switching)
Muhammad Yasin Tipu, Assistant Professor	Operation Laboratory, University of Veterinary and Animal Sciences, Lahore	HEJ Research Institute of Chemistry, University of Karachi	High performance liquid chromatography
Mr. Nadeem Sultan, Data Processor	Registrar Office, Government College University, Lahore	Techno-Ed (Pvt.) Ltd. Oracle University, Lahore	Developer 9i : developer track
Mr. Muhammad Amer Irshad, Assistant System Officer	IT Department, FAST National University, Lahore	Corvet Systems, Lahore	CCIE (routing and switching)
Dr. Syed Waseem Hassan, Associate Professor	Department of Plant Breeding and Genetics, University of Agriculture, Faisalabad	National Centre of Excellence in Molecular Biology, University of the Punjab, Lahore	Basic

Cases Approved in 2008-09

Name	Parent Organization	Host Institution	Training
Mr. Kamran Afzal, Technical Assistant	Department of Computer Science, Quaid-i-Azam University, Islamabad	Techno-Ed, Islamabad	Red hat linux essentials
Mr. Ghaffar Mohiudin, Lecturer	School of Art and Design, University of Gujrat	Faculty of Art and Sciences, Harvard University	Harvard's ceramics programme
Dr. Rifat Hayat, Lecturer	Department of Soil Science and SWC, Arid Agriculture University, Rawalpindi	Institute for Agriculture Biotechnology and Genetic Resources, National Agricultural Research Centre, Islamabad	Isolation and multiplication of soil beneficial microorganisms for production of inoculums to improve crop yield and soil quality
Mr. Muhammad Ishaq Kakar, Assistant Professor	Centre of Excellence in Mineralogy, University of Balochistan, Quetta	National Centre of Excellence in Geology (NCEG), University of Peshawar	Hands on Experience of Electron Microprobe Analyzer (EPMA) and X-Ray Fluorescence Spectrometer (XRF)
Mr. Sanaullah Khan, Assistant Professor	Department of Zoology, Kohat University of Science and Technology	Laboratory for Stem Cell Biology, Goethe University, Germany	Development of novel molecular therapeutic approaches bases on competitive peptides targeting the leukemia inducing oncogenes in acute myeloid leukemia and chronic leukemia
Mr. Rana Muhammad Bilal, Lecturer	College of Agriculture, Islamia University, Bahawalpur	Charles Stuart University, Australia	Slow release urea and ruminant nutrition
Dr. Muhammad Nisar Khan, Chairman	Department of Parasitology, University of Agriculture, Faisalabad	Department of Entomology, The Ohio State University, USA	Determinants Influencing prevalence and control of ticks
Dr. Muhammad Tariq Javed, Professor	Department of Pathology, Faculty of Veterinary Science, University of Agriculture, Faisalabad	Departamento de Geneticae Biologia Molecular, University Federal do Estado do Rio de Janeiro, Brazil	Current tools in cell biology: probing normal and pathological cell functions
Dr. Riffat Hayat, Lecturer	Department of Soil Sciences, Arid Agriculture University, Rawalpindi	Institute of Molecular and Cellular Biosciences, University of Tokyo, Japan	Identification and chemotaxonomic characterization of soil beneficial bacteria using molecular techniques for the preparation of efficient bio fertilizer
Dr. Najma Shaheen, Assistant Professor	Department of Zoology, University of the Punjab, Lahore	University of Veterinary Medicine, Vienna, Austria	Intra-tracheal infection experiment in SPF birds under highly contained conditions

Cases Approved in 2008-09			
Name	Parent Organization	Host Institution	Training
Dr. Sarzamin Khan, Assistant Professor	Department of Livestock Management, NWFP Agricultural University, Peshawar	China Dayi Xuping, Technical Rabbit Training School	Introduction to angora rabbit training school
Mr. Muhammad Iqbal, Lecturer	Department of Botany, University of Education, Lahore (Okara Campus)	National Institute for Biotechnology and Genetic Engineering (NIBGE), Faisalabad	Plant DNA Isolation, PCR, Gel electrophoresis gene cloning, bacterial transformation agro infiltration northern analysis and siRNA analysis
Mr. Nadeem Rashid, Assistant Professor	Centre for Advanced Studies in Vaccinology and Biotechnology, University of Balochistan, Quetta	Department of Veterinary Pathology, University of Agriculture, Faisalabad	Estimation of mycotoxins by HPLC its experimental production and observation of histo-pathological lesions produced in poultry
Dr. Younas Muhammad, Lecturer	Department of Animal Health, NWFP Agricultural University, Peshawar	University of Veterinary and Animal Sciences, Lahore	Radiological imaging and its interpretation
Mr. Muhammad Iqbal, Lecturer	Department of Botany, University of Education, Lahore (Okara Campus)	National Institute for Biotechnology and Genetic Engineering (NIBGE), Faisalabad	Plant DNA Isolation, PCR, Gel electrophoresis gene cloning, bacterial transformation agro infiltration northern analysis and siRNA analysis

Sabbatical/Duty Leave Fellowship Programme

Sabbatical/Duty Leave Fellowship Programme is for the permanent faculty members (professors and associate professors) of public sector universities/ degree awarding institutions and approved for Government funded private sector universities and DAIs as well as for the employees of equivalent grade from R&D organizations.

The objective of the programme is to advance the pursuit of research in the universities/R&D institutions by relieving the faculty members from their normal university duties and enable them to pursue their scholarly interests and enhance their professional growth so that they may present themselves with renewed vigour, perspective and insight at pedagogical and research forums. The target of the project is to facilitate 40 faculty members for foreign fellowship for a maximum period of six months or 80 faculty members for

local fellowship for a maximum period of nine months over four years.

So far, 27 faculty members have been awarded this fellowship, out of which 25 faculty members were awarded foreign fellowship while two members availed local fellowship. During the current year, a total number of 13 faculty members have been provided foreign fellowships.

Scholars selected under Sabbatical/Duty Leave Fellowship Programme

Name	Title of Proposed Work	Host Institution
Dr. M. Afzal, Director, Soil and Environmental Sciences Department, NWFP Agriculture University, Peshawar	Integrated plant nutrient management for environment sustainable crop production	Soil Science Unit, Institute of Biological Sciences, University of Wales, UK
Dr. Muhammad Siddique, Professor, Department of Chemistry, Quaid-e-Azam University, Islamabad	Synthesis and laser light-scattering (LLS) characterization of thermally sensitive polymer microgel	University of Science and Technology, Hefei National Laboratory for Physical Sciences, China
Dr. Ikram-ul-Haq, Professor, National Centre of Excellence in Physical Chemistry, University of Peshawar	Development and characterization of nano-crystalline thermally sprayed coatings	Department of Mechanical and Manufacturing Engineering, University of Calgary, Canada
Dr. Asif Tanveer, Professor, Department of Agronomy, University of Agriculture, Faisalabad	Mechanism of resistance to glyphosate in weed biotypes and allelopathic studies	Department of Agro Environmental Science and Technology, University of Bologna, Italy
Dr. Muhammad Ahmed Khan, Associate Professor, Department of Earth Sciences, University of Sargodha	PT variations in amphibole from SE Kohistan Island Arc, NW Himalaya, Pakistan	Department of Geology, Brandon University, Manitoba, Canada
Dr. Muhammad Nasim Khan, Professor, Department of Zoology, University of AJK, Muzaffarabad	Genomic and proteomic analysis of human breast adenocarcinoma cells resistant to anti-cancer drugs	Department of Chemistry, St. Cloud State University, USA
Dr. Muhammad Zaheer Khan, Associate Professor, Department of Zoology, University of Karachi	Extent of commercially important fish and mussel species contaminated by EDCs in Pakistan, assessment through in-vitro YES test	Department of Biological Sciences, Simon Fraser University, Canada
Dr. Muhammad Asghar, Professor, Department of Chemistry and Biochemistry, University of Agriculture Faisalabad	Immobilization of enzymes for their applications in the industrial processes	Department of Chemical Engineering, University of Waterloo, Canada
Dr. Naheed Ali, Professor, Department of Zoology, University of Peshawar	Arbovirus surveillance and control	Centre for Vector Borne Diseases, School of Veterinary Medicine, University of California
Dr. Khalil Ahmed, Associate Professor, Department of Biological Sciences, Karakoram International University, Gilgit	Bacterio-phages in the control and treatment of bacterial infections	Institute of Biological Sciences, Aberystwyth University, Wales, United Kingdom
Dr. Qazi Masood Ahmed, Associate Professor, Finance and Economics, Institute of Business Administration, Karachi	An empirical analysis on the relationship among fiscal policy, growth, income distribution and poverty	Department of Human Resources, University of Bath, UK
Dr. Tahira Basharat, Associate Professor, University of the Punjab Lahore	Survey of major faith of the world with special emphasis on the modes of worship in Hinduism and Christianity	Department of Theology and Religious Studies, University of Wales, UK
Dr. Sajjad Mohsin, Associate Professor, COMSATS Institute of Information Technology, Islamabad	Large-scale biologically accurate brain modelling and super computer-enabled simulations and visualization	Blue Brain Project, Brain Mind Institute, (EPFL), Lausanne, Switzerland

Outstanding Research Awards

The programme was launched in 2007 to recognize and reward achievements of Pakistani researchers/scholars in research, innovation and publication in all areas of knowledge. The programme is for three years having series of awards annually. In each year, applications are invited from all over Pakistan for the cash awards in the following categories:

- Best Research Paper Award
- Best Book Publication Award
- Best Innovator Award
- Best Young Research Scholar Award
- Life Time Achievement Award

These awards are given in the following disciplines:

- Biological Sciences
- Engineering and Technology
- Basic and Applied Sciences
- Management Sciences
- Social Sciences
- Humanities

Under the first series of awards in 2007, 133 applications were selected after initial scrutiny. Judges were appointed to review the award applications in 21 different sub fields. The final scores by judges along with category-wise details will be presented to 'Research Awards Management Committee' and the awards will be conferred in the year 2009-10.

HEC-BC Joint Higher Education Links Programme

In order to facilitate research and development in the higher education learning system, a partnership was established between the HEC and British Council Pakistan entitled HEC-BC Joint Higher Education Links Programme (JHELP). The purpose of this programme is to enhance the research and training capacity of higher education institutions in the country. Initially, 15 higher education links between Pakistani and UK universities institutions were activated in year 2004 for a period of three years, ending June 2007. Subsequently, under Phase II of the project, 35 links have been developed. The links are to be supported for three years, provided there is significant progress or achievement of output during the first year. Research proposals submitted by the link coordinators are approved only if they meet the specified criteria.

The established links are focused to develop research and training capacity of higher education institutions in Pakistan, improve teaching methodologies and management system.

This also includes curriculum and faculty development. These links are created with a special focus on science related disciplines and specifically cater to research oriented projects across Pakistan.

The focused subject areas include Engineering Sciences, Pharmaceuticals, Biotechnology, Information Technology, Social Sciences/ Management Sciences, Agricultural Sciences and Health Sciences.

List of 35 established Links under JHELP (Phase-II)

Link Title	Field/Area	UK-Institution	Pakistan-Institution
Natural product chemistry for new medicines	Sciences	University of Oxford	HEJ Research Institute of Chemistry, University of Karachi
Education	Social Sciences	Institute of Education, University of London	Institute of Educational Development, Aga Khan University
Nutraceutical foods of industrial importance	Health Sciences	Department of Food Biosciences, University of Readings	HEJ Research Institute of Chemistry, University of Karachi
Development of sepecialisim in shellfish aquaculture	Environment	University of Sterling	Centre of Excellence in Molecular Biology, University of Karachi
Waste treatment management	Environment	Brunel University	University of Sindh, Jamshoro
Field rock mechanics	Engineering	School of Civil Engineering	Mehran University of Engineering Technology, Jamshoro
Development of faculty of community health sciences	Health Sciences	University of Birmingham	Liaquat University of Medical and Health Sciences, Jamshoro and Baqai Medical University, Karachi
To identify the root causes of Hepatitis B & C in district Kech, Balochistan	Health Sciences	University of Nottingham	Kech, Balochistan
Bio-nano-technology research initiative	Health Sciences	Division of Physical Biochemistry, MRC National Institute of Medical Research	University of Management and Technology, Lahore
Wildlife and natural resources conservation	Environment	University of Essex	University of Veterinary and Animal Sciences, Lahore
Strengthening and development of environmental training and research center	Environment	Imperial College, London	Lahore College for Women University
Development of collaborative postgraduate programme on environmentally sustainable design	Environment	University of Edgehill, Lancashire	National College of Arts, Lahore
Research and Split PhD collaboration	Sciences	University of Aberdeen	Government College University, Lahore

Link Title	Field/Area	UK-Institution	Pakistan-Institution
Development of SMES through skills enhancement	Social Sciences	Strathclyde University	University of the Punjab, Lahore
Film and TV studies	Social Sciences	Glasgow University	Beaconhouse National University, Lahore
Receptor binding studies of modified bovine growth hormone	Health Sciences	University of London	University of the Punjab, Lahore
Isolation of novel anti-MRSA lead agents from the guttiferae	Health Sciences	Portsmouth University	Lahore College for Women University
Capacity building in molecular genetics	Health Sciences	University of Newcastle	The University of Faisalabad
Capacity building for molecular biology studies in fish production	Sciences	University of Newcastle	Government College University, Faisalabad
Multan Area Study Centre	Social Science	University of London	Bahauddin Zakariya University, Multan
Socio-cultural and economic factors involved in spread of HIV/AIDS in Pakistan	Social Sciences	University of Sussex	Quaid-i-Azam University, Islamabad
Teaching and research	Information Technology	Coventry University	Iqra University, Islamabad
ESO/EF IIU/TOEFL	Social Sciences	University of Wales	International Islamic University, Islamabad
Developing bilingualism in Pakistan	Social Sciences	University of Birmingham	Fatima Jinnah Women University, Rawalpindi
Undergraduate, postgraduate training and research in the field of mental health	Health Sciences	University of Manchester	Rawalpindi Medical College
Center for trauma research and psychosocial interventions	Health Sciences	Robert Gordan University	NUST-Military Hospital
Electrical Engineering	Information Technology	University of Essex	COMSATS Institute of Information Technology, Wah
Improvement of teaching and research methodologies	Sciences	University of Glasgow	NWFP Agriculture University, Peshawar
Biological sciences	Sciences	University of Bristol	NWFP Agriculture University, Peshawar
Psychology	Social Sciences	University of Leicester	Frontier Women University, Peshawar
Gender Studies	Social Sciences	University of Warwick	University of Peshawar
Archaeology	Social Sciences	University of Cambridge	University of Peshawar

Link Title	Field/Area	UK-Institution	Pakistan-Institution
HEC-BC Joint Higher Education Links Programme	Social Sciences	University of Luton	University of AJK, Muzaffarabad
Natural sciences and bioinformatics	Sciences	Liverpool John Moores University	Kohat University of Science and Technology
Targeted drug delivery systems	Health Sciences	University of Bradford	Gomal University, D. I. Khan

Statistics and Outputs

Total number of UK and Pakistani based link coordinators:	98
Total number of links visitors to UK and Pakistan:	67
Number of other institutional staff trained as a result of link activities:	89
Number of students pursuing Masters/PhD/Diplomas as a result of link activity:	50
Number of core staff trained as a result of link activity:	145
Number of government officials/other professionals trained as a result of link activity:	270
Total number of seminars/workshops held:	37

Country Licenses of Advanced Design Software (Phase-II)

The HEC has launched an umbrella project Country Licenses of Advanced Design Software for Teaching and Training in Engineering Institutions (Phase-II). The Project was approved by DDWP in August 2007 with a total cost of Rs.38.792 million.

This Project provides country licenses of advanced design software pertaining to Civil Engineering, recommended by the Technical Committee, to 8-15 public sector engineering universities and degree awarding institutions

depending upon requirement, in order to enhance the learning capacity of students. This keeps our students abreast of modern and technical knowledge and produces more skilled workforce in future that may be able to cater to the rapidly changing industrial needs. Fourteen Civil Engineering softwares will be installed in eight universities/DAIs along with training to at least 16 faculty members of these universities. The number of licenses to be provided to the universities was finalized.

University	Software	Licenses
University of Engineering and Technology, Taxila	SAP 2000	2
	ETABS	1
	DIANA	1
	Mathematica	2
	Mod Flow	2
	HEC-RAS	2
	ANSYS	2
	Fluent	1
	M Pile	1
	M Sheet	1
	SURFER	2
	TSIS	1
	STAAD PRO.	1

National University of Science and Technology, Rawalpindi	SAP 2000	1
	ETABS	2
	ANSYS	1
	Fluent	1
	M Pile	1
	M Sheet	1
	STAAD PRO.	2
University of Engineering and Technology, Lahore	SAP 2000	1
	DIANA	1
	Mathematica	2
	Mod Flow	1
	HEC-RAS	1
	ANSYS	1
	Fluent	1
	M Pile	1
Balochistan University of Engineering and Technology, Khuzdar	SAP 2000	1
	ETABS	1
	Mod Flow	1
	ANSYS	1
	STAAD PRO.	1
Mehran University of Engineering and Technology, Jamshoro	SAP 2000	1
	ETABS	1
	DIANA	1
	Mathematica	2
	Mod Flow	1
	HEC-RAS	1
	ANSYS	1
	Fluent	1
	SURFER	1
	TSIS	2
	Primavera	1
	STAAD PRO.	1
Quaid-e-Awam University of Engineering and Technology, Nawabshah	SAP 2000	1
	ETABS	1
	Mod Flow	1
	Fluent	1
	M Pile	1
	SURFER	1
	STAAD PRO.	1
NED University of Engineering and Technology, Karachi	DIANA	1
	Mathematica	2
	Mod Flow	1
	HEC-RAS	1
	Fluent	1
	M Pile	1
	M Sheet	1
	SURFER	2
NWFP University of Engineering and Technology, Peshawar	Mathematica	2
	M Sheet	1
	SURFER	1
	TSIS	1

Electronic Design Automation Tools

The Project was launched to facilitate Very-Large-Scale-Integration (VLSI) Designs in Engineering Universities/Degree Awarding Institutions.

This project aims at making transition to using actual tool sets that VLSI design engineers use in the industry. The EDA tools will put students through the entire design and development life cycle, spanning design, synthesis and testing.

It will facilitate proliferation of VLSI design and embedded systems knowledge among students by undertaking research projects with the involvement of all stakeholders and enhance the skill and ability of faculty members and students so that they may be able to provide industrial based solutions.

The recent advances in speed, density, features and low cost have made VLSI a new wave of technology with great market and research potential. Expertise in the area will help Pakistan one of the centres for off-shore VLSI design services.

Achievements

The EDA Tools software was installed successfully and its license was provided to universities/DAIs. Two candidates from each of the following universities/DAIs were nominated for training in Singapore:

1. NED University of Engineering and Technology, Karachi
2. Mehran University of Engineering and Technology, Jamshoro
3. Quaid-e-Awam University of Engineering, Science and Technology, Nawabshah
4. Balochistan University of Engineering and Technology, Khuzdar
5. Balochistan University of Information Technology and Management Science, Quetta
6. University of Engineering and Technology, Lahore
7. COMSATS Institute of Information Technology, Islamabad
8. University of Engineering and Technology, Taxila
9. NWFP University of Engineering and Technology, Peshawar
10. National University of Sciences and Technology, Islamabad

Strengthening of Universities and Institutions of Higher Learning in New and Emerging Technologies

Under this project, the following three centres have been established:

1. Bio-Organic Chemistry Laboratory at the School of Biological Sciences, University of the Punjab, Lahore
2. R&D facility for exotic cut flowers and value added products at HEJ Research Institute of Chemistry, University of Karachi
3. National Centre of Nanotechnology at Pakistan Institute of Engineering and Applied Sciences (PIEAS), Islamabad.

Patent Filing

Keeping in view the importance of patent filing, HEC has developed a programme through which research ideas, published papers, thesis synopsis or description of potential invention are evaluated for patentability. In case an invention is determined to be patentable the inventor will be encouraged to file for an international patent. To make sure that this process is completely confidential, HEC has developed an online patent filing system.

The researchers/ inventors /scientists can check the progress on the evaluation of their invention/idea as well as the recommendations of the experts to proceed with the filing of international patents.

Achievement

Three patents have been filed in US Patent Office.

Access to Scientific Instrumentation/ Laboratory Test

HEC has initiated this programme to share scientific instrumentation facilities which would on one hand provide access of scientific community to sophisticated equipment and on the other hand provide a source of funding to those institutions which make their instruments available.

Achievement

More than 1000 researchers have been provided analytical services.

Presidential Young Innovator Programme

The Project encourages research work in universities by awarding up to six million rupees to support the early career activities of young faculty members in public sector institutions and provide greater incentives for PhD holders to develop careers as faculty members in public as well as private sector institutions.

Achievement

All the seven projects under this programme have successfully entered their 3rd year/final stage and will be completed in June 2010.

Provision of Grants for Maintenance of Scientific Equipment

The project is based on the provision of grants for the up-gradation, spare parts, repair and maintenance of expensive scientific equipment of

public sector universities /degree awarding institutions

Achievement

Grant for 111 different type of equipment were approved in eight meetings

- Keeping in view progress of the project, it has been shifted to recurring budget of the HEC. Now it has become a continuous activity to facilitate and strengthen research and development in these universities

University Industry Technology Support Programme

The University Industry Technology Support Programme (UITSP) of HEC is an important step towards fostering high level of tangible cooperation between academia and industry for capitalizing on emerging international demand for products and processes in discrete and continuous manufacturing that shall contribute to national economy. This programme is focused on industrial sectors where the country is already a major contributor to world trade. It focuses on harnessing the potential of highly competitive sectors for international trade which need developments both for local and international consumption.

The increased globalization of trade, formulation of policies and procedures to streamline the globalization trend and application of international standards by national, international and professional organizations has increased the trade competitiveness and thus has opened new avenues for worldwide industrial sector. To avail these new opportunities, the local industry and the universities at home shall be competitive and compliant with international standards.

Achievement

Following three projects have been completed and are in commercialization phase, while two new projects were approved for funding under this programme.

Project	Principal Investigator
Utilization of indigenous raw material for production of sodium dichromate	Dr. Niaz Ahmad, University of the Punjab, Lahore
Re-evaluation and standardization of selected herbal products for export	Dr. Zabta Khan Shinwari, Kohat University of Science and Technology
Prevalence and control of pathological conditions causing skin damage and consequently reducing its market value in domestic ruminants of Punjab	Dr. Zafar Iqbal Chaudhry, University of Veterinary and Animal Sciences, Lahore

Travel Grants/Grants for Seminars and Conferences

The purpose of this programme is to consolidate the research experiences of faculty members and researchers at national and international level. Travel grants are provided to the faculty members of public and private sector universities for presenting papers in international conferences abroad. Travel support is also provided to academics for going abroad to pursue PhD studies and participate in post-doctoral training courses and cultural exchange programmes etc. Likewise, funding is also provided to the public sector universities for organizing seminars and conferences.

Year	Programme	Allocation (Rs. in million)	Cases	Grants Approved (Rs. in million)	Cases	Amount Utilized (Rs. in million)
2008-09	Travel Grants	80.000	611	81.185	626	79.289
	Seminars and Conferences	40.000	60	28.127	101	38.238

Furthermore this section also deals with the cases of NOCs for faculty members proceeding abroad and foreign scientists/scholars visiting Pakistani universities. Two hundred and forty eight cases were processed during the year and NOCs were issued after obtaining clearance from the Ministry of Foreign Affairs and Ministry of Interior.

Monograph and Textbook Writing Scheme

The project has completed its five-year term and, due to its popularity, has been extended for another two years. It has managed to fill the shortage of textual and support materials and encourage academicians to write standard materials, giving them due recognition as 'Writers'.

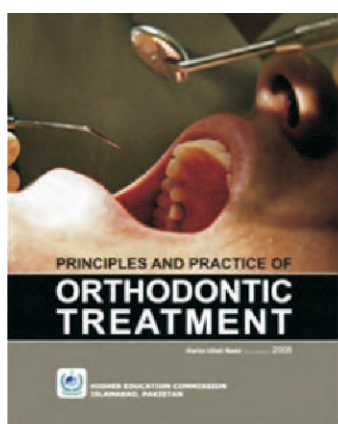
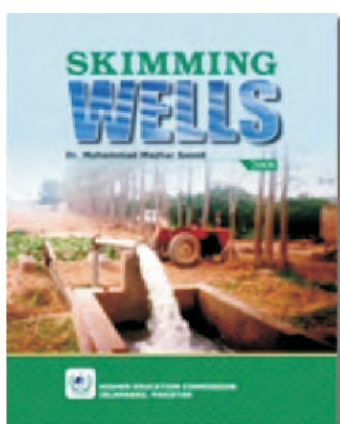
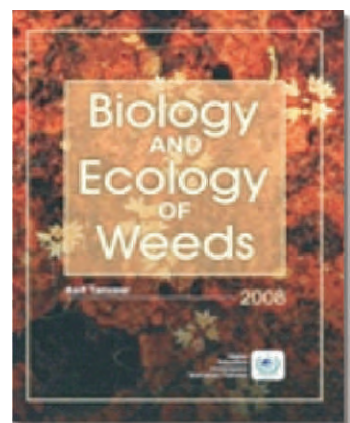
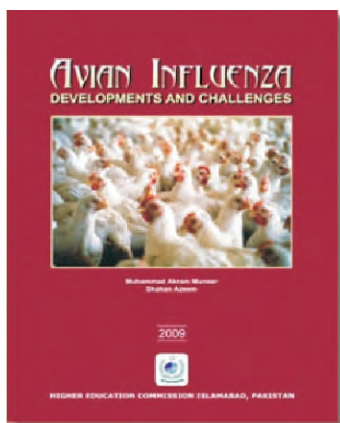
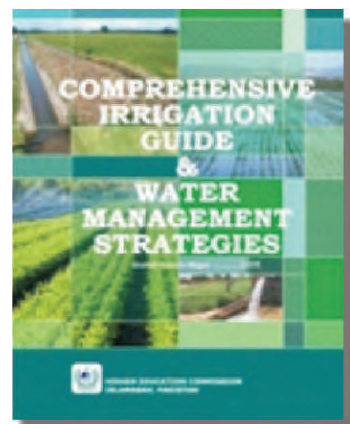
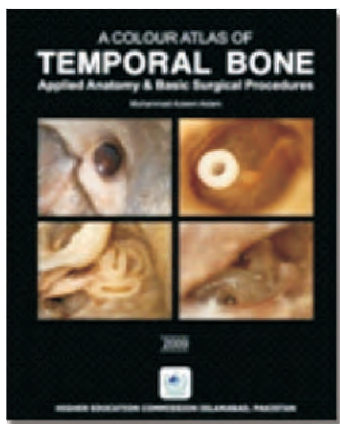
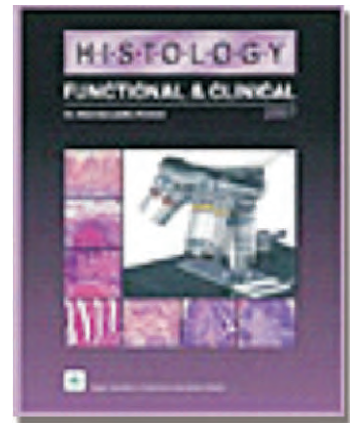
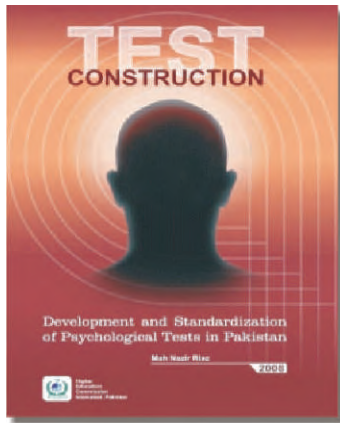
The Scheme is working towards creating a strong cadre of authors in the country. The opportunity is open to teachers and researchers either in service or retired.

The authors may choose from a diverse range of topics, keeping in view the HEC approved curricula in emerging fields such as Information Technology, Robotics, Biotechnology as well as Basic Sciences, Social Sciences, Management Sciences, Behavioural Sciences, Arts and Humanities, Agriculture, Engineering and Health Sciences.

Achievements

Textbooks	03
Monographs	09
Total	12

Monographs and Textbooks published in 2008-09





Quality Assurance



Quality Assurance is one of the three pillars of HEC's strategic planning. Quality is the hub of all policies, programmes and activities reflected in the Medium-Term Development Framework (MTDF), and reflects HEC's response to the modern notion that quality adds value to the higher education.

The Quality Assurance Programme of the HEC has been developed to raise standard of higher education and bring it at par with international standards.

To enforce quality check on mushroom growth of substandard higher education institutions especially in the private sector, the criteria of establishment of new universities are under strict implementation.

A zero tolerance policy against plagiarism is being practiced to ensure publication of quality research in the country and to achieve desired level of observing intellectual property rights and professional ethics.

Ranking criteria for discipline-wise ranking have been developed, data collected, validated and analyzed to reflect the standing of each university and higher education institution in the context of quality provision.

Besides, a PhD review committee is working to oversee the quality of PhD programmes in the universities, the committee is represented by vice chancellors/senior professors and its reports are being shared with the respective universities to identify their deficiencies in meeting the minimum conditions to conduct a PhD programme.

Technical assistance is also offered to enhance capacity of faculty to conduct the processes and procedures of quality assurance and enhancement; international linkages with agencies such as Asia Pacific Quality Network (China), International Network of Quality Assurance Agencies in Higher Education (Berlin), National Accreditation and Assessment Council (India), and securing capacity building opportunities in worldwide terms.

Implementation of Quality Assurance Criteria

The quality assurance programme of the HEC has three major components, including development of criteria and standards for various quality parameters in higher education with the help of stakeholders, development of processes of quality assurance and capacity building to ensure implementation of these criteria, and develop a system of regular internal and external monitoring of the higher education institutions in respect of the status of implementation of the quality criteria.

HEC encourages and facilitates the process of quality assurance in universities for the implementation of quality criteria in their programmes. In this context, HEC has issued guidelines to the universities to implement the quality criteria. However, it has been observed that the implementation process has been slow in the universities due to various reasons.

In order to evaluate the implementation status and to discuss the problems and prospects of the implementation of quality criteria in universities and degree awarding institutions, a region-wise schedule of video-conference/meetings has been chalked out and is being executed by Quality Assurance Division from June 2009 to June 2010.

During the first phase, video-conference/meeting of the institutions of Islamabad-Rawalpindi region was successfully conducted in June 2009 wherein 17 Universities/DAIs participated.

In order to ensure quality of higher education in Pakistan, follow-up of the implementation status of HEC quality criteria in all public/private sector universities/DAIs continued throughout the year.

Implementation status of any criterion by a higher education institution is validated after provision of relevant notification/minutes of the meeting of Senate/Syndicate/BoG etc.

Implementation Status for Quality Criteria			
S. No.	HEC Quality Criteria	Implementation Status	
		Public = 70	Private = 58
1	Eligibility criteria for appointment of faculty members	57	43
2	Eligibility criteria for appointment of Meritorious Professors	32	0
3	Eligibility criteria for appointment of Professors Emeritus	22	0
4	Criteria for award of MPhil/PhD	45	35
5	Affiliation criteria	30	10
6	Tenure Track System	43	0
7	Four-year Bachelor Degree Programme	55	40
8	International GRE (Subject) Test for PhD Degree	45	30

HEC Recognized Journals

The Higher Education Commission has taken many initiatives for improving the quality of research journals in its endeavour to promote research and development activities in Pakistan.

The Commission is encouraging locally published journals in various disciplines to fulfil HEC laid down criteria to be considered at par with other international journals in their respective disciplines. Journals have been placed in four main groups, i.e. Sciences, Social Sciences, Multidisciplinary and Oriental Languages.

To decide upon the quality of a journal and award it recognition status, meetings of the Experts are called soon after HEC receives applications from the fresh journals for recognition or from the already recognized journals for up-gradation of their status.

Based on level of meeting the recognition criteria of journals, each recognized journal is allotted a

category (W, X, Y, Z), W being the highest and Z the lowest publication in a particular category has a given set of prescribed privileges. Series of the meetings of Experts were held as listed below:

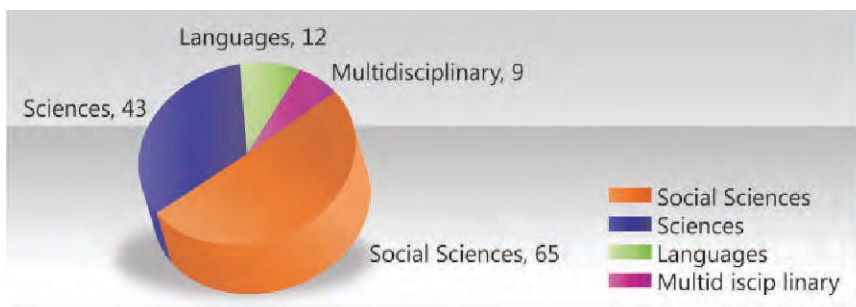


Participants of a workshop of the Editors of HEC Recognized Journals

S. No.	Committee	Date of Meeting	Number of Journals Evaluated	Number of Journals Recommended Recognized	Number of Journals Up-Graded
1	Engineering	February 10, 2009	05	05	Nil
2	Multidisciplinary	February 11, 2009	09	01	02
3	Agriculture	February 17, 2009	09	01	01
4	Medical	April 11, 2009	12	01	01

Current Status of Journals

A total of 129 local journals have been recognized by HEC. The category-wise distribution of journals is as under:



Category	No. of Journals
W	03
X	11
Y	42
Z	73
Total	129

Financial Support for Journals

An amount of Rs. 19 million was released to HEC Recognized Journals during 2008-09 for the up-gradation of research journals in the country. The Committee for Allocation of Funds to HEC Recognized Journals approved the following category-wise financial support, per annum.

Category W	: Rs. 0.7 million
Category X	: Rs. 0.5 million
Category Y	: Rs. 0.43 million
Category Z	: Rs. 0.25 million

Standard Operating Procedures (SOPs) for Evaluation of Journals have been prepared and complete process of recognition of journals has been defined. The (SOPs) for financial support to HEC Recognized Journals for up-gradation of Journals have also been prepared and complete process for acquiring financial support from HEC has been defined. A user friendly webpage for HEC Recognized Journals has been developed and canvas of FAQs is also extended to facilitate the stakeholders.

Workshops for Editors

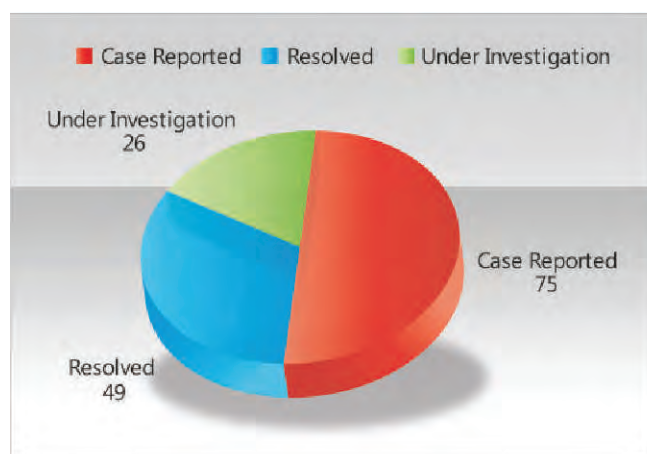
The Quality Assurance Division is focusing on the promotion of quality and bringing HEC recognized research journals in the country at par with international standards. In this regard four region-wise workshops were conducted to interact with the Editors of research journals for the purpose of capacity building, experience sharing and to address the issues/problems. The workshop of the Editors of Science, Social Science, Language and Multidisciplinary Journals

of the different regions were held as per following schedule:

Region	Date
Rawalpindi/Islamabad	March 28, 2009
Sindh	April 6-7, 2009
Punjab	April 14-15, 2009
NWFP	April 29, 2009

Plagiarism Policy

A mass awareness programme regarding the plagiarism issues was effectively pursued by the Quality Assurance Division during the year 2008-09. Plagiarism Policy duly approved by the Commission has been published and distributed to all higher education institutions (HEIs) of Pakistan. As far as implementation of the policy is concerned, 75 cases of plagiarism have been reported to HEC until now; out of which 49 cases have been closed after investigation as per policy procedures whereas 26 cases are under investigation at the universities.



Year-wise distribution of reported plagiarism cases is as under:

2006	2007	2008	2009	Total
11	24	22	17	75

Anti-plagiarism Service

The plagiarism detection service was provided by the Division to check similarities in the research papers and theses sent by scholars/faculty members of universities. Reports with "similarities" higher than the acceptable range were forwarded to the concerned university/institution for revision as per plagiarism policy. The details are given below:

Year	Number of checked theses/papers
2007	461
2008	2652
2009	886
Total	3999

All papers submitted to R&D Division by the applicants of travel grant were checked by the QA Division for plagiarism detection and all MPhil/PhD theses submitted by the students at higher education institutions were also checked by the Division up till June 10, 2009.

Provision of Turnitin to HEIs

A new service 'Turnitin' has now been provided to higher education institutions by the HEC to facilitate the students and faculty for checking the extent of similarities on their own. HEC negotiated for subsidized price and purchased one of the reliable plagiarism detection services (Turnitin) for 60 public sector universities. The service is provided to focal person nominated by the university, who is the resource person for rest of the faculty members. They can check theses, papers and undergraduate assignments through this service. The unlimited accounts have been acquired for period of one year and each university has been given 1000 user accounts. In this regard a virtual training session from USA was conducted by the service provider, and following that, demonstrations were held for various universities as well. Demonstration and discussion about the plagiarism policy and service was arranged in 30 universities/institutions.

Directorate of Distance Education

The issue of quality of private students has been addressed by the HEC for the first time. A Task Force of Distance Education Experts was constituted and, on recommendations of the Task Force, a PC-I was approved by DDWP in April, 2009. The objective of these directorates is to facilitate private candidates at Graduate and Master level and to improve the quality of learning as well as to enhance the success ratio in examinations of the private students. These directorates will provide education facilities to the private students through distance education. Directorates are being established in the following universities:

1. University of the Punjab, Lahore
 2. University of Peshawar, Peshawar
 3. University of Karachi, Karachi
 4. University of Sindh, Jamshoro
 5. Bahauddin Zakariya University, Multan
 6. Gomal University, D. I. Khan
- Three of the Universities i.e. University of Peshawar, Gomal University, D.I Khan and University of Sindh, Jamshoro have nominated the focal persons for their Directorates and establishment is under process at these Universities. The Project Management Unit is being established at HEC to coordinate with DDEs.

International GRE

Meetings with National Testing Service (NTS) and other experts have been held to develop collaboration with international testing agencies to develop a local GRE level test which may be recognized all over the world.

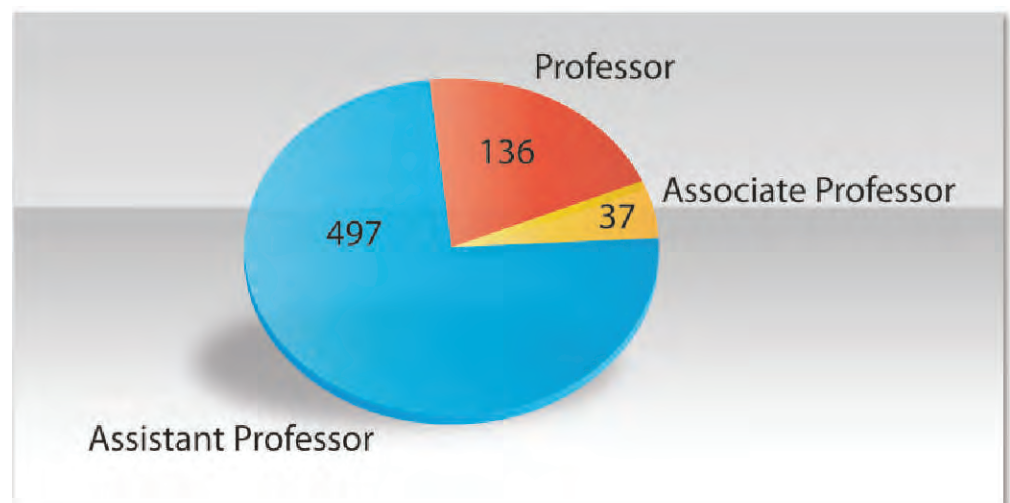
National Quality Assurance Committee

The Quality Assurance Committee (renamed as National Quality Assurance Committee (NQAC) of the HEC contributes as an advisory body for quality provision in higher education sector and review of current policies for continuity and facilitation in response to global advancements and challenges. The Committee, comprising eminent scholars, policy makers and the vice-chancellors of major universities, carries out the consultative process vital for effectiveness and ownership of the policy recommendations. The 15th meeting of NQAC was held on May 19, 2009 at HEC Regional Centre Lahore, and was chaired by Dr. Abdul Raouf, Distinguished National Professor and Dr. Sohail Naqvi, Executive Director, HEC. The Vice Chancellors of selected public sector universities, Adviser (Quality Assurance), MD (Quality Assurance Agency) and DG (Quality Assurance) being members of the Committee attended the meeting. The Committee discussed various quality related issues in higher education sector of Pakistan and recommendations were made on the following agenda items:

- Criteria for award of "Honorary Degrees"
- External Review of Academic Programmes
- Change of Nomenclature of QAC
- Equivalence Formula; research publications and projects
- Training of Programme Evaluators
- Quality of Distance Education
- Recommendations of the 2nd ICAQHE, Lahore December 2008
- Quality Assurance of HEC Approved PhD Supervisors
- Appraisal regarding progress of Accreditation Councils

Tenure Track System

HEC has already introduced a Tenure Track System (TTS) of appointments which aims at enhancing performance and efficiency of the faculty members by creating a healthy competition among faculty members, allowing freedom of research and teaching, as well as financial independence to pursue these objectives. Tenure Track System offers financial benefits accompanying autonomy and freedom of research. Secondly, junior faculty is driven to establish themselves by the high stakes of the tenure positions, helping to create a culture of excellence within the university. Forty three public sector universities have adopted this System for academic appointments with appreciation for HEC on this initiative. A total of 670 faculty members have been appointed on Tenure by different universities upto June 2009, whereas 212 appointments on TTS were made in 2008-09. The following diagram shows level-wise distribution of faculty on Tenure Track.



Better Incentives for Non TTS Faculty

A meeting to discuss the issue of "Better Incentive Package" for Non TTS faculty members was held on May 29, 2009 at HEC Islamabad. The meeting was attended by representatives of 10 universities. Some of the universities have already adopted the same while some universities have a

pay package of their own which is almost equivalent to the TTS. As a result of this breathtaking exercise following conclusion was derived and guidelines in this regard were unanimously developed:

1. The guidelines circulated by the HEC will be kept in view and, in no case, the number of the recipients would exceed 25 per cent of the budgetary posts of BPS faculty (excluding TTS posts) in each cadre i.e. Lecturer, Assistant Professor, Associate Professor and Professor.
2. The award for better incentives will be based on the previous year's performance.
3. The incentives will vary from one to four basic salaries of the faculty member depending upon the evaluation scores obtained by him/her on the basis of Faculty Evaluation Proforma.
4. Only the regular BPS faculty will be eligible for the award of better incentives.
5. The universities will develop their own evaluation criteria and get them approved from their Syndicate/BOG and develop Faculty Evaluation Proforma (FEP) based on these criteria.
6. The general criteria developed by the HEC, UET Peshawar and University of Agriculture, Faisalabad may be consulted for developing criteria/FEP by the universities.
7. The weightage for each of the criterion may also be assigned by the university which may vary between the universities and between the cadres, e.g. for Lecturers and Assistant Professors, more weightage may be given to teaching.
8. A standing committee having one nominee of the HEC, one member of the University Selection Board and Peers from within or outside the university will be constituted by the University. The Standing Committee will prepare merit list of the candidates based on the approved criteria which will be presented in a special meeting of the Selection Board and the recommendations of the Selection Board will be placed before the Syndicate for approval. The process of award of Better Incentives needs to be completed between July 1 and September 30 every year.

9. 50 per cent may be considered as the minimum score for award of these incentives.

CREATING MASS AWARENESS:

QA web-pages are frequently visited by all the stakeholders, to check updates about different policies and programmes. Quality Assurance section of HEC website is mostly visited by university teachers and scholars to get first hand information about different criteria and documents. Therefore, a continuous process of improving quality and scope of the QA information available on HEC website is adopted. All commonly received queries are streamlined and section wise FAQs are developed. SOPs for all QA initiatives are developed to inform the masses and are made available on QA web pages. In addition, Lectures/Group Discussions were held at GCU Faisalabad, NUML Islamabad and Quaid-i-Azam University Islamabad during the year regarding plagiarism policy and other QA criteria.

PUBLICATIONS:

In order to facilitate stakeholders for QA processes and procedures, the Division has developed Quality Assurance Manual for Higher Education in Pakistan which provides detailed instructions and explanations of QA processes like self assessment etc. It was circulated among higher education institutions and is available on HEC website.

Quality Assurance Agency

The Medium Term Development Framework (MTDF) of HEC identified quality as one of the major issues confronting the higher education sector. The Quality Assurance Agency (QAA) is addressing the issue through systematic implementation of quality assurance procedures/criteria. The quality assurance regime being introduced in universities is helping to strengthen the internal standards and achieve improved levels of international compatibility and competitiveness at institutional and programme level.

The figure below outlines the major activities in which QAA is presently involved. All these activities are geared towards strengthening the internal and external quality assurance procedures based on the guidelines and policies developed at HEC.



Quality Enhancement Cells

Presently the Quality Enhancement Cells are functioning in 30 public sector universities. In addition, another 15 QECs in the public sector universities and 17 in the 'W' category private sector universities that are eligible for government funding would become operational during 2009-10. Some significant achievements in the year under review are:

- Self assessment process (including the parameters of Programme Mission Objectives and Outcomes, Curriculum Design and Organization, Laboratories and Computing

Facilities, Student Support and Guidance, Faculty, Process Control, Institutional Facilities, Institutional Support) is being implemented in more than 249 teaching departments of 30 public sector universities.

- QEC expenditures included in the recurring budget of respective universities.
- Ninety-four permanent staff appointed in universities to look after the QEC activities.
- Twenty-five Heads of QECs are members of university statutory bodies.
- Seven QECs have become members of Asia Pacific Quality Network (APQN) and two QECs have obtained membership of International Network of Quality Assurance Agencies for Higher Education (INQAAHE).
- Workshop on 'Programme Assessment and Continuous Improvement of Quality' was organized for QEC staff.
- Experience sharing undertaken in two meetings of Heads of QECs.
- Heads of 10 QECs attended seminars/workshops at international level.
- QEC website launched in 29 universities.

Accreditation Councils

■ From amongst the four councils established by HEC, the National Computing Education Accreditation Council has organized four regional workshops and assigned a rating to 25 programmes. The National Agriculture Education Accreditation Council has so far held six awareness seminars/workshops and assigned ratings to six programmes. National Accreditation Council for Teachers Education after holding two awareness seminars/workshops has successfully launched the National Standards for Accreditation in collaboration with UNESCO. Pakistan Business Council after strenuous efforts has prepared their accreditation procedures and guidelines for approval from the Council.

- Formal linkage of HEC now exists with the following professional councils: Pakistan Engineering Council, Pakistan Council for Architects and Town Planners and Pakistan Veterinary Medical Council.

Resolving of issues concerning programmes with these and other councils is an ongoing activity.

- Second meeting of all councils (HEC established and professional) was held to deliberate on common issues.
- A two-day workshop on 'Quality Assurance and Programme Accreditation: Building a Framework for Quality Improvement and National Development' was organized by HEC for all the councils. Dr. Fred M. Hayward was the resource person.

PhD Review Committee

Three committees are functioning to determine the implementation status of the HEC laid down criteria for MPhil/PhD programmes. Both the public and private sector universities are being evaluated. Twenty eight programmes have been reviewed so far and recommendations after approval from the Commission have been conveyed to the concerned universities.



Participants of the 15th meeting of the National Quality Assurance Committee (NQAC)



Learning Innovation



Learning Innovation Division (LID) was established in 2003 as an 'In- service Continuous Professional Development (CPD) hub' for the higher education teaching faculty and university administrators across Pakistan.

Its main objective is to assist faculty members in maintaining as well as improving their academic excellence and qualitative governance by supporting their professional needs through open and customized programmes.

The LI Division's range of programmes is implemented through its core unit called LI Department and its two projects National Academy of Higher Education (NAHE) and English Language Teaching Reforms (ELTR), which have benefitted 11,671 faculty members and university administrators through their long/short term professional development and capacity building support in academic and administrative areas. During 2008-09, 1091 teachers benefitted from these programmes.

Consolidated Achievements of LID, NAHE and ELTR

LI Activity Heads	No. of Faculty Members/ Participants Trained (2008-9)
LI	847
NAHE	22
ELTR	222
Total	1091

Learning Innovation Department

During the year, the LI department trained 847 teaching faculty and administrators of higher education institutions across Pakistan through its regular long and short-term Continuous Professional Development (CPD) programmes:

1. Long /Short Term Faculty Professional Development Programme

a) Master Trainer Faculty Professional Development Programme is a 6 to 12 week in-service orientation programme, designed to equip the relatively fresh teaching faculty with the latest pedagogical and research skills required for

effective teaching and research at higher educational level. During 2008-09, 60 faculty members were trained.

b) Advanced Specified Courses for Master Trainers FPDP Alumni is a two-week programme exclusively designed for the LID certified master trainers. The main objective of the activity is to provide an in-depth follow up and enhancement of the skills and learning during their basic course. Since this programme is a latest addition, the academic and administrative planning of the programme was formulated and approved in the reporting phase. So far, 44 faculty members have been trained.

c) Curriculum Based Courses of up to two-week duration are conducted regularly based on the recommendations of the National Curriculum Review Committee (NCRC) to keep the university teachers abreast with the latest changes, enhanced scope of the subject, new concepts/ contents incorporated in the curricula. During the current year, 407 faculty members were trained through these courses.

d) Open and Customized Short Courses/ Workshops/ Seminars Based on University Proposals of up-to two-week duration are based on the proposals received from the higher education institutions across Pakistan. Faculty members actively participate and greatly benefit from these workshops. During 2008-09, 194 faculty members were trained through these courses based on university proposals.

e) Lectures/Seminars by Foreign and Pakistani Scholars are arranged for the teaching faculty in Pakistan to help benefit directly from the scholars visiting Pakistan. Lectures are also arranged via video conferencing. Thirty-one teachers attended a video conferencing lecture of Dr. Michael Thomas from the University of Wisconsin in June 2009 on current educational practices in higher education and role of ICT in teaching.

2. Modern University Governance Programme for University Administrators

In order to further develop and strengthen the university stakeholders besides empowering academic leaders, LID took a strategic initiative by starting an exclusive programme entitled "Modern University Governance Programme for University Administrators" in August 2006 for in-service capacity building of the university administrators, who are the backbone of any university system, to equip them with the latest governance tools as well as bridging the gap between administration and academia.

The following programmes are exclusively designed for the university leadership and senior management such as Vice Chancellors/Rectors, Pro Vice Chancellors/Rectors, Registrars, Controllers of Examination, Treasurers, Deans, Chairpersons and Hostel Wardens etc. aiming to equip them with the holistic understanding of modern university governance models. The major programmes include:

□ A two-tier series of programme entitled as "Leading Transformational Change" was conducted by Dr. Mary Linda Armacost, who is HEC Consultant on university governance issues, for University Administrators, Registrars, Controllers Of Examination, Treasurers, Deans, Chairpersons and Hostel Wardens etc. So far, 233 senior university Administrators have been trained under this Programme.

3. NCES Seminars/Examination Policy Awareness Seminars/Workshops

The National Committee on Examination System (NCES) was established in 2004 to review the existing examination policies, analyze weaknesses and propose improvements. The Committee developed HEC Approved Policy Guidelines for 'Semester System' to encourage HEIs to gradually shift to the new system of examination. Guidelines for both undergraduate and Master/MPhil level have been finalized and circulated to all public sector universities for

feedback and recommendations.

So far, 493 faculty members have benefited from various workshops. During the year, 59 faculty members and examination staff attended the following workshops:

- Master Trainers Workshops on Testing and Assessment (one-week)
- Semester/Policy Awareness Seminars (one-day)
- Open /Customized Workshops/Seminars for Examination Staff and relevant Teaching Faculty based on university proposals (up to two-week)

4. Capacity Building of HEC Employees

In order to further enhance the capacity of HEC employees, the Division held its first-ever workshop series for the HEC Senior Management with the objective to provide opportunity of sharing experiences of different divisions in an environment away from work. In addition, an online English Language Proficiency Enhancement Support System (ELPESS) was conducted for HEC officials. HEC drivers were given training on traffic rules in collaboration with the Islamabad Capital Territory Police.

So far, 717 HEC officials have been trained in various disciplines. In 2008-09, 54 HEC Employees were trained through three courses held for HEC officers and officials in Report Writing Skills, Stress Management, Time Management, Monitoring and Evaluation of Projects, International Computer Driving Licenses (ICDL), Project Proposal Development, etc.

English Language Teaching Reforms

The English Language Teaching Reforms (ELTR) Project provides holistic, effective and sustainable professional development framework exclusively for ELT faculty in HEIs across Pakistan. The ELTR Project offers long term international scholarships and indigenous fellowships. It also conducts and facilitates continuous short-term workshops and seminars for the English teaching faculty.

National Committee on English

In March 2003, the National Committee on English (NCE) was commissioned by HEC comprising national and international level ELT experts and foreign consultants that devised a mechanism to achieve the goals of the ELTR Project through six subcommittees.

1. Faculty Development Programmes
2. Testing and Evaluation
3. Computer Assisted Language Learning (CALL)
4. Research and Publication
5. Curriculum and Material Development
6. Reorganization of Departments/Centers of English Language

Since 2004 the ELTR project has provided professional development support to 1504 ELT teachers from HEIs across Pakistan through various long and short-term programmes conducted by its six subcommittees working strategically catering to their continuous capacity building needs. During the year, the Project benefitted 275 academics from English teaching community. Following is an abstract of the major milestones achieved during the year.

ELTR Achievements

Since the inception of the ELTR Project, 1504 English teaching faculty from universities as well as colleges have been a part of the short and long-term CPD programmes conducted by its six subcommittees catering to the continuous capacity building needs of ELT teachers at HEIs across Pakistan. However, it catered to 275 ELT teachers in the year 2008-9 through various long and short-term programmes.

The Faculty Development Subcommittee

addresses the need of teachers training in English Language. This Subcommittee works to improve the English language proficiency of college and university teachers by providing them international scholarships and indigenous fellowships which include MS (Leading to PhD) in Applied Linguistics, two-year Masters in TESL, TEFL, and Linguistics and one-year PGD in TEFL, TESL, and ICELT.

Two English language teachers were given MS level International Scholarships in June 2008 who went in July and August 2009, respectively to pursue their degrees in Applied Linguistics and TESOL from East Anglia University and Anglia Ruskin University, UK respectively. 161 Indigenous Fellowships have been given to ELT teachers across Pakistan for long-term training in MS in Applied Linguistics, two-year Masters in TESL, TEFL and Linguistics, one-year PGD in TEFL, TESL and ICELT. However, the achievements in the year 2008-9 are as follows:

- Award of 19 fellowships in MS Applied Linguistics to the University of Peshawar
- Award of 20 fellowships in PGD (TEFL) to Beacon House National University, Lahore
- Award of 12 fellowships in PGD (ELT) to Forman Christian College Lahore
- Three indigenous fellowships in PGD (TEFL) to the Aga Khan University Karachi
- A week-long workshop entitled English for Academic Purposes (EAP) was organized at F. G. Post Graduate College for Women Kashmir Road, Rawalpindi in which 28 ELT teachers from local universities and colleges attended the workshop

Computer Assisted Language Learning

The Computer Assisted Language Learning (CALL) Subcommittee is working to strengthen independent and interactive language learning through Computer Aided Language Learning. This Subcommittee helps the teachers to make use of the latest tools of Information Communication Technology (ICT) and electronic communication to support language learning. The achievements of the Subcommittee during 2008-09 are as under:

- Conducted CALL short course at FAST-National University, Peshawar
- Establishment of Self Access Centre (SAC) at Allama Iqbal Open University, Islamabad
- Need Assessment Survey on CALL

Research and Publication

The Research and Publication Subcommittee of the ELTR is working to improve quality research on English language teaching in the Pakistani context. The Subcommittee is helping to develop a set of recommendations to provide support to the English teachers in various research activities; research training to teachers and research supervisors in various public sector institutions; and funding for joint research projects at national and international level, through public-private partnership.

The achievements of the Subcommittee during 2008-09 are as under:

- Organized six-day Research Methodology course at BZU, Multan
Organized International Conference on ELT at NED University of Engineering and Technology, Karachi
- Conducted Research Methodology Course at Islamia College University, Peshawar
- Organized six-day Research Methodology Course at GCU, Faisalabad

- Research Methodology course at Bilquess College, PAF Complex Chaklala, Rawalpindi

- Funding of 5th International Conference on ELT at The Aga Khan University Karachi

Testing and Evaluation

ELTR's Testing and Evaluation Subcommittee is working for bringing improvement in the testing and examination system of the country. In this regard strategic activities and workshops are conducted for improving Testing and Assessment skills of English Language Teaching faculty. The achievements of the Subcommittee during 2008-09 are as under:

- Conducted Testing and Assessment six-day Workshop at University of Karachi
- The ELTR Project organized the 15th NCE Advisory Session from April 1-2, 2009 to seek suggestions of the external stakeholder from all over Islamabad and Rawalpindi as how to bridge the gap between the Language and Literature lobbies
- Preparation of PC-I for ELTR Project Phase-II
- Data analysis completion of short-term and long-term courses

National Academy of Higher Education

The National Academy of Higher Education (NAHE) is a project of LID with the major aim to acquaint the university faculty with the latest androgogical and research skills through month-long professional development courses conducted at universities across Pakistan. After the successful achievement of the set targets of NAHE Phase-I, the second phase of NAHE began in June 2008 with more motivation and improved programmes.

NAHE Phase-II

In the present phase, 2500 university faculty members will benefit through two major components of NAHE II, entitled Professional Competency Enhancement Programme for Teachers (PCEPT) and Incorporating Technology in Education (ITE).

Professional Competency Enhancement Programme for University Teachers

Professional Competency Enhancement Programme for University Teachers (PCEPT) is a 24-day orientation programme to be conducted at the doorstep of universities all over Pakistan with the target of training 2100 faculty members.

Keeping in view the recommendations of the third party evaluation of Phase-I, NAHE took the huge task of Teaching Learning Resource Material Development for teacher training programmes. The task of module writing was assigned to the following seven higher education institutions:

1. Teaching as a Profession
Islamia University, Bahawalpur
2. Academic Planning and Management
IED, Aga Khan University, Karachi
3. Curriculum Development, Assessment and Evaluation
Iqra University, Quetta,
4. Learners' Psychology
University of Education, Lahore
5. Androgogical Skills
Allama Iqbal Open University,
Islamabad
6. Communication Skills
APCOMS, Rawalpindi
7. Research Methods and Skills
Fatima Jinnah Women University,
Rawalpindi

During the year, a framework for the module review and development was devised and series of meetings and workshops were conducted in collaboration with the above mentioned

institutions. The following is a review of the step wise meetings/workshops held during the year:

Step-01: Planning Workshop

Step-02: Module Development Workshop-I

Step-03: Module Development Workshop-II

The workshop participants worked on the development of the revised outlines and these outlines were reviewed by the expert educationists of Module Development Committee. The Committee worked on the following agenda:

- Identification of the module specific and cross cutting outcomes of the PCEPT Programme
- Development of outlines for the Teaching Learning Resource material
- Review and finalization of the outlines
- Finalization of the approach of writing the TLR Material
- Allocation of time for each module area
- Development of detailed Teaching Learning Resource Material in each area

NAHE Planning Workshop

Step-04: Pilot test of Teaching Learning Resource (TLR) Material

The TLR material on the above-mentioned areas was developed and pilot test was conducted to analyze the effectiveness of the content. The pilot test Programme was held from February 12-13, 2009, which was attended by 22 faculty members from universities and DAIs of the twin cities.

The pilot testing of the content was conducted to analyze the effectiveness/suitability of the content according to the professional needs of participants. The participants represented several higher education institutions of Rawalpindi and Islamabad nominated by their institutions, having varied range of disciplines such as Medical Science, Mathematics, English Literature, Governance and Defense Studies.

The expert reviewers evaluated the entire Programme and they compiled the research based report of the pilot test. TLR material was finalized by the module writers of seven universities for the implementation of professional development Programme at mass level.

Step-05: Teaching Learning Resource (TLR) Material Development: Concluding Meeting

The modules were finalized by the committee heads in the light of the results of the pilot test course and course evaluation.

Step-06: TLR Material Review Meeting

Keeping in view the recommendation of the concluding meeting, two review committee members were called to Islamabad to review and examine the final content submitted by the module developers. They made some amendments in the material and submitted the finalized content to HEC for further necessary action. This reviewed material was named as draft version of the PCEPT modules and it was decided that the PCEPT courses would be launched in 12 universities with draft version.

LI Activity Heads (2008-09)	
LI Activity Heads	Teachers Trained
Long Term Master Trainer Faculty Professional Development Programme (MTFPDP)	60
Short Term Faculty Professional Development Programme	601
Modern University Governance Programme for University Administrators	73
Capacity Building of HEC Employees	54
NCES Seminars/Workshops	59
Total	847
NAHE Activity Heads (2008-09)	
NAHE Activity Heads	Teachers Trained
Staff Development Courses (SDCs)	22
ICDL	--
Workshops	--
Long Term PCEPT courses	--
Total	22
ELTR Activity Heads (2008-09)	
ELTR Activity Heads	Teachers Trained
Faculty Development	75 (including 22 ongoing fellowships)
Research and Publication	99
Testing and Assessment	26
Curriculum and Material Development	--
Online and CALL	22
Total	222
Grand Total	1091

In the meantime, a team of Michigan State University (MSU) education experts were also involved through USAID Pre-STEP for final content and language review of the TLR material. The final proof read material will be submitted to this office till August 2009. Later the experts of MSU will come over to Pakistan to conduct a four day workshop where they will help our module developers' team members in incorporating the changes into the content at the spot. By the end of year 2009 the revised In-Service professional Teacher Training Modules For HEI teachers will be ready for dissemination, printing and implementation into the future PCEPT courses.



MoU signing ceremony for the establishment of SAC at AIOU (November 13th, 2008)



Workshop on Leading Transformational Change at HEC Regional Centre, Karachi (March 17 – 18, 2009)



10th FPDP Participants with Chairman HEC at HEC Islamabad (June 2 – July 16, 2008)



Academics



The Academics Wing of Higher Education Commission is responsible for policy planning, coordination and provision of necessary support to the academic component of the Universities/Degree Awarding Institutions.

The Wing, through Academics Division is implementing various programmes and projects e.g Institutional Strengthening and Up-gradation of Laboratories and Libraries, Best University Teacher Awards, Support to Scientific Talent, etc aimed at providing institutional support to the academic activities of the Universities in order to enhance its qualitative aspect.

In addition, foreign students admissions and promotion of International Cooperations is also dealt in Academics Division. The Curriculum Division has a mandate to coordinate all the activities related to development and up dating of the curriculum.

Presidential Awards. After detailed deliberation and scrutiny HEC recommended the following:

Izaz-e-Kamal (one award)

Izaz-e-Fazeelat Seven awards for the following categories:

1. Best Quality Researcher (3)
2. Best Textbook (3)
3. All rounder (1)

Izaz-e-Sabqat

One award each for Punjab, Sindh, NWFP, Balochistan, AJK and FATA/FANA at BA/BSc, MA/MSc and professional categories as follows:

Professional		MA/MSc		BA/BSc	
Punjab	1	Punjab	1	Punjab	1
Sindh	1	Sindh	1	NWFP	1
NWFP	1	NWFP	1	FANA/FATA	1
Balochistan	1	Balochistan	1		
AJK	1				

Additionally, the Academic Division also oversees the offer and establishment of new programmes/projects/schemes related to higher education as approved by the HEC.

Presidential Awards

Every year HEC seeks nominations from Universities /Degree Awarding Institutions for Presidential Awards in various categories on behalf of the Ministry of Education. This year 234 nominations were received for various

Civil Awards

This year HEC sought nominations of teachers in higher education sector on behalf of Government of Pakistan for various Civil Awards. In total, 66 nominations were received from various Universities/DAIs. The HEC Award Committee recommended the following number of teachers/researchers for Civil Awards for the year 2008:

Year	Hilal-e-Imtiaz	Sitara-e-Imtiaz	Pride of Performance	Tamgha-e-Imtiaz	Total
2008	1	5	3	10	19

Best University Teachers Award

The programme was approved in 2004 at a capital cost of Rs 29.5 million. This programme is aimed to give recognition to such university teachers who have shown outstanding performance and to provide incentive to teachers to improve the quality of their teaching and research.

This year, 36 teachers have been awarded Best University Teachers for the year 2008 in an Award Ceremony.



Institutional Strengthening and Up-gradation of Laboratories and Libraries

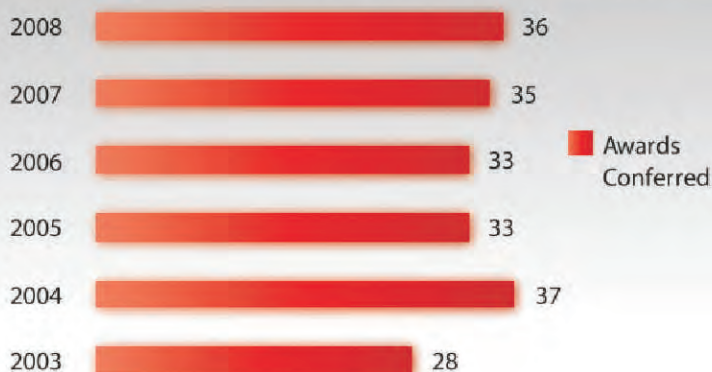
Institutions in Pakistan suffer from lack of institutional and human capacities to conduct any meaningful research. Therefore, an urgent need to strengthen and upgrade scientific institutions in Pakistan was felt. This support programme is aimed at strengthening the laboratories and libraries of the universities/degree awarding institutions in public sector for enhancing the research activities. During the year 2008-09, HEC approved and provided funds amounting to Rs. 17.469 millions for implementation of 20 proposals received from various universities.

Year	Proposals Approved	Amount Approved (in millions)
2008-09	20	17.469

Admission of Foreign Students under Self Finance Scheme (Professional Stream) Academics Year 2008-09:

S. No.	Name of Discipline	Seats Available	Applications Received	Number of Students recommended by HEC	Fee paid by the Foreign Students to the concerned institutions.
1.	MBBS	129	221	120	\$922000.00
2.	BDS	22	21	17	\$158000.00
3.	Engineering	92	92	120	\$644000.00
4.	D. Pharmacy	82	146	82	\$75000.00
Total		325	480	339	\$1799000.00

Best University Teacher Awards Conferred



Admission of Foreign Students (General Stream)

As per procedure HEC endorses the admissions of foreign students in various higher education institutions Pakistan. The country wise detail of the cases endorsed during the year 2008-09 are as under:

S. No.	Name of Country	No. of Students
1.	Afghanistan	252
2.	Algeria	2
3.	Azerbaijan	3
4.	Bangladesh	8
5.	Bahrain	1
6.	Bosnia	1
7.	Canada	2
8.	China	345
9.	Camros	1
10.	Djibouti	3
11.	Egypt	1
12.	Ethiopia	1
13.	Germany	8
14.	Ghana	3
15.	IOK	2
16.	Indonesia	20
17.	Iran	13
18.	Iraq	6
19.	Japan	6
20.	Jordan	30
21.	Kenya	20
22.	Korea	12
23.	Kyrgyzstan	1
24.	Libya	4
25.	Macedonia	1
26.	Malaysia	2
27.	Maldives	3
28.	Mauritius	4
29.	Morocco	2
30.	Myanmar	1
31.	Nepal	32
32.	Nigeria	14
33.	Palestine	17
34.	Rwanda	1
35.	Saudi Arabia	36
36.	Somalia	270
37.	Sri Lanka	6
38.	Sudan	32
39.	Sweden	1
40.	Switzerland	1
41.	Syria	7
42.	Tajikistan	2
43.	Tanzania	3
44.	Thailand	22
45.	Tunisia	1
46.	Turkey	44
47.	UAE	16
48.	Uganda	3
49.	UK	2
50.	USA	1
51.	Yemen	11
52.	Zambia	1

Fee rates vary from university to university, However, every year the foreign students pay approximately more than one million \$ US to the universities/institutions of Pakistan.

Talent Farming Scheme - Phase III

The Project was approved with the aim to award scholarships to BSc/BSc(Hon) and MSc students studying in Basic Science subjects who qualified the test for a period of two years. Total amount of Rs. 13,000/- per annum at BSc/BSc(Hons) and Rs. 19,500/- per annum at MSc level is given to successful candidates. The eligible candidates appear in an objective type test at 13 centres throughout the country simultaneously.

During the current year, 83 students were awarded scholarship at BSc/BSc(H) level and 98 students at MSc level. The subject-wise summary of the awards is given below:

MSc Level							
S. No.	Subject	Punjab	NWFP	Sindh	Balochistan	FATA	AJK
1	Physics	04	00	01	00	00	00
2	Chemistry	24	06	10	02	02	01
3	Biology	00	00	00	00	00	00
4	Maths	06	00	01	00	00	00
5	Statistics	06	01	00	00	00	00
6	Economics	00	00	00	00	00	00
7	Zoology	07	04	04	01	02	01
8	Botany	05	00	00	00	00	00
9	M/Biology	08	00	01	01	00	00
Total		60	11	17	04	04	02
Total							98

BSc Level							
S. No.	Subject	Punjab	NWFP	Sindh	Balochistan	FATA	AJK
1	Physics/Chemistry/Maths	17	01	02	00	00	01
2	Physics/Chemistry/Biology	38	11	08	01	00	00
3	Physics/Math/Computer Science	02	00	00	00	00	00
4	Physics/Statistics/Maths	01	00	00	00	00	00
5	Maths/Statistics/Computer Science	01	00	00	00	00	00
Total		59	12	10	01	00	01
Total							83
Grand Total							181

Support to Scientific Talent Scheme

The Project was approved by the CDWP in 1995 at the capital cost of Rs. 120.02 million. The aim of the project is to give Subsistence Allowance to the unemployed 1st Class MSc, MPhil and PhD degree holders from recognized universities. The rate of the Subsistence Allowance per month for

MSc was Rs. 1,200, for MPhil Rs. 1,800, and for PhD was Rs. 2,400. Owing to meager amount of scholarship, the candidates lost their interest, as a result the Scheme was closed temporarily.

In order to attract the qualified science graduates, the scheme was restricted to Masters only and the rate of Subsistence Allowance was enhanced from Rs. 1,200 to Rs. 10,000 per month from the Planning Commission. As many as 600 scholars were selected under this Scheme towards the end of last financial year. However, 150 of them did not avail the opportunity for one reason or the other. During the year 2008-09, payment of Subsistence Allowance was made to remaining 450 scholars against teaching assignment in the universities and colleges of their choice.

This is an annual activity. First round of debates is held at University (intra-university) level. Two top winners, both in English and Urdu participate at Regional/Provincial level debates organized at five stations i.e. Islamabad (for Islamabad, Rawalpindi, AJK, and Northern Areas), Karachi (for Sindh), Lahore (for Punjab), Peshawar (for NWFP), and Quetta (for Balochistan). Final round is organized at HEC, Islamabad. During the year 2008-09, the following students won the first, second and third position, in the final round:

English Debates

Mr. Shamaon Ahmad (First Prize)

University of the Punjab, Lahore

Mr. Faisal Maqsood (Second Prize)

University of Agriculture, Faisalabad

Mr. Rafique Ahmed Brohi (Third Prize)

University of Sindh, Jamshoro

Urdu Debates

Syed Shafaat Ali (First Prize)

CECOS University, Peshawar

Mr. Haider Miraj (Second Prize)

(National University for Computer and Emerging Sciences, Islamabad)

Syed Farhan Ali Zaidi (Third Prize)

University of Sindh, Jamshoro

Centres of Excellences, Area Study Centres and Pakistan Study Centres

Matters relating to these Centres were tackled with the Ministry of Education viz. nomination of subject experts for BoGs, Academic Councils, and Selection Committees. Video Conference for three Centres of Excellence, Area Study Centre, National Institute of Pakistan Studies, Chairman BoG/Vice-Chancellors of the AIOU, Secretary Education was organized at HEC headquarters to solve issues faced by the Centres.

SAARC Activities

The Meeting of SAARC Heads of University Grants Commission or equivalent bodies are held after every two years. The Academics Division monitors the implementation of the decisions of this august body and also coordinates the visits of educationists to and from SAARC Member States. Pakistan has committed to hold First SAARC Debates in Islamabad and is exchanging delegations in a bid to implement the decisions of this body.

In the 14th SAARC Summit held in New Delhi (India) on 4th April 2007, an Inter-Ministerial Agreement was signed for establishment of "South Asian University" in India. Since then various meetings have been held to discuss issues relating to this University. The 1st, 2nd and 3rd meetings of Inter-Governmental Steering Committee on establishment of South Asian University were held during the year under review. The HEC handled nominations, and all other related issues with the Ministry of Foreign Affairs, Islamabad and Pakistan Passport Office, etc.

review. The HEC handled nominations, and all other related issued with the Ministry of Foreign Affairs, Islamabad and Pakistan Passport Office, etc.

Nominations Against various Facilities and Programmes offered by National/International Agencies

The nominations are invited by HEC against various offers of scholarships short/long-term training programmes, conferences, seminars etc. announced by the National/International Agencies including Ministry of Education, Ministry of Foreign Affairs, Economic Affairs Division and Pakistan National Commission for UNESCO. After obtaining the nominations/recommendations from the Universities and Centres the nominations are sent to the concerned agencies. The number of cases processed during this year is 120.

During the period the following major cases were dealt with:

- Offer of Scholarships in Master and PhD Programmes by Government of Jordan
- Study on Education Improvement of Training Course of Teacher (Asia/Pacific)
- International Congress on "Philosophy of Education" 6-8 March, 2009 Ankara, Turkey.
- Seats to Foreign Students for admission into Bangladesh University of Engineering and Technology, Dhaka.
- Call for Nominations: Colombo Plan-University Putra, Malaysia (UPM) Long-Term Scholarship Programme 2009-2010.
- Offer of Scholarship by Govt. of Slovak in 2009-2010.
- Offer of Scholarship by China Harbour Engineering Company (CHEC).
- Developing Countries Partnership Scholarship Programme for the Academic Year 2000-2012
- Third Country Training Programme in Sri Lanka from 14.7.2009 to 25.8.2009
- Nomination for Training Programme of the

Forum of Civil Engineering Education in China.

- International Scientific Conference "Ancient Jeitun-The Centre of Early Agriculture" Asghabat, Uzbekistan
- Invitation to the 9th Asia-Pacific Training Workshop on Education for International Understanding. (EIU)
- Intellectual Property Capacity Building by WIPO Worldwide Academy

UNESCO/ISESCO

The matters pertaining to Pakistan National Commission for UNESCO/ISESCO are processed for nominations against different Conferences, Seminars, and Workshops. The total number of cases processed during the year were 53.

- Asia-Pacific Regional Preparatory Conference for the 2009 World Conference on Higher Education. The Pakistani delegation led by the Executive Director HEC, attended the conferences at New Delhi in February, 2009 and at Paris in July, 2009
- Workshop on "Development of Science & Technology" through ISTIC, Kuala Lumpur, Malaysia from 22-26 June, 2009
- World College Youth to Award Civic Youth Forum (WCVF) 2009
- UNESCO/Poland Co-Sponsored Fellowship Programme 2009
- 12th Science-Expo Internationale (ESI) 23-29 July, 2009 in Tunisia
- Regional High Level Meeting on Teaching of Philosophy in Manila 25-26, May, 2009
- Advisory Network for the Convention for the safeguard of intangible Cultural Heritage
- Invitation of nominations for the Post of Director, Division of Culture Objectives and Intangible Heritage, Culture Sector CLT-188 (D-I)
- Invitation to the 9th Asia-Pacific Training Workshop on Education for International Understanding (EIU)
- International Congress of UNESCO Chairs on Education for Sustainable Development to be held on 17-19, September, 2009

held on 17-19, September, 2009

- Regional Symposium on innovation Technology, Capacity Building from 17 -19 November, 2009
- International Conference on Human Security in West Asia 25-26 November, 2008
- The Russian Federation Co-Fellowship Programme 2008

International Linkages/Cooperation

The Section also processes the cases for possible linkages and collaboration between Pakistani and Foreign Universities regarding cooperation in the field of Higher Education. The following major cases are in process.

- National Defence University Collaboration with Nasser Higher Military Academy, Cairo, Egypt for views/comments from Ministry of Defence
- Cooperation between OIC and Korea in the field of Education, Science and Culture. Questionnaire circulated to university
- Cooperation the field of Education with Oman
- Agreement on Avoidance of Double Taxation between Pakistan and Serbia
- Cooperation in the field of higher education with Mexico
- Marketing of Pakistani Institutions in Yemen
- Global Business Development Programme, Opportunity in Japan Asia Pacific University, APU, Japan

Pact and Protocols/MoUs

Pacts and Protocols/MoU's are signed between the governments of two countries to set out a framework for enhanced collaboration in the field of Higher Education.

The major activities involved are:

- Drafting of MoUs
- Submission of proposals comments on Agreements/MoUs to the Ministry of

Education and Economic Affairs Division

- Processing of MoUs through Ministries of Law, Justice & Human Rights and Foreign Affairs
 - Initiate actions for the Implementation on the signed Pacts & Protocols
 - Circulation of MoU's/Pacts and Protocols to the universities/DAIs
 - Facilitate different Universities in signing MoUs with foreign institutes for collaboration and to develop linkages
- Pakistan has signed Pacts and Protocols agreements, MoUs etc with different countries of the world and has established various linkages with foreign universities/research institutes. The numbers of cases processed during the year were thirty. The major MoUs, Joint Ministerial Commission (JMCs) and Agreements dealt during this year were:

- MoU signed between Balochistan University of Engineering & Technology, Khuzdar and AIT, Bangkok
- MoU signed between Pakistan and Libya in the field of Higher Education and Scientific Research
- Draft Agreement between Government of Pakistan and Afghanistan in the field of higher education
- Draft MoU to be signed between Ministry of Education, HEC and USAID, received from Ministry of Education, Islamabad
- 7th Session of Pak-Afghanistan JEC on 25.26 November, 2008
- 2nd Session of Pak-Morocco JMC 9-11 October, 2008
- 8th Session of Pak-Mauritius Joint Working Group 7-9 October, 2008
- Views/comments on signing of MoU between EAD (HAFO) an NGO of Afghanistan
- Views/comments on signing of MoU between Economic Affairs Division and Tear Fund, a UK (NGO)

Foreign Delegations

Under this head, delegations are sent abroad through nomination by HEC and foreign delegations are invited:

- To enhance collaboration and to finalize linkages and cooperative programmes
- To attend Conference, Seminars, Training Programs and Workshops to sign MoUs

The delegations Afghanistan, UK, Mauritius, Iran, Australia visited Pakistan this year. The Pakistani delegations visited India, Nigeria, UK, Malaysia, Korea, Bangladesh, Sri Lanka. The number of cases processed during the year were 20.

Miscellaneous Cases

The Section also process the miscellaneous cases relating to the International Institutions, Establishment of Chairs, forwarding applications for foreign fellowships or Scholarships to the concerned departments, circulation of information.

- Establishment of Benazir Bhutto Chair at Lahore College for Women University, Lahore
- Establishment of Benazir Bhutto Chair at SZABIST, Karachi
- Marketing of Pakistani Institutions in Yemen. Letter from Embassy of Pakistan, Sana Yemen. Material Sent
- 17th Conference of the Commonwealth Minister of Education. Vice-Chancellor's Conference June 15-17, 2009, Kuala Lumpur, Malaysia. Request for funding by VC, FJWU, Rawalpindi
- Comments on Revised Draft Disciplines on Domestic Regulations, Letter from Joint Secretary, Ministry of Commerce (WTO Wing)
- D-8 Experts Working Group Meeting Scheduled in Nigeria On 7-8 April, 2009
- Withdrawal of General Declaration in Pakistan's accession to the Convention on elimination of all forms of Discrimination against women
- Placement of Chinese Volunteer Language Teachers to Pakistan

- Grant of Visa to Ms. Asha Singh Kanwar to attend the 8th Meeting of CEMCA Advisory Council organized by Allama Iqbal Open University, Islamabad on 2-12-2008

Curriculum Revision

Government of Pakistan has appointed Higher Education Commission is the competent authority for the supervision of curricula and textbooks beyond class XII. HEC is entrusted to maintain the standards of education in keeping with the nation's changing the social and economic needs which are compatible with the basic national ideology. The aim is to ascend from general education to more purposeful agro-technical education. The Curriculum Section guides all degree colleges, universities and other institutions of higher learning in designing curricula regarding Basic Sciences, Social Sciences, Humanities along with Engineering and Technology. It also guides institutions in good governance and management. Educational programmes are thus designed not only to meet the needs of the employment market but to promote the study of basic and applied science in every field of national and international importance. To keep our students abreast with the global changes and the research carried out in the field, the curricula of the universities/degree awarding institutions are constantly revised.

Curriculum Development/Revision is an organized and systematic process. It involves a number of steps which include:

- Constitution of National Curriculum Revision Committee (NCRC)
- Assessment / Analysis of the existing Curriculum
- NCRC meeting-I: Draft Preparation
- Appraisal of the First Draft
- NCRC meeting-II: Finalization of Draft
- Implementation & Monitoring

Major Activities

All the curricula were revised by keeping in view the international standard of four-year degree programme, latest achievements in the field of social, basic and applied sciences and market demand. Following curricula were revised during 2008-09

1. Arabic	BS (4-year)
2. Biochemistry	BS (4-year)
3. Biotechnology	BS (4-year)
4. Computer Science	BS (4-year)
5. Computer System Engg.	BS (4-year)
6. Environmental Science	BS (4-year)
7. Geography	BS (4-year)
8. Geology	BS (4-year)
9. Health and Physical Education	BS (4-year)
10. Information Technology	BS (4-year)
11. Library Science	BS (4-year)
12. Psychology	BS (4-year)
13. Public Administration	BS (4-year)
14. Social Work	BS (4-year)
15. Sociology	BS (4-year)
16. Software Engineering	BS (4-year)
17. Telecommunication System	BS (4-year)
18. Urdu	BS (4-year)

- Roadmap for Business Education was finalized and circulated to Public and Private sector universities and degree awarding institutions of the country for adoption/implementation.
- A total of 44 national curriculum revision committee (NCRC) meetings in various disciplines were held.
- Thirty curricula in the disciplines of Engineering, Basic and Social Sciences revised during 2007-08 were sent to all public and private universities and degree awarding institutes of the country.

Social Sciences and Humanities Research Council of Pakistan

Thematic Research Grant Programme

Social Sciences and Humanities Research Council of Pakistan (SSHRCP), Higher Education Commission Pakistan has allocated Rs.30 million for Thematic Research Grant Programme, which is especially designed to address the contemporary issues of the country. Following themes have been selected:

1. Ethnicity, Social cohesion and Political integration
2. Family Transition, Technology and Social Change
3. Economics of Extremism and Violence

HEC Recognized Journals

(Social Sciences, Arts, Humanities and Business Education)

The Higher Education Commission has been endeavouring to raise the quality of research in Pakistan to international level. Research journals are the excellent tool to enhance research capabilities. As such it has been decided to approve those research journals which meet the HEC criteria for recognized journals. Different lists have been approved for different purposes and different timeframes and are applicable only within the given framework. All Social Sciences Journals have been classified in different categories (W, X, Y, Z) as per fulfilment of the criteria. HEC has phrased the following definition of 'HEC Recognized Journal/Journal of International repute'. "A journal published regularly, having diverse editorial/advisory board, peer reviewed by at least two reviewers (including one international) and abstracted/indexed internationally."

Following research journals have been recognized by HEC in 'Z' category in the year 2008-09:

HEC Recognized Journals

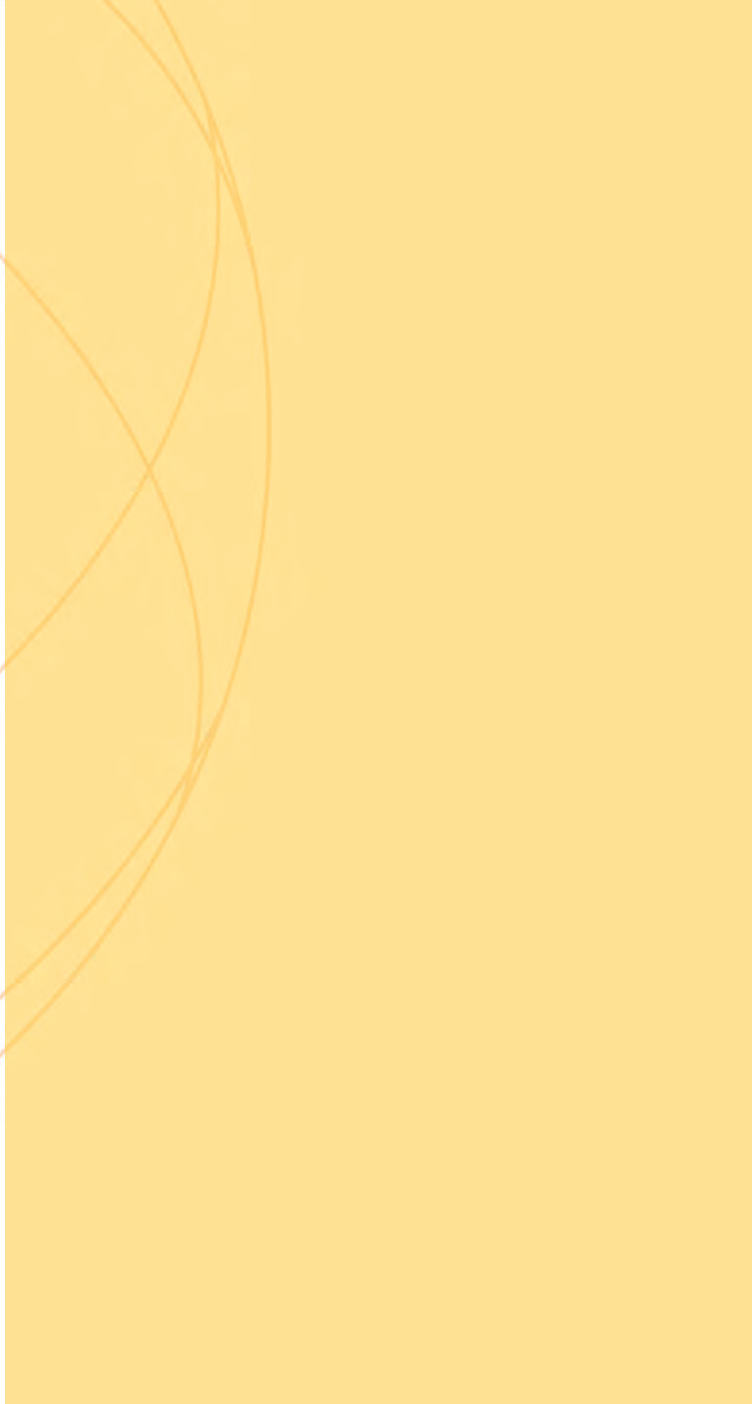
S. No.	Journal Name
1	Journal of Educational Research, The Islamia University of Bahawalpur
2	Pakistan Journal of Education, Allama Iqbal Open University, Islamabad
3	Pakistan Journal of Special Education, University of Karachi, Karachi
4	The Shield, University of Sindh, Jamshoro
5	Maragalla Papers, National Defence University, Islamabad
6	NDU of Journal, National Defence University, Islamabad
7	Al Qalam, University of Punjab, Lahore
8	Fikr-o-Nazar, International Islamic University, Islamabad
9	Ma'arif-i-islami, Allam Iqbal Open University, Islamabad
10	Kashmir Journal of Language Research, University of AJKr, Muzaffarabad
11	Pakistan Journal of social Sciences (PJSS), Bahaidin Zakariya University, Multan
12	Journal of Research (Language & Islamic studies), Bahaidin Zakariya University, Multan
13	Journal of Social Sciences, GC University, Faisalabad
14	Journal of social Sceinces & Humanities, allama Iqbal Open University, Islamabad
15	Journal of social Sceinces & Humanities, University of Karachi, Karachi
16	NUML research Magazine, National University of Modern Languages, Karachi
17	Pashto, Pashto Acadamy, University of Peshawar
18	safeeneh, Orintal College, Lahore
19	Khoj, department of Punjabi, University of the Punjab, Lahore
20	Kalachi, Shah Abdul Latif Chair, University of Karachi, Karachi-75270

HEC Approved PhD Supervisors (Social Sciences, Arts, Humanities and Business Education)

The doctoral education primarily concentrates on appropriate research skills to undertake an independent inquiry. This goal imposes special responsibilities on PhD students' supervisors who must guide them to the productive lines of research and ethical conduct and buildup their professional career. The doctoral education in particular is advanced through highly personalized arrangements embodied in the direction provided by supervisor and the supervisory committee.

The specific objective of this programme is to identify well-qualified, experienced and active researchers and scholars among the faculty member of HEC recognized universities and degree awarding institutions as well as R&D organizations to act as PhD supervisor for doctoral students, especially those funded under various HEC scholarship programmes. The criteria have been approved by 'Committee on Development of Social Sciences and Humanities in Pakistan'. The approved PhD supervisors are selected in line with the Approved Eligibility Criteria. A total of 543 faculty members have been registered as HEC Approved PhD Supervisors in the subject fields.

Subject	Total Number of HEC Approved PhD Supervisors	Approved Supervisors (2008-09)
Mathematics/ Statistics	137	1
Management Sciences	65	4
Social Sciences	341	21
Total	543	26



Planning and Development



The Planning and Development Division of Higher Education Commission formulates, coordinates and implements plans in consultations with all concerned universities/institutions for the development of the universities and degree awarding institutions. The main focus in the planning of universities education in recent years is to provide necessary infrastructure required to impart quality education and research, and hence to revive knowledge based economy. While preparing the plan, HEC ensures its relevance to the country's economy. The Division's emphasis has been on the academic as well as infrastructure development of the universities.

The Division prepares strategic and visionary plan of the higher education institutions and prepares pre-feasibility/need assessment studies/projects proposals in respect of universities and other projects of higher education. It also prepares technical appraisal and evaluation of development projects, organizes and coordinates Departmental Development Working Party (DDWP) meetings for approval of the projects which cost less than Rs. 40 million of higher education institutions.

The Division also coordinates the approval of the projects costing more than Rs. 40 million by the competent forum i.e. Central Development Working Party (CDWP) and Executive Committee of the National Economic Council (ECNEC). The Division is also involved in co-ordination and integration of annual and five years plans of the universities, assessment of financial needs of the higher education institutions regarding their annual development needs, preparation of cash plans for the projects and release of funds.

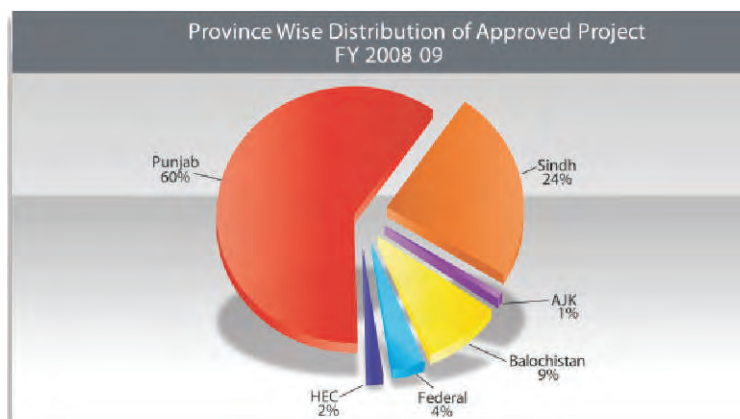
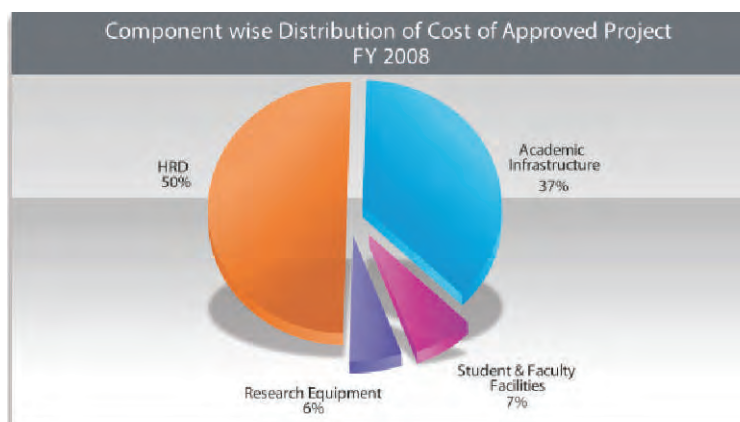
While evaluating the development needs of the universities, planning and development division focuses relevance to the national economy, need in the regional context, availability of critical mass

in the form of professionals, executing capacity of the university and regional/provincial distribution of development activities.

Development Schemes of Public Sector HEIs

During the current year 2008-09, 22 development projects of various universities and degree awarding institutions were approved with a total capital cost of the projects Rs. 2707.843 million, of which 17 projects were approved by DDWP and five by CDWP. A comparison of growth of development projects and volume of these projects are shown below.

Forum	No. of Projects Approved		Cost of the Approved Projects (million Rs.)	
	2008-09	2007-08	2008-09	2007-08
DDWP	17	12	471.409	1244.322
CDWP	06	04	2444.322	1563.521
ECNEC	01	00	832.105	000.000
TOTAL	24	16	3747.836	2807.843



Infrastructure Development

The following development projects were approved during the FY 2008-09 for the infrastructure development of the public sector universities.

- Establishment of new universities
- Khyber Medical University, Peshawar
Gillani Law College, Multan
- Islamia College University, Peshawar

- Establishment of new campuses
- Virtual University Campus at Badin Sindh
- Fatima Jinnah Women University Campus II Rawalpindi
- Shaheed Benazir Bhutto Campus University of Malakand at Sheringal Dir (Upper)
- Feasibility Study for the establishment of new University and campuses
- D.G. Khan University
- AJK Women University
- GCU Lahore campus at Kala Shah Kaku
- University of Health Sciences, Lahore Campus at Kala Shah Kaku.
- Shaheed Mohtrama Benazir Bhutto Medical University, Larkana Sindh

- A project was approved for provision of power supply in the newly established NUST campus at H-12, Islamabad

Faculty Development and HRD

- A development project costing Rs. 491.601 million for the faculty development of the University of Sindh Jamshoro was approved by the CDWP.
- Another development project titled Faculty Development Programme was approved for the Bahauddin Zakariya University (BZU) Multan at a cost of Rs. 932.105 million.
- Four development projects of the universities were approved with the major component of HRD and faculty development as per the policy of Government and HEC.

Facilities for Students and Faculty

In the year 2008-09 nine development project with the cost of Rs. 253.166 million were approved for provision of facilities such as student and faculty residences, library, transport, sports and IT facilities and student services centre, to the students and faculty of higher education institutions.

Research Equipment

Six projects were approved during the year, which have the components for provision of research equipment worth Rs. 221.532 million for R&D facilities in the public sector universities/DAIs through establishment and strengthening of departmental labs.

Quality Enhancement and Access to Education

- A development project for establishment of quality enhancement cell in the public sector universities was approved at a cost of Rs. 39.287 million for quality assurance at higher education institutions.

- A development project was approved for the establishment of six directorates of distance education in six public sector universities at a cost of Rs. 15.410 for the provision of quality education to private students.

Funding to Private Sector Higher Education Institutes

To enhance the access to education, HEC took a new initiative to support private institutions through public funding. Three private universities were declared eligible for public funding during year 2008-09.

- (i) Beaconhouse National University, Lahore
- (ii) Iqra University, Karachi
- (iii) Shaheed Zulfikar Ali Bhutto Institute of Science and Technology (SZABIST)

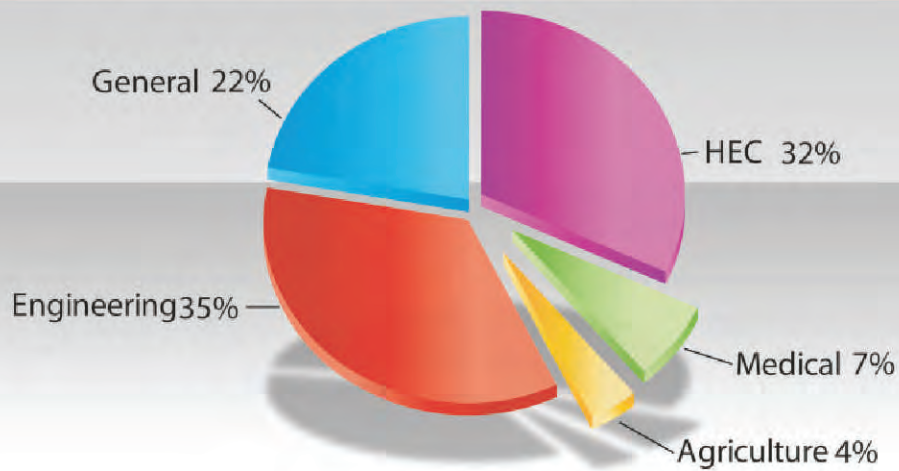
Financing for Quality Enhancement

During the fiscal year 2008-09, Rs. 16.221 billion was allocated to 278 new and on-going projects

of the universities /institutions. Additional Grant of Rs. 198.508 million was received from Government of Pakistan for development projects of Higher Education Institutions. The sector wise distribution of PSDP funds/releases are given below.

S. No.	Institution Category	Allocation of Development Funds (Rs. million)
		2008-09
1	Agriculture	679.906
2	Engineering	5867.619
3	General	3557.702
4	HEC	5182.204
5	Medical	1129.777
6	UESTP	000

Distribution of PSDP Allocation 2008 -09





Accreditation Attestation and Equivalence



As a Statutory function, the Higher Education Commission attests degrees and certificates issued by the institutions of higher education both in the public and private sector. The Commission also determines equivalence of the university degrees within jurisdiction of the individual universities and HEC. It also examines rules governing the qualification and degrees awarded to the students. HEC also verifies credentials of the institutions that claim affiliation or association with a foreign institution. Besides, the Commission also accredits or processes cases for grant of charter to the universities/institutions both in public and private sectors.

The Division has been divided into three cells:

i). Accreditation Cell

- (i) Establishment of new universities/institutions both in public and private sectors;
- (ii) Franchising of local institutions with foreign universities;
- (iii) Correspondence with the private chartered universities]

ii). Equivalence Cell

- (i) Equivalence of degrees/diplomas awarded by local and foreign universities;
- (ii) Equivalence of *deeni asnad*

iii). Attestation Cell

2. Institute of Southern Punjab, Multan (private sector)
3. Qarshi University, Lahore (private sector)

Eleven proposals for establishment of new universities/institutes were received during the period and are under process at different stages. The cases received in previous years also remained under process at different stages.

During the period, the HEC inspected and recognized following previously chartered universities:

1. National School of Public Policy (NSPP), Lahore
2. University of EAST, Hyderabad
3. Al-Hamd Islamic University, Quetta

Draft 'Bills/Ordinances' of nine universities/institutions were evaluated/vetted and forwarded to respective governments for further processing.

Steering Committee of Provincial Education Secretaries

For effective coordination between HEC and the Provincial Education Departments, the 8th meeting of Steering Committee of Provincial Education Secretaries was convened under chairmanship of Executive Director, HEC on July 08, 2008 at HEC Regional Centre, Lahore which considered many issues of mutual interest.

Accreditation Cell

Establishment of Universities/Institutes

During the fiscal year 2008-09, Abdul Wali Khan University, Mardan was granted Charter by Government of NWFP in public sector. In the current year, the HEC recommended the following institutions for grant of Charter in public and private sectors:

1. PARC Institute of Advanced Studies in Agriculture (PIASA), Islamabad (public sector)

Franchising of Foreign Institutions

Six cases for collaborative arrangement of local institutions with foreign universities were received and are under process. The office formulated/drafted 'Criteria/Guidelines for Collaboration of Foreign Universities with local Institutions' and after approval of the competent authority the guidelines have been forwarded to stakeholders for comments. Additional guidelines for opening/operation of foreign campuses of local private universities were devised and approved.

Further, the Accreditation Cell responded to approximately 1400 queries received from the students, parents and general public with regard to the queries on status/operation of chartered and non-chartered Universities/Degree Awarding Institutions of Pakistan and AJK. An equal number of queries were responded through e-mail.

Equivalence Cell

In accordance with provisions of section 10 (1-o) of HEC Ordinance No. LIII of 2002, following cases of equivalence of foreign, local degrees and deeni asnad were received and processed during the fiscal year:

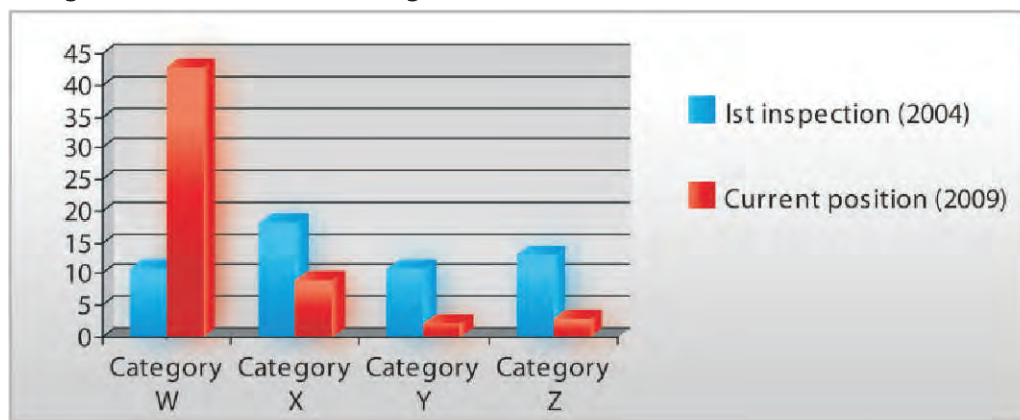
Month	Cases Processed	Amount (Rs.)
July-2008	577	81,620.00
August-2008	585	72,600.00
September-2008	515	62,400.00
October-2008	585	65,400.00
November-2008	805	72,900.00
December-2008	559	259,000.00
January-2009	578	328,400.00
February-2009	573	259,700.00
March-2009	559	270,500.00
April-2009	590	270,400.00
May-2009	651	253,200.00
June-2009	584	268,600.00
Total	7161	2,264,720.00

Operation of Private Universities

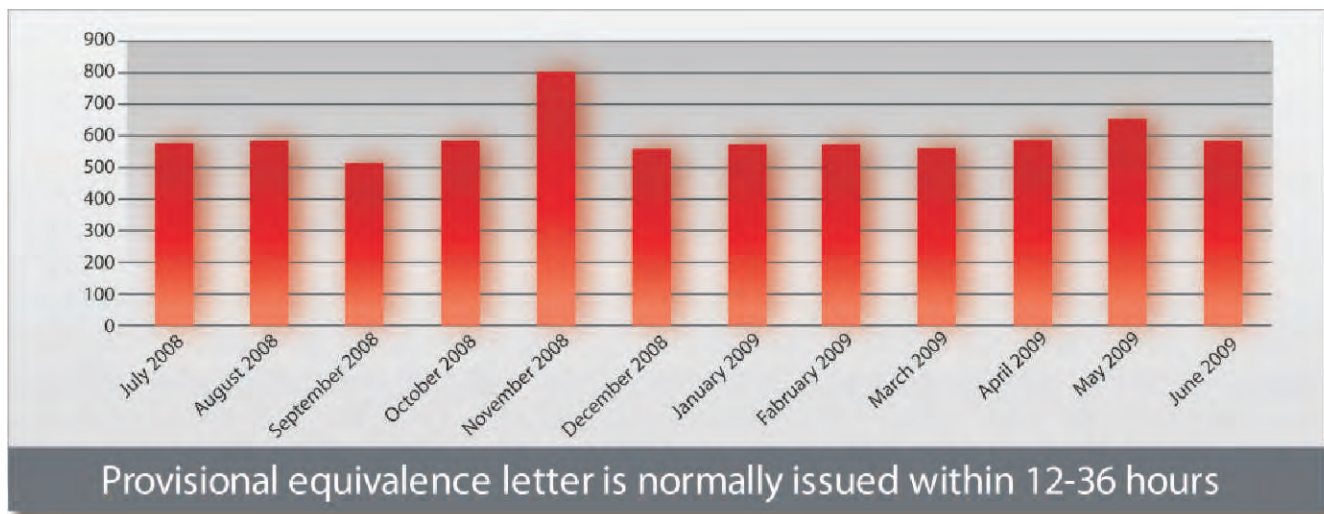
The office kept vigilance over the private universities/institutions in relation to meeting Criteria requirements. As a result many universities were upgraded into higher categories. A comparative statement of universities/institutions vis-à-vis first inspection is as under:

Category	Position after 1 st Inspection	Present Position	Difference
Category 'W'	11	43	32
Category 'X'	18	09	-09
Category 'Y'	11	02	- 09
Category 'Z'	13	03 (out of which 2 universities are non-operational)	- 10
Total	53	57 (four new universities were established during time)	

Graphical representation of upgradation of categories is shown in following chart:



The chart reflects that the number of universities/institutes in Category W has increased and number of universities/institutes in Category X, Y and Z is decreased, which shows substantial improvement by private universities.



Attestation Cell

The job of attestation of degrees/transcripts issued by chartered universities/degree awarding institutions was transferred by Ministry of Education in May, 2000. The job was assigned to

A&A Division in December, 2002. In the current year, 1,89,026 educational documents were attested. The verification/attestation is also being provided to more than eleven embassies including United Kingdom, United States of America, United Arab Emirates, Kingdom of Saudi Arabia, Australia, Oman, Sudan, Afghanistan, Kuwait, Iraq, Jordan etc.

S. No.	Embassies/High Commission	Number of Cases for Verification/Attestation
1.	Australian High Commission	61
2.	British High Commission	973
3.	Saudi Cultural Attaché office in Pakistan	2736
4.	Swedish Universities	18400



Statistics



Access to reliable statistical data is essential for good planning and policy decisions. Keeping in view the increasing day to day demand for reliable data by National and International Researchers, Planners and Policy Makers about Higher Education Statistics, Statistical Unit was established at HEC in September 2004, to access the data requirements, plan, collect, compile and analyze information about Universities and Degree Awarding Institutions (DAIs) etc, so as to make it a major source of information for the Researchers, Planners and Policy Makers.

Number of Universities/Degree Awarding Institutions in Pakistan

There were only two universities at the time of creation of Pakistan in 1947, namely University of the Punjab and University of Sindh. The trend of increase in number of Public and Private sector universities and DAIs is shown in Fig. 1. One private sector and one public sector University were also established during year 2008-09. Detail is given in Table 1.

Fig 1

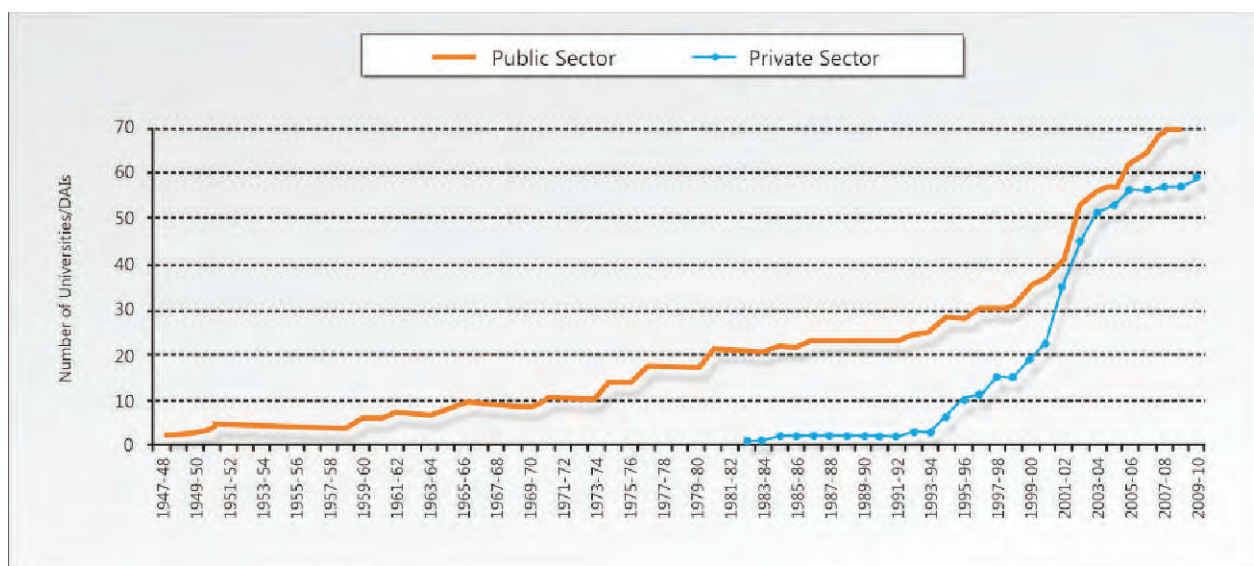


Table 1: New Universities/DAI established during Financial Year 2008-09.

Sr No	Name	University/DAI	Sector
1	Mirpur University of Science & Technology	University	Public
2	Al-Hamd Islamic University Quetta	University	Private

Enrolment by Gender

Enrolment in Higher Education Institutions

Enrolment at Universities/Degree Awarding Institution (excluding affiliated colleges) was 276274, 331745, 423236, 471964, 521473, 640060, 741095 and 803507 students during

the years 2001-02, 2002-03, 2003-04, 2004-05, 2005-06, 2006-07, 2007-08 and 2008-09 respectively, Fig 2. The increase in enrollment both for male and female students was consistent over the years. There was 168.48 percent increase in the total enrolments of students in the

universities and DAIs over year 2001-02. The ratio between Male and Female students showed a slight change in favour of female.

Enrolment by Level of Degree

Enrolment by level of education is shown in Fig 3 and by qualification and gender is given in Table

2. There has been decrease in the PhD enrolment during year 2004-05 as compared to year 2003-04. This was the direct impact of pre-admission conditions implemented by Universities on the guidelines provided by HEC for the improvement of PhDs produced.

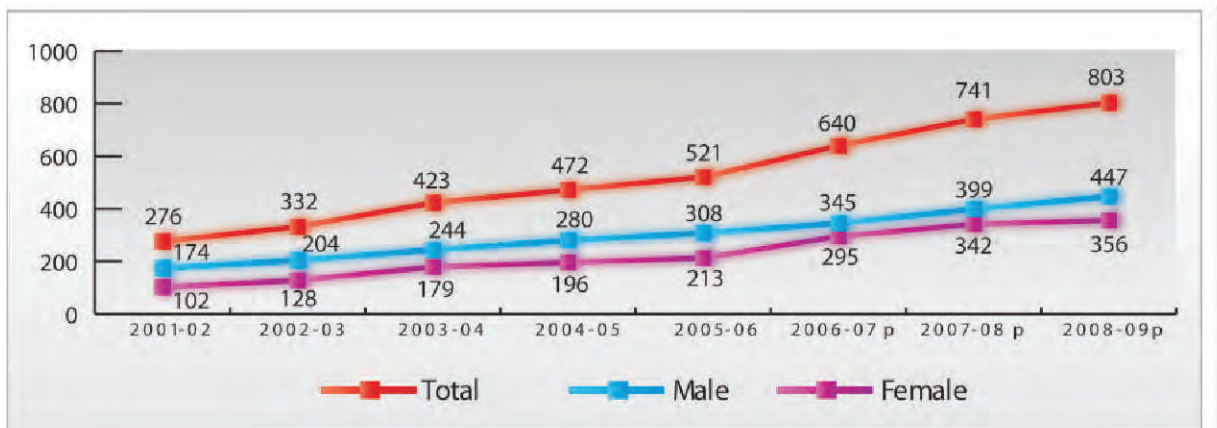


Fig. 2: Student Enrollment at University (Campus + Constituent Colleges) during Period 2001-09.

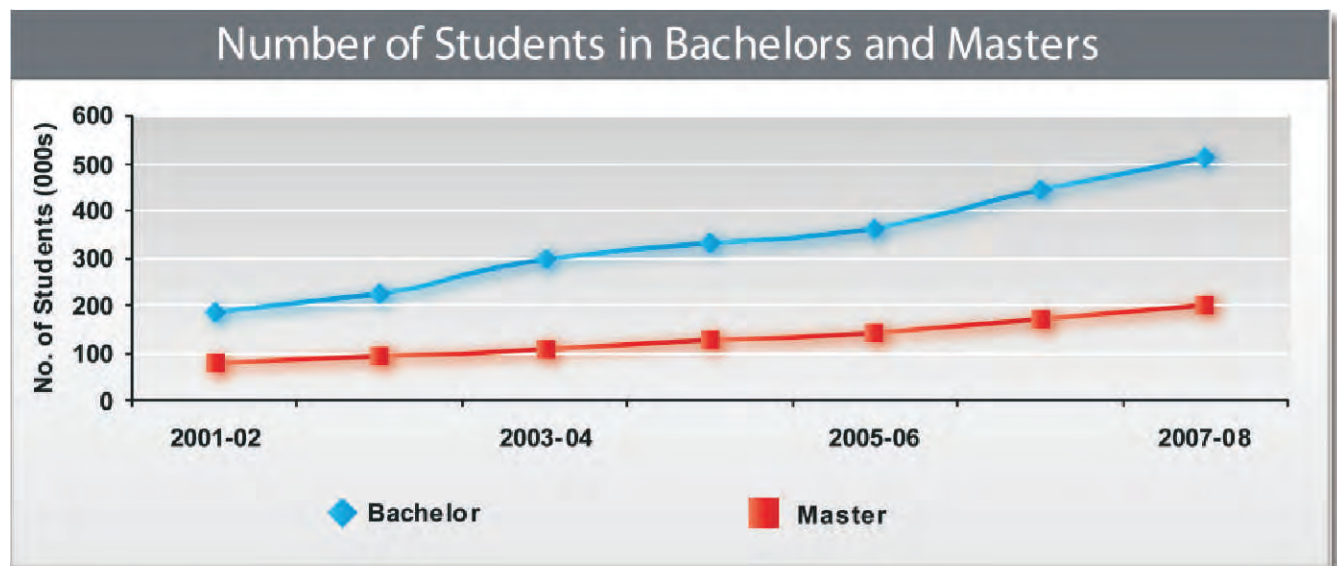


Fig 3. Number of Students Enrolled for Different Level of Degree over the Years.

Number of Students in M.Phil and Ph.D

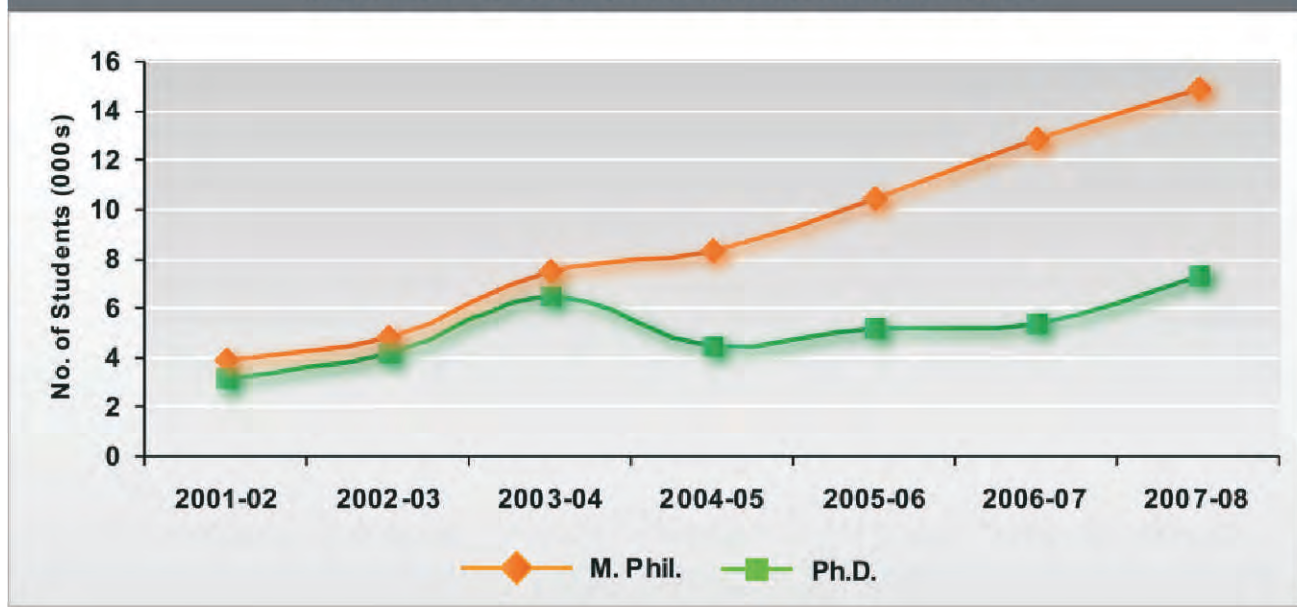


Fig 3. Number of Students Enrolled for Different Level of Degree over the Years.

Table 2: Gender wise Enrolment at Universities/DAIs (including Constituent Colleges) by Level of Degree during the Period 2001-08.

Level of Degree	2001-02		2002-03		2003-04		2004-05	
	M	F	M	F	M	F	M	F
Bachelors	117827	68654	137695	86595	167072	128640	190996	138937
Master	48255	30274	56714	37810	64879	43788	73167	51729
MPhil	2556	1315	3150	1692	4708	2746	6016	2340
PhD	2435	689	3122	1016	4662	1810	3596	847
PGD	3431	838	2998	953	3192	1739	2634	1702
Total	174504	101770	203679	128066	244513	178723	276409	195555

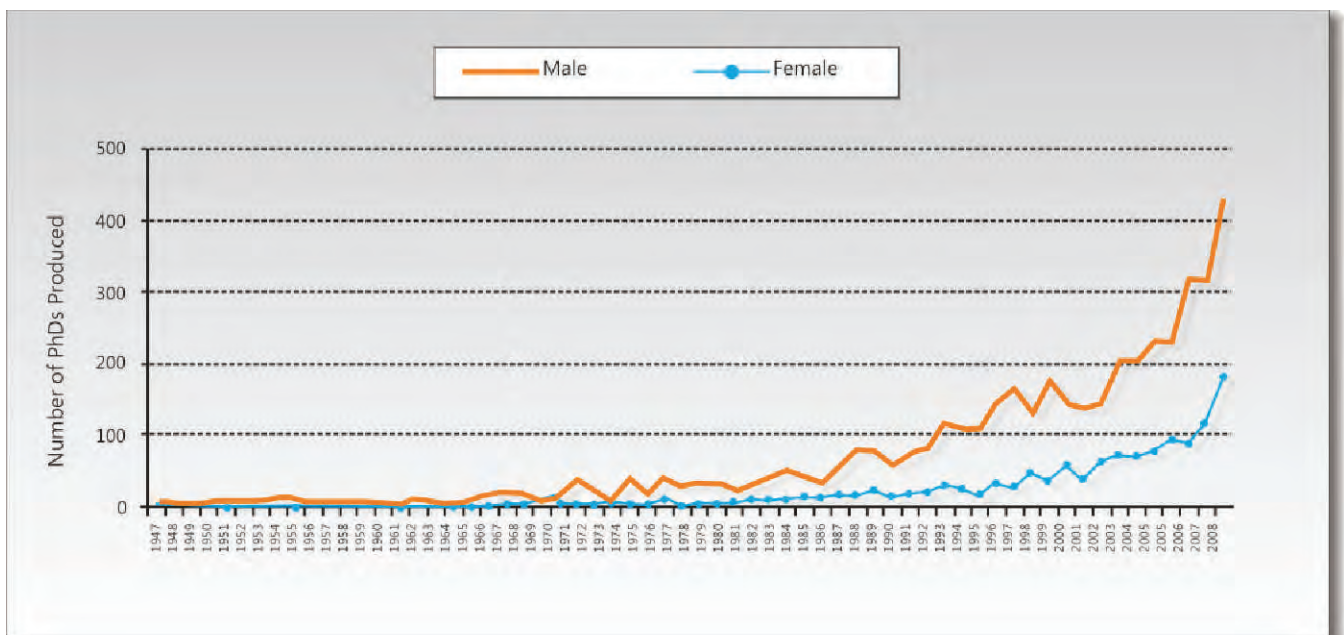
Level of Degree	2005-06		2006-07 p		2007-08 p	
	M	F	M	F	M	F
Bachelors	210293	149390	236320	206227	272839	238478
Master	84445	56472	92840	80046	106874	93264
MPhil	6476	3954	7648	5176	8864	5995
PhD	3741	1398	3993	1352	5469	1853
PGD	3521	1783	4263	2196	4921	2535
Total	308476	212997	345064	294997	398966	342125

Pakistan Research Repository (PRR)

PhDs Produced by Pakistani Universities

Considering the importance and demand by the Researchers and Faculty members of the Universities, regarding information about research work under taken by the PhD Scholars at Pakistani Universities. HEC with the full cooperation of universities has collected and compiled information about PhD degrees awarded since 1947. This directory will provide information about the Name of Scholar, Subject, Title, Year of Award of degree, Name of Supervisor and Name of the Institution. It is a comprehensive document compiled with an objective to provide relevant

information about research which was carried out during 1947-2008 in Pakistan. The directory will be useful for all stake holders who are directly or indirectly involved in research and development. Title information is going to help new scholars and supervisors in finding new potential area for research and reference material. It will also lead to get first hand knowledge about documented sources and undocumented sources (i.e. experts in the field). The people who are involved in long term/short term planning in research and development will also get related indicators from this directory. Plagiarism menace can also be curbed as the number of chances of reproduction of same information will significantly curtail.



Note: Year wise breakup of information is mentioned in Annex-I

Fig 4: Number of PhD Produced by Pakistani Universities over the Years.

Discipline Wise Distribution of PhDs Produced

Fig 5:

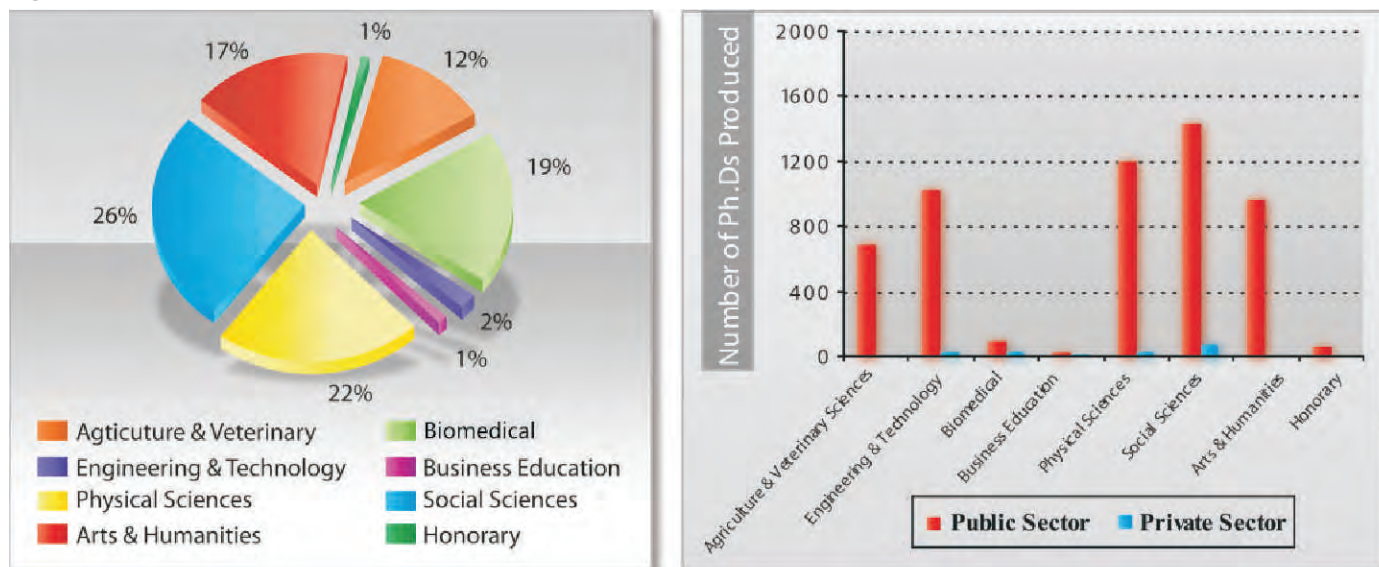


Table 3:

Discipline	Public		Private		Total
	M	F	M	F	
Agriculture and Veterinary Sciences	646	42			688
Biological and Medical Sciences	647	387	16	9	1059
Engineering and Technology	89	4	19	2	114
Business Education	25	1	14	1	41
Physical Sciences	890	310	11	8	1219
Social Sciences	1135	308	49	20	1512
Arts and Humanities	781	189	4	1	975
Honorary	54	4			58
Total	4267	1245	113	41	5666

Note: Subject wise Breakup of information is mentioned in Annex-II

Discipline wise distribution of PhD graduates produced by Pakistani Universities is given in Fig 5 Table 3.

The broader spectrum of Figure 5 shows that the maximum number of PhD graduates produced in the discipline of Social Sciences whereas the highest female ratio (more than 30 percent) is in Biological and Medical Sciences which is also encouraging.

On the other hand the lowest PhD graduates produced by the Discipline of Business Education and

Engineering and Technology which shows that more concentrated efforts are required in this area of specialization as technology transfer is a key issue in modern economies. Furthermore there is a long tradition of considering PhD graduates as vectors of Technology transfer so collaboration among Industry and Science and Technology would be an effective way of diffusing the latest techniques of Science and Engineering in the industry.

Province Wise Distribution of PhDs Produced

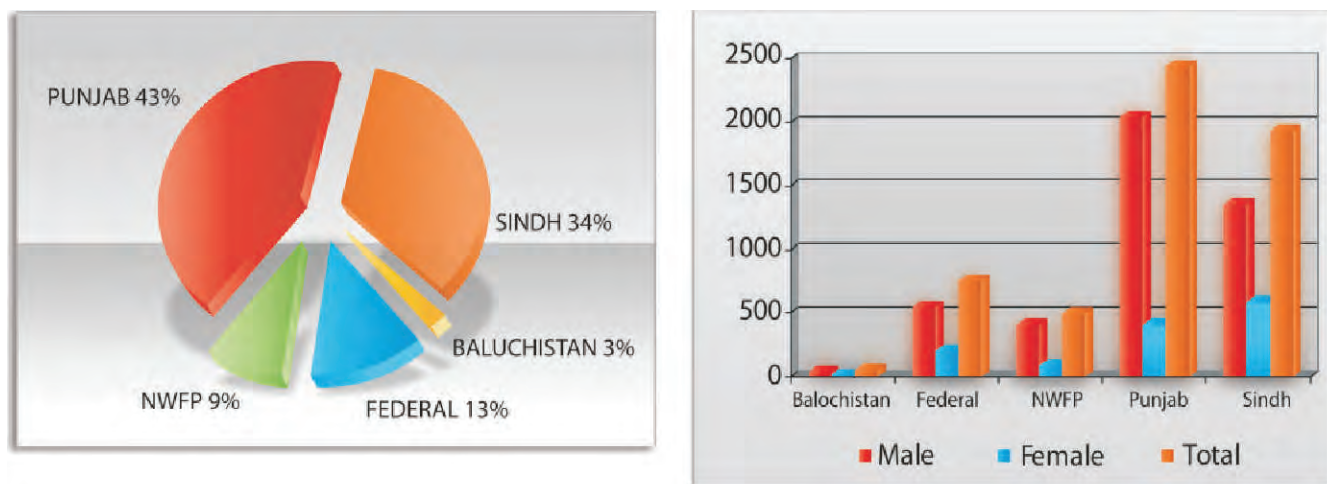


Fig 6: Provincially Gender wise and Sector wise distribution of PhD graduates

Table 4:

Province	Public		Private		Total
	M	F	M	F	
Baluchistan	35	10	0	0	45
Federal	546	201	3	0	750
NWFP	379	85	24	4	492
Punjab	2030	398	10	7	2445
Sindh	1277	551	76	30	1934
Total	4267	1245	113	41	5666

Note: University wise breakup of information is mentioned in Annex-III

Fig 6 shows province wise distribution of PhD graduates produced by Pakistani Universities. Overall the highest contribution is of the province of Punjab in Public sector, whereas the highest private sector contribution is of the province of Sindh.

Faculty

Number PhD and Non PhD full time faculty members in the public sector universities funded by HEC over the years are given in the Table 5. Data shows that ratio of PhD faculty to Non PhD faculty has decreased with the increase in number of Full Time Faculty members.

Table: 5. PhD and Non PhD Full Time Faculty in Public Sector Universities/DAIs Funded by HEC

Year	Faculty			%age of PhD Faculty
	PhD	Non-PhD	Total	
2001-02	2,095	5,144	7,239	28.9
2002-03	2,281	5,559	7,840	29.1
2003-04	2,579	7,007	9,586	26.9
2004-05	2,482	7,853	10,335	24.0
2005-06	2,686	9,192	11,878	22.6
2006-07	3,312	10,691	13,856	23.9
2007-08	3,483	11,616	15,099	23.06
2008-09	3586	12860	16446	21.80

Finances

Funds provided by the Higher Education Commission to the public sector universities for Recurring and Development expenditure are given in **Table 6** and trends in **Fig. 7**

Table 6: Funds provided by the Higher Education Commission to the Public Sector Universities for Non-Development and Development Expenditure

	2001-02	2002-03	2003-04	2004-05	2005-06
Recurring Budget	2946.914	3443.393	5304.647	6995.608	10493.412
Recurring Released	2946.914	3443.393	5304.647	6995.608	10493.412
Development Budget	423.927	4265.009	4968.450	8940.076	10890.877
Released Development	423.927	4265.009	4968.450	8940.076	10890.877
Total	3370.841	7708.402	10273.09	15935.68	21384.28

	2006-07	2007-08	2008-09
Recurring Budget	14332.521	15766.425	18000.00
Recurring Released	14332.521	12536.498	15766.425
Development Budget	14409.156	18000	16221.9
Released Development	14409.156	15390.455	16221.9
Total	28741.67	27926.95	31988.32

Fig. 7

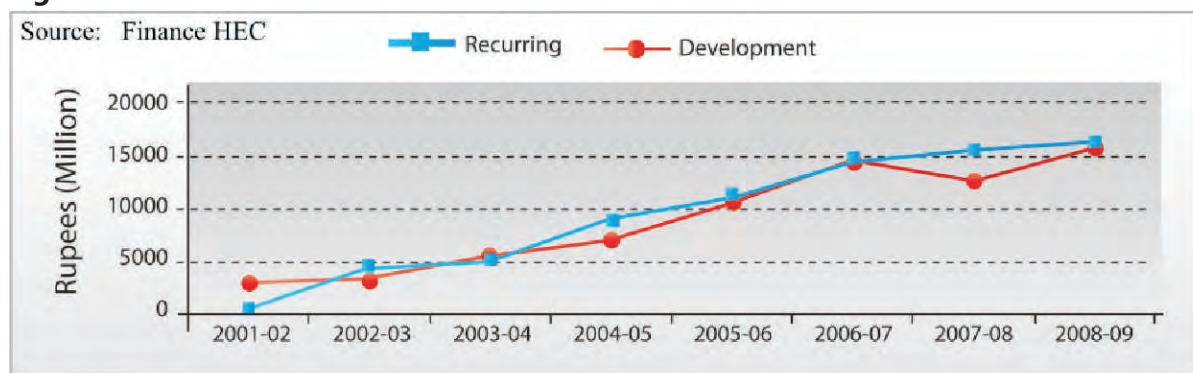


Fig 7: Funds Provided by the Higher Education Commission to the Public Sector Universities for Recurring and Development Expenditure for the Period July 2001 to June 2009.

PhDs Produced Over the Years

Year	Public		Private		Total
	M	F	M	F	
1930	1	0	0	0	1
1931	1	0	0	0	1
1935	1	0	0	0	1
1937	1	0	0	0	1
1939	3	0	0	0	3
1940	0	1	0	0	1
1941	2	0	0	0	2
1942	2	0	0	0	2
1943	6	0	0	0	6
1944	2	0	0	0	2
1945	1	0	0	0	1
1946	4	0	0	0	4
1947	4	0	0	0	4
1948	1	0	0	0	1
1949	2	0	0	0	2
1950	2	0	0	0	2
1951	0	1	0	0	1
1952	1	0	0	0	1
1953	4	0	0	0	4
1954	8	0	0	0	8
1955	8	1	0	0	9
1956	7	0	0	0	7
1957	5	0	0	0	5
1958	5	0	0	0	5
1959	5	0	0	0	5
1960	2	0	0	0	2
1961	3	1	0	0	4
1962	7	0	0	0	7
1963	7	0			7
1964	4	2	0	0	6
1965	10	1	0	0	11
1966	18	1	0	0	19
1967	20	3	0	0	23
1968	17	3	0	0	20
1969	7	0	0	0	7
1970	15	4	0	0	19
1971	37	3	0	0	40
1972	26	3	0	0	29
1973	11	6	0	0	17
1974	38	3	0	0	41

Year	Public		Private		Total
	M	F	M	F	
1975	17	3	0	0	20
1976	40	8	0	0	48
1977	28	2	0	0	30
1978	33	3	0	0	36
1979	34	5	0	0	39
1980	22	6	0	0	28
1981	31	12	0	0	43
1982	40	8	0	0	48
1983	51	9	0	0	60
1984	42	11	0	0	53
1985	32	12	0	0	44
1986	57	15	0	0	72
1987	79	14	0	0	93
1988	77	23	0	0	100
1989	57	14	0	0	71
1990	74	15	0	0	89
1991	79	20	0	0	99
1992	111	28	0	0	139
1993	106	25	0	0	131
1994	107	18	0	0	125
1995	145	33	0	0	178
1996	163	28	0	0	191
1997	124	46	1	0	171
1998	176	35	0	1	212
1999	139	57	4	1	201
2000	135	36	3	2	176
2001	140	61	2	1	204
2002	193	68	9	4	274
2003	188	65	14	5	272
2004	224	77	6	2	309
2005	216	91	16	3	326
2006	305	86	13	4	408
2007	297	115	19	1	432
2008	407	163	26	17	613
	4267	1245	113	41	5666

PhDs Produced by Discipline

Discipline	Standard Subjects	Subject	Public		Private		Total
			Male	Female	Male	Female	
Engineering and Technology	Engineering and Technology	Chemical Engineering and Technology	6	1			
		Electronic Engineering			3		
		Architecture Engineering	1				
		Chemical And Materials Engineering	2				
		City and Regional Planning Engineering	2				
		Civil Engineering	7				
		Communication Engineering			1		
		Computer Engineering	1	1	1		
		Computer Software Engineering	0	1			
		Computer System Engineering	1		4		
		Electrical Engineering	21				
		Electronic Engineering	1		4	2	114
		Environmental Engineering	2				
		Hydraulics and Irrigation Engineering	3				
		Material Engineering	1		1		
		Mechanical Engineering	9		2		
		Metallurgical Engineering	2				
		Nuclear Engineering	11				
		Petroleum Engineering	1				
		Engineering Sciences	1		3		
		Structural Engineering	3				
		Engineering System Medicine	1				
		Telecommunication Engineering	2	1			
Water Resources Engineering	3						
Mechanical Engineering	1						
		Total	89	4	19	2	

Discipline	Standard Subjects	Subject	Public		Private		Total
			Male	Female	Male	Female	
Social Sciences	Anthropology	Anthropology	1				
	Archaeology	Archaeology	4	1			
	Geography	Geography	16	5			
	History	History	75	17			1512
	International Relations	International Relations	17	11	1	2	
	Islamic Studies	Islamic Studies	456	44			
	Law	Law	14				

Discipline	Standard Subjects	Subject	Public		Private		Total	
			Male	Female	Male	Female		
	Library and Information Sciences	Library And Information Sciences	4	3				
	Philosophy	Philosophy	45	12	4	1		
	Political Science	Political Science	67	18	1	1		
	Psychology	Psychology	30	69	2	3		
	Public administration	Public Administration	15	3				
	Sociology	Sociology	45	25	7	1		
	Studies	Iqbal Studies	Iqbal Studies	16	6	1		
		Pakistan Studies	Pakistan Studies	19	7			
		Social and Cultural Studies	Social and Cultural Studies		1			
		American Study	American Study	3				
		Area Study	Area Study	55	7			
		Asian Civilizations Study	Asian Civilizations Study	5	4			
		European Study	European Study	2	1			
	Economics	Economics	78	21	4	3		
Education	Education	167	52	29	9			
		Total	1134	308	49	20		
Arts and Humanities	Languages and Literature	Arabic	241	30				
		Balochi	1	1				
		Bengali	1					
		Brahvi	1					
		Kashmiryat	1	1				
		Pashto	15	3				
		Persian	45	13				
		Punjabi	32	12				
		Russian	0	1				
		Saraiki	1				975	
		Sindhi	52	13				
	Urdu	335	90	3	1			
	English	21	12					
	Communication Mass	Communication Mass	32	11				
Education Health and Physical	Education Health and Physical		1					
Fine Arts	Fine Arts	2	1					
Humanities	Humanities			1				
Journalism	Journalism	1						
		Total	781	189	4	1		
Discipline	Standard Subjects	Subject	Public		Private		Total	
			Male	Female	Male	Female		
Agriculture and Veterinary Sciences	Agriculture	Agriculture	457	22			688	
	Food Technology	Food Science and Technology	31	4				
	Poultry and Veterinary	Poultry and Veterinary	151	16				

Discipline	Standard Subjects	Subject	Public		Private		Total
			Male	Female	Male	Female	
Business Education	Finance Management	Business Management Finance			1		41
	Marketing	Business Management, Marketing			1		
	Commerce	Commerce	7				
	Human Resource Development	Human Resource Development	3			1	
	Management Sciences	Management	15	1	12		
		Total	25	1	14	1	
Physical Sciences	Chemistry	Chemistry	546	260		2	1219
	Computer Science	Computer Science	13		6	1	
	Environmental and Earth Sciences	Earth Sciences	13	3	0	1	
	Geology	Geology	49	6			
	Mathematics	Mathematics	91	10	1	2	
	Mineralogy	Mineralogy	2				
	Physics	Physics	153	27			
	Science Materials	Science Materials	2				
	Statistics	Statistics	10	3	4	3	
Electronics	Electronics	10	1				
		Total	890	310	11	8	
Biological and Medical Sciences	Anatomy	Anatomy	1		5		1059
	Biochemistry	Biochemistry	45	49	1	3	
	Biological Sciences	Biological Sciences	101	68			
	Marine Biology	Marine Biology	12	11			
	Micro Biology and Molecular Genetics	Micro Biology and Molecular Genetics	58	61			
	Biotechnology	Biotechnology	4	2			
	Botany	Botany	179	75	0	1	
	Health Sciences	Health Sciences	27	3	5	2	
	Pharmacy	Pharmaceutics	44	14	3	2	
	Physiology	Physiology	6	8	2		
Zoology	Zoology	170	96		1		
		Total	647	387	16	9	
Honorary	Honorary	Honorary	54	4			58
		Total	54	4			

University Wise Distribution of PhD Graduates

S. No.	Province	Sector	University	Male	Female	Total	Provincial Total		
1	Balochistan	Public	University of Baluchistan, Quetta.	35	10	45	45		
2		Private	Foundation University, Islamabad	3	0	3	3		
3	Federal	Public	Allama Iqbal Open University, Islamabad	51	13	64			
4			Bahria University, Islamabad	2	6	8			
5			COMSATS Institute of Information Technology, Islamabad	3	0	3			
6			Federal Urdu University of Arts Sciences and Technology, Islamabad	6	3	9			
7			International Islamic University, Islamabad.	32	4	36	747		
8			National University of Modern Languages, Islamabad.	28	20	48			
9			Pakistan Institute of Engineering and Applied Sciences, Islamabad.	20	2	22			
10			Quaid-i-Azam University, Islamabad.	404	153	557			
11			NWFP	Private	City University of Science and Information Technology, Peshawar.	1	0	1	
12					Ghulam Ishaq Khan Institute of Engineering Sciences and Technology, Swabi.	11	1	12	27
13	Preston University, Kohat.	6			2	8			
14	Qurtaba University of Science and Information Technology, Peshawar.	6			0	6			
15	Public	Gomal University, D.I.Khan.		37	4	41			
16		NWFP Agriculture University, Peshawar.		52	2	54	465		
17		NWFP UET, Peshawar		4	0	4			
18		University of Peshawar, Peshawar.		286	80	366			
19	Punjab	Private	King Edward Medical University, Lahore	1	0	1			
20			Lahore University of Management Science, Lahore.	1	2	3	16		
21			National College of Business Administration and Economics, Lahore.	8	3	11			
22			University of Lahore, Lahore.	0	1	1			
23			Public	Bahauddin Zakariya University Multan	138	30	168	2429	
24		Government College University, Lahore.		27	5	32			
25		Islamia University, Bahawalpur.		111	15	126			
26		Lahore College for Women University, Lahore.		0	7	7			
27		National University of Science and Technology, Rawalpindi.		11	3	14			
28		University of Agriculture, Faisalabad.	595	52	647				

S. No.	Province	Sector	University	Male	Female	Total	Provincial Total			
29			University of Arid Agriculture, Rawalpindi.	86	21	107				
30			University of Education, Lahore	0	2	2				
31			University of Engineering and Technology, Lahore.	23	1	24				
32			University of Engineering and Technology, Taxila.	14	0	14				
33			University of Health Sciences, Lahore	2	2	4				
34			University of Sargodha, Sargodha.	6	0	6				
35			University of the Punjab , Lahore	1009	258	1267				
36			University of Veterinary and Animal Sciences, Lahore.	8	3	11				
38			Sindh	Private	Aga Khan University, Karachi.	13		5	18	
39					Baqai Medical University, Karachi.	3		2	5	
40	Hamdard University, Karachi.	52			17	69				
41	Jinnah University for Women Karachi	0			2	2				
42	Mohammad Ali Jinnah University	6			0	6				
43	Shaheed Zulfikar Ali Bhutto Institute of Sciences and Technology, Karachi.	2			0	2				
44	Zia-ud-Din Medical University, Karachi.	0			3	3				
45	Public	Mehran University of Engineering & Tech., Jamshoro.			10	1	11			
46		NED University of Engineering and Technology, Karachi.		3	1	4				
47		Quaid-e-Awam University of Engineering, Science and Technology, Nawabshah.		1	0	1				
48		Shah Abdul Latif University, Khairpur.		29	4	33				
49		Sindh Agriculture University, Tandojam.		37	2	39				
50		University of Karachi, Karachi.		774	467	1241				
51		University of Sindh, Jamshoro.		423	77	500				
			Total	4380	1286	5666				



Finance



The Finance Division has been entrusted the responsibilities of arranging recurring funds for universities/HEC programmes, managing payments/releasing funds for development and recurring expenditure as well as maintaining annual/quarterly accounts of the HEC. Annual assessment of recurring funds is carried out through inviting and examining budget proposals from all Federally funded universities/institutes/centres. The funds are allocated to universities and HEC programmes on need and performance basis.

The recommended allocations of recurring grant are submitted to the Finance Division, Government of Pakistan as New Item Statement (NIS) for incorporation in the Federal Government Budget. The approved allocations of recurring grants are, thereafter, processed and got released on quarterly basis from the Finance Division and AGPR, and released to universities after ensuring utilization of previously released funds.

The Division is also responsible for transfer of funds to the universities, for approved development projects as per PSDP. In addition, foreign exchange requirement for development and recurring expenditure for all the universities and HEC are also being managed by the Division.

To manage the increased quantum of work, ensuring efficient and effective financial control within HEC, and timely availability of financial data/information for higher management, the SAP-based Enterprise Resource Planning (ERP) solution has been deployed through M/s Siemens Pakistan Limited. SAP became functional in July 2008 and now all the financial transactions are processed and accounts are being maintained through SAP system.

Accounting procedure of HEC was vetted by the Office of Controller General Accounts (CGA) and the Office of the Auditor General of Pakistan (AGP). The Endowment Fund rules were prepared and approved by the Commission and further submitted to Finance Division GoP for

concurrence. The HEC financial rules were prepared and presented before the Commission, which were referred to the Budget and Finance Committee of the Commission for further consideration.

An amount of Rs. 640.689 million and Rs. 493.811 million was released against various programmes under Inter University Academics Activities (IUAA) and Promotion of Research (POR) respectively. In order to cope with the uncertain and emergent needs of the universities/ institutes/centres/HEC programmes, an amount of Rs. 493.049 million was released under "HEC-Universities Programme".

To ensure the retention of existing PhD faculty and attract the newly qualified people, an amount of Rs. 276.929 million was released under Tenure Track System to the different universities.

Budget of HEC Programmes

HEC Secretariat revised estimates for 2008-09 at Rs. 366.875 million and Budget Estimates for 2009-10 at Rs. 469.714 million were placed before the Finance Planning Committee and approved by the Commission.

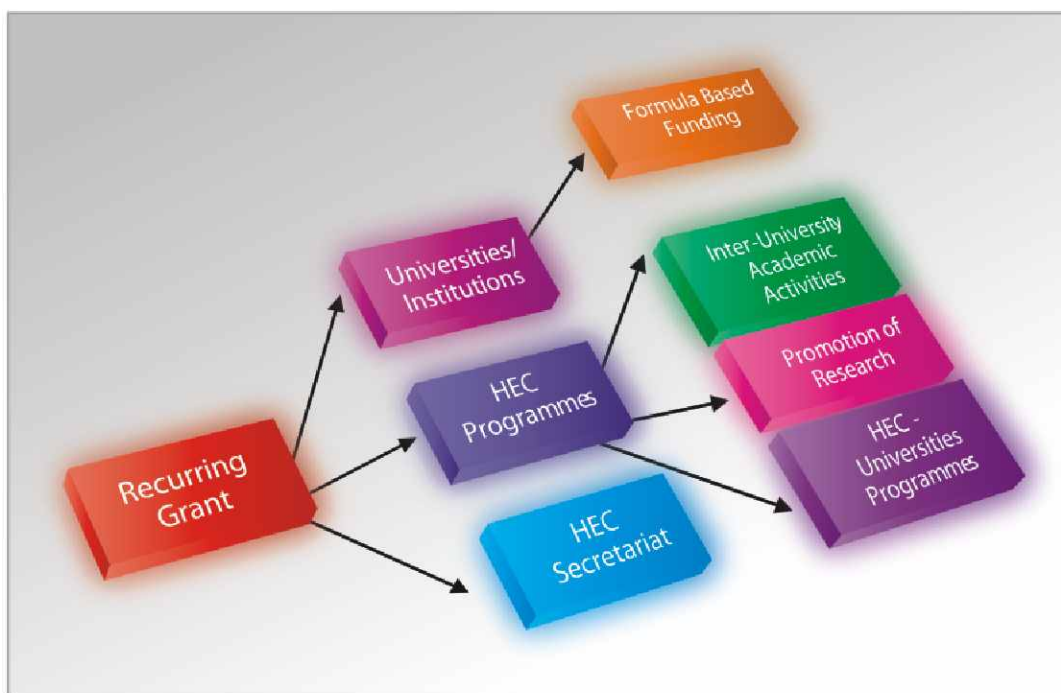
Allocation of Funds for HEC Programmes

HEC Programme	Budget Allocation Rs. in Million
Inter University Academic Activities	706.141
Promotion of Research	726.205
HEC, Universities' Programmes	440.425

Federal Funding of Recurring Grant

The financial year 2007-08 faced a difficult situation of financial constraints and the Government was compelled to retrench some funds out of the allocated grant while in 2008-09 against the agreed allocation of Rs. 15,766.425 million, the same was released.

Funding formula of allocation of recurring grant to universities/institutes/centres/HEC programmes:



Recurring grant is transferred to the universities/institutes/centres in quarterly installment after obtaining the utilization reports of previous releases. Summary of the recurring grant released in 2008-09 is appended below:

S. No.	Name of Institution	Annual Recurring Grant Released (2008-09) Rs. in Million
PUNJAB		
General Universities		
1	University of the Punjab, Lahore	892.500
2	Bahauddin Zakariya University, Multan	320.880
3	Islamia University, Bahawalpur	332.995
4	Fatima Jinnah Women University, Rawalpindi	102.592
5	Government College University, Lahore	109.530
6	Lahore College for Women University, Lahore	92.308
7	Government College University, Faisalabad	111.596
8	University of Sargodha, Sargodha	114.280
9	University of Education, Lahore	87.177
10	Virtual University of Pakistan, Lahore	86.619
11	University of Gujrat , Gujrat	50.000

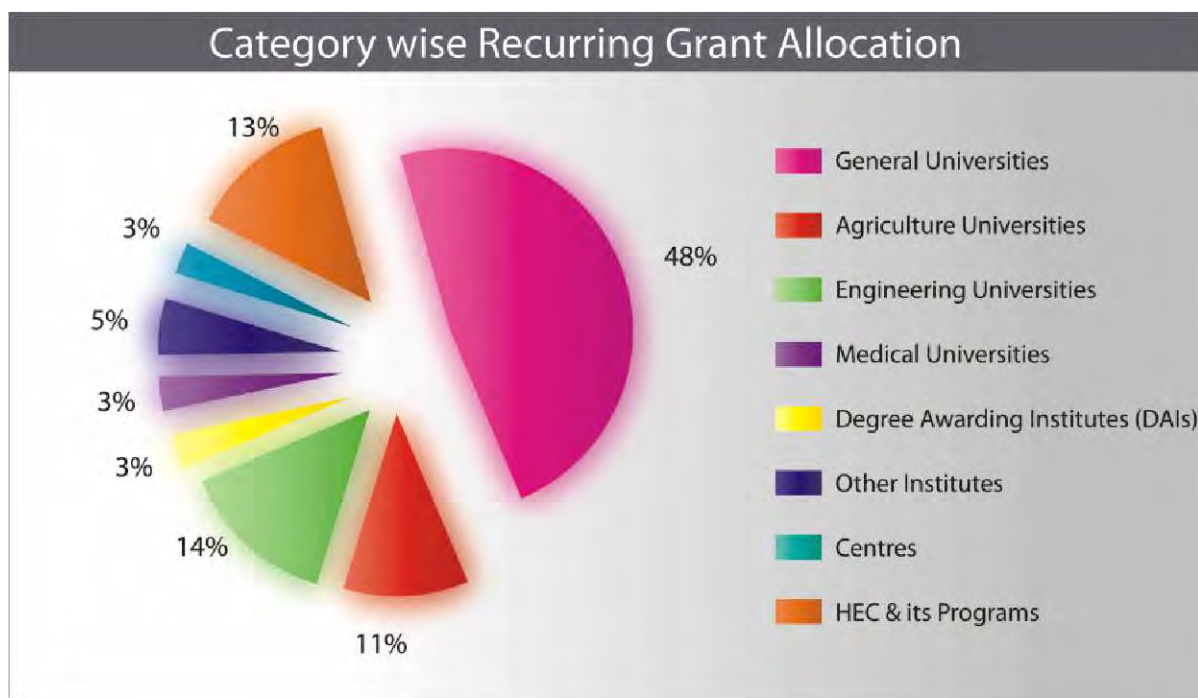
S. No.	Name of Institution	Annual Recurring Grant Released (2008-09) Rs. in Million
Agriculture Universities		
12	University of Agriculture, Faisalabad	620.390
13	University of Arid Agriculture, Rawalpindi	142.619
14	University of Veterinary and Animal Sciences, Lahore	86.844
Engineering Universities		
15	University of Engineering and Technology, Lahore	684.256
16	University of Engineering and Technology, Taxila	170.567
Medical Universities		
17	University of Health Sciences, Lahore	47.831
18	King Edwards Medical University, Lahore	50.000
Degree Awarding Institutions		
19	Kinnaird College for Women, Lahore	45.000
Other Institutes of Higher Learning		
20	Institute of Bio-Chemistry and Bio-Technology, Lahore	5.000
21	Institute of Clinical Psychology, Lahore	14.102
22	Water Management Research Centre, Faisalabad	11.829
23	Shaikh Zayed Islamic Centre, Lahore	13.916
24	Bahauddin Zakariya University Agriculture College, Multan	24.635
25	Bahauddin Zakariya University Engineering College, Multan	32.586
26	Seerat Chair, Islamia University, Bahawalpur	1.394
27	Dr. Salam Chair in Physics, Lahore	4.553
28	School of Biological Sciences, University of the Punjab, Lahore	58.200
29	School of Mathematical Sciences, Government College University, Lahore	31.500
30	Al-Khawarzmi Institute of Computer Sciences University of Engineering and Technology, Lahore	21.000
Centres of Higher Learning		
31	Centre of Excellence in Solid State Physics, Lahore	34.000
32	Centre of Excellence in Water Resources Engineering, UET Lahore	25.000
33	Centre of Excellence in Molecular Biology, Lahore	84.535
34	Area Study Centre for South Asia, Lahore	12.000
35	Pakistan Study Centre, University of the Punjab, Lahore	7.839
Sub-Total (i)		4530.073

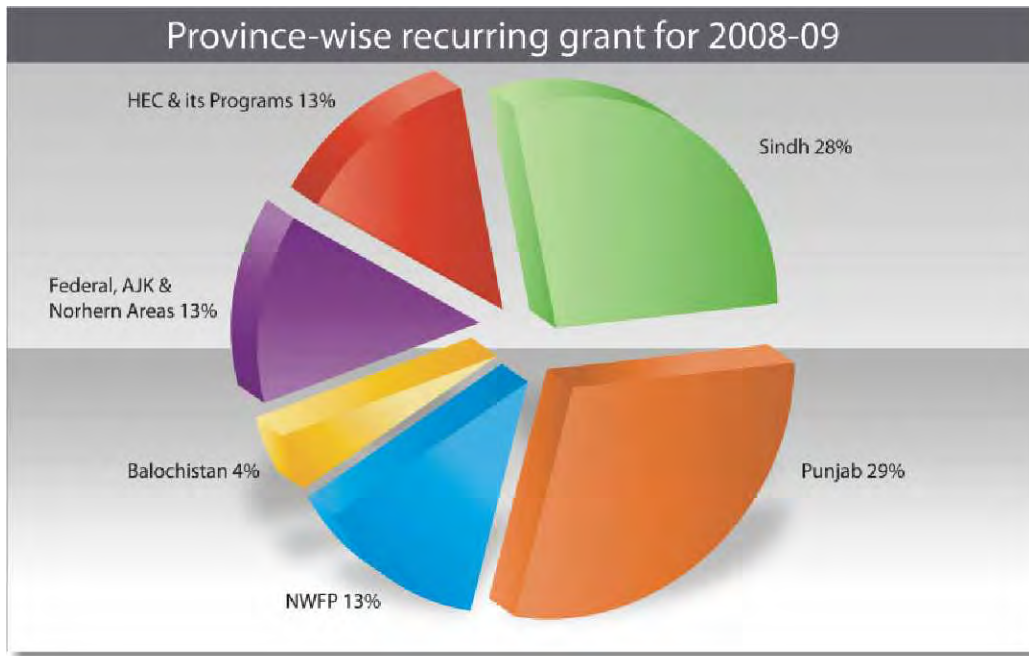
S. No.	Name of Institution	Annual Recurring Grant Released (2008-09) Rs. in Million
SINDH		
General Universities		
1	University of Karachi, Karachi	790.038
2	University of Sindh, Jamshoro	690.171
3	Shah Abdul Latif University, Khairpur	198.702
4	Federal Urdu University of Arts, Science and Technology, Karachi	234.880
Agriculture Universities		
5	Sindh Agriculture University, Tandojam	470.378
Engineering Universities		
6	NED University of Engineering and Technology, Karachi	414.681
7	Mehran University of Engineering and Technology, Jamshoro	422.217
8	Quaid-i-Awam University of Engineering, Science and Technology, Nawabshah	150.339
Medical Universities		
9	Liaquat University of Medical and Health Sciences, Jamshoro	231.197
10	Dow University of Health Sciences, Karachi	83.807
Degree Awarding Institutes		
11	Institute Business Administration, Karachi	63.281
12	Sukkur Institute of Business Administration, Sukkur	25.000
Other Institutes of Higher Learning		
13	Applied Economics Research Centre, University of Karachi	56.579
14	HEJ Research Institute of Chemistry, University of Karachi	188.762
15	Third World Centre for Science and Technology, University of Karachi	109.105
16	Dr. Panjwani Centre for Molecular Medicine and Drug Research, University of Karachi	36.752
17	Institute of Clinical Psychology, University of Karachi	17.193
18	Shaikh Zayed Islamic Centre, University of Karachi	14.270
19	Z. A. Bhutto Agriculture College, Dokri, Sindh Agriculture University, Tandojam	41.303
20	Shah Abdul Latif Bhitai Chair, University of Karachi	4.203
21	Seerat Chair, University of Karachi	1.174
22	Dr. A. Q. Khan Institute of Bio-Technology and Genetic Engineering, University of Karachi	33.594
23	Pakistan Marine Academy, Karachi	40.000

S. No.	Name of Institution	Annual Recurring Grant Released (2008-09) Rs. in Million
Centres of Higher Learning		
24	Centre of Excellence in Marine Biology, University of Karachi	25.000
25	Centre of Excellence in Analytical Chemistry, University of Sindh, Jamshoro	32.233
26	Centre of Excellence in Arts and Design, Mehran University of Engineering and Technology, Jamshoro	18.669
27	Area Study Centre for Europe, University of Karachi	12.186
28	Area Study Centre for Far East and South East Asia, University of Sindh, Jamshoro	14.175
29	Pakistan Study Centre, University of Karachi, Karachi	8.500
30	Pakistan Study Centre, University of Sindh, Jamshoro	9.080
Sub-Total (ii)		4437.469
NWFP		
General Universities		
1	University of Peshawar, Peshawar	647.546
2	Gomal University, D.I. Khan	304.486
3	Kohat University of Science and Technology, Kohat	67.662
4	University of Malakand, Chakdara	65.693
5	Hazara University, Mansehra	82.586
6	University of Science and Technology, Bannu	57.309
7	Frontier Women University, Peshawar	47.578
Agriculture Universities		
8	NWFP University of Agriculture, Peshawar	274.306
Engineering Universities		
9	NWFP University of Engineering and Technology, Peshawar	317.486
Medical Universities		
10	Khyber Medical University, Peshawar	35.000
Degree Awarding Institutions		
11	Institute of Management Sciences, Peshawar	36.740
Other Institutes of Higher Learning		
12	Scientific Instrumentation Centre, Peshawar	6.490
13	Shaikh Zayed Islamic Centre, Peshawar	13.810
Centres of Higher Learning		
14	Centre of Excellence in Geology, Peshawar	35.721
15	Centre of Excellence in Physical Chemistry, Peshawar	32.386

S. No.	Name of Institution	Annual Recurring Grant Released (2008-09) Rs. in Million
16	Area Study Centre for Central Asia, Peshawar	15.560
17	Pakistan Study Centre, University of Peshawar, Peshawar	12.000
Sub-Total (iii)		2052.359
BALUCHISTAN		
General Universities		
1	University of Balochistan, Quetta	330.584
2	Balochistan University of Information Technology and Management Sciences, Quetta	80.971
3	Sardar Bahadur Khan Women University, Quetta	35.000
Agriculture Universities		
4	Lasbela University of Agriculture, Water and Marine Sciences, Uthal	65.650
Engineering Universities		
5	Balochistan University of Engineering and Technology, Khuzdar	82.820
Centres of Higher Learning		
6	Centre of Excellence in Mineralogy, Quetta	15.000
7	Area Study Centre for Middle East and Arab Countries, Quetta	7.000
8	Pakistan Study Centre, University of Balochistan, Quetta	9.000
Sub-Total (iv)		626.025
FEDERAL / NORTHERN AREAS and AJK		
General Universities		
1	Quaid-i-Azam University, Islamabad	415.708
2	International Islamic University, Islamabad	325.607
3	National University of Modern Languages, Islamabad	152.287
4	Air University, Islamabad	50.000
5	Allama Iqbal Open University, Islamabad	250.000
6	University of AJK, Muzaffarabad	290.722
7	Karakorum International University, Gilgit	83.211
8	National Defence University, Islamabad	40.000
Degree Awarding Institutes		
9	COMSATS Institute of Information Technology, Islamabad	250.768
10	Institute of Space Technology, Islamabad	55.000
11	Pakistan Institute of Development Economics, Islamabad	45.000

S. No.	Name of Institution	Annual Recurring Grant Released (2008-09) Rs. in Million
Other Institutions of Higher Learning		
12	Chair on Quaid-i-Azam, Quaid-e-Azam University, Islamabad	1.000
13	Dawah Activities, International Islamic University, Islamabad	64.600
14	Iqbal International Institute of Research and Dialouge, IIU, Islamabad	20.000
Centres of Higher Learning		
15	Centre of Excellence in Psychology, Islamabad	18.000
16	Centre of Excellence in History and Culture, QAU, Islamabad	26.499
17	Centre of Excellence in Gender Studies, QAU, Islamabad	2.000
18	Area Study Centre for Africa, North and South America, QAU, Islamabad	11.058
19	Institute of Pakistan Studies, QAU, Islamabad	19.555
Sub-Total (v)		2121.015
Total (i + ii + iii + iv + v): [A]		13766.941
HEC Programmes		
1	HEC Secretariat	315.000
2	Inter University Academic Activities	706.141
3	Promotion of Research	726.205
4	HEC, Universities Programmes	252.138
Total: [B]		1999.484
Grand Total: [A + B]		15766.425





Trend of Per Student Spending of Recurring Grant

Due to financial crunch in 2007-08, universities grant was retrenched which resulted in the reduction of per student spending as shown below:

Spending Indicators	2006-07	2007-08	2008-09
Enrolment	263,414	316,278	333,966
Universities' Recurring Grant (Rs. in Million)	12,378.153	10,861.597	13,766.941
Grant per Student (Rs.)	46,991	34,342	41,223

Additional Financial Assistance to Universities

HEC provides an additional funding to the universities so that they may cope with emergent needs of laboratories, libraries, chemical/glassware and teaching aids etc. Detail of additional funds released to the universities in 2008-09 is as under:

Category	Amount (Rs. in Million)
University of Balochistan, Quetta	65.000
Karakorum International University, Gilgit	10.000
University of Malakand, Chakdara, Dir	15.000
University of Sindh, Jamshoro (Mirza Kalich Chair)	2.000
Total	92.000

Foreign Exchange Allocation

Foreign exchange to the tune of Rs. 927.643 million was allocated to 17 different universities/institutions to meet their foreign exchange requirements and Rs. 4, 650 million was remitted against various HEC scholarships programmes.

Tenure Track Funds Released to Universities

Funds released to universities/institutions during 2008-09 for payment of salaries to the faculty members appointed under Tenure Track System are given below:

S. No.	Name of University	No. of Faculty	Amount Released (Rs.) 2008-09
1	Government College University, Lahore	53	25,729,000
2	University of Baluchistan, Quetta	23	17,919,453
3	University of Azad Jammu and Kashmir, Muzaffarabad	8	4,263,197
4	COMSATS Institute of Information Technology, Islamabad	86	20,000,000
5	Kohat University of Science and Technology, Kohat	23	21,540,376
6	Bahauddin Zakariya University, Multan	8	5,348,375
7	University of Agriculture, Faisalabad	29	20,542,168
8	University of Health Sciences, Lahore	1	191,515
9	Hazara University, Mansehra	14	9,538,326
10	University of Veterinary and Animal Sciences, Lahore	15	12,830,117
11	International Islamic University, Islamabad	27	21,642,933
12	University of Sargodha, Sargodha	8	3,462,011
13	University of Punjab, Lahore	58	55,541,448
14	HEJ Research Institute of Chemistry, University of Karachi	5	5,816,256
15	Third World Centre for Chemical Sciences, University of Karachi	3	1,719,900
16	Dr. Panjwani Centre for Molecular Medicine and Drug Research, University of Karachi	4	2,029,200
17	Institute of Management Sciences, Peshawar	3	2,187,645
18	Centre of Excellence in Solid State Physics, University of the Punjab, Lahore.	3	3,640,932
19	Centre of Excellence in Molecular Biology, University of the Punjab, Lahore	2	3,922,728
20	University of Gujrat, Gujrat	2	559,040
21	Islamia University, Bahawalpur	1	1,148,149
22	Government College University, Faisalabad	1	676,667
23	Fatima Jinnah Women University, Rawalpindi	6	2,380,478
24	University of Engineering and Technology, Taxila	17	13,174,409
25	University of Malakand, Chakdara Dir.	12	8,078,386

S. No.	Name of University	No. of Faculty	Amount Released (Rs.) 2008-09
26	Federal Urdu University of Arts, Science and Technology, Karachi	1	1,381,935
27	NWFP Agricultural University, Peshawar	12	3,684,770
28	NWFP University of Engineering and Technology, Peshawar	4	2,713,118
29	Centre of Excellence in Psychology, QAU Islamabad	1	266,667
30	Quaid-i-Azam University, Islamabad	32	5,000,000
Total		462	276,929,199

SAP related Activities

The annual approved budget of HEC, universities/institutes/centres was entered in SAP System for the year 2008-09. In order to update financial profiles of the federally funded universities / institutes through SAP solution, the detailed utilization report proformas for processing of quarter-wise income and expenditure of universities / institutes for 2008-09 in SAP were designed in consultation with SAP team and uploaded on the HEC website.

The provision of HEC Budget and nominal Roll of Pay and Allowance is made available in SAP system. All receipts, expenditure and releases are being vouched through SAP. Entire book keeping is also being done through this system. A reporting module has been developed for the senior management of HEC to view the real time financial status of budget and expenditure in respect of all recurring as well as development projects and scholarship payments.

World Bank Support

The World Bank mission was extended full support under Higher Education Support Programme by the HEC. As a result the loan of US\$ 100.00 million has been sanctioned.

Development Grant

The development grant of Rs.16.221 billion and Rs.178.900 million as technical supplementary grant were released to the universities, institutes and centres for the implementation of development project.



Information Technology



Information and Communication Technologies (ICT)

The information and communication technologies (ICT) have brought not only magnificent opportunities for the higher education institutions but have also addressed the development challenges for the socio-economic conditions of the country.

The Higher Education Commission endures its commitment to provide full support and strategy to the higher education institutions meeting these challenges effectively and leveraging the same as tools for poverty reduction and sustainable economic development.

The ICT strategy of the HEC aspires to provide means and resources to increase productivity, workability and innovation as to catalyze the development of knowledge-society.

As always, the Information and Communication Technology division at HEC continues to keep abreast and pace with the ever changing world of information society, providing an innovative path of modern solutions and guidance to tap the potentials and capitalizing it to full extent.

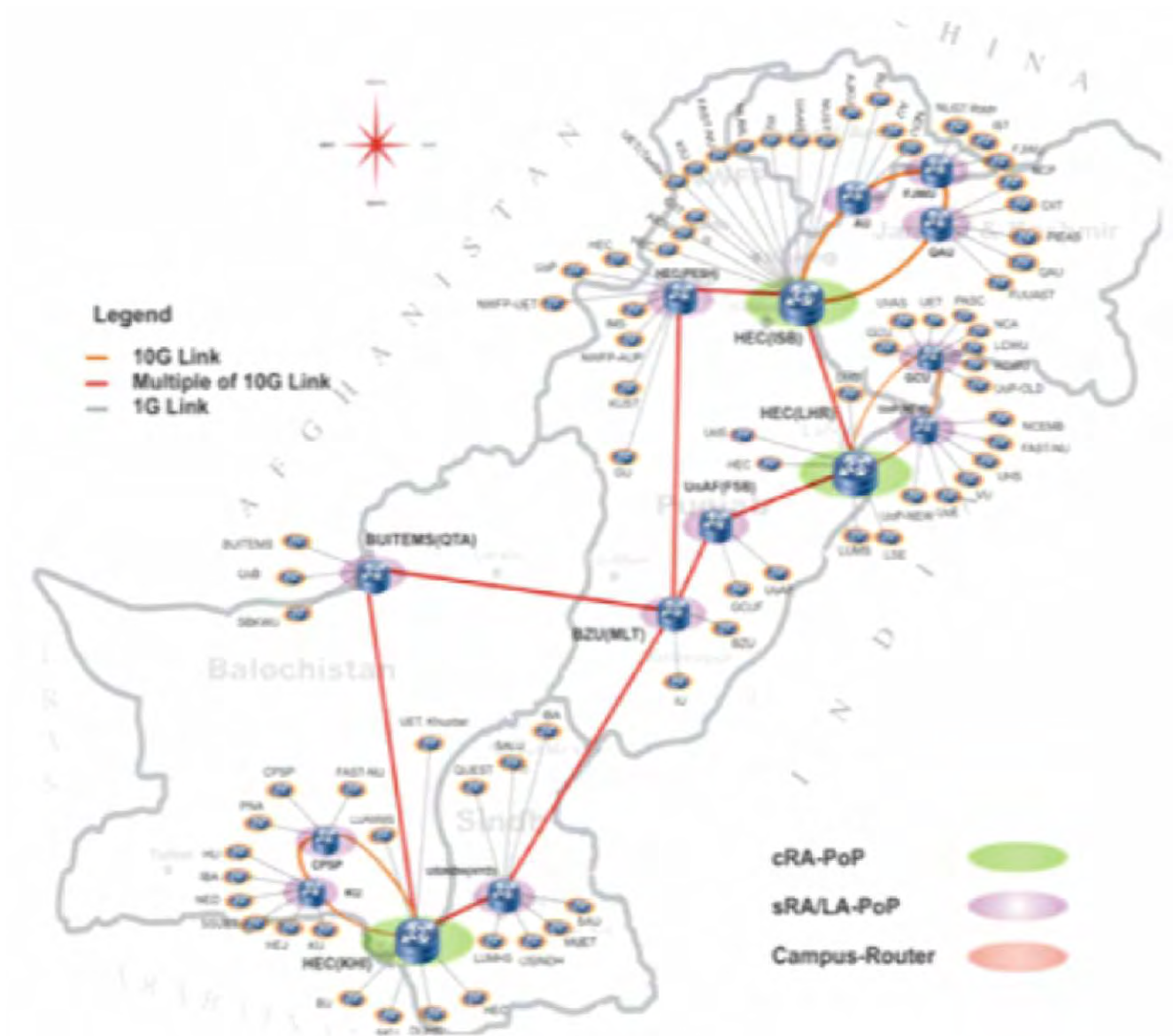
PERN2: The National Research and Education Network of Pakistan

Pakistan Education and Research Network is the only research and education network of Pakistan which was launched in 2002. The purpose of this national research and education network is to provide communication infrastructure to the universities, institutions of higher learning and research organizations to meet their networking and internet requirements. The network has evolved significantly and is providing valuable services, like high-speed internet, audio/video

conferencing, access to digital library resources. At the time of its inception, 56 public and private sector universities/institutes were provided connectivity with a total core capacity of 2 Mbps and 8 Mbps internet bandwidth, whereas universities/institutes used to get 64-128 kbps links.

In order to overcome the limitations of existing network and the needs of having a true end-to-end IP-based research and education network of the country, the Higher Education Commission has established a new state-of-the-art advanced research and education network, named PERN2, while keeping in view the current needs of the institutes of higher learning and their future requirements with respect to advanced networking infrastructure. This network offers extremely high bandwidth at charges much less than the ones offered by commercial telecom operators, whilst additional value added services will be also available to its users. PERN2 reflects a very cost-effective investment in next-generation networking for research and education.

The design of this network is based on latest technology available in this domain, i.e. Gigabit MetroEthernet, SDH, and DWDM (OADMs/OLAs). The network architecture consists of Establishment of 10 GE Metro Ring Networks in Islamabad/Rawalpindi, Karachi, and Lahore metro cities, whereas in other larger cities like, Hyderabad, Multan, Faisalabad, Quetta and Peshawar, the network is being established as hub-and-spoke topology. Three (03) High End Carrier Class Core Routers at Islamabad, Lahore and Karachi have been installed as three Regional Access (RA) POPs (Point of Presence: a junction/aggregation point of connections), whereas, Eight Local Access (LA) POPs in the three metro cities and Four Sub-Regional Access (sRA) POPs based on aggregation/ distribution routers of Carrier Class have been installed in four major cities of the country with following distribution:



Type of POPs	Metro Cities			Other Major Cities				
	Islamabad	Lahore	Karachi	Hyderabad	Multan	Faisalabad	Quetta	Peshawar
RA-POPs	1	1	1	-	-		-	-
sRA-POPs	-	-	-	1	1		1	1
LA-POPs	3	2	3	-	-		-	-
Universities Covered	22	19	15	7	2	3	3	7

In addition, all the universities covered under this project are provided with an enterprise class router equipped with at least two Gigabit Ethernet interfaces. The POP sites for the installation of these routers are equipped with proper electrification, power backup, fire protection, etc.

In order to establish the communication links between these POPs and for the connectivity of member universities to these POPs, Optical Dark Fiber rings and segments have been leased from M/s NayaTel (Pvt.) Ltd. in Islamabad/ Rawalpindi, and from M/s Wateen Telecom in Lahore, Karachi, and Hyderabad, Multan, Quetta and Peshawar

regions. Moreover, for the long-haul connectivity between the eight cities as mentioned above, Core Optical Dark Fiber has been acquired on long-term lease basis from the available national optical fiber system of M/s Pakistan Telecommunication Company Limited. However, the Optical Transmission equipment based on hybrid solution of DWDM and SDH are being acquired for lighting-up the available Core Optical Dark Fiber.

The Internet bandwidth for the member universities of PERN2 has been acquired from the two international bandwidth carriers in the country, i.e. M/s PTCL and M/s TW-1 to ensure reliability and high availability of internet services. The use of dual homing for internet services guarantees the availability of a backup path for international data traffic.

HEC has adopted the "top down" methodology for data centre floor plan using a 'hot aisle/cold aisle' approach. Raised floors have been put in place with data and power cables running under it. A separate room for power backup has been arranged with GALAXY 5000 UPS system that ensures 99.997 percent power availability. The UPS installed in the room provides backup for two hours at full load.

Three five-ton STULZ precision air conditioners help maintain optimum data centre temperature. FM-200® Fire Suppression agent along with smoke detectors have been employed to deal with any eventuality arising out of a fire situation resulting from short circuit or any other cause. Water detector helps detect the presence of water under the raised floor resulting from seepage either from rain or a leaked pipe.

Status of PERN/PERN2 Connected Universities

	Public Sector				Private Sector			
	Universities	Institutes	Campuses	Total	Universities	Institutes	Campuses	Total
PERN1	14	15	3	32	5	2	-	7
PERN2	43	3	-	46	4	0	2	6
New in PERN2	4	-	5	9	2	1	4	7
Total	61	18	8	87	11	3	6	20

PERN2 Network Operation Centre

In order to meet the demands of rapidly expanding network with exponential traffic growth, Network Operation Centre has been established at HEC Islamabad. State-of-the-art Network Management Systems keep a close eye on the performance of systems and services 24/7/365 by generating alarms on the fly depending on the status of the network.

The NOC houses expert staff capable of managing equipment resident there. The Technology Help Desk Service integrated with NOC facilitates timely responses to the user generated trouble tickets.

Solar Winds Orion Network Performance Monitor 9.5 SP5 along with System Centre Operation Manager 2007 (SCOM) have been introduced for monitoring the network and services. Currently 78 universities are being served through the HEC NOC. Complaints received at the UAN 111-11-PERN are logged and the relevant staff is dispatched to fix the issue. NOC operational time has been extended from initially 12/5 and 12/7 to 24/7.

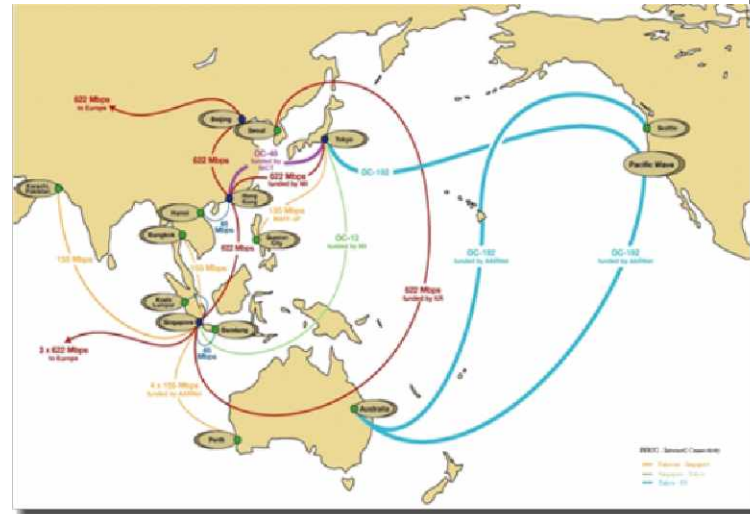


International Research and Education Links

International Private Leased Circuit (IPLC) is a dedicated service for connecting remote offices of an enterprise in different geographical locations with committed bandwidth. It can be employed for the transfer of bulk data, real time traffic and other types of traffic in a secure manner without concerns over data being routed through public networks. An IPLC circuit can be established between two landing stations deployed in different countries or across the border to facilitate cross-border communications.

IPLC is also employed by Research Networks like Pakistan Education Research Network (PERN2) to serve the research as well as the student community of Pakistan to transfer raw experimental research data, form workgroups, exchange research ideas, analyze test results, contribute in a global research effort, conduct

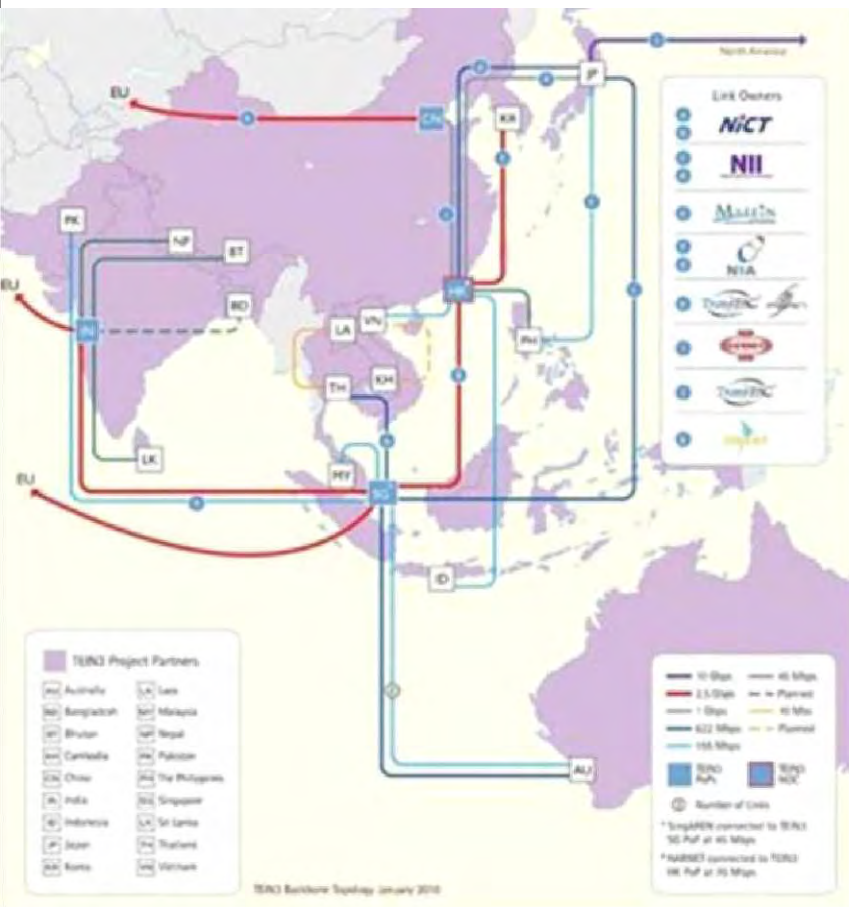
video conferencing sessions and participate in distance learning programmes.



It can also serve as a valuable tool to the medical practitioners of the country to benefit from the technology of telemedicine. The IPLC link between PERN2 and TEIN2 PoP in Singapore was established in August 2008 as a result of joint collaborative efforts of HEC and the US National Science Foundation. It extended the connectivity of PERN2 to Internet2 via Japan and TransPAC2.

Pakistan recently joined ASEM (Asia Europe Meeting) in 2007 which consists of 45 members. Trans Eurasia Information Network (TEIN) was formed as a result of concerted efforts by the members of ASEM to establish an information highway between the Research and Education Network of Europe (GEANT2) and the communication network of EastAsia via the TEIN2 project.

Pakistan-EC joint commission approved the proposal of linking PERN and GEANT2, EC has provided 80 percent of the funding for the project. The connectivity of PERN to TEIN3 is now official through the 155 Mbps link which further facilitates connectivity to Internet2 in the East and GEANT2 in the west. Scientists and Academicians in Pakistan now have direct access to the global research and education community. This has allowed scientists from Pakistan and Europe to pool resources and participate in research.



	.bd	.bt	.in	.np	.pk	.lk
User Community						
No. of Universities in Country	80		270	4 (132)	94	15
No. of Universities Connected			183	1 (5)	68	15
Percentage of Universities Connected			67.78%	4.40%	72.34%	100.00%
No. of Research institutes in country	30		250	47	20	20
No. of Research institutes connected			250	6	9	7
Percentage Research institutes connected			88.00%	12.77%	45.00%	35.00%
No. of Schools connected			413			
No. of others (libraries, hospitals) Connected			174		20.00	5
End users - Universities			1,464,000		1,000,000	76,000
End users - Research Institutes			33,000	80	18,000	2,800
End users – Schools			206,500			
End users – Other			121,800		20,000	
End users - Total			1,825,300		1,018,020	78,805
Acceptable Use Policy			Yes	No	Yes	In Preparation

Table shows that considerable coverage is already being achieved in Pakistan, India and Sri Lanka.

TEIN3 gives communities in the Asia Pacific high capacity Internet for research and education. It provides connectivity to 12 countries in the region and is spreading to South Asia, taking the tally of partners to 18. Australia, China, Indonesia, Japan, Korea, Laos, Malaysia, the Philippines, Singapore, Thailand and Vietnam are being joined by Bangladesh, Bhutan, India, Nepal, Pakistan, Sri Lanka and Cambodia.

TEIN3 provides entrance to over 45 million users in over 8000 research and academic centres of the Asia Pacific to global collaboration and take part in joint ventures with their counterparts in Europe and other parts of the world.

A dedicated DPLC circuit between Islamabad and Karachi has been established to cater to the special needs of National College of Physics which is carrying out High Energy Physics experiments using grid computing. The IPLC circuit extends this connectivity to the TEIN3 network that directs the flow of information to and fro between CERN and NCP.

Video Conferencing: An emerging trend in pedagogical tools

Video Conferencing is a powerful multimedia tool that improves communication and increases an

organization's productivity. A national level project of Video Conferencing was initiated by the Higher Education Commission in 2006. Through this project, the most advanced Video Conferencing facilities have been provided to all public sector universities. The project was aimed at bringing universities of Pakistan closer and eliminating the distances as barrier in collaboration. This allows students of such universities, who are not in a position to benefit from high profiled teachers, may have the opportunity to learn from universities having such resources, to share their ideas and views to enhance their productivity. Video conferencing is an extremely useful tool for communication because it saves resources including time, expense, travel and is instrumental in providing alternate mode of participation without being physically present at location. In short, it gives a concept of virtual cloning of a person as being at different locations at the same time and so can achieve the same as one may accomplish while being present physically in meetings.

HEC has established a full-fledged video conferencing infrastructure at 70 public sector Universities/ Institutes of higher learning so far. As far as the project achievements are concerned, year 2008-09 has been the most successful year since a total of 37 sites have been added to the pool of video conferencing national setup. This year the newly established universities are being

given the same facility as to bring them at par with other universities nationally and internationally.

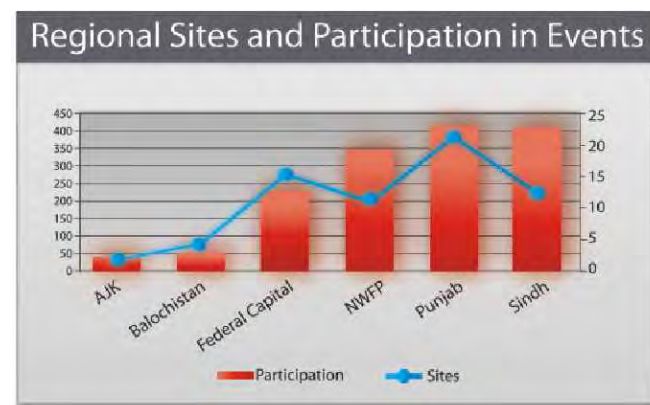
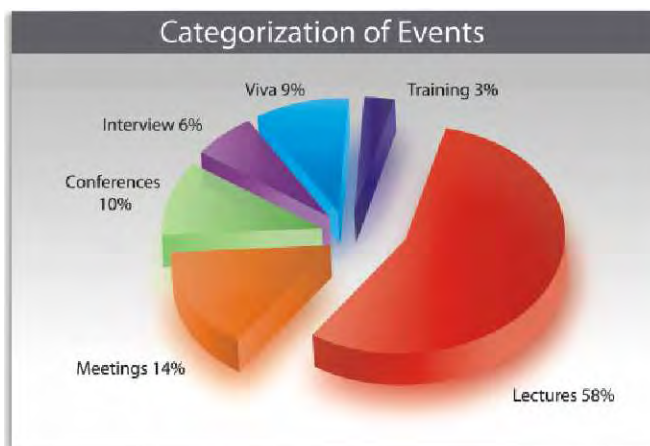
The infrastructure includes establishment of world class Video Conferencing class room for distance learning and interactive sessions in virtual but real-time environment. HEC has deployed the high profile equipment for centrally managing these facilities, which includes three Multipoint Conferencing Unit (MCU) in cascaded mode for simultaneous connectivity of 100 sites. In addition, Tandberg Management Suite has been deployed as well which centrally keeps the remote management of all Video Conferencing Units/ Endpoints deployed at universities/ institutes across the country and these units can be remotely managed and configured from central location. Tandberg Content Server (TCS) for recording and real-time streaming of events has also been installed connected through NAS server to integrate with the SAN storage. A capacity of One TeraBytes is reserved on SAN for archiving/ recording of events.

National and international level events, lecture series and courses are being initiated by HEC to facilitate the students and faculty of higher learning. The programme is being executed by Virtual University of Pakistan in collaboration with HEJ Research Institute of Chemistry. The programme focuses on lectures delivered by eminent scientist /researchers to share their knowledge and experiences in chosen disciplines. The lectures delivered are aimed at fundamental concepts, to enhance the critical thinking for undergraduate and graduate students and to discuss cutting edge technologies/ research work in the field of modern science.

The facility is very much helpful for the students/researchers of those areas where human mobility is constrained due to deteriorating law and order situation. Not only the delivery of lectures has been made easier through this facility but also the interaction at international level has been facilitated. HEC has initiated online semester course for Mathematics and Computer Science, in collaboration with CIIT Wah Cantt through Video Conferencing.

The Video Conferencing facility has also

been extended to other non-academic organization on rental basis. In this context, British Council has organized workshops for Islamabad and Lahore region. The resources of British High Commission joined UK via Video Conferencing. Similarly, The World Bank is efficiently utilizing the HEC's Video Conferencing facility for their activities with their stakeholders in Pakistan. The income generated will be utilized for the long-term sustainability of Video Conferencing network across the country. HEC through Virtual University of Pakistan now plans to launch full-fledged distant learning but interactive programmes while capitalizing on this invaluable resource available across the country



to arrange and deliver online courses. The overall programme may include the following major components;

- 1) Professional Courses (Full Course)
- 2) Frontier Technologies Courses (Short Courses)
- 3) Professional Development Programme
- 4) Conferences and Workshops

IP Telephony: Transporting Voice over IP

Higher Education Commission has deployed a state-of-the-art Alcatel-Lucent Digital Exchanges/EPABX(s) which supports both TDM and IP based voice communication (phone) facilities. The EPABX is capable of serving more than 5000 TDM/IP telephone connections. IP phones have been extended to HEC users and to the higher management of all public sector universities/ institutes across the country. Besides many Value Added Services (VAS) are being provided, which include but not limited to, voice mail system, centralized directory, text messaging, voice traffic routing from preferred path, web based billing for end users to check their usage. Besides this, numerous new functionalities are available in the newly deployed Voice Communication System/EPABX which makes the communication more economical, centralized and robust, these include;

- GSM routers with SIM(s) from various Mobile/Cellular operators are installed in the EPABX - a considerable saving of more than 38% is achieved in the monthly bills of Exchange.
- Exchange installed in HEC, H-9 and COMSATS building are linked on IP and direct Fiber connectivity, this facilitates the users of both Exchanges to dial each other directly without involving PTCL/NTC network, which contributes saving in the monthly bills of both Exchanges.
- IP Phones/Extensions have been installed in the offices of higher management of all public sector Universities/Institutes, which are the IP extensions of the Digital Exchange installed at HEC, H-9, Islamabad. Telephone calls made between HEC and Universities, and among Universities are possible through the HEC Exchange using IP Network of PERN/ PERN2, this also makes considerable saving because of IP network.
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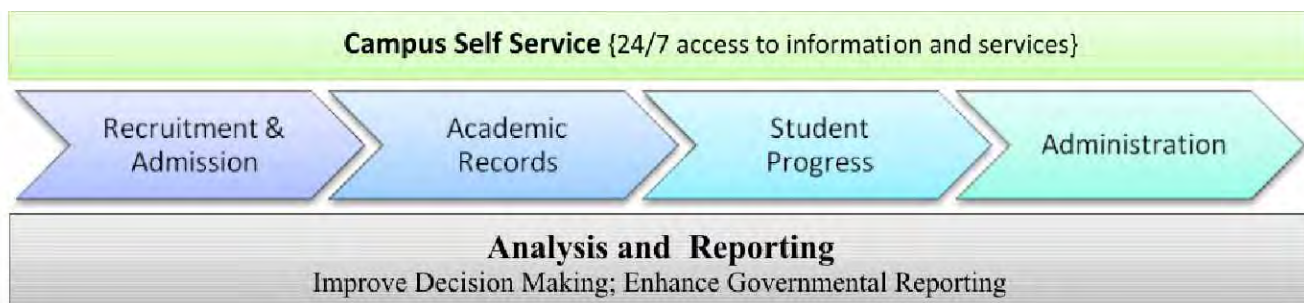
Higher Education Commission also plans to deploy a strong Voice Communication Infrastructure across the country while bridging the voice communication setup of universities/ institutes in vicinity through VoIP gateways. For this and to have local presence in the region, the project is in procurement phase, and later on deployment of Digital Exchanges at HEC Regional Centres will be made while integrating all with the existing TDM/IP EPABX setup at HEC Islamabad.

Campus Management Solution Universities' Management Information System

HEC took an initiative to facilitate universities with the standard off-the shelf campus management solution (CMS) to be customized and implemented about two and half years back. As a pilot project six public sector universities of different flavours from all the regions of country were selected. Two more universities, Sukkur Institute of Business Administration, Sukkur and Institute of Business Administration, Karachi were added later in this pilot project.

CMS provide campus-wide integrated information systems covering all functional areas and automate core managerial activities including admissions, academics, examination, fees, placements, alumni and finance thus augmenting the institute's brand image as well as improving profitability.

To run the PS CMS application HEC has executed the meticulous tender process for the procurement of the CMS hardware (Servers and SAN). The target was to follow best practices to have the state-of-the-art and latest technology equipment with highly scalable, available and fault tolerant features. To get the best performance, the university size and its growth in next 5-10 years is among one of the key



parameters for the appropriate hardware selection. Adaptive Solution opted for today's and tomorrow's need that can work effectively and efficiently for next five years without any up gradation and will be available to run ERP solutions (Financial, HRM, Projects, Inventory, etc). It was planned to implement the solution in six universities in two years, and to meet this goal HEC and the Systems Integrator decided to opt phase wise implementation plan. CMS is rolled out at defined time frame as per the project plan and is now in production phase at six universities while rollout phase is continued in University of the Punjab, Lahore. Required technical and functional trainings of application

have been given to the university's project teams and also to the end-users which includes university's administration, faculty and the students. Reporting module for HEC to receive the consolidated reports from the universities, where solution is implemented, is in the development phase and will be available by Feb 2010.

Procured hardware has been delivered in all universities and the solution installation and configuration process has also been completed in all universities. CMS hardware equipment training for its operation and management is continued for the university resources. Implementation at IBA, Karachi will completed by June 2010.

Project Status		
No.	Universities	Status
1	Balochistan University of IT, Engineering and Management Sciences, Quetta	Completed and Operational
2	Dow University of Health Sciences, Karachi	Completed and Operational
3	Islamia University, Bahawalpur	Completed and Operational
4	NWFP University of Engineering and Technology, Peshawar	Completed and Operational
5	Quaid-i-Azam University, Islamabad	Completed and Operational
6	Sukkur Institute of Business Administration, Sukkur	Completed and Operational
7	University of the Punjab, Lahore	Rollout Phase Continued
8	Institute of Business Administration, Karachi	Requirement Analysis Phase

CMS usage (in %) after rollout



HEC Web Portal

HEC Web Portal has become the most visited portal of Pakistan, boasting seven million hits per month.

The web portal has undergone a facelift with the aid of Microsoft components and provides much more detailed workflow methodology for content endorsement and publishing. Content owners

The screenshot shows the HEC Pakistan website with the following sections:

- Navigation:** Home, About HEC, Inside HEC, Our Institutions, Media Publication, HE Job Portal, HEC Contact List, Old Site.
- News in Picture:** 13th Meeting of All Pakistan QECs.
- Scholarships | Fellowships:**
 - Foreign Scholarships/Fellowships: 10% Overseas Scholarships (Phase 2, Batch 1), Commonwealth Scholarships for PhD, Split Site PhD and Post Doctoral Fellowships, Tenable in UK in 2010.
 - Local Scholarships/Fellowships: Higher Education Opportunities for Students of Balochistan and FATA, International Research Support Initiative Program, USAID Funded Merit and Need Based Scholarships.
- In Focus:** Position Announcements (VC [AIU], VC [QAU]), Directory of PhDs (Produced by Pakistani Universities), HEC Report 2002-08.
- Research & Development:** Research Grants, Resource Grants, Conferences & Meetings, Industrial Liaison.
- Quality Assurance:** Degree Attestation & Equivalence, Anti-Plagiarism Policy, Ranking of Universities, Tenure Track System.
- Academic & Curricular Affairs:** HEC Approved Curriculum, Monograph & Text Book Writing, Foreign Students Admission, HEC Recognized Journals.
- Technological Reforms:** Video Conferencing, National Digital Library, Networking Universities, Broadband Facility.
- University Support Services:** Foreign Experts, Approved PhD Supervisors, Hiring of Foreign Faculty, HEC Scholar's Job Portal.
- Learning Innovation:** Faculty Development, National Academy of Higher Education, English Language Teaching Reforms, Modern University Governance.
- Latest News:** PhD applicants shortlisted for interview under the Commonwealth Scholarship 2010 scheme, Update of applicants shortlisted for interview for MS Engineering studies in South Korea Batch-VII (Spring 2010 session), Result of finally selected applicants for Turkish Scholarships for OIC Member States for the Academic Year 2009-2010.
- Events:** 2nd Advance Specified Course for the Master Trainer Faculty Professional Development Program Alumni from 16-23 Nov at HEC R.C. Karachi, HEC launches new National Higher Education web portal.

Methodology	2005-06	2006-07	2007-08	2008-09
Sessions	2,135,581	3,239,623	4,235,164	5,22,034
Page views	11,661,309	20,194,272	27,456,421	37,716878
Hits	25,111,866	91,768,306	102,254,120,	117,351,616

place their data on the website making use of the content management system.

The Web portal is a sea of information for visitors seeking scholarships, research opportunities as well as academic and curricula guidelines. It provides up to the minute news on recent developments and upcoming events so that any visitor desirous of participating in them can keep abreast of advancements in the field of education. The newly transformed portal provides details of services being offered to universities and students. Applications are focused on these very services to make them readily available and easily accessible.

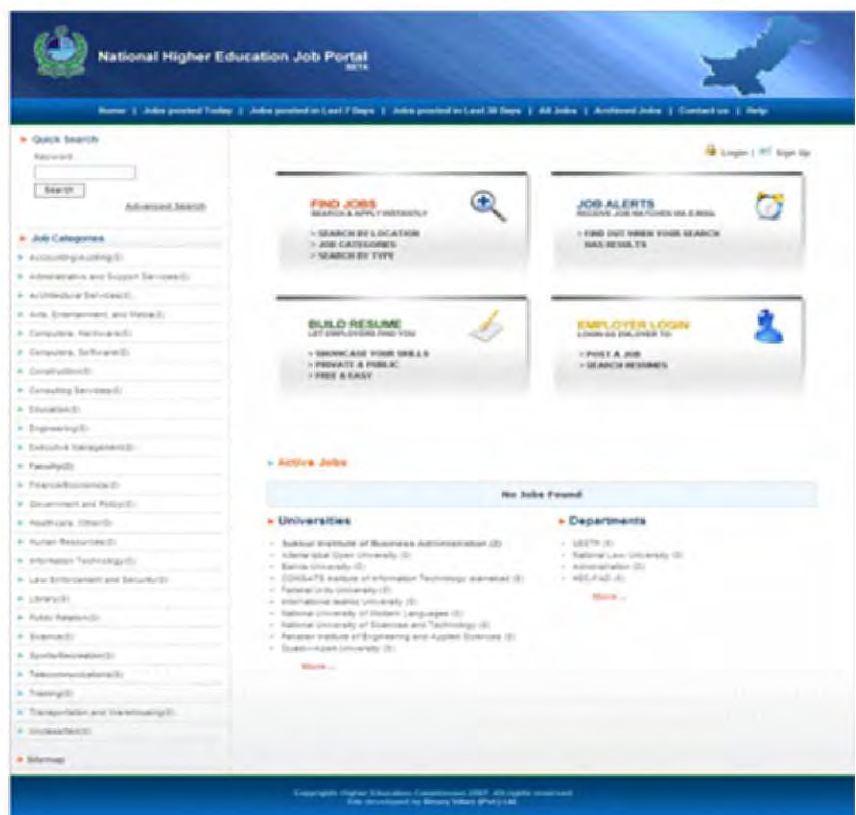
National Higher Education Job Portal

The main reason for the launch of the **National Higher Education Job Portal (NHJP)** by the Higher Education Commission was to facilitate national universities in the hiring of competent faculty and professionals for administrative and teaching purposes. NHJP emulates job portals by bringing the employers (i.e. HEC/ universities/ institutes) to employees and vice versa. Job seekers interested in vacancies inside universities and academic institutes can obtain relevant information from the portal. Jobs are diverse in nature (e.g administrative, clerical, etc.) and not confined to teaching. All member universities and academic institutes can avail this

wonderful facility to post their jobs. The portal provides flexibility to the employer in posting vacant positions, scrutinizing applications employing pre-defined filters, uploading tests/interview scores, generating lists of shortlisted and successful candidates and using other useful services.

The NHJP gives universities/ institutes a free hand in customizing their own interface and defining their own URL for the job portal giving applicants the impression that the job portal is owned by the universities/ institutes.

Numerous workshops/trainings have been arranged through NHJP for the universities in Islamabad/Rawalpindi region to raise awareness among them about the benefits of posting their jobs through this portal. HEC has been flooded with positive responses from the universities in this region. All universities had been sent



Online Degree Attestation Reservation System

The Online Degree Attestation Reservation System (DAS) has been unveiled by the Higher Education Commission to hasten the degree attestation process and avoid the hassles of long queues and streamline the process through automation. This has simplified the attestation process for all who had to endure frustratingly long waiting hours. Having signed in the system, people arrive with their printed application forms, confirm their arrival and get their attestations once their number is called. The walk-in section has been launched for speedy disposition of attestation cases for candidates without printed applications.

Pakistan Research Repository

Pakistan Research Repository (PRR) has grown significantly over the last year and the repository has now been populated with more than 2200 PhD theses, i.e. an addition of more than 400 theses. PRR is an initiative of the HEC aimed at promoting open access to scientific literature. The repository with an

ultimate objective of creating a federated repository to make the collective research output of Pakistan's institutes of higher education available for open access. It is available online at <http://eprints.hec.gov.pk>.

The widest possible dissemination of a scholar's work is enhanced through online open access to scholarly information which has appreciably higher citation rates than those that are published in the traditional manner. The content of the Pakistan Research Repository has already been indexed by leading online search tools, including global eprints servers and Google Scholar.

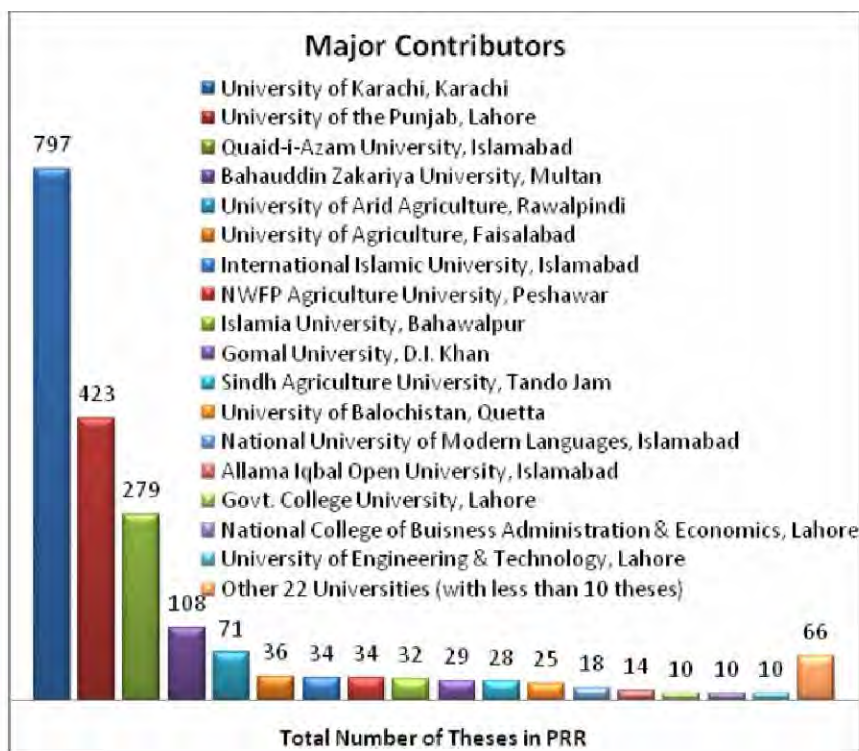
The Pakistan Research Repository provides benefits of open access to both individual researchers and the scientific community as a whole. PRR is serving as an aggregated repository, archiving the research output from institutions across Pakistan as a permanent digital archive of all the theses published historically by Pakistani universities. This is driven by the development of content through digitization of every thesis and making them available online.

Total Applicants (No.)	Total Applications	Attested Documents		Rejected Documents		Confiscated Documents	
		2009	Total Applications	32217	Total Attestations	14081	2009
28077	32217	24585	22373	257	200	14	15

Month-wise Distribution (Based Upon Application Date)

Month wise Distribution (Based Upon Application Date)	Total Applicants	Total Applications	Attested Documents		Rejected Documents		Confiscated Documents	
			Original	Photocopy	Original	Photocopy	Original	Photocopy
March	868	911	1078	770	6	1	0	0
April	5118	5393	6668	4872	27	15	1	0
May	3508	3845	3723	3103	36	17	5	10
June	3433	3737	3021	2834	50	43	5	0
July	4577	5120	2771	3390	42	47	1	4
August	4425	4920	3961	4023	48	54	1	1
September	3122	3458	1558	1435	15	12	1	0
October	3999	4389	1791	1919	31	11	0	0
November	412	444	14	27	2	0	0	0

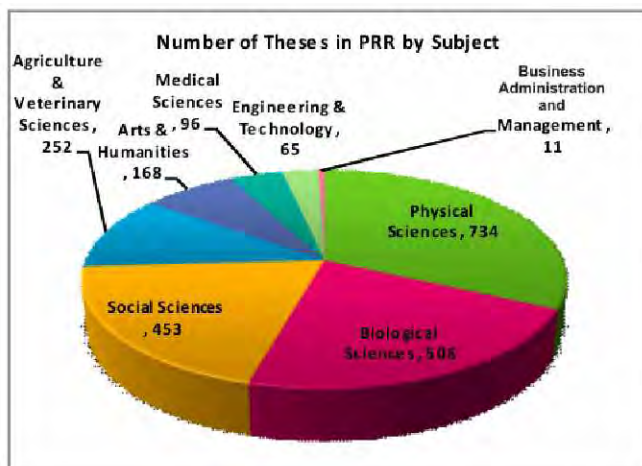
Over 2200 PhD theses are available in high-quality digitized format, whilst a further 200 have been digitized and are being uploaded in repository. Currently it is hosted at National Higher Education Data Centre in Islamabad. However, HEC intends to deploy similar child servers in the higher education institutes which will be cross searchable. Universities will be able to upload all their theses directly onto these servers.



Zero Tolerance against Plagiarism

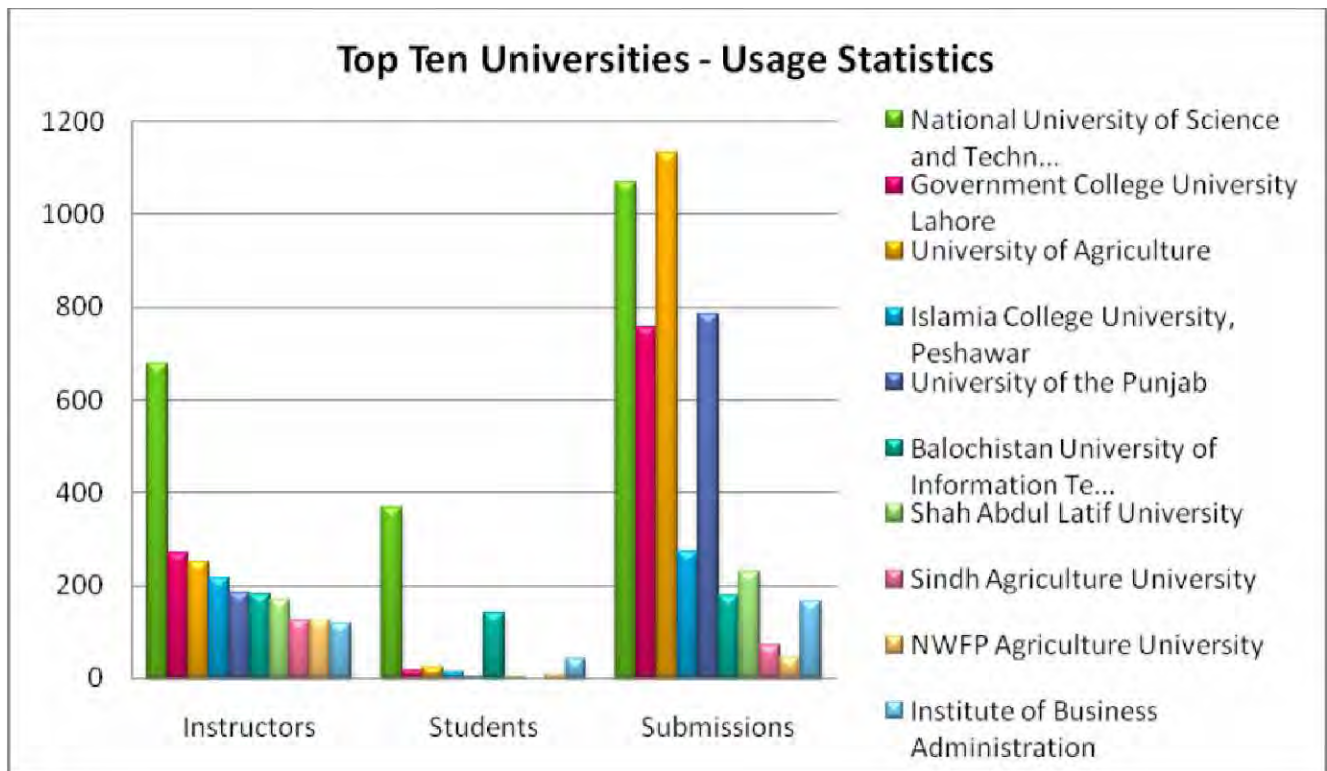
HEC's goal to combat plagiarism effectively in an academic environment in all institutions of Pakistan while ensuring that the students and

software used globally for such purposes. technological solution and acquired an online software tool to assist in identifying the plagiarized material from documents. The software tool, *iThenticate*, is one of the leading software used globally for such purposes. Upon the success of *iThenticate*, HEC acquired another software *Turnitin* for all public sector universities/institutes. Its online service is available at <http://www.turnitin.com/> and for this to use, 1000 licenses for each of the public sector institutes have been acquired for teaching faculty, post graduate students and researchers in order to address the issue at the grass root level.



academicians refrain from stealing someone's intellectual property. HEC is committed to eradicate plagiarism from higher education institutes. For this, IT division had sought for technological solution and acquired an online software tool to assist in identifying the plagiarized material from documents. The software tool, *iThenticate*, is one of the leading

Access to Software in	Universities	Instructors	Students	Submissions
Sindh	11	759	64	1768
Punjab	18	1105	749	6044
NWFP	12	596	179	1380
Federal Capital	12	1191	484	3779
Balochistan	5	189	143	184
AJK/GB	2	22	-	17



Turnitin is amongst the three interrelated tools of overall solution of WriteCycle Collaborative Writing. Educators can check students' work for improper citation or potential plagiarism using *Turnitin* Originality Checking by comparing it against continuously updated databases. This helps the instructors to teach their students proper citation methods and safeguard students' academic integrity. *Turnitin* also helps in encouraging students for proper citation while providing the original report as side-by-side comparison along with printable reports. The database behind the *Turnitin* includes billions of web pages, few hundred students' papers, major newspapers, magazines and scholarly journals as well as thousands of books. *Turnitin* online service provides a user friendly interface similar to the *iThenticate* for the submission of a document through a browser document upload option.

A remotely managed training for the focal persons of all the universities was arranged to train them to create and manage the user accounts and further train users about how to use this facility. A Master Trainer programme was also arranged by the *Turnitin* service provider as

part of the contract.

HEC now intends to acquire the other two interrelated tools for the complete WriteCycle Collaborative Writing solution. This will help accelerate the overall learning process and students' development. HEC is also encouraging universities/ institutes to run an awareness campaign against the ill practice of stealing other's intellectual scripts.

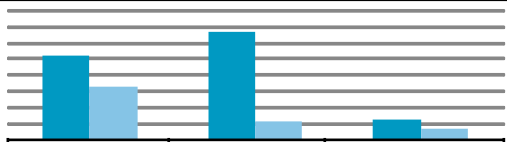
National Internship Programme - NIP

Government of Pakistan has launched the National Internship Programme for the graduates who have completed their 16 years of education till March 01, 2008 for the second year. Under this programme the graduates have been offered the internship for the duration of one year. Ministry of Youth undertakes the responsibility to place the applicants in various departments and the programme is conducted through Prime Minister Secretariat.

National Internship Programme launched by the Government of Pakistan is intended to serve

those graduates who have completed their 16 years of education. Applicants can take advantage of internship being offered to them for one year. The programme was initially launched by the Prime Minister Secretariat; however, from this year the Ministry of Youth has taken the responsibility of placement of selected individuals in relevant departments based on their background and relevant field of expertise. February 2008 and October 2009 mark the launching of the second and third batch of the programme, respectively. Keeping in view the special circumstance of Malakand Division – NWFP, a special internship programme was also launched to serve the youth belonging to this area.

Considering the significance of the programme on a national scale, the services of HEC were taken on board in verifying the degrees of the applicants through the applicants' respective universities/ institutes. HEC maintains record of students' data from all HEC recognized universities and degree awarding institutes whether in public sector or private sector all over Pakistan, for degree verification. Universities are able to access the applicant's record online conveniently. HEC's performance can be measured on year wise scale of NIP applicants to verified records for the second and third National Internship and special programme for Malakand given as under:

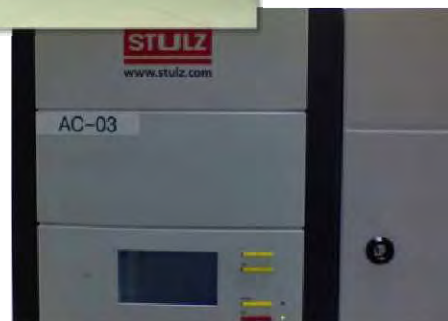


	NIP 2008	NIP 2009 *	NIP Malakand 2009 *
NIP Applicants Count	52455	66902	12291
Verified Records	32500	11551	6792

Higher Education National Data Centre, Islamabad

The HEC as part of its overall strategy of strengthening existing National ICT infrastructure has established a National Data Centre for Higher Education Sector, i.e. universities and degree awarding institutes of the Pakistan.

This data centre provides hosted and managed services not only for the common use of



universities/ institutes but also all the required resources for the universities and degree awarding institutes to host on core of the Pakistan Education and Research Network.

Multi-Point Conferencing Unit, Streaming Server, Network Management Servers, Video Conferencing Management Suite, EVDO Panda Server, and PingER Monitoring Server are few systems which are hosted at the National Data Centre, Islamabad. In addition, the IT facilities, viz. SAP-ERP Servers, Exchange Server, Unified Communication Server, SAN Storage, and Servers used for providing networking and internet services are hosted at this Data Centre.

Moreover, this Data Centre is also accommodating the needs of hosting the Regional Access PoP router of PERN2 setup as well as Edge router of HEC which bridges to ASA Security appliance and Core Switch of HEC local area network.

The facility of the National Data Centre is maintained with the state-of-the-art and most advanced technology available not only in the Data Communication domain but also in HVAC and Power backup systems as per the Tier-II Data Centres standards.

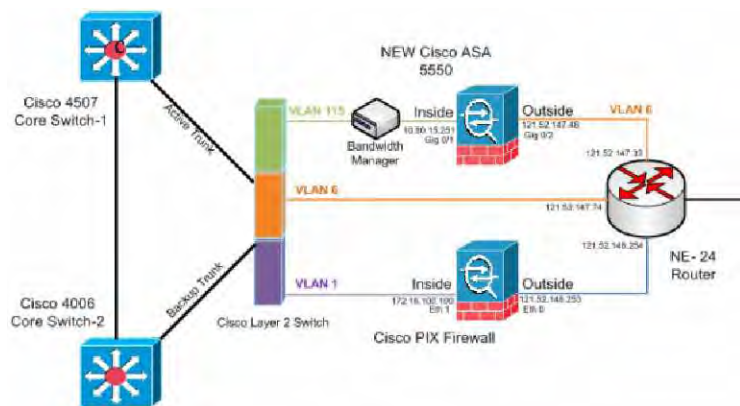
In addition, a Power Backup Unit has been established to maintain the services availability through this Data Centre seamlessly on 24/7/365 basis with almost 99.999 percent uptime.

IT division of HEC has also established a Disaster Recovery Site (DRS) of this Data Centre to maintain a replica of similar services as being offered, at another site of HEC which is distantly located.

Moreover, structured fiber networking for end-to-end connectivity of LAN and SAN installed in this Data Centre with the proposed DR site has been established.

Advanced Networking @ HEC, Islamabad

The entire HEC Local Area Network during its teething years was running on a single VLAN and broadcast domain. The challenge of limiting the broadcasts within the network was met by subdividing it into 22 VLANs. During the single VLAN era, the network remained clogged with 60% of broadcast traffic. This has now come down to a meager 10%. Inter VLAN routing caters to the need of cross communication among all the VLANs.



Redundancy at the convergence layer of the network has been enhanced with the introduction of the New Core Switch (Catalyst 4507R) alongside the previously running Core Switch (Catalyst 4006). The access layer consists of the Catalyst 2950 and Catalyst 2960 switches with dual optic fiber connectivity to the core switches increasing fault tolerance of the network. The core switches are running the HSRP (Hot Standby Redundancy Protocol) to boost reliability and availability of the network.



Internal ISA



External ISA

Security in the network has been introduced through the deployment of the Cisco ASA 5550

firewall. The previously running Cisco PIX Firewall's functioning has now been limited to the provisioning of backup. The PIX Firewall will route all internal and external traffic if ASA 5550 goes down for some reason. Remote users are authenticated through Active Directory configured over the ASA, which is acting as a Remote VPN (IPSec) Server. Users can now access the network remotely through their VPNs using their Active Directory username and passwords by connecting to the ASA.

Critical applications requiring high bandwidth and high availability are functioning smoothly as a result of bandwidth management being provided through the Bandwidth Manager based on Server IP addresses and the Barracuda Load Balancer. Economical use of power cables and outlets is ensured by incorporating Power over Ethernet access switches (2960) in every building of HEC to extend network connectivity to devices like IP Phones while simultaneously providing power to keep them running. HEC employees now enjoy the use of IP phones that has reduced the dependency of HEC employees on POTS for both internal and external communication with local and remote HEC offices saving HEC significant financial resources.

Fiber links among HEC buildings have been doubled to guarantee higher network and service availability. UTP cable management has been simplified by separately tagging the client side and data centre side cables. The potential for network expansion has significantly increased in terms of users that can be added to the network in future.

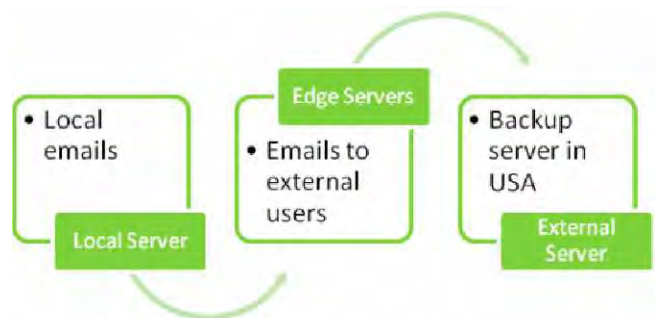
Apart from the infrastructural development that has taken place in past year, IT division has introduced unique directory services for applications and automation processes. Active Directory Domain Services (AD DS) of Windows Server 2008 helps keep a record of configuration information, authentication requests, and user information at a centralized location and is being managed by HEC. Using AD DS from a centralized location, management of users, computers, groups, resources, applications and other

directory-enabled objects has become efficient. HEC is now administering sub-domains for its Regional Centres as well.

HEC has moved to ISA Server 2006 to protect the network and applications from Internet based threats. The network gives an organized feel through the use of a unified firewall and virtual private network architecture which comprises web caching and bandwidth management, an optimized firewall filtering engine and comprehensive access controls. The security concerns are being met through the use of ISA 2006 firewall and Microsoft ForeFront Security Solutions and Kaspersky Antivirus at client end.

Unified Communication - Technology Convergence

In the recent past, IT-Division has implemented communication technologies like Video Conferencing, IP-Telephony, Email system etc., which have been so far running as independent systems. The time is ripe for converging all of them into a combined group. The IT Division of HEC concluded the primary emailing services being offered through the international rental facility and started them locally at the National Data Centre at Higher Education Commission, Islamabad – Pakistan keeping the internationally hosted emailing services as backup. In past years, HEC has had its own domain based email system. Two parallel systems were in operation, one of which was hosted locally and the other outside



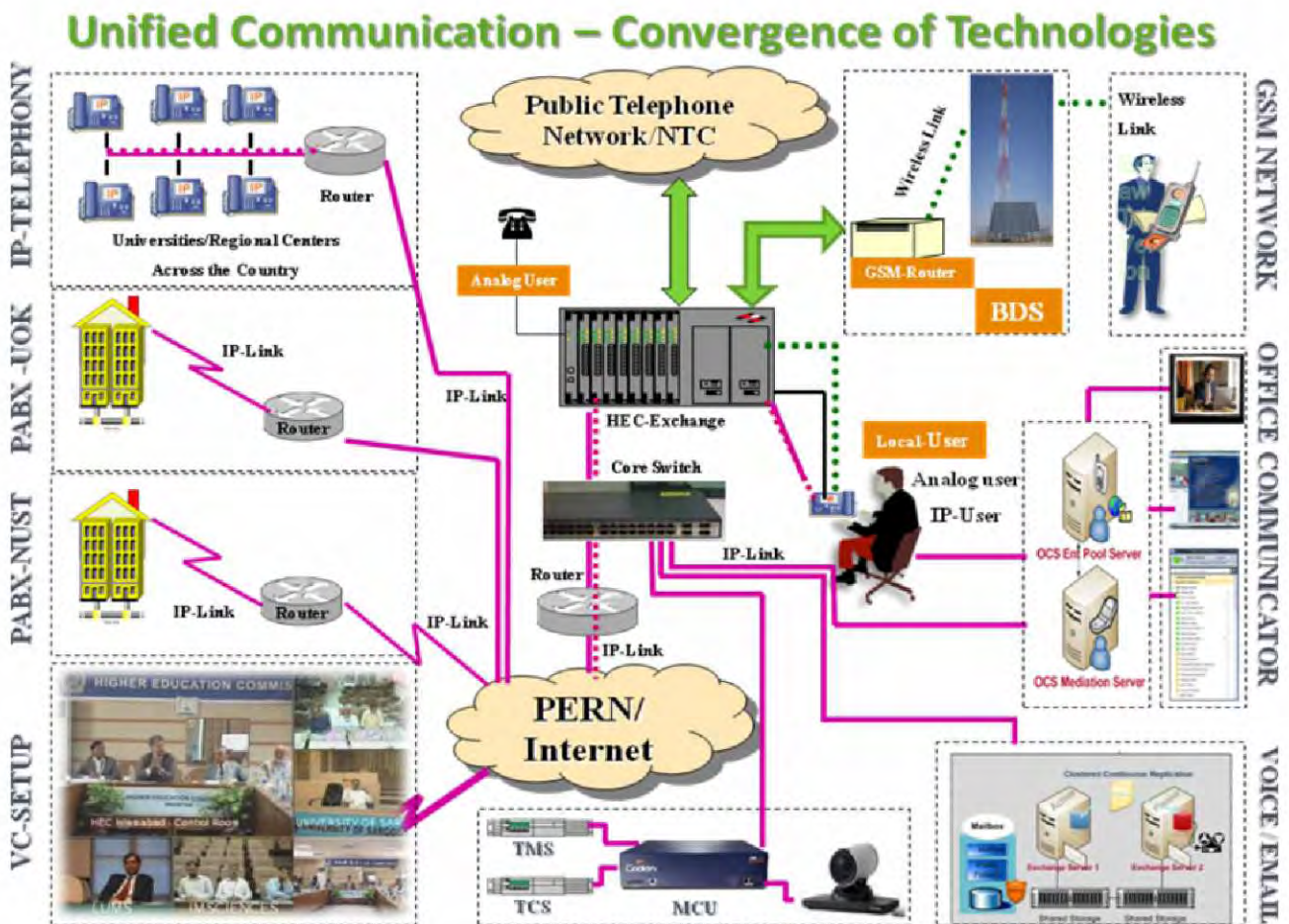
Pakistan. Managing two accounts for the same purpose was taxing on the users.

The email service hosted abroad had been in use for primarily transferring emails to and from HEC. This resulted in unwanted delay in the receipt of even locally generated and intended emails. The justification of retaining the dual system was due to the febleness of the local infrastructure and significance of the service to HEC.

IT Division, however, had been carefully plotting and planning on steps required in acquiring independence of managing email services locally for some time. This resolved the issue of duplicity of email accounts and email routing outside the country. Furthermore, it expedited internal

communication and made new features accessible to the email users that could not be activated earlier.

The HEC through the use of OCS has achieved the goal it had set out to do, i.e to attain convergence. Microsoft Office Communicator 2007 has considerably simplified office communications by combining features like Email, Voicemail, Calendar, telephone, data sharing, audio conference and video conference in single software.



HEC Keeps Abreast with the Latest Enterprise Software

HEC wants to promote a healthy culture of the use of licensed software. For this it has decided to lead the way not only in implementing licensed software within its offices but also keep abreast with the developments that take place in software world. HEC has signed the School Agreement with Microsoft, an umbrella licensing for all users across its offices in Islamabad and Regional Centres in Peshawar, Lahore, Quetta and Karachi.

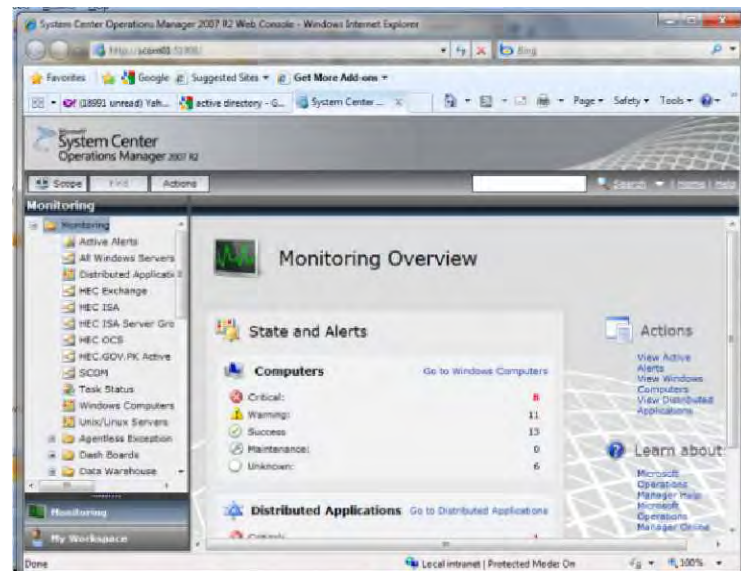
Windows XP was in common use as a client operating system and Windows 2003 Server software was being used for Servers at HEC for past many years. However, after signing the School Agreement with Microsoft, Windows Vista option is available to all the users and almost all the servers have been installed with Windows Server2008 R2. HEC has become the Early Adopters of Windows7 and has decided to take all client OS to Windows7.

HEC has also adopted Microsoft SharePoint Server 2007 for its both internal and external web portals which give HEC users control over its contents, re-organize its business processes and exchange information with other employees.

Amongst the enterprise software is the Microsoft System Centre Configuration Manager (SCCM) which addresses the change and configuration management needs in computer systems of an organization. After the deployment of SCCM, policy of giving local administrative rights on the systems has been revoked. An alternate to this is the advertisement of White List software which users get available for their system which they can install as per their needs. Relevant software updates are provided to the users instantly without too much trouble. This method is also cost-effective and flawless.

Microsoft System Centre Operations Manager (SCOM) has also been deployed for end-to-end service monitoring within HEC. It has a user friendly interface that helps monitor a large

number of servers, applications and clients. It provides an extensive report on the state of services in the network. All the servers in the data centres are being monitored and emails are sent based on violation of threshold values set in the SCOM. With the availability of the full version of Microsoft Office 2010, migration of all the client machines onto the platform is in the offing. Integration of Voice and Video Conferencing is in the pipeline as well. There are plans of providing access to office communication server to HEC's public users like universities, etc.



Enterprise Resource Planning (ERP) through SAP

An Enterprise Resource Planning solution based on well renowned and globally acknowledged system, i.e. SAP has been deployed at the Higher Education Commission. The customization of this ERP solution is performed by M/s Siemens Pakistan after going through various business processes of HEC thoroughly, the requirement as well as data gathering. Keeping in consideration of the business requirements of HEC, following SAP modules have been implemented:

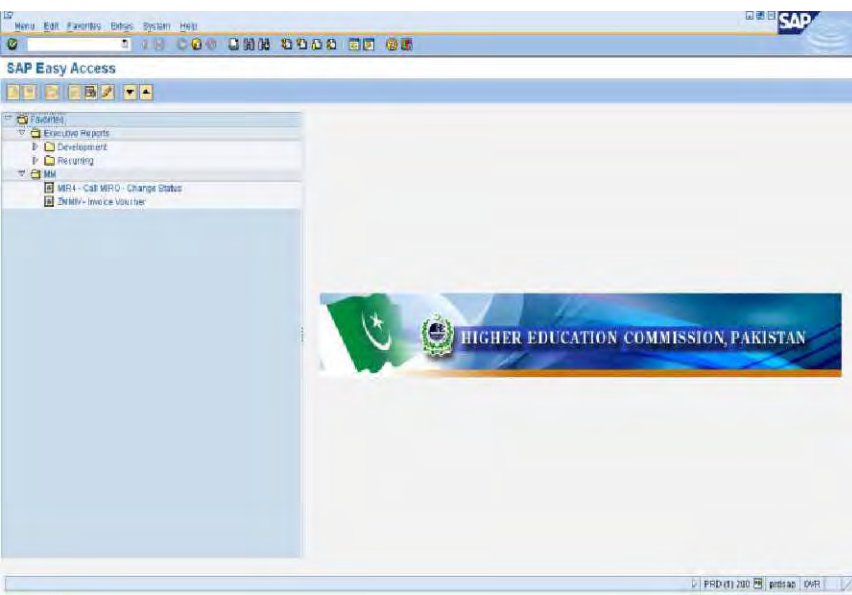
- FI/CO (Finance and Controlling module)
- HR Module (Human Resource Management)
- MM (Material Management)
- Projects System (For Development Projects)

Achievements

Implementation of SAP in Higher Education Commission as an ERP solution has been completed, whereas, data entry by the end-users has been started in all modules. The required financial reports have been developed by Siemens and necessary trainings for reporting system to all senior managers of HEC have been provided.

Moreover, an effective disaster recovery strategy has been implemented successfully in

The ERP solution is planned to be extended to all the public sector universities/ degree awarding institutes of Pakistan after completion of the project at HEC. HEC also intends to introduce more sophisticated technologies in future in order to get optimum productivity out of this investment. These technologies include Oracle Data Guard Broker, Oracle flash back technology, Oracle RAC (Real Application Cluster), and Oracle Data Warehouse.



HEC and made operational. The IT division of HEC is maintaining the operational system in the newly established National Data Centre for Higher Education.

Overview training sessions have also been conducted successfully by M/s Siemens for Finance and Controlling (FI/CO), Human Resource (HR), Project systems (PS), and Materials Management (MM) to provide the overview of the functionalities and working structure of SAP. A forty-day training programme of HR and Scholarships Module to the relevant employees has been conducted successfully. The training was aimed at capacity building of HEC employees to effectively and efficiently use the new system deployed at HEC. This training inculcated in the participants the necessary skills of using the SAP well and has made them accustomed to it.

Capacity Building of IT Professionals of HEC and Universities

HEC truly believes the Human Resource Development as the key to success and the socio-economic development of the country while uplifting the overall standard of education system. The same has been the approach while launching various programmes and ICT initiatives which have been taken so far. Each of these project initiatives were taken while keeping the requirement of capacity building of the associated IT professionals of HEC as well as universities, in order to take up the project once implemented for its long term sustainability. HEC has initiated capacity building programme for HEC and Universities' IT professionals and decision makers. In order to properly utilize/operate the system and to achieve best results against each of the initiatives as highlighted above, training sessions both locally and internationally for University/ Institution's technical officials were arranged.

Attendance and Visitor Record System

The Radio Frequency Identification (RFID) based Employee's Attendance and Visitors Record System which was deployed and made operational last year, has now been activated with the Access Control System as well. The Access Control System is being used to protect the HEC offices from unauthorized access and to provide

access to only authorized persons bearing valid/registered RFID card in the system either as an employee or a visitor.

For this all HEC buildings have been equipped with state of the art, fully integrated RFID based Attendance and Visitor Record System that comprises of Attendance Record System (ARS), Access Control System (ACS) and finally the Visitors Management System (VMS). In addition, the network of this system has now been extended to HEC Regional Centre, Lahore while establishing a Site-to-Site VPN over PERN2 between the two campuses of HEC. However, the registration process and access control setup is centrally managed from HEC Islamabad. IT Division plans to extend this service to all its Regional Centres, that are, Peshawar, Karachi and Quetta. Moreover, the same setup has been planned for the PERN2 PoPs at 15 locations across the country.

The system in place helps keep track of daily attendance of all HEC employees by electronically registering the entry and exit times through reading of unique RFIDs printed on each individual's employee RFID cards. AVS's web based client can be used for monitoring each employee's attendance. A manual system would be incapable of maintaining a record and producing reports of employees on such a grand scale that sees status changes numerous times during the course of a day. The shortfall of a file based record system is its redundant nature and its time consumption. Each RFID card bears information that is unique to its owner.

A total of 22 RFID card reading units are in service throughout the HEC campus at all entry and exit points of the above mentioned buildings. A unique feature of the AVS is its integration with the Active Directory that shares the login password with the AVS. Identification and attendance are the two goals achieved through this approach. The AVS web server used in conjunction with the employee directory remains up to date with the employee details. The AVS

web client helps create the employee's attendance report on a daily, weekly and monthly basis. A future application of the system would be to maintain a record of employee's leaves.

An obvious benefit accruing out of the deployment of ACS is the prevention of unauthorized access of HEC offices that are vulnerable to intrusion from illegal trespassers due to the presence of general public inside HEC's premises. The vision behind the installation of VMS is to keep a temporary log of individuals visiting HEC due to an official visit or privately in an individual capacity. All visitors would be required to hold the Visitor RFID card for the duration of their stay. The card would have to be returned at the reception when exiting HEC's premises. The VMS would aid in determining the current number of visitors along with pinpointing their location in terms of department visited.

IT Helpdesk and Support Services

IT Support Section provides fast and reliable computing and network services to all individual users requiring more than just a high bandwidth link to their desktop. It requires the elimination of bottlenecks through the enhancement of throughput on the local area network and on links to internet. Therefore, maintaining the network means a constant effort at balancing various elements.

The IT Helpdesk forms the backbone of the IT Division and assists HEC staff by solving day to day issues and providing support. It is also assigned with the complicated task of providing Oand M services to the National Data Centre and Power Backup Unit. The IT helpdesk identifies and carries out remedial action against problems communicated through the Trouble Ticket System. On average, the IT Helpdesk tackles a few hundred complaints per month. More than 85 percent of the complaints in general are dealt with immediately within 30 minutes. The

efficiency of the helpdesk has increased several folds with the commencement of the 'Trouble Ticket Number (TTN)' system called Service Communicator. The extension number *2233 has been reserved for the helpdesk solely for the purpose of addressing the complaint promptly.

IT Support Section has enhanced various services to its users and extended the services to other buildings as well as Regional Centres. Amongst are the Internet services, backup connectivity, wireless bridging to other HEC buildings, LAN infrastructure, etc. During the year the internet bandwidth enhanced from 12 Mbps to 24 Mbps and a redundant 4 Mbps DRS Link as well as alternate internet bandwidth facility through the PERN2 dual-homing internet connectivity has also been maintained operational. Moreover, for the uninterruptible operations and services of video conferencing, a separate 1 Mbps link over fiber has been provided to the Video Conferencing Control Room.

Moreover, due to the power crisis as being faced everywhere, computer users at HEC have been facilitated with UPSs for uninterrupted services to their computing needs. IT Division has also provided technical support on various mega events such as Meetings at Cabinet Division, Senate Secretariat, University Games, Vice Chancellors Meeting, etc.



Sports



Sports provide infinite opportunities for increasing human abilities, both physical and mental. The developed nations around the globe accord top priority to sports in their national development programmes. The sports activities provide cathartic opportunities that revive physical and mental energies. These activities not only inculcate empathy amongst the students but also smoothen their character. HEC Sports Division is making strenuous efforts in sports at Inter-University and National levels that earned HEC teams/players 47 medals in National Championship this year. Sports Division carried out the following sports activities during 2008-09:

Intervarsity Sports Championships 2008-09

During 2008-09, 41 events were organized including 10 female sports events at 96 venues of Pakistan in which 78 universities participated. The brief details of the events along-with champion trophy winners are as under:-

- Intervarsity Sports Championships
- Participation in National Championship
- Prize Money
- Scholarships
- PC-I
- Training Courses for Sports Officials
- Meetings

Position	Male	Points	Female	Points
1 st	University of the Punjab, Lahore	423.00	University of the Punjab, Lahore	215.00
2 nd	University of Central Punjab, Lahore	232.50	Govt. College University, Faisalabad	120.00
3 rd	Islamia University, Bahawalpur	135.50	Lahore College for Women University, Lahore	107.00

The complete result of the Intervarsity championships is depicted below.

OVERALL RESULTS						
Intervarsity Sports Championships 2008-09						
S. No.	Event	Date	Venue	No. of Participating Universities	Winner	Runner Up
Women						
1	Tennis	26-29/12/2008	University of the Punjab, Lahore	8	University of the Punjab, Lahore	Lahore College for Women University, Lahore

S.No	Event	Date	Venue	No. of Participating Universities	Winner	Runner Up
Women						
2	Basketball	12-14/01/09	University of Sargodha	14	University of the Punjab, Lahore	University of Sargodha
3	Badminton	17-19/01/2009	Shah Abdul Latif University, Khairpur	13	University of the Punjab, Lahore	University of Sargodha
4	Cricket	22-25/01/09	University of Sindh, Jamshoro	7	University of the Punjab, Lahore	University of Sindh, Jamshoro
5	Athletics	30-31/01/09	University of Karachi	12	University of the Punjab, Lahore	Government College University, Faisalabad
6	Hockey	05-09/02/2009	University of the Punjab, Lahore	7	University of the Punjab, Lahore	Lahore College for Women University, Lahore
7	Handball	10-11/02/2009	Lahore College for Women University, Lahore	6	University of the Punjab, Lahore	Lahore College for Women University, Lahore
8	Volley ball	03-07/05/09	Islamia University, Bahawalpur	8	Government College University, Faisalabad	Lahore College for Women University, Lahore
9	Table Tennis	2-3/3/2009	Quaid-e-Awam University of Engineering, Science and Technology, Nawabshah	24	University of the Punjab, Lahore	Islamia University, Bahawalpur
Experimental (Men and Women)						
1	Karate	12-13/11/2008	University of Veterinary and Animal Sciences, Lahore	9	University of Veterinary and Animal Sciences, Lahore and Superior University, Lahore	
2	Hiking (W)	30/11/2008	University of Sargodha	8	Government College University, Faisalabad	University of the Punjab, Lahore
3	Judo	29-30/04/09	University of Central Punjab, Lahore	9	University of Central Punjab, Lahore	University of Sargodha
4	Teakwondo	20-21/11/2008	University of Central Punjab, Lahore	11	University of Central Punjab, Lahore	University of Sargodha

S.No	Event	Date	Venue	No. of Participating Universities	Winner	Runner Up
MEN						
Racket Games						
1	Table Tennis	14-16/4/2009	University of Peshawar	12	University of the Punjab, Lahore	University of Agricultural Faisalabad
2	Tennis	26/2 to 3/3-09	University of Engineering and Technology, Lahore	17	University of the Punjab, Lahore	University of Engineering and Technology, Lahore
3	Squash	15-17/01/09	Lahore University of Management Sciences, Lahore	21	Government College University, Lahore	University of the Punjab, Lahore
4	Badminton	7-9/4/2009	Mehran University of Engineering and Technology, Jamshoro	16	University of the Punjab, Lahore	University of Science and Technology, Bannu
5	Chess	16-17/04/09	University of Karachi	9	University of Karachi	University of Engineering and Technology, Lahore
Major Games						
1	Basketball		NED University of Engineering and Technology, Karachi	58	NED University of Engineering and Technology, Karachi	University of Karachi
2	Football	24-26/04/2009	University of Veterinary and Animal Sciences, Lahore	52	University of the Punjab, Lahore	Islamia University, Bahawalpur
3	Volleyball	24-27/04/09	National University of Sciences and Technology, Islamabad	61	University of Peshawar	University of the Punjab, Lahore
4	Hockey	07-09/04/2009	Government College University, Lahore	48	University of the Punjab, Lahore	Government College University, Lahore
5	Athletics	26-27/01/09	University of Peshawar	32	University of the Punjab, Lahore	Universities of Peshawar and Central Punjab
6	Handball	20-24/04/2009	University of AJK, Muzaffarabad	8	University of Agriculture, Faisalabad	University of the Punjab, Lahore
7	Cricket	2-5/3/2009	University of Peshawar	64	University of the Punjab, Lahore	Gomal University, D. I. Khan

S.No	Event	Date	Venue	No. of Participating Universities	Winner	Runner Up
8	Swimming	28-29/05/2009	University of Agriculture, Faisalabad	15	University of Central Punjab, Lahore	University of Karachi
Minor Games						
1	Shootingball	3/11/2008	Mehran University of Engineering and Technology, Jamshoro	12	University of Sargodha	University of Sindh, Jamshoro
2	Weightlifting	10/11/2008	University of the Punjab, Lahore	15	University of Central Punjab, Lahore	University of the Punjab, Lahore
3	Kabaddi	02-04/12/08	University of the Punjab, Lahore	8	University of the Punjab, Lahore	University of Central Punjab, Lahore
4	Bodybuilding	22-23/12/2008	University of Veterinary and Animal Sciences, Lahore	15	University of Central Punjab, Lahore	University of the Punjab, Lahore
5	Rifle Shooting	05-06/01/09	Government College University, Lahore	12	Government College University, Lahore	University of Central Punjab, Lahore
6	Mountaineering	09-10/02/2009	University of Agriculture, Faisalabad	9	University of Agriculture, Faisalabad	Quaid-e-Azam University, Islamabad
7	Wrestling	15-16/02/2009	University of Central Punjab, Lahore	9	University of the Punjab, Lahore	University of Central Punjab, Lahore
8	Gymnastics	19-21/02/2009	University of Sindh, Jamshoro	10	University of Karachi	University of the Punjab, Lahore
9	Rovering	28-29/2/2009	Islamia University, Bahawalpur	9	Islamia University, Bahawalpur	
10	Rowing	27-28/4/2009	COMSATS Institute of Information Technology, Islamabad	9	Superior University, Lahore	
11	Trekking	10-11/4/09	International Islamic University, Islamabad	18	Islamia University, Bahawalpur	University of the Punjab, Lahore
12	Tug of War	28-29/3/09	Bahauddin Zakariya University, Multan	13	University of the Punjab, Lahore	Bahauddin Zakariya University, Multan
13	Water Polo	28-29/5/09	University of Agriculture, Faisalabad	9	University of Agriculture, Faisalabad	Lahore University of Management Sciences, Lahore
14	Boxing	10-11/4/2009	Sindh Agriculture University, Tandojam	12	University of the Punjab, Lahore	Sindh Agriculture University, Tandojam
15	Hiking	20-21/02/2009	University of Sargodha	12	University of Sargodha	University of Central Punjab, Lahore

Participation in National Championships

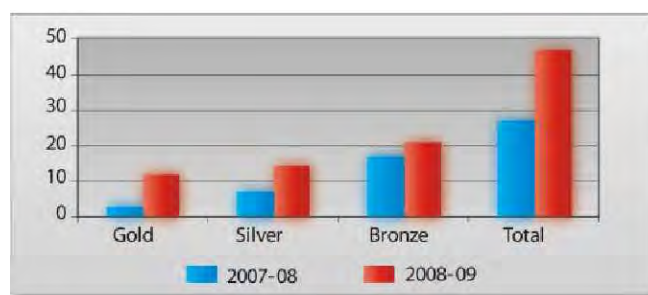
The teams and players of HEC participated in 39 National Championships (Men and Women) during the year 2008-09:-

S.No.	Events
1	1 st Inter-Departmental Weightlifting Championship
2	1 st National Beach Wrestling Championship
3	2 nd National Inter-Departmental Bodybuilding Championship
4	3 rd All Pakistan NBP Boxing Championship
5	3 rd All Pakistan NWFP Governor's Gold Cup Swimming Championship
6	3 rd Junior National Bodybuilding Championship
7	4 th PFF Football (Men) League
8	4 th National Women's Football Championship
9	4 th Umer Butt Memorial National Bodybuilding Championship
10	5 th PFF - Departmental League
11	6 th National Handball Championship
12	8 th National Volleyball (Women) Championship
13	18 th National Rugby Championship
14	35 th National Kabaddi Championship
15	41 st National Athletic (Men) Championship
16	41 st National Athletic (Women) Championship
17	44 th National Gymnastic Championship
18	44 th National Men's Volleyball Championship
19	46 th National Table Tennis (Men) Championship
20	46 th National Table Tennis (Women) Championship
21	48 th National Men Swimming and 8th National Water Polo Championship
22	48 th National Men's Open Swimming Championship
23	52 nd National Badminton (Men) Championship
24	52 nd National Badminton (Women) Championship
25	56 th National Senior Weightlifting Championship
26	56 th National Wrestling Championship
27	Departmental National Basketball Championship
28	Inter-Departmental National Weightlifting Championship
29	Junior Bodybuilding Championship
30	National Badminton Championship (Men)

S.No.	Events
31	National Badminton Championship (Women)
32	National Beach Handball Championship
33	National Junior Wrestling Championship
34	National Men Sand Volleyball Championship
35	National Rugby Championship
36	National (Women) Basketball Championship
37	Pakistan Open Machine Rowing Championship
38	Patron's Trophy Cricket
39	Quaid-i -Azam Water Rowing Championship

Achievements at National Level

2008-09	
MEN	
Wrestling Junior and Senior	1 Gold 3 Silver 5 Bronze
Beach Wrestling	1 Bronze
Boxing	1 Silver 2 Bronze
Bodybuilding	3 Gold 3 Silver 2 Bronze
Weightlifting	3 Gold 4 Silver 4 Bronze
Beach Handball	1 Bronze
Kabaddi	1 Bronze
Rowing Machine	5 Gold 1 Bronze
Rowing Water	2 Silver
WOMEN	
Athletics	1 Silver 5 Bronze
Basketball	1 Silver
Volleyball	1 Silver
Total Medals:	Gold 12 Silver 15 Bronze 24
Grand Total	51



National Championships Organized by HEC

- I. National Beach Handball Championship was organized by University of Karachi under the auspices of HEC at sea view, Karachi from May 15-17, 2009. Eight teams from the country took part in the competition. HEC team won Bronze medal.
- ii. HEC organized National Women Basketball Championship from June 20-24, 2009 at Hamidi Hall, Pakistan Sports Complex Islamabad. Pakistan Sports Board, Islamabad provided technical assistance, physical facilities, food and accommodation to the players. Nine teams from the country participated in the competition. HEC Basketball team played final and won Silver Medal.

Prize Money

The 4th sports prize award ceremony was held at the Government College University Lahore on March 25, 2009 in which 39 student players and 10 officials were awarded prize money. Lt. Gen. ® Arif Hassan, President, Pakistan Olympic Association was the chief guest.

Scholarships

Thirty three scholarships were awarded to the student players who got medals at national level competitions.

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During the year, HEC provided funds for establishment of Fitness Centres to twenty four universities including nine separate centres for female. Twenty five universities had already been provided funds for the Fitness Centres.

Training Courses for Sports Officials

HEC released funds to the University of Peshawar and Mehran University of Engineering and Technology, Jamshoro (MUET) for the organization of courses for sports officials. More than one hundred and twenty participants attended the courses.

Meetings

The 42nd Sub Committee meeting was held at MUET on August 10, 2008 which was attended by Directors of Sports, Universities of Pakistan.

The 9th and 10th Sports Promotion Committee Meetings were organized at Regional Center Peshawar and HEC Islamabad respectively.



Dr. Riaz-ul-Haq Tariq, former Member (Academics) HEC presents Intersports Championship Trophy to Dr. Asghar Javed, Director Sports, University of the Punjab during 42nd meeting of the Standing Sub-Committee of Pakistan University Sports Board (PUSB). Mr. Rahim Bux Channa, former D. G. (Sports) HEC is also present.



The 4th HEC Sports Cash Award Ceremony was held at the GCU, Lahore. Lt. Gen. (R) Arif Hasan, President, POA gave awards of Rs. 25,000, Rs. 15,000 and Rs. 10,000 to the students winning gold, silver and bronze medals respectively in various events during the year.



The team of HEC finished runner-up in the 8th National Women Volleyball Championship, which was won by WAPDA.



Administration and Coordination



The Administration and Coordination is responsible for processing and supporting a number of key subjects. Some of these functions are as follows:

- Commission's Meeting.
- Vice-Chancellors' Committee Meeting
- Senate/National Assembly Questions, Cut Motions, Resolutions, Call Attention Notices
- President's /Prime Minister's Directives and Cabinet Decisions
- Nominations of HEC's representative on various statutory bodies of Universities/Degree Awarding Institutes/Centres
- Complaints received from President/PM Secretariat
- Affairs of Public Sector Universities including Court Cases
- Search Committee for appointment of the Vice-Chancellors

Meetings of the Commission

The 16th, 17th, 18th and 19th Meetings of the Commission were held on August 13, 2008; December 22, 2008; March 31, 2009 and June 27, 2009 respectively during 2008-09. The Commission approved various policies and offered administrative and managerial guidance for magnification of higher education and research in the country.

National Assembly and Senate Business

Submission of replies to the National Assembly and Senate Questions asked during the sessions of the Upper and Lower Houses is another task carried out by the Division. All the questions pertaining to the higher education sector are referred to HEC for appropriate replies. These questions are processed through Ministry of Education and are responded in the National Assembly and Senate by the Federal Education

Minister on behalf of the Higher Education Commission.

However, collecting required and authentic information in a very limited timeframe is a constant challenge faced by the Section all through the year. However, the queries are met within deadlines.

During the period, the HEC processed and responded to a large number of National Assembly and Senate questions as per following schedule:

National Assembly Questions:	156
Senate Question:	85

Cut Motions, Privilege Motions, Resolutions and Meeting of the Senate and National Assembly Standing Committees

Fiscal Management is another name of balancing expenditures and revenues. Sometimes expenditures exceed revenues and every so often revenues show such a positive trend that they exceed expenditures. Pakistan is a country that possesses meager financial resources and, therefore, recourse management becomes even more difficult when expenditure outweigh available resources. In such situations, budget cuts are introduced which are presented in National Assembly in the form of Cut Motions. The education sector also faces such budgetary cuts like all other sectors and different Cut Motions are presented in the National Assembly to balance out distribution of resources in accordance with the national priorities. As a bridge between Government and Universities, the Higher Education Commission also has to face such Cut Motions and prepare defence statements for consideration in the National Assembly. Similarly, Privilege Motions (viz. complaints put forth by the honourable Members of National Assembly and accepted by the Speaker Resolutions and representation of the Higher Education Commission in various

Higher Education Commission in various Standing Committees of the National Assembly and Senate are other important functions. During 2008-09, HEC processed a number of Cut Motions, Resolutions, Privilege Motions and participated in a number of Standing Committee Meetings as per following details:

President's/Prime Minister's Directives and Cabinet Decisions

During the year, 27 President's/Prime Minister's Directives were received in the HEC. Out of these, nine Directives have been fully implemented, whereas rest is being processed for implementation by the concerned Division of HEC. The Section is responsible for collection of implementation report and status of these Directives and forward that to the Cabinet Division, President's/Prime Minister's Secretariat and the Ministry of Education on monthly basis.

HEC Representation on Statutory Bodies of Universities

There are more than 130 universities and degree awarding institutions in public and private Sector entres of Excellence, Area Study Centres and Pakistan Study Centres in the country. The Chairman HEC or his nominee is represented as

Member on the statutory bodies of these Universities/Institutes/Centres. In this regard, more than 180 persons were nominated for representing HEC on various meetings of different bodies of the universities and degree as well as Centres of Excellence, Area Study Centres and Pakistan Study Centres in the country. The Chairman HEC or his nominee is represented as Member on the statutory bodies of these Universities/Institutes/Centres. In this regard, more than 180 persons were nominated for representing HEC on various meetings of different bodies of the universities and degree awarding institutions during the year.

Search Committee for Appointment of the Vice-Chancellor of KIU, Gilgit

The tenure of the Vice-Chancellor of Karakorum International University (KIU) expired in the month of January, 2009. To fill the post of Vice-Chancellor of KIU through Search Committee mechanism, a summary was submitted to the President of Pakistan/Chancellor for appointment of Search Committee. The President/Chancellor appointed the Search Committee. Ms. Shahnaz Wazir Ali, Special Assistant to the Prime Minister on Social Sector, former In-charge, HEC was appointed as Convener of the Committee. A panel of candidates for the position was recommended. Later the final selection was made. The new Vice-Chancellor of KIU joined the University on 11th June, 2009.

National Assembly					Senate					Total 1
Cut Motions, resolutions and Privilage Motion										
Cut Motions	Privilage Motions	Call Attention Notices	Adjournment Motions	Resolution	Cut Motions	Privilage Motions	Call Attention Notices	Adjournment Motions	Resolution	
2	1	2	4	5	0	0	0	0	4	18
National Assembly & senate Standing Committee Meetings										
6					2					8



**National Law
University**



The project to establish a Federal Law University was approved by CDWP in its meeting held on March 21, 2006 at a capital cost of Rs.415 million with 12 months duration. The project was revised and approved by CDWP in its meeting held on May 17, 2007 at a revised cost of Rs.473.30 million with 24-month duration. The objectives of the project include:

1. Procurement of 50 acres land at Islamabad for National Law University
2. Consultancy services for master planning, survey and detailed BoQs for Islamabad campus
3. Hiring of three buildings, one each at Islamabad, Lahore and Karachi for the university campuses
4. Hiring of faculty and support staff for National Law University.
5. Provision of computer, teaching aids and necessary office equipment
6. Human Resource Development for 41 faculty members
7. Furnishing of Classrooms, Labs, Library, Faculty and Management Offices, Conference Rooms, Cafeteria, Gymnasium, etc. at each campus
8. Purchase of Vehicles

Land Acquisition of Each Campus

Under the project 35 acres of land for the main campus of Islamabad has been acquired in the Kurri Zone of Islamabad (Zone-IV) from the CDA. The land for other campuses has been provided free of cost by the respective provincial governments. The detail is as under:

Campus	Area	Location	Status	Cost
Islamabad	35 Acres	Kurri Zone-IV	Allotted	PKR (M) 191.00
Lahore	25 Acres	Thokar Niaz Baig	Allotted	Free of Cost Provided by Provincial Government
Karachi	-	-	-	-
Peshawar	50 Acres	Jallozai Camp	Allotted	Free of Cost Provided by Provincial Government.
Quetta	100 Acres	Samungli Road, adjacent to PAF Facilities	Allotted	Free of Cost Provided by Provincial Government

Physical status and Facilities

- Offices of the Vice Chancellor, Registrar, Director Finance, Controller of Examination, Faculty members and Support Staff have been established at Islamabad campus
- All the facilities required to run a professional library for the campus have been provided including books and journals for all the campuses
- Telephone exchange has been installed
- Class rooms, faculty rooms, common rooms, conference room, and rooms for administrative staff have been equipped with furniture and other necessary facilities and are fully functional
- Internet tower has been installed and server room developed for the purpose at Islamabad campus
- Computers, printers, photocopier, scanner, fax machine etc have been purchased and are functional
- 100 KV Electricity Generator is installed and functional
- Furniture has been purchased and acquired for offices and classrooms
- Air conditioners have been installed
- Three vehicles have been purchased for each campus

Human Resources development

Under the project, 41 scholars are to be sent abroad for LLM/ PhD studies in Law. In five intakes 51 scholars were selected, out of which 33 have proceeded abroad and joined their studies

in different universities of Australia, US and the UK. By the end of year 2009 all the LLM scholars will be available to join the University as faculty members, however two scholars sent for PhD will return in 2011.

Faculty and the Supporting Staff Induction

Besides Support Staff has been hired for all the three campuses. Scholars who were sent abroad for higher studies in law with the condition that upon their return they will serve the proposed University for a minimum period of three years have started coming back after completing their studies. So far eleven scholars have returned and nine others are expected to return soon. The faculty recruitment for social sciences and other subjects is in progress. The advertisement has appeared in the press for the induction of non-law faculty members. The process of faculty induction will be completed within a couple of months.

Decision of the Commission (HEC) for Funding and Start of Classes

According to the decisions of the 17th and 19th meetings of Higher Education Commission, HEC will provide funding for the proposed University, The commission further decided and advised to modify the name of the University by inclusion of some other disciplines. After the inclusion of "Social Sciences" discipline the name has been modified from "National Law University" to "National University of Law and Social Sciences" The 'Commission' also decided that the commencement of classes in the University be deferred and only be initiated after the sanction of charter by the Government.

Charter of the University

In pursuance of the decision of Cabinet a bill to establish of National University of Law and Social Sciences, Islamabad was submitted by the Ministry of Education. The Federal Cabinet in its

Ministry of Education. The Federal Cabinet in its meeting in September, 2009 considered the bill. The Federal Cabinet constituted a Committee comprising Federal Education Minister as Chairman and Federal Minister of State for Finance and Deputy Chairman, Planning Commission being its members to examine the contents of the draft Bill and sought their recommendations thereof. The decision remains to be made to date.