

Chapter 24 | HIGHER EDUCATION

Higher education plays an important role in the development of a knowledge economy. Many developing countries while trying to develop a robust higher education sector have experienced challenges relating to: sustainability in increasing access; inequalities of access and outcomes; educational quality and relevance; and weaknesses in university governance structures and management practices. Pakistan is projected to become the 5th populous country by 2030, with a population ranging up to 230 to 260 million people. Large portion of this population will be the youth. This dividend can be gained through higher productivity and a faster economic growth by providing quality higher educational attainments throughout the population.

The Vision 2025 stands on 07 Pillars. Two of these pillars have direct relevance to higher education sector. Pillar-I emphasizes Developing Human and Social Capital while Pillar-VI encompasses Higher Education and Science & Technology into a broader scope of Knowledge based economic development. Pakistan has to make significant leap forward in areas like education, health and social development to catch up with its peers. Vision 2025 presents a comprehensive approach to addressing human and social development gaps with an emphasis on developing human and social capital to take full advantage of Pakistan's youth bulge. It aims at substantial expansion in levels of education as well as improvements in the quality of education. A larger share of the GDP, at least 4 per cent to education and at least 3 per cent to health, would have to be allotted.

11th Five Year Plan also describes both Higher Education and Science & Technology sectors embedded in a broader concept or Knowledge and Technology Based Development. The plan envisages change from an input-driven to a productivity-driven growth strategy. This transition would require leadership role by institutions of higher learning through the production of skilled, innovative and enterprising knowledge workers. On the other hand Research organizations will also come up with solution based and innovative research in collaboration with the industry and academia for fruitful results. It is envisaged that the access to higher education should increase from 7 percent to 10-12 per cent during the Plan period. The next important aspect in the plan is relevance of research to the national needs. This covers sub-areas, like revamping and standardization of the curricula, commercialization of research, innovation, promotion of entrepreneurship and establishing centers of excellence in priority areas of research. Universities and R&D organizations will develop strong linkages with the industry and produce meaningful research.

Performance review 2016-17

Increase in access

Increasing access to higher education is one of the important aspects of both Vision 2025 as well as 11th Five Year Plan. In line with this objective, Higher Education Commission has taken several steps to enhance the access to tertiary education in the country during

2016-17. A comparison of number of universities / Degree Awarding Institutions (DAIs) and corresponding increase in student enrolment is given below:

Year	Universities/Degree Awarding Institutions			Student Enrollment*
	Public	Private	Total	
2004-05	57	53	110	471,964
2008-09	70	57	127	803,507
2012-13	87	66	153	1,138,735
2013-14	87	69	156	1,243,040
2014-15	94	69	163	1,298,600
2015-16	105	73	179	1,361,987
2016-17	108	75	183	1.4-1.5 million (approx.)

*Including students from AIOU and Virtual University (source HEC)

Now higher education institutions have wide coverage throughout the country. It is worth mentioning here that the above table does not include the number of campuses of the universities and DAIs. If we include the campuses then the overall number of higher education institutions in the country would roughly be close to 300.

Visibility of Pakistani universities on globe

The output in Higher Education Institutions (HEIs) of the country have shown tremendous improvements and Pakistan has been acknowledged as rising star by the international higher education community in a number of disciplines. Today many Pakistani universities are seen on the globe. The addition of Pakistani universities in QS Asian ranking over the year is given below:

2014		2015		2016	
University	Rank	University	Rank	University	Rank
PIEAS	106	PIEAS	115	LUMS	111
AKU Karachi	116	QAU	116	NUST	112
QAU	123	AKU Karachi	117	QAU	149
NUST	129	NUST	119	PIEAS	149
LUMS	181-190	LUMS	161-170	AKU, Karachi	183
CIIT	201-250	CIIT	201-250	Univ. of Karachi	201-210
Univ. of Karachi	201-250	Univ. of Punjab	201-250	Univ. of Punjab	221-230
Univ. of Punjab	201-250	UA, Faisalabad	251-300	CIIT	231-240
UA Faisalabad	251-300	UET, Lahore	251-300	UET Lahore	241-250
UET Lahore	251-300	Univ. of Karachi	251-300	UA, Faisalabad	>300-
Total HEIs = 10		Total HEIs = 10		Total HEIs = 10	

Source: HEC

Human resource development

The present government believe that youth of this country is the real driving force towards economic prosper Pakistan, therefore, government has launched number of new initiatives for them. Under these projects a total of 10,266 scholarships would be provided

to Pakistani nationals in next five to ten years. In 2016-17 about 2,300 PhD and Master leading to PhD scholarships have been awarded to the faculty of university and fresh candidates. This includes 1,180 indigenous and 1,120 foreign scholarships. Some of the important ongoing scholarship schemes include: Indigenous PhD Fellowships for 5,000 scholars, Overseas Scholarship Scheme for Master / M Phil leading to PhD and US Pak Need Based Merit Scholarships at bachelor level. There are two scholarship schemes specifically for students of FATA and Balochistan. In addition to these efforts, government is providing fee reimbursement facility to students of universities under Prime Minister's Youth Programme.

Research & development

Universities in Pakistan have improved their R&D infrastructure and working culture. As a result academic employment and retention of doctoral scientists and engineers grew over the last decade. Due to this, the research activities have enhanced resulting in more than 6 folds increase in research articles published in impact factor journals. Streamlined research, generated by strategic academic processes that build strong societies and economies has now entered a takeoff phase of commercialization. Business and Technology Incubators are being established in universities across Pakistan to promote university-industry collaboration. Universities have initiated different research projects related to agriculture, business, industrial needs, which are shared with the related stakeholders and other sections of the society. Some important steps taken to promote R&D are described below:

- About 30-32 per cent of the approved development funds have been allocated for provision of latest teaching and research lab equipment to expand and enhance the R&D infrastructure of the universities.
- A project for establishment of Seerat Chairs in six (6) Public Sector Universities, has been approved at a cost of Rs.192 million, for conducting research on aspects like finance, interfaith harmony, leadership and governance in context of Seerat-e-Pak.
- JICA is providing Rs.212 million for Baluchistan University of Information Technology, Engineering & Management Sciences (BUIEMS), Quetta for provision of training and Lab equipment.
- KOICA is providing grant in aid for University of Agriculture Faisalabad and Arid Agriculture University, Rawalpindi for establishing agricultural innovation centers and capacity building of community organizations / training of farmers.
- The Higher Education Commission has launched a new project "Establishment of Technology Development Fund for HEC Scholars Returning after completion of PhD to introduce new Technologies in Pakistan (HEC)" for academia-industry collaborative project. Under this project, new and innovative ideas of researchers along with industry are being supported for prototype development, initial product development, patent filing, marketing and licensing of new products.

Infrastructure development

About 20 per cent of the approved development funds have been allocated for infrastructure development of the universities to expand the access to higher education. This includes 30 new development projects approved so far in 2016-17 for universities. Some important project and their envisaged impact is given below:

- Strengthening and Up-gradation of Universities of Backward Areas: This is an approved umbrella project intended to provide small amount of funds (Rs100-200

Million) to newly established universities or universities in backward area for their requisite civil infrastructure and equipment.

- Establishment of Sub Campuses of Public Sector Universities at District Level (Phase-I): Under the directions of the Prime Minister of Pakistan, a project has been approved in 2016-17 for providing higher education access at district level. In the Phase-I of the project, 22 campuses of universities are being established in districts having no public sector university or campus.
- Establishment of University of Central Asia and Pakistan (UCAP), Part-I, Islamabad: The project was approved in 2016-17 and intends to develop a world class university in Pakistan to attract students from both Pakistan and Central Asian Republics.
- Innovation Centre and Innovation Park at UET Lahore Sub Campus: Under this approved project, UET Lahore is implementing a project for establishing innovation centre for improved industry academia collaboration.
- Upgradation of University of Hazara Campus at Havelian to a Full-fledged University: The approved project is intended to provide higher education access to the people of the area.
- Expansion and Upgradation of International Islamic University (IIUI), Sector H-10, Islamabad: Under, this approved project IIUI is upgrading its infrastructure and providing better facilities for the students.
- Provision of new facilities and Infrastructure for main campus at of University of Engineering & Technology, Lahore: The project approved in 2016-17 is under implementation for upgrading the laboratories of UET Lahore main campus.
- Establishment of AJK Women University, Bagh, AJ&K: Establishment of a Women University was an old demand of people of AJ&K. Accordingly, this project was approved and is under implementation. The project will provide necessary civil infrastructure, equipment and other facilities for the women university.

Financial

The Government of Pakistan initially allocated Rs21.49 billion for 122 development projects in 2016-17 out of which an amount of Rs19.09 billion has been released. Total expenditure reported is Rs12.75 billion.

In addition to above, Rs5.45 billion has also been released by the government for the PM's Laptop Scheme (Phase-II) through technical supplementary grant. Similarly, Rs0.56 billion were released for the Project titled "Award of 3,000 Scholarships to the Students from Afghanistan under Prime Minister's Directive" and Rs0.01 billion for the project titled "Afghanistan Scholarship Programme (ASP) at Lahore University of Management Sciences (LUMS), Lahore".

Outlook 2017-18

Ministry of Planning, Development & Reform is taking steps to focus for creating awareness about productivity, quality and innovation for economic development of the country. Main stakeholders for this initiative will be Ministry of Science & Technology, Ministry of Industries and Higher Education Commission. HEC being one of the most important stakeholders will play its part in this regard. In addition to that efforts will be made for improving industry academia linkage. New Science & Technology Parks and Incubation/Innovation Centres will be established across the country to facilitate established

industry, SMEs as well as startup companies and promote entrepreneurial culture in the country.

The most important aspect for development of higher education sector is enhancing access to the doorsteps of the people. Several new universities and the sub campuses of universities will be opened in order to increase coverage to the far flung areas across the country. The target is to provide 100 per cent university coverage at district level without compromising on quality of education.

Human resource development is another important focus area in higher education sector. Government of Pakistan will provide funds for both indigenous and foreign scholarships so as to bridge demand and supply gap of qualified PhD faculty members in the universities and DAIs. HEC is implementing both indigenous and foreign for Master, Masters leading to PhD and PhD degrees. In addition to that the Post-Doctoral Fellowships are being provided to faculty members to refresh their knowledge about latest research at global level. PhD students will also be supported for spending one semester at foreign universities to conducting research on latest equipment. Travel grants will be provided for attending seminars and conferences in developed countries.

Access to higher education requires establishing new universities or providing infrastructure to the existing universities. In addition to that, the obsolete infrastructure at existing institutions needs to be replaced or upgraded. In this context, infrastructure development and procurement of state of the art equipment for new and existing universities will be one of the main aspect of the outlook for higher education sector.

Financial outlay

Higher Education Commission has been allocated Rs35.66 billion for 2017-18. In addition to that funds for PM Laptop Scheme and Scholarship Scheme for Afghan Students have also been allocated.

Programmes

- An approved project for establishing new universities or campuses of existing universities at district level will be implemented to improve access. In Phase-1 of the project, 22 new campuses will be established.
- New universities to be established in 2017-18 include: University of Baltistan (GB), University at Chitral, Agriculture University at Dera Ismail Khan, University at Gawadar and Federal University at Hyderabad Sindh.
- University campuses to be established are: Women Sub campus at Kohat University of Science & Technology, Campus of Turbat University at Zhob, Women sub campus of Swat University in Mingora and Women university campuses at Pishin and Khuzdar.
- The projects for upgradation of infrastructure on universities will also be an important aspect of programmes in 2017-18. These include: Up-gradation of Bannu University of Science & Technology Lakki Marwat, Agriculture College at Dera Murad Jamali, Development and Improvement of facilities at Ghazi University, DG Khan, Expansion and Upgradation of International Islamic University Islamabad, Strengthening of Dawood University Karachi and Upgradation of Hazara University Campus at Havelian.

- HEC is providing digital access of resources to universities across the country through its Pakistan Education & Research Network (PERN) project. A project namely “Strengthening of Core Network & Expansion of PERN footprints through CPEC Optical Fiber (PERN-III)” will be implemented for betterment of the digital resource facilities.
- Government is trying to bring universities in less developed areas at par with universities in other parts of the country. A project for providing funds to Universities of Backward Areas has been approved specifically for this purpose and its implementation will continue in 2017-18. Similarly approved projects for students of FATA and Balochistan will continue and provide them quality education opportunities.
- Government of Pakistan is providing scholarships for Afghan students for last few years, this initiative will continue in next year. In FY 2017-18, its new phase namely Award of Additional 3,000 Allama Muhammad Iqbal Scholarship to Afghan Students will be approved and implemented for continuous support.
- Prime Minister of Pakistan visited Sri Lanka in 2016.17 and committed for providing scholarships to Sri Lankan students at Pakistani universities. In this regard an initiative named Pak-Sri Lanka Knowledge Corridor will be launched for playing a positive role in the region. Pakistan will continue to provide scholarships to students from Indian Occupied Kashmir.
- A project “Bridging the Job Market Skill Gap for General Post Graduate Degree Holders for providing training to postgraduate students in subject like Arabic, Pashtu, Sindhi, Punjabi, Balochi, Political Science etc. as regular or private candidates will be implemented.
- HEC will also start Phase-II of Science Talent Farming Scheme (undergraduate level). Phase-I of the scheme was meant for matric and college students and was implemented by Pakistan Science Foundation.
- Government will fund a project for Establishment of National Science & Technology Park at Central Campus H-12, NUST. Many of the universities will establish their own Incubation Centers for facilitating startup companies. One such center will be established in 2017-18 at University of Agriculture Faisalabad with Korean cooperation. In a similar way, Dr Panjwani Centre of Molecular Biology at University of Karachi will establish a center for indigenous production of animals and birds for medical use.
- The Higher Education Commission launched a new project “Establishment of Technology Development Fund for HEC Scholars Returning after completion of PhD to introduce new Technologies in Pakistan (HEC)”for academia-industry collaborative project. Under this project, new and innovative ideas of researchers along with industry will be supported for prototype development, initial product development, patent filing, marketing and licensing of new products.
- .HEC is one of the important stakeholder in respect of PPQI initiative. HEC will undertake awareness, academic and other activities assigned to take for propagating the PPQI initiative during 2017-18.
- It is estimated that a total of 2610 Masters, Master / MPhil leading to PhD and PhD scholarships will be provided to students during 2017-18. This will include 1,350 indigenous and 1,260 foreign scholarships. In addition to that 2,136 bachelor level

students will get need / merit based scholarships. Under PM Fee Reimbursement programme 40,000 students across the country will get benefits.

It is pertinent to mention here that in addition to the development and recurring funding provided to the universities by federal government, they also get support from provinces. However, most of the times this support comes in form of grants or partial sharing of recurring expenditure. Provincial government have also shown support by providing land / cost of land for establishing new campuses of existing universities or establishment of a new university. In some cases, provincial governments have also provided existing buildings for immediate start of classes for a new campus or university.