



A CRITICAL ANALYSIS OF UTILIZATION OF AVAILABLE RESEARCH FACILITIES IN PUBLIC SECTOR UNIVERSITIES OF PAKISTAN

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ABSTRACT

Theoretical background and Purpose:

Higher Education Commission (HEC) is continuously supporting institutions of higher learning for conducting valuable research. It is generally a problem that available research facilities are under-utilized in Pakistan at higher level of learning. This is probably because of lack of motivation, know-how and streamlining the research facilities by the institutes. Lack of interest on part of the students may also be part of problematic situation. The study attempted to answer the questions like “*what are the minimal research facilities available in the universities; to what extent the available facilities are being properly utilized for the guidance of the students; and what are the probable reasons for gaps between the facilities available and their utilization as perceived by students and academicians*”?.

Methodology:

The population of the study comprised of academicians working in 03 public sector universities and PhD scholars enrolled in Phase II (2005) of Indigenous Fellowship Programme of (HEC). Sample was selected using randomized-systematic sampling technique and it consisted of 30 PhD scholars, 03 heads of departments and 10 academicians. The research design was qualitative in nature and only two interview schedules were used which were based on parameters such as, central library, reference books, internet facilities, digital library, guidance and supervision etc. Data were analyzed on simple percentage basis through categorizing, sorting and coding.

Results:

Findings of the study indicated that; (1) the research facilities are not being properly utilized by the scholars; (2) majority of supervisors thought that scholars were not serious while; (3) majority of scholars opined that supervisors did not take any interest to guide them properly. The study concluded that steps are needed to be taken in order to minimize the understanding gap between supervisors and scholars to ensure proper utilization of research facilities.

Practical Implications:

The study might be helpful for HEC and Universities to change their policies of students' support services to bring a positive change in research culture. The research may provide directions to HEC for funding the research projects and approval of the supervisors for its scholars.

Key Words:

Research facilities, PhD scholars, Digital Library, Guidance, Quality

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INTRODUCTION

Universities are established to bring a positive change in the development (material & human) of the country across the globe. Material development is concerned with prosperity of the country which can be judged by fast growing economy, inventions and innovations in different fields while human development is particularly concerned with well balanced personalities. Balance personalities mean people who are responsible and loyal, with high moral and professional attitudes towards others. Generally, universities are supposed to conduct high quality research to bring about those changes mentioned above. Quality in research is one of important indicators of quality education in universities. Quality education is an issue in universities around the globe. According to Frazer, 1994, universities or institutes of higher learning are accountable to common people of societies, to employers, to students and to each other. According to (Mok 2007), quality in education is very complex positive concept.

In research studies quality is judged by its originality, relevant content, right approach, contributions, realistic and feasible recommendations. For the last decade, major emphasis is being put on intellectual property rights of individuals. Now each research study goes through rigorous plagiarism checking process before its acceptance for any further actions. Each of the university in Pakistan is following the international laws of plagiarism and there is a strong monitoring system of Higher Education Commission (HEC) as an aspect of quality assurance in research. HEC Pakistan has provided huge funds to develop proper structure, professional development of faculty of higher education and provision of ICTs facilities. According to Rana, 2008, a committee of quality assurance comprised of Vice Chancellors of the universities was constituted in October, 2003. According to Azam, 2007 the quality assurance system of HEC in Pakistan has three main components. These are: development of criteria and standards for various quality parameters in higher education; development of processes and capacity building to ensure implementation; and development of a system to arrange regular internal and external monitoring of the higher

education institution in respect of the status of the implementation of the quality criteria and quality control processes. According to Iqbal, 2004, who highlighted some of the problems of Higher Education in Pakistan including: (i) limited access to universities; (ii) low quality in the fields of academic, administration, research and equipment; (iii) less development of faculty and staff in terms of knowledge and skills; (iv) inadequate and misappropriation in funds; (v) less focus on character building of the students; (vi) no linkage between university and industry; (vii) faulty examination; and (viii) non-existent system of governance.

The government of Pakistan, through HEC has expanded its resources for promotion of quality education in the institutes of higher learning. The universities are ranked on the basis of their quality output. HEC has established Pakistan Education and Research Network (PERN) to accelerate quality research in Pakistan. The present study focused on an analysis of available research facilities in public and private universities of Pakistan and their use in research activities in the fields of Social Sciences (Education, History and economics).

LITERATURE REVIEW

Higher Education Commission (HEC) and Research in Pakistan

HEC reports that the generation of new knowledge and efficient dissemination of existing knowledge is a key responsibility of universities. Promotion of research culture in universities of Pakistan is one of the key strategic objectives of HEC. HEC has established more than 20 central research laboratories in the major cities of Pakistan to support high quality research. In order to cater research needs of the scholars, HEC improved the facilities of sophisticated IT based solutions. The HEC Digital Library provides access to over 23,000 leading research journals and over 45,000 e-books. Digital library in Pakistan has following sources to support researchers. The main sources are: American Association of Physics Teachers (AAPT), American Chemical Society (ACS), American Institute of Physics (AIP), American Mathematical Society (AMS), American Physical Society (APS), American Society of Microbiology (ASM), American Society of Agricultural Engineers (ASAE), American Society of Civil Engineering (ASCE), American Society of Mechanical Engineering (ASME), Association of Computing Machinery (ACM), Blackwell Synergy, Bentham Science, Cambridge University Press, Ebscohost, Elsevier (Science Direct), Institute of Electrical and Electronics Engineers (IEEE), Institute of Physics, ISI Web of Knowledge, Jstor, Mary Ann Liebert, Nature Publishing, Optical Society of America (OSA), Oxford University Press (OUP), Palgrave Macmillan, Royal Society of Chemistry (RSC), Science Online, Scopus and Springerlink.

http://units.sla.org/division/dpam/irc/Soroya_sla_international.pdf retrieved on 27/7/10.

Pakistan Education and Research Network (PERN)

PERN is a project of HEC which was launched in 2002 with a mission to integrate Pakistan’s education system by linking all public and private sector universities/degree awarding institutions. It aimed to inter-connect all institutes of higher learning to provide access of data banks, research and development activities. HEC also launched PERN-2 to provide fast communication infrastructure for students, teachers, and researchers. It is also connected with other networks of the world e.g. APAN Asia, Internet to USA, GEANT to Europe. <http://hec.gov.pk/eReforms/PERN.html> accessed on 27/7/10.

According to HEC, GÉANT network connects Pakistan to 100 million researchers in Europe and Asia. The EU-funded Trans-Eurasia Information Network (TEIN) and the US National Science Foundation (NSF) today agreed to link with the Pakistan Education Research Network (PERN). The connection to TEIN has been co-funded by PERN and the U.S. National Science Foundation (NSF). Through this link, Pakistan is the first of a series of new countries joining TEIN3, the next generation of EU-funded Asian research networks. PERN uses this new 155 millions of bits per second (or Mbps) connection between Karachi and the TEIN3 network Point of Presence in Singapore, which is supplied by Pakistan Telecommunications Company Limited (PTCL). HEC gives generous research funds for conducting research projects, seminars, conferences and workshops in Universities. It also provides funds for presenting research papers in national and international research conferences for faculty members as well as for research scholars.

According to (Amjad 2007), the growth of PERN is as under in previous years.

Table 1: Growth of PERN

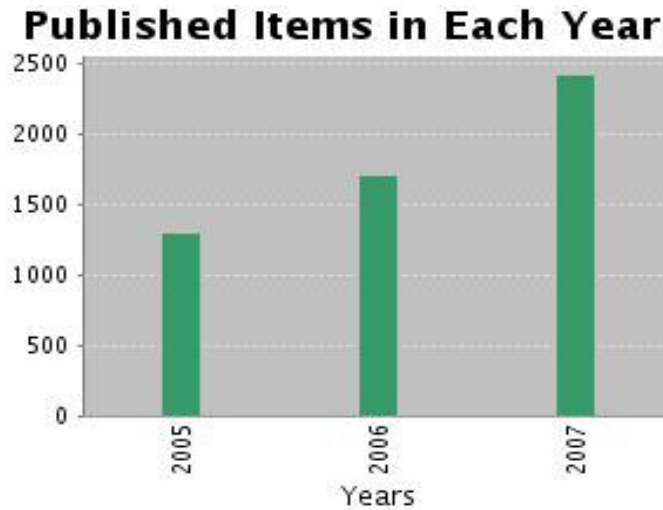
	2003	2009
Universities/ Institutes	56	86
Core Bandwidth	2 Mbps	155 Mbps
Last Mile Bandwidth	64-128 kbps	4-24 Mbps
International Bandwidth	8 Mbps	510 Mbps
International Leased Circuit	Nil	155 Mbps

The next plan of PERN-2 for future is as under:

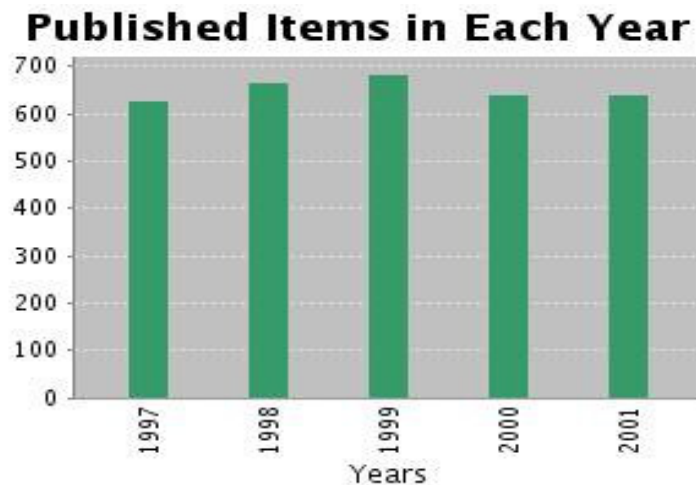
Table 2: PERN2 Plans (2009)

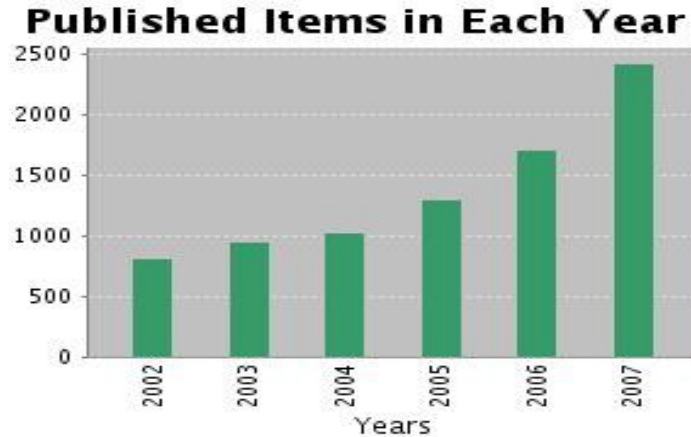
Universities/Institutes/R&E Org.	250+
Core Bandwidth	10 Gbps
Last Mile Bandwidth	1 Gbps
International Bandwidth	2.5 Gbps
International Leased Circuit	622 Mbps

According to (Hussain 2009), the Institute of Scientific Information (United States), the total number of publications appearing in the 8,000 leading journals indexed in the Web of Science arising out of Pakistan in 2005 was 1,259 articles, representing a 41% increase over the past two years, and a 60% increase since the establishment of the HEC in 2002. Overall research publications of Pakistani scholars and faculty members listed in ISI Web of Science for the year 2005-2007 is depicted in the following figure-1



To see the impact of HEC on production and publication of research papers, a comparison of five years of pre-HEC and post- HEC can be made. Comparison of research output is given in figures-2 & 3.





Source: Research Performance, HEC pp.3-5

It is very clear in figure 1 and 2 that, for the period of 1997-2002 there were 3,260 published articles whereas in the subsequent five years (2002-2007) after establishment of HEC, the numbers of published articles were 8,224.

http://www.digitallibrary.edu.pk/pdf_lib/Promotion%20of%20Excellence%20in%20Learning%20and%20Research_Rev3.pdf retrieved on 27/07/10 at 11:09:34

METHODOLOGY

The population of the study comprised 03 public sector universities, namely Allama Iqbal Open university, International Islamic university and Fatima Jinnah Women University, Heads, Departments of Education, History, International Relations, faculty members of these departments, PhD scholars enrolled in 2nd phase of indigenous fellowship in the departments and approved supervisors of HEC.

Sample was selected using randomized-systematic sampling technique and it consisted of 30 (19 male and 11 female) PhD scholars, 03 (02 male and 01 female) heads of departments and 10 (06 male and 04 female) academicians. Few research questions were designed to guide the study. Research questions were: what are the minimal research facilities available in the universities? To what extent the available research facilities are being properly utilized for the guidance of the students? And what are the probable reasons for gaps between facilities available and their utilization as perceived by students and academicians?

The research study was qualitative in nature and interviews schedules were separately prepared for PhD scholars and supervisors/heads of the respective departments keeping in mind the research questions. In research tools, themes relevant to the availability and utilization of computer labs, availability and utilization of internet connections, availability and utilization of digital library, availability of Professors in the departments, availability of HEC approved supervisors, availability and utilization of libraries in the universities, availability and utilization of library books, availability of training for computer applications were included. Furthermore, availability of services of computer experts in

computer labs, availability of printing facility, availability of guidance about what to search through internet and how to search it?, guidance in how to review the literature?, guidance about how to avoid plagiarism?, guidance in preparing proposal for thesis were part of the enquiry. Respondents were asked about the proper functioning of departments in conducting different research meetings to get approval of research proposals, guidance in preparation of research tools, guidance in pilot testing of research tools, guidance about analysis of data, guidance about how to write thesis?, reading of thesis before submission for evaluation by supervisors, and supervisor's help in incorporating the observations suggested by internal or external expert on thesis.

Research tools were tested on pilot basis and then some suggestions from experts of HEC were incorporated. Data of the study were collected personally and analyzed through constant comparison method.

Results of the Study, Research Question-1 Availability of Research Facilities

In all of the universities, maximum research facilities were available. The universities had well furnished computer laboratories, fast internet connections, access to the digital library, department of ITs to monitor the functioning of computer laboratories, faculty members to assist the scholars in their research work, etc. The availability of experts of computer in computer labs to resolve the computer related problems was missing. No of computers in laboratories were also minimum/less as required for users. The computers were not updated.

HEC had provided generous funds to universities for promotion of research activities. Initially, universities did not have any skill manpower in the departments to establish well equipped computer laboratories. Different departments working under faculty of social sciences was a problem to use specific funds for specific department. Generally computer laboratories were established for faculties of social sciences where more than three departments like department of education, psychology, economics, sociology, history etc were included. The users of the computers were more than the numbers of computers available to use. Apart from Allama Iqbal Open University, some time the computer classes were also arranged in laboratories and scholars were unable to use this facility.

Central libraries were available but the updated books were missing. Professors were available in the departments who were mostly working as visiting faculty members. No of approved HEC supervisors were very less and hard to consult.

Research Question -2, Utilization of Research Facilities

Most of the PhD scholars were not able to use computers properly. They did not receive any training of computer applications. The departments did not arrange any orientation workshops for PhD scholars to get maximum benefits of Information and Communication Technologies (ICTs) in the universities. The computers were not protected from viruses and

numbers of computers were unusable most of the time. It was also reported that for maintenance of computers, department took longer time to process the concerning files.

Availability of professors was ensured to some extent by the universities but their support in research to PhD scholars was very rare. The professors remained busy in official works and scholars could not get their proper attention. The availability of approved HEC approved supervisors was also a problem. Many of the scholars were availing the services of supervisors who were working in other universities. The supervisors who were not part of parent universities of the scholars could not pay attention to their supervisees. Most of the scholars reported that they were not told how to write theses to meet minimum criteria of international standard.

Most of the approved supervisors of HEC did not provide any guidance to the scholars in their research work. The scholars lacked support of supervisors in searching relevant material, how to locate relevant literature to review? How to locate workable research problems? How to prepare research proposal for PhD theses? Most of the supervisors did not have experience to use online information or use of advanced ICTs in education.

The supervisors did not guide scholars in preparation of research tools, testing of research tools on pilot basis and in the analysis of the data. The supervisors did not study their theses before submission in the departments for internal as well as external evaluation. The supervisors only put their signature on forwarding sheets of the thesis. Availability of services of Digital Library was there. The scholars were downloading material for their research studies. More than eighty percent of research theses of the scholars were plagiarized. The supervisors could not guide their scholars how to avoid plagiarism? The supervisors did not help scholars to incorporate the observations suggested by internal and external evaluators of theses.

Most of the scholars were not able to prepare good research articles for publication. As per HEC minimum requirement for awarding a PhD degree, the scholars of Social Sciences must have at least one research article published or accepted to be published in reputed research journal of category "Y". Now the scholars were surprised to fulfill the condition of HEC for their PhD degree.

Research Question-3: Probable Reasons of gaps

- 1) **Weak Research Background:** About half of the scholars were incompetent in the sense that they were not able to understand the nature of their own study. They were not using facilities of libraries to mature their idea of research. They did not even understand the nature of research, the way to conduct it and they were simply became dependent on their supervisors to guide what to do.
- 2) **Lack of conducive research environment:** A large number of respondents are of the opinion that universities do not provide research friendly environment. Young scholars are not motivated to attend and participate in seminars, conference and workshops etc. There is acute shortage of seminars, conferences and workshops in

the area of research methodology. The departments do not have updated versions of journals. Time is wasted in useless activities, like assignment writing, rote learning and book reading. These activities do not attract PhD scholars. Students remain busy in political discussions and religious debates which adversely affect their performance at PhD level.

- 3) **Shortage of HEC approved supervisors:** Most of the respondents opined that their time is wasted in running after the supervisors. They face much difficulty in finding and getting acceptance from an HEC approved supervisor. Respondents agreed that sometime there is seen an element of professional jealousy between HEC approved supervisors and other supervisors. This shortage of HEC approved supervisors is affecting the performance of the department and the scholars as well.
- 4) **Inability to utilize computer technology skills:** Majority of the respondents ascertained that they did not know how to utilize computer technology for research purpose. They also agreed that teachers and supervisors could not guide scholars how they could benefit from online databases and other electronic research resources. It is very critical that most of the supervisors and teachers cannot utilize modern computer technologies and consequently they are not able to guide their supervisees.
- 5) **Teachers' attitude towards scholars:** Data indicated that teachers' attitude towards students of PhD was not pleasant and favorable. Most of the time, students were not given time, particularly for their research synopsis, dissertation and articles etc even sometimes they felt discouraged when they had to stand outside and kept waiting for several hours. This attitude of university teachers and supervisors often caused disappointment for young scholars. However, in this regard, one thing was very significant that the teachers and the supervisors who were foreign qualified, showed pleasant and favorable attitude by addressing the problems of their supervisees in time.
- 6) **Lack of orientation programs:** Students need orientation programs so that they might know possible sources related to their professional career. Data indicated that students did not know right direction for their research work. They were never invited to such programs and even not motivated to do such activities.
- 7) **Lack of international exposure:** Majority of the respondents opined that they were not provided opportunities for international exposure. It seemed that even most of the teachers lack international exposure. They were not aware of fast changing paradigm in Education and how globalization affecting educational practices. Students of PhD did not have opportunities to share discussion with relevant international experts and develop collaboration and institutional linkage etc.
- 8) **Lack of awareness about journals, databases and online resources:** Respondents agreed that they did not have awareness about current resources. They lack of awareness about electronic databases which includes journals, theses and books.
- 9) **Lack of Relevant and Updated Books in Libraries:** there is lack of relevant and updated books, research journals and magazines to consult in the libraries of the universities.

CONCLUSION AND DISCUSSION:

The present study brought into light valuable findings relevant to the available research facilities and their proper utilizations in public sector universities at PhD level. At the present pace and quality of research, institutes of higher learning (universities) are not fulfilling their basic objectives. With the inclusion of young researchers in the departments having international exposures and awareness about important databases to consult, there is hope that the quality of research will improve with the passage of time.

It was found that nothing was wrong with the availability of research facilities in the universities but their effective utilization was questionable. Due to revolutionary changes and steps taken by HEC Pakistan for promotion of higher education in the country and unavailability of expert faculty members on regular basis in universities, the utilization of research facilities could not be ensured. In the beginning, the criterion to become an HEC approved supervisor was not tough and many professors who even did not have single publication in an international journal were selected. Those professors did not know what is the minimum quality of research acceptable at international level? Many HEC approved supervisors could not guide how to avoid plagiarism in theses or research articles. Overall their contributions in research work of scholars at PhD level were not realistic.

There were many flaws and barriers to utilize the research facilities properly. Those heads of departments and professors were not skillful in the use of ICTs in education because in their own times these facilities were not available to use. At their time of service, they did their work manually and they were in dire need of training to benefit new research facilities. Due to their heavy responsibilities and supporting staff in the departments, they were reluctant to avail any such training of using ICTs and hence they were not able to guide their supervisees also.

RECOMMENDATIONS:

On the basis of findings and conclusions, following recommendations were made. These were:

- 1) The orientation workshops of using ICTs may be ensured for new comers and for even professors of the universities in order to get maximum benefits of research facilities.
- 2) The course of research methods and statistics of advance level may be taught well with ample opportunities of activities to strengthen the basic concept of research and statistics during course work of PhD.
- 3) The training workshops on research methodology may be arranged for scholars in the universities with the help of HEC every year in summer holidays.
- 4) The training workshops on data analysis may be arranged for scholars to understand the nature of research work.

- 5) The work of supervisor may be monitored regularly in order to bring quality in the work of PhD scholars.
- 6) The updated and relevant materials like research journals and magazines may be arranged in the libraries for scholars to consult.
- 7) The research work of scholars may be regularly monitored and supervised by the departments in an active coordination with approved supervisors
- 8) The professors and scholars may be motivated to prepare good paper to present in international conferences at national and international level.

REFERENCES:

- 1) Amjad. A (2007), *Higher Education Commission, Pakistan Education & Research Network (PERN) A Project of Higher Education Commission.ppt.p.04*
- 2) Azam, M.K.S. (2007). Quality assurance in higher education: initiatives in Pakistan, in Iqbal A. 2004, 'Problems and Prospects of Higher Education in Pakistan', PhD dissertation, University Institute of Education and Research, Arid Agricultural University, Rawalpindi. Pp.298-301
- 3) Frazer, M. (1994). Quality in higher education: an international perspective. Indiana university, USA.pp.45
- 4) Higher Education Commission (n.d) http://www.digitallibrary.edu.pk/pdf_lib/Promotion%20of%20Excellence%20in%20Learning%20and%20Research_Rev3.pdf retrieved on 27/07/10 at 11:09:34
- 5) Higher Education Commission (n.d) <http://hec.gov.pk/eReforms/PERN.html> accessed on 27/7/10.
- 6) Higher Education Commission (n.d) http://units.sla.org/division/dpam/irc/Soroya_sla_international.pdf retrieved on 27/7/10.
- 7) Hussain N. (2009), Director (VC&PERN) Higher Education Commission, *Pakistan Education & Research Network (PERN) ,The National Research & Education Network of Pakistan*, ppt.p.4-8.
- 8) Mok, M.M.C. (2007). Quality assurance and school monitoring in Hong Kong
- 9) Rana R.A. (2008), *Dimensions Of Quality Assurance In Higher Education: Challenges For Future, 2nd International Conference on Assessing Quality in Higher Education, 1st – 3rd December, 2008, Lahore – Pakistan P.179 (9)*