

Higher Education of Pakistan Country

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COUNTRY PROFILE

Pakistan became an independent nation in 1947 when British India split into a Muslim state of Pakistan and a largely Hindu India. Pakistan is a federation of four provinces, each with a parliamentary system, federally administered Tribal Areas and Islamabad Capital Territory. The four provinces are Punjab, Sindh, Northwest Frontier Province (NWFP) and Balochistan. Pakistan is located in South Asia, bordering India to the East, China to the North East, Iran to the South West and Afghanistan to the West and North. To the south is the Arabian Sea. Pakistan is an Islamic Republic. Since 1947 the country has experienced a variety of democratic and military governments. Since October 1999 the head of state is General Pervez Musharraf. He became president of Pakistan in June 2001. Pakistan has around 162 million inhabitants (2005 estimate). 97% of the population is Muslim. The country is composed of several ethnic groups of which Punjabi are the largest. Punjabi is the most widely spoken language, with Urdu

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as the official language and English as the language of administration.

The population is young and fast growing with a median age of 19.58 years and a population growth rate of 2.03%. The country has an estimated literacy rate somewhere between 48% and 54 % depending on the sources and the definitions used (10 years+ or 15 years+) with big gender differences and differences between rural, tribal and urban areas. 32% of the population live below the poverty line. The main occupation is within agriculture (42%), while 38% of the labour force works in services and 20% in industry. The country has suffered from long internal disputes, a low level of foreign investment and conflicts with India. However, in recent years, aided by macroeconomic reforms and an increase in industrial production, Pakistan has experienced a positive economic trend, with an annual growth in GDP of 6.1%.

The Constitution from 1973 (article 33) requires development of an education policy to ensure the preservation, practice and promotion of Islamic ideology and principles as enshrined in the teachings of the Koran and the Holy Prophet. The National Education Policy (1998-2010) clearly states the objective of making Islamic studies the code of life incorporated in all education.

BACKGROUND OF THE STUDY:

In Pakistan, higher education refers to education above grade 12, which generally corresponds to the age bracket of 17 to 23 years. The higher education system in Pakistan is made up of two main sectors: the university/Degree Awarding Institutes (DAI) sector and the affiliated Colleges sector. The Higher Education Commission (HEC - a reincarnation of the erstwhile University Grants Commission), is an autonomous apex body responsible for allocating public funds from the federal government to universities and DAIs and accrediting their degree programs. Colleges are funded and regulated by

provincial governments, but follow the curriculum of the HEC funded universities/DAIs with which they are affiliated. While the HEC primarily funds public universities, it has recently opened a limited number of avenues for making funds available to private sector universities for research and infrastructure development. The Pakistan higher education sector is predominantly public in nature, with public Higher Education Institutions (HEIs) dominating both the university/DAI and College sectors.

The HE sector enrolls less than 4% (including colleges) of the age cohort, and compares unfavorably with countries such as India at 11% and Malaysia at 32%. There is also a large distance learning program. Public HEIs generally offer a wide range of courses and programs, while private HEIs predominantly offer a narrow range of vocationally oriented courses and programs such as business and IT. The bulk of research in the HE sector is conducted in public universities. However, the private sector does play an important role. In 2006/07, the private sector represented some 23% of HEI enrolments and 9% of Degree College enrolments.

GENERAL CHARACTERISTICS OF HIGHER EDUCATION IN PAKISTAN

Responsibility for higher education in Pakistan is shared between the federal government and the provincial governments. The Higher Education Commission (HEC) is an actor of central importance to the development of higher education in Pakistan. HEC was established in 2002, replacing the University Grants Commission (UGC) which until then was responsible for higher education under the rule of the federal government. HEC is an autonomous organization directly under the rule of the prime minister, and has been given a wide mandate in order to improve and promote higher education and research in the country. Among its many tasks, the Commission has responsibility for policy formulation and guiding principles

for all higher education institutions. HEC submits budgets concerning public universities to the federal government and controls distribution of these funds. The Commission also functions as a link between higher education institutions and the surrounding society, making sure that the institutions work in the same direction as the industry and employment markets. Quality assurance of higher education in Pakistan is another very important task under the auspices of HEC. This includes accrediting the institutions of higher education and prescribing the conditions for the establishment of private institutions of higher education.

The tertiary enrolment rate for students aged 17 to 23 is 2.6 % (2005). HEC aims to increase this figure to 8% by the year 2020. Restricted access to higher education at the established institutions for higher education has led to an explosive increase in the numbers of private universities operating.

INTRODUCTION OF THE TERTIARY EDUCATION SYSTEM IN PAKISTAN:

Government Strategy and Ongoing Policy Reforms about the higher education Pakistan: After two decades of serious neglect, the higher education sector in Pakistan has, in recent years, undergone a rebirth. The situation began to reverse itself in the early 2000s, with the government showing a clear commitment to improving higher education, as evidenced by significant increases in spending on higher education (Table 2), the creation of the HEC in 2002 and the establishment of an ongoing major policy reform program outlined in the Medium-Term Development Framework (MTDF) 2005- 2010 prepared by the HEC.

Recent developments in the areas of quality, access, and governance and management include:

Quality:

- (i) Establishment of Quality Assurance Agency at the HEC and Quality Enhancement Cell at HEIs;
- (ii) A program launched to equip both new and existing faculty with the advanced qualifications;
- (iii) Introduction of a new compensation system (Tenure Track System);
- (iv) Provision for laboratories, equipment and scientific material;
- (v) Alignment of academic degrees with international norms; and
- (vi) Curriculum revision.

Access –

Measures have been taken both to expand supply and to boost demand:

- (i) expansion of existing infrastructure;
- (ii) exploitation of the potential of distance learning; and
- (iii) Provision of undergraduate and post-graduate scholarships to students in both the public and private sectors.

Governance:

- (i) Implementation of measures to introduce a culture of accountability in Universities/DAI, to clarify administrative procedures, and to institute transparent quality assurance mechanisms; and
- (ii) Strengthening capacity of HEC through streamlining of financial management and procurement procedures, and stakeholder consultations.

As a result of the reforms introduced since 2002, the higher education sector has made some progress toward addressing the significant issues and challenges that faced the

sector at the turn of the 21st Century. The impact of these initial measures has been substantial, and the results can be seen at both the University/DAI and HEC levels. For example, total enrollments grew at an average annual rate of 21% between 2002/03 and 2004/05, recruitment procedures for HEI leadership and academic staffs are now explicitly based on merit, and HEC is able to process a huge volume of transactions with reasonable turnaround time. Despite considerable progress in addressing the issues and challenges facing the Pakistan higher education sector, much remains to be accomplished.

HIGHER EDUCATION ENROLLMENT AND GROWTH

In the early 20th century, Muslims of the Indian subcontinent were, in general, poorly educated relative to Hindus. This was both because of British prejudice against Muslims, as well as resistance by orthodox Muslims to modern scientific ideas and to the English language. Poor education made it difficult for Muslims to get high-level government jobs. This was historically one of the most important reasons that led to the demand for Pakistan.

Compared with much of India, the areas that currently constitute Pakistan were educationally backward. In 1947, Pakistan had only one teaching university, Punjab University in Lahore, with a student enrolment of 644. It lost its best faculty members, who were mostly Hindus, to the migration following the Partition. Although the University of Sindh also formally existed at this time, it was only an examining body and began its role as a teaching university after relocating from Karachi to Hyderabad in 1951.

Karachi University was established in 1950. University level education in Pakistan clearly had a very modest beginning. Expansion followed in subsequent years. Table 1 shows the growth in the number of universities, as well as other degree awarding institutions (DAI's), over a period of about 60

years.¹ The first major increase in the number of public universities was initiated by Zulfikar Ali Bhutto, whose populist regime (1971-1977) promised to spread higher education widely.

This was subsequently eclipsed by a much faster expansion in the public sector. The first private Pakistani universities were the élite Lahore University of Management Sciences in 1984, followed by the Aga Khan University Hospital in 1985.

The tally in early 2007 was as follows:

- 50 public universities (several upgraded from college status).
- 9 public Degree Awarding Institutes (DAIs).
- 37 private HEC recognized universities.
- 18 private Degree Awarding Institutes.

This makes a grand total of 114 universities and DAIs, an apparently impressive achievement given the low starting point. Student enrolment increased correspondingly. According to the Higher Education Commission the year-wise enrolment in 101 universities/DAIs (including distance-learning institutions) was 276,274 in 2001-2002, 331,745 in 2002-2003, and 423,236 in 2003-2004. Of the total enrolment in 2003-2004, 48 percent was in public sector universities and DAIs, 38 percent in distance learning, and 14 percent in private sector institutions. The latest³ presently available enrolment statistics are for 2004-2005. They amount to 534,000 or 2.5 percent of the eligible age group. If affiliated colleges are included, the number of students the higher education sectors increases to 807,000 which is about 3.8 percent of the eligible age group.

Let us briefly reflect upon the province-wise enrolment. The populations in Punjab, Sindh, Khyber Pakhtunkhwa, and Balochistan are roughly 55 percent, 23 percent, 16 percent and 5 percent of the total population respectively. *If Balochistan had the same population as Punjab the enrolment there would*

be only 63,591 instead of Punjab's 102,781, showing that this province has much lower access. Sindh appears to have far greater access – it would have 190,802 for equal population with Punjab. But this is deceptive because Karachi, with a population of nearly 16 million, has the overwhelming number of higher education institutions in Sindh. To put these figures in context: the university enrolments of Khyber Pakhtunkhwa and Balochistan put together is less than the enrolment at a single large US university. The University of Maryland, for example, has over 50,000 students. Pakistan does not compare favourably even in comparison with its neighbours—Iran and India. Iran with a population of about 65 million in 2004 had over 2.2 million students in its universities.⁴ India has approximately twice as much of its eligible population enrolled in comparison to Pakistan. Such comparisons put pressure upon policy makers to show fast results.

Constraints upon increasing enrolment still further come principally from the following:

- (a) Availability of formally qualified faculty.
- (b) Availability of formally qualified students.
- (c) Funding.

We shall consider each in turn.

(a) Faculty: show the number of full-time faculty members, classified by their last degrees. A large number of Pakistani university teachers hold only bachelor's degrees but teach at least at the BA/BSc level. The average number of PhD teachers per university works out to roughly 30. Assuming 10 departments per university, this is only 3 PhDs per department. The "PhD deficit" has frequently been emphasised, and plans to increase the number of PhD holders several fold were announced but with little consideration for suitability.⁵ Clearly, even without insisting upon any quality standards of teachers with PhDs (i.e., a person with a PhD is to be considered a "real PhD" for counting purposes), a simple

consideration of the numbers available in Pakistan puts a definite limit to expansion of the university system.

(b) *Students:* Those who complete their Higher Secondary Certificate (FA/FSc) have gone through 12 years of schooling. Subsequently, they are formally eligible for entering colleges or universities. Currently, only 2 out of 10 students taking the HSC exams pass, and only one makes it to a university.

(c) *Funding:* The total higher spending for higher education increased from Rs 3.9 billion in 2001-2 to Rs 33.7 billion in 2006-7. (Breakup: Rs 15.7 billion for recurring expenses, and Rs 18.00 billion for development.) Per university student, the average expenditure up from around Rs 30,000 in 2001-2 to Rs 135,000 in 2006-7. This is about \$2100 per student which, while small by western standards, is substantially larger than for corresponding levels in India even without the large increases in the last several years.⁶

(d) *The above may be summarized as follows:* enrolment in higher education has increased many-fold over the last six decades; access is nevertheless limited to only a small fraction of the eligible population; provincial disparities are substantial; the number of formally qualified teachers is low; and funding for universities has increased enormously since 2002. But the real problem—higher education quality—has so far not entered the discussion. It will be taken up next.

HISTORICAL PERSPECTIVES

HEC has established quality assurance agency to safeguard public interest by enforcing sound standards in higher education and encouraging continuous improvement by reviewing and developing higher education benchmarks and quality criteria. Rahman (2007) says that HEC lays a particular focus on the institution of quality enhancement, assurance,

accreditation, mechanisms and universities across the country sustainable improvement in the delivery of higher education requires the development of a mechanism for continuous self-monitoring and improvement of the system.

The quality assurance initiatives improve the quality and relevance of the graduates and research programs, and thus enable universities to play a more effective role in the economy. The basis for this belief is in the finding that education contributes to economic growth in a number of ways (Asian Development Bank, 1989; Denison, 1967; Psacharopoulos, 1988; Schultz, 1961). First, it improves generally the quality of labour by imparting skills and work knowledge. Second, it increases labour mobility and therefore promotes the division of labour. Third, it improves management skills which lead to more efficient location of resources. Fourth, it removes many of the social and institutional barriers to economic growth. Finally, it encourages entrepreneurship by promoting individual responsibility, organizational ability, moderate risk-taking, and long-term planning.

The generation of new knowledge and efficient dissemination of existing knowledge is a key responsibility of institutions of higher learning (Siddiqui, 2007). Over 30% of the growth in per capital income may be attributed to technological innovation. Most of the technological advances in the second half of the 20 century including new bio-technological industries, telecommunications, information technological, and advanced materials (such as semi-conductors, fibre optics, etc.) have their origins in university research (University of President's Council, 2001).

The present study aims to explore current practices of HEC to improve R & D culture, and their implications on HRD. The study also draws on major successes and failures in the result of these initiatives. The study addresses these questions based on the following research framework.

CURRICULUM AT HIGHER EDUCATION IN PAKISTAN

National Curricula

Primary education

Primary education comprises Grades I-V. The language of instruction is either Urdu or the regional language. The curriculum includes reading, writing, arithmetic, general science, social studies, Islamic education, and physical education.

Middle level education

Middle level education lasts from Grades VI-VIII. The curriculum includes the compulsory subjects of Urdu, English, mathematics, sciences, social studies, and Islamic studies. Non-Muslims are exempt from Islamiyat-Islamic Studies. Instead they are taught Moral Education.

Secondary Education

Secondary Education lasts from Grades IX through X. Students can specialise in science, humanities, or technical streams. Compulsory subjects for all are English, Urdu, Islamiyat, Pakistan studies and mathematics. In addition, students study the following subjects within the different streams:

- Science stream: Physics, chemistry and biology/computer science/technical subject
- Humanities stream: General science and two elective subjects/one elective subject and one technical subject
- Technical stream: General science and two technical subjects.

However, rural areas often offer a limited choice of subjects due to lack of staff and facilities, such as science labs in science streams. Only 35% out of 9,200 secondary and higher secondary schools in Pakistan meet the minimum requirements of an equipped laboratory according to official statistics published in the Education Sector.

Reforms: Action Plan for 2001/2002 to 2005/2006

The government plans to construct new science labs in about 3,000 schools during 2001-2011. The technical education stream was introduced at the beginning of this century. The aim is for the technical stream to be available in 1,200 secondary schools, 10 in each district, preferably five male and five female schools. The technical education stream addresses itself to those pupils who enter the labour market after Grade X. 34 emerging technology streams are planned for introduction along with appropriate teaching materials. Students passing the examination at the end of Grade X are awarded the Secondary School Certificate.

Higher secondary education

Higher secondary education, sometimes referred to as the "intermediate stage", lasts from Grades XI to XII. It often takes place at university colleges or similar. According to the UK NARIC, army public schools, divisional public schools, autonomous colleges and some private sector institutions are commonly recognised as being more prestigious than government schools. The earlier term faculty of arts/sciences for higher secondary education is still often used, e.g. in admission materials from higher education institutions.

Regional Boards are granted some autonomy on the subjects and combinations they may offer.

The students are offered the following subjects and streams by, for example, the Federal Board of Secondary and Intermediate Education (FBISE):

The students are offered the following subjects and streams by, for example, the Federal Board of Secondary and Intermediate Education (FBISE):

- **Compulsory subjects for all groups:**

English, Urdu, Islamic education and Pakistan studies

- **Pre-engineering group:**

Mathematics, physics and chemistry

- **Pre-medical group:**

Biology, physics and chemistry

• **Science general group:**

- o Mathematics, physics and statistics
- o Mathematics, economics and statistics
- o Mathematics, computer studies and physics
- o Mathematics, computer studies and statistics
- o Mathematics, computer studies and economics

• **Humanities group:**

Three subjects out of 23 elective subjects

- Commerce group:

o **Part one:**

Principles of accounting, principles of economics, principles of commerce, business mathematics

o **Part two:**

Principles of accounting, commercial geography, statistics, computer studies/banking/typing

- Medical technology group

o **Part one:**

Elementary chemistry and chemical pathology, elementary anatomy and micro-techniques, micro-biology I

o **Part two:**

Haematology and blood banking, clinical pathology and serology, micro-biology II.

Girls are also offered the possibility of home-economics.

Dars-i-Nizami Group (Koran reading) is introduced at secondary and higher secondary levels to bridge the gap between Madrasah education and the formal education system in Pakistan.

ASSESSMENT IN HIGHER EDUCATION IN PAKISTAN:

Assessment

Pakistan has introduced a continuous assessment and examination system. Pupils are assessed through course work, class participation, and examinations. However, promotion from one grade to another is automatic. Examination is

conducted by the boards. It consists of question papers comprising different sections: objective questions, short answer questions and long answer questions.

The final mark is determined by the final set of examinations. Those who fail their national examinations at the first or "Annual" sitting by three subjects or less are able to retake the failed subjects, usually for a maximum of two "Supplementary" sittings. If no subjects are passed after the third and final supplementary, the entire set of examinations must be repeated, according to information from the UK NARIC.

Pass percentages vary according to the district, gender of the candidate as well as the stream chosen. Statistics from the different boards show that the highest pass percentages are found within the pre-medical and pre-engineering groups and within the science group.

Higher Secondary (School) Certificate / Intermediate (Examination) Certificate

Mark	Percentage result	Remarks
A1	100 - 80%	Outstanding/Distinction
A	79-70%	Excellent
B	69-60%	Very Good
C	59-50%	Good
D	49-40%	Satisfactory
E	39-33%	Pass
F	Under 33%	Failed

Documentation in Higher education in Pakistan:

The final qualification awarded is either the Intermediate Certificate or the Higher Secondary School Certificate. The student receives a certificate/diploma with the marks obtained issued by the relevant Board. The Inter Board Committee of Chairmen might attest the certificate.

Institutional Structure of institutions in which higher Education takes place:

Higher education in Pakistan takes place in universities and colleges. Research is restricted to the universities, while both universities and colleges undertake teaching.

Universities and colleges that have been given a charter by the federal government or one of the provincial governments are recognized and have the right to award degrees.

Universities with a charter from a province have a right to operate within that province. As soon as they go outside the territorial jurisdiction of the province, they are considered to be illegal and degrees awarded under such circumstances are not recognized; see below under Private universities.

Affiliated colleges and constituent colleges in Pakistan

Affiliated colleges are run by the Government or by private, religious or philanthropic organisations. They are affiliated to a university and are under their jurisdiction; the university determines the courses of study, prescribes the syllabus and conducts the examinations. The university is also responsible for awarding of degrees. The role of the affiliated colleges is to prepare the students for the examinations of the universities. Constituent colleges are part of the university, but may be located off the main campus. They are run as separate colleges under full financial, administrative and academic control of the university.

Private universities in Pakistan

In 1947, after the partition from India, Pakistan had only one university, the University of the Punjab. Until the early 1970s when all educational institutions were nationalized, many private institutions of higher education were established in the country. From the beginning of the 1980s, private universities were again able to operate in Pakistan. Many private institutions were established in this period, but until 1991 only two private universities were recognized. These were the Aga

Khan University, established in 1983; and Lahore University of Management Sciences, established in 1985.

By the end of the 1990s, the rising demand for higher education led to an explosive increase in the number of private universities. The ones that had been given a charter by a regional or by the federal government were all considered recognized. However, the speed at which these new universities were established made it difficult to ensure the quality of their work. In 2005 Pakistan had a total of 54 private degree-awarding institutions.

When HEC was established in 2002, there was a clear need for a national policy for quality assurance. One way of informing the public of the situation in the private universities has been the publication of a list that groups private universities into four different categories according to federal criteria. The criteria mainly concern academic, financial, and physical infrastructure. Those universities that have been categorized as "sub-standard" risk losing their charter on 26th February 2007 if they have not met the criteria by then. Those that lose their charter will become colleges affiliated to another university.

In addition to the recognized private institutions of higher education, a large number of illegal private universities and colleges operate throughout the country. They are not chartered and therefore do not have the right to award degrees. HEC regularly informs the public of unlawfully operating universities and colleges. When such information is published, it quickly reaches the target groups, and employers in Pakistan are well aware of the situation.

According to HEC, the effect of such publications usually is that the unlawfully operating college or university is shut down.

Degree Structure in Pakistan

Undergraduate degree – Bachelor in Pakistan

Traditionally, the Bachelor degrees in arts, science and commerce have been of 2 or 3 years duration following 10 years of schooling and 2 years of secondary study. This structure, referred to as 10+2+2 or 10+2+3, is the old Indian structure and goes back to the time when Pakistan and India were one nation sharing the same educational system.

The 2-year degree, referred to as Bachelor (Pass), consists of three major subjects studied to an equal extent. The 3-year degree is referred to as Bachelor (Honours). Three subjects are studied with one major subject chosen for the last year.

Three Bachelor degrees are based on a previous Bachelor degree (Pass or Honours). These are Bachelor of Law (2 years), Bachelor of Education (1 year) and Bachelor of Library Science (1year).

The professional bachelor degrees in agriculture, engineering, pharmacy and veterinary medicine are obtained after 4 years of study. Architecture and medicine require 5 years.

Among the professional programmes, engineering and technology are the most popular.

4-year bachelor degrees have also been introduced in other fields since private, often US influenced, universities have established themselves in Pakistan. In addition, The International Islamic University has been offering 4-year bachelor degrees for many years, for example in the field of economics.

Post-graduate degree - Master

One subject in the fields of Arts, Science or Commerce is studied for 1 or 2 years. The duration of the programme depends on the previous degree (to make a total of 4 years). The

eligibility requirement is a bachelor degree in a relevant field as specified by the university.

The professional master degree is 2 years following a professional bachelor degree in the same field. A thesis is not always required in order to obtain a master degree. This depends on the regulations of the individual university or department.

Research degrees - Master of Philosophy (M Phil)

The Master of Philosophy is a 2-year research degree usually involving course work as well as a thesis. The eligibility requirement is a master degree.

Research degrees - PhD

A PhD is a 3-4 years research degree, usually requiring a master degree as entry level. Some universities, such as the research-oriented Quaid-e-Azam University, require an M Phil for admission. Students with an M Phil finish their PhD in 2 years.

QUALITY IN HIGHER EDUCATION: ISSUES AND CURRENT PRACTICES

This aims to focus on Higher Education Commission (HEC) initiatives towards Research and Development (R&D), and their implications on Human Resource Development (HRD) and quality assurance in the universities. Lemaitre (2008) says that quality improvement recognizes that the responsibility of quality lies within the higher education institutions; it also focuses on their ability to develop and apply effective policies and mechanism for self-regulation, and the continued advancement towards quality. Quality is not any single thing but an aura, an atmosphere and an over powering feeling that the institution is doing everything with excellence (Rauf, 2004). Today, more than ever before in human history the wealth or poverty of nations depends on the quality of higher education.

Quality of higher education has become a benchmark for the success of a nation. Those countries that have realized its importance, and are taking adequate measures to enhance the standard of higher education, are counted in the best ranking education. HEC has been putting its possible efforts into practice to ensure the standard of education but the major obstacles are lack of committed faculty and R&D culture. Mohanthy (2000) envisages that quality of higher education depends upon R&D culture and motivated faculty to conduct research in order to upgrade their knowledge. Husain (2007) comments that research is a serious business and a university teacher is supposed to produce quality research in addition to his teaching assignments.

HEC is trying hard to streamline the universities to adopt quality assurance mechanism to improve the quality of their teaching and research. An instrumental approach has been suggested by HEC to enhance the quality of higher education which begins by establishing a mission, followed by the functions that have to be carried out to achieve the mission and the objectives. A quality management system is then recommended to ensure the quality of the programmes. Lastly, an internal system is proposed to assess the effectiveness of the management system. Best practice also requires that the implementation of the quality assurance programmes preceded by a strong commitment on the part of the university leaders and managers to quality advancement (Tovey, 1992). An important reason is that it will improve the quality and relevance of their graduates and research programs and thus enable universities to play a more effective role in the economy of the country.

The study aimed to look into:

- a) HEC initiatives to enhance R&D in the universities,
- b) Implications of these initiatives on human resource development, and
- c) Major successes and failures in the result of these initiatives.

REFERENCES

1. Asian Development Bank. (1989). *Asian development outlook 1989*. Manila, Asian Development Bank. In Lim, D. (1999). Quality assurance in higher education in Developing Countries. *Assessment and Evaluation in Higher Education*, 24 (4).
2. Denison, E. (1967). Why Growth Rates Differ: post-war experience in nine Western Countries. Washington, DC, Brookings Institute. In Lim, D. (1999). Quality assurance in higher education in developing countries. *Assessment and Evaluation in Higher Education*, 24 (4).
3. Higher Education Commission, Pakistan's Website: www.hec.gov.pk/
4. Husain, I. (2007). Social sciences receiving due attention. *HEC News and Views*, a Monthly Magazine of Higher Education Commission.
5. Lemaitre, J.M. (2008). Impact of quality assurance processes in higher education institutions. *Quality Assurance in Higher Education*. HEC-Printing Press.
6. Mohanthy, J. (2000). *Current trends in higher education*. New Delhi India: Deep & Deep.
7. Psacharopoulos, G. (1988). Education and development: a review, *World Bank Research Observer*, 3, pp. 99-116.
8. Rahman, A. (2007). Higher education in Pakistan: A Silent Revolution. Institute of International Education. Retrieved from <http://www.iienetwork.org/page/108514/>
9. Rauf, A. (2004). *Quality in higher education*. Pakistan Academy of Science Proceedings, PP 165-174.
10. Schultz, T. P. (1961). Investment in human capital. *American Economic Review*, 51, pp. 1-17.
11. Siddiqui, S. (2007). *Rethinking education in Pakistan*. Paramount Publishing Enterprise, Karachi, pp 152.
12. Tovey, P. (1992). Assuring quality: current practice and future directions in continuing professional education, *Studies in the Education of Adults*, 24, pp. 125-142.
13. University of President's Council of British Columbia. (2001). *The vital importance of university research to the new economy*. Retrieved from http://www.tupc.bc.ca/publications/ur_bro.pdf