

INTRODUCTION

Pakistan does not lack in talent but in opportunities. While a huge effort has been made to build and fund a large number of colleges, universities and technical institutions across Pakistan during the leadership of Prof. Dr. Atta-ur-Rahman, *FRS* as Chairman HEC, a major bottleneck has been the availability of sufficient numbers of highly qualified faculty. However, the vision of higher education in Pakistan knows no boundaries. Growth of technology in Pakistan over the last decade has opened up new opportunities. With the advent of high speed internet services during the time that Dr. Atta-ur-Rahman, *FRS* was the Federal Minister of Science and Technology and Information Technology, distances have lost their significance.

It is now possible for us to benefit from lectures and courses delivered from thousands of miles away. The Latif Ebrahim Jamal National Science Information Center leads the nation in bringing all such resources at one platform and combines them with a comprehensive system of mentoring and assessment.

A large number of live interactive lectures are being delivered from Latif Ebrahim Jamal National Science Information Center. Thousands of excellent recorded and online courses are now also available free of charge from a number of sources. The challenge is to have knowledge of what is available where, and then to have rapid access to them without being lost in the wilderness of information that we encounter when carrying out a search in Google and other search engines for the desired materials. The answer has been provided by integrating all such resources on one platform and providing them to students across the country. Pakistan is now among the first in the world to initiate a massive learning platform which includes integrated courses from various major world sources for ready accessibility, structured mentoring and assessment system and at the end credit recognition, issuance of certificates, and degrees, wherever possible.

BACKGROUND

Latif Ebrahim Jamal National Science Information Center (LEJNSIC) has been serving as a hub of information dissemination and focal center of the Virtual Education Project Pakistan (VEPP) since 2008, led and supervised by Professor Atta-ur-Rahman, *FRS* and Prof. M. Iqbal Choudhary. LEJNSIC is equipped with cutting edge information and communication technologies and with full access to world's largest library resources. The vision of the program is to provide an interface for the researchers and reputed institutions from around the world to collaborate, share and enhance their knowledge. With the same vision, LEJNSIC (ICCBS) is now launching an open learning program in Pakistan (and globally as well) that has the potential to change the entire landscape of education in Pakistan and the developing world. An easily accessible treasure chest of unending information is being made available to students, faculty and researchers alike. For this purpose, LEJ (ICCBS) at University of Karachi has launched a program entitled "**LEJ Knowledge Hub**" for integrated and open learning. The program includes access to on-line, interactive and recorded courses and mentoring and assessment system. The entire program is led by our most celebrated scientist and global leader in education, Prof. Dr. Atta-ur-Rahman *FRS* as a monumental service to the nation and the world at large.

LEJNSIC CENTER LEADS THE WAY!

- A new learning portal has been developed at the LEJ Center that allows the selection of appropriate courses according to the needs of the students.
- LEJNSIC disseminates information through VEPP about the available educational resources at the LEJ Center.
- LEJNSIC makes available *in-house* educational materials, recorded lectures, databases and other relevant materials to partner institutions on request, following copy right rules.
- Learning resources availability will be through:
 - a) Interactive access to on-going courses and mentoring sessions at the LEJ center
 - b) Downloading from available links

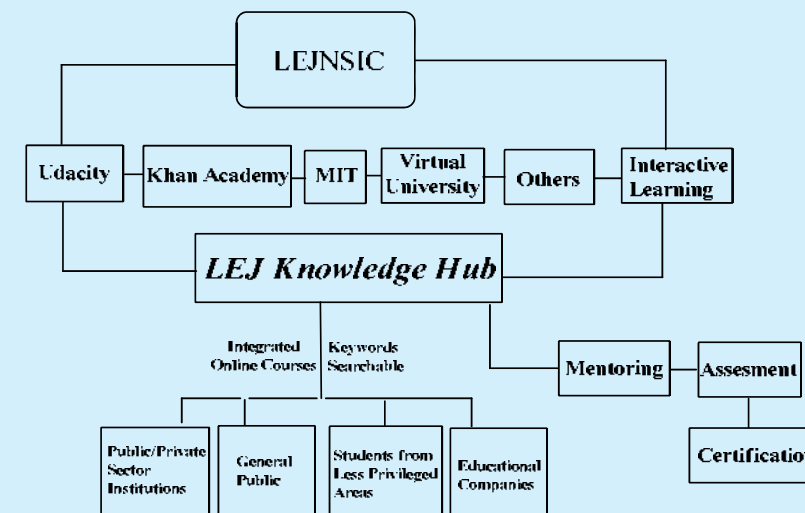
- c) By playing videos directly from a streaming server or
- d) Through cable television which will allow access to remote regions of Pakistan.

SOURCES OF FREE ONLINE COURSES

Thousands of full courses (about 0.5 million lecture hours), skill development modules, research based lectures, and on-line mentoring sessions for school, college and university levels have been arranged from the following sources:

- LEJ Courses and Lecture Series
- MIT Open courseware (founded by Massachusetts Institute of Technology, USA)
- Udacity (Harvard)
- Khan Academy (USA)
- Open Yale Courses (USA)
- Stanford Engineering Everywhere (SEE, USA)
- Virtual University (Pakistan)
- HEC courses (Pakistan)
- ICCBS/other Universities (Pakistan)

These learning materials are available through a web based portal, for all levels and in various languages. A variety of technical and vocational courses will be made available, preferably dubbed in Urdu, for the underprivileged population with the aim of providing them with excellent means of learning.





“The LEJ Center leads again by providing priceless source of learning to the nation. We are delighted to be the part of a silent revolution.”

Aziz Latif Jamal S.I.
Chairman Husein Ebrahim Foundation



“This is one of the most exciting projects that I have undertaken in my life time, as it can change the landscape of education in Pakistan and in other countries”.

Prof. Dr. Atta-ur-Rahman FRS, N.I., H.I., S.I., T.I.
Patron-in-Chief ICCBS, University of Karachi
UNESCO Science Laureate



“Education beyond borders that transcends national and geographic boundaries was once a dream, it is now a reality. The world is truly flat now where we are all engaged in meaningful dialogue, be in class rooms or in international forums. With this innovative program, we bring the knowledge right at the doorstep of people who need it most”

Prof. Dr. M. Iqbal Choudhary H.I., S.I., T.I.
Director ICCBS, University of Karachi

UNIQUE FEATURES:

- Students will have access to live interactive courses in various disciplines delivered by top authorities, as well as to tens of thousands of excellent recorded and on-line courses at all levels in the fields of Information Technology, Natural Sciences, Engineering and Technology and Social Sciences.
- Ability to offer education to a large number of students at distant locations.
- Students from Pakistan will be truly engaged in academic pursuit and able to develop 21st century skills.
- Economically disadvantaged students and children with disabilities will particularly benefit.
- Accessible to people with limited financial resources (offered free).
- Teachers will have a more positive attitude towards their work and will be able to provide more personalized learning.
- Ability to reach the world instantaneously with the latest research and technologies.
- Decrease long-term education expenses by shifting learning programs to the Web.
- Economic progress can result from direct job creation in the technology industry, as well as by developing a better educated work force.
- Access to high quality mentoring and assessment will ensure concept development.

URL:

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LEJ KNOWLEDGE HUB



New Paradigm in Integrated Learning



LATIF EBRAHIM JAMAL NATIONAL SCIENCE INFORMATION CENTER

Another Milestone Project
For Inclusive Growth and Equity in
Education at All Levels

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