

# DR. NAZIR AHMED SANGI

Vice Chancellor  
Allama Iqbal Open University, Sector H-8, Islamabad  
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## OBJECTIVES

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To achieve the status of a successful **Academic Executive** and distinguished researcher with track record of achievements in Education and Information & Communication Technologies (ICT) in a dynamic and competitive environment.

## EXPERIENCE

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**March 2010- till date** **AIOU** **Islamabad**

**Vice Chancellor**

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- Initiated long term procurement systems for efficient and effective support to officers, students and staff.
- Initiated automation and computer related development processes and projects.
- Developed teams of effective and motivated workers and improved efficiency of organization and internal integration of supply chain management.
- Developed liaison with Govt. and other organizations for better support and systems acquisition in order to complete assignments on time with quality and within projected costs.
- Installation of Video Conferencing, Wi-Fi Mesh System and other cyber technologies.
- Established Model Study Center at Umar Kot.
- Established Muzaffarabad Regional office.
- Inauguration of D.G. Khan and Bahawalpur Regional campuses by the prime Minister of Pakistan Syed Yousaf Raza Gillani.
- Increased 10% university enrolment.

**April 2003–May 2006 and May 2009-March 2010** **AIOU** **Islamabad**

**Dean Faculty of Science**

- Initiated and developed faculty's 4 years BS (Science) programs in various departments.
- Developed and synthesized rules and regulations for MS/PhD level. Work is still continuing.
- Provided strategic leadership to the Science Faculty towards high quality, affordable cost, science education, by introducing world class curriculum, teaching methods and ICT in educational processes.
- Supervised curriculum development from Matric to PhD and successfully

- launched more than 15 programs in Science in seven disciplines.
- Launched the Multimedia Digital Labs and Classroom for ICT based Education.
  - Was nominated for more than five National and International education awards and won one National Award.
  - Chairman, Equivalence Committee (2003-2004), Member ICT in education Committee, Founding Chairman, Staff Welfare Fund, Member Finance Committee, AIOU. Headed many internal and external R & D and ICT Committees.
  - Initiated first (nationwide) blended learning program in CS/IT, which resulted better learning, lower costs and increased outreach. Now ICT based education is well accepted at University as many more faculties are planning.

**Oct 2008–to March 2009**

**AIOU**

**Islamabad, Pakistan**

**Director ICT**

- Worked on “Strengthening of Allama Iqbal Open University, Islamabad: Transformation of Distance Learning by use of Satellite based interactive systems for delivery of TV, Content and Internet” project.
- Successfully completed Wifi Mesh project contract between AIOU and Corvit Networks with the collaboration of Cisco Pakistan Ltd..
- Enhanced ICT infrastructure for improved quality of distance education at AIOU
- Video Conference System were acquired.
- Worked for establishing Satellite based TV channels.
- Staff problems were pursued for proper establishment and recruitment of ICT Directorate.

**Nov 1999–March 2010**

**AIOU**

**Islamabad, Pakistan**

**Professor and Chairman of Computer Science Department**

- Established nationwide CS/IT education programs; Intermediate (ICS), Bachelors (BS CS/IT), PGD (CS), MBA (IT) and Masters in CS/IT were launched within one year. Increased IT/CS enrolments from 2000 to 12,000 students.
- Started MS and PhD graduate research programs in CS and Educational within three years.
- 120 + new courses were launched as per ACM/IEEE standard curricula.
- Established Liaison with 100+ study centers and 36 regional offices around the country.
- Received many project grants worth more than Rs. 500 millions aimed at ICT infrastructure and e-learning capacity building. Have actively planned, acquired resources and commissioned IT infrastructure including computers, network and staff training during last 09 years.
- Won NCR IT Education Excellence Award 2004 for Online Virtual

Education Capacity Development.

**Chairman/ Member of Various Committees**

- Member, HEC National Curriculum Revision Committee regarding:
  - Information Technology.
  - Software Engineering.
  - Computer Science.
  - Computer Engineering.
- Chairman, Synopsis Committee for MS/PhD in Computer Science, AIOU.
- Chairman, Committee for short listing candidates for Directorate ICT positions, AIOU.
- Member, International Islamic University Research Committee for the Department of Computer Science for evaluation of PhD research proposals.
- Chairman, Committee to finalize the BS (CS) Accreditation Case from NCEAC, AIOU.
- Chairman, Standing sub-committee to resolve implementation of GPA/CGPA scheme, AIOU.
- Convener, Committee to resolve BCS/ BS (CS) students issues relating 7 years limit, AIOU.
- Chairman, Equivalence Committee (2003-2004), AIOU.
- Member, ICT in education Committee, AIOU.
- Founding Chairman, Staff Welfare Fund, AIOU.
- Chairman, Committee to explore the offer of Oracle Company for acquiring licensed software for Department of Computer Science, AIOU.
- Chairman, e-learning Committee, AIOU.
- Chairman, Special Task Group (STG), AIOU.
- Member Finance Committee, AIOU.
- Member, Urdu and Regional Languages Software Development Board.
- Member, National Advisory Committee on ICT Strategy Development.
- Member Board of Postgraduate Studies, International Islamic University.
- Chairman, Inquiry Committee for AIOU Employees of BPS-1-19.
- Member, Computer Acquisition Advisory Committee, AIOU.
- Member, Committee to investigate the matter of UNITEC students' attendance case (AIOU).
- Member, Selection Board (90th session), AIOU.
- Chairman, Removal from Service Committee (special powers), AIOU (2006).
- Convener, Sub-committee for analyzing the case of raise in share being paid to the approved study centers, AIOU (2004).
- Chairman, Synopsis Committee for PhD in CS, AIOU (2006).
- Member, Committee to frame a policy for nomination of AIOU faculty member (2003).
- Chairman, Committee to finalize the workshop schedules of all required workshops, AIOU (2003).



- Initiated standardization of drawing process and trained existing staff.
- Initiated networking of CAD/CAM development partners for faster growth and support in the market.

**1982–1989      Sui Southern Gas Company      Karachi, Pakistan**

**Manager/Executive Engineer**

- Managed several teams for emergency/planned operations and maintenance.
- Established a new Computer Applications Department in the Company.
- Implemented PC culture in many departments of the Company.

**1976–2001      Miscellaneous Assignments      National/International**

**Consultant/Part time Research Scholar/Trainee**

- Consultant to European Union on Monitoring and Evaluation/MIS assignment with International consultant.
- Consultant to Trust for Voluntary Organization, TVO, Pakistan.
- Worked with NGOs, such as ADHR, TVO, RIM, SGA, etc in all provinces.
- Industrial Research with Lucas Automotives, UK and Ewarts, UK.
- Overseas Pakistanis Education Network. Established their Lahore IT College and curriculum.
- Member HEC, National Curriculum Revision Committee. Actively helped in the design of International Curriculum in 2000 and revised it in 2004. This is first HEC curriculum which is well implemented nationwide.
- Consultant/Project officer on web sites development of Pakistan Insurance Corporation and Sui Southern Gas Company.
- Consultant Trainer to National PG College of Informatics, Islamabad.

**EDUCATION**

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January-July 2008      Kent State University      Ohio, USA  
Research Fellowship

1985–1989      Liverpool University      Liverpool, UK  

- PhD Advanced Manufacturing Systems and Technology –(CAD/CAM and Databases).

■ Received Mason Bibby Award 1986 and two special grants in 1985 and 1987

1976–1981      Mehran University of Engg. and Tech.      Jamshoro, Pak.

- Bachelors of Engineering degree.
- Received two Gold Medals: First Position and Best Graduate.
- Many of my supervised projects have been given Awards in national competitions since 1998.

## AREAS OF INTEREST

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ICT in education, Multimedia Curriculum Development, e-learning, e-assessment, mobile learning, IT /CS Education Consultancy, Nationwide Traveling, Social Work.

## PUBLICATIONS, PROJECTS AND RESEARCH WORK

### PUBLISHED RESEARCH PAPERS

1. N. A. Sangi; **“Generalized E-Assessment Framework for Software Development”**, The 24<sup>th</sup> AAOU Annual Conference, organized by Hanoi Open University in Hanoi, Vietnam on October 26-28, 2010.
2. N. A. Sangi; **“Delivery Issues in Blended Computer Science Education at AIOU”**, GUIDE International Workshop 2010 organized by Global Universities in Distance Education (GUIDE) Association in Rome, Italy on March 18-19, 2010.
3. N. A. Sangi and M. S. Raja: **“U-OLIVE: e-learning in Native Urdu Language”**. Reviewer’s comments have been received.
4. N. A. Sangi and M. D. Khattak: **“Multimedia Instruction Objects for Localized e-learning Environment”** paper presented in ELDEC conference held at HEC, Islamabad on March 30-31, 2009.
5. N. A. Sangi: **“Access Strategy for Blended E-learning: An AIOU Case Study”**. Journal of Research Center for Educational Technology (RCET), 5(2), 75-91, Summer 2009.
6. N. A. Sangi: **“Electronic Assessment Issues and Practices in Pakistan: A Case Study”**, *Learning Media and Technology Journal*, 33(3), 191–206. September, 2008.
7. N. A. Sangi and Karen Swan: **“Information and Communication Technology (ICT) Applications in Development of Information Technology (IT) Cottage Industry in Pakistan”**. The paper has been submitted to *Information Technology for Development* journal. Reviewers comments have been received.
8. N. A. Sangi, Annette Kartcoski, Pat Mazzer and Karen Swan: **“Technology Integration Impact on Teaching and Learning: A Case Study of AT&T Classroom”**, working paper developed at Kent State University, Ohio, USA. .
9. N. A. Sangi and Imran Malik: **“E-Assessment Models and Methods for Student Evaluation”**, 21<sup>st</sup> AAOU conference, Malaysia, 29-31 October, 2007.
10. N. A. Sangi and Parwaiz Karamat: **“Global Influences of the Networked Environment on Distance Education”**, IIMA Conference, China, 15-19 October, 2007.

11. N. A. Sangi and Sheeraz Ahmed: **“Accessibility, Acceptance and Effect based DE Technologies in South Asia”**, published in “Distance Education Technologies in Asia: past and Present” under PANDora Distance and Open Resource Access, page 11-26, June 2007.
12. N. A. Sangi and Sheeraz Ahmed: **“Training and Assessment in Distance Education”**, published in “Distance Education Technologies in Asia: past and Present” under PANDora Distance and Open Resource Access, page 79-84, June 2007.
13. N. A. Sangi and Moiz Ahmed: **“E-Learning Initiatives at AIOU- A Case Study of Using ICT in Education”**, E-Learning and Distance Education Conference (ELDEC) organized by Virtual University of Pakistan, 16-17 April, 2007.
14. N. A. Sangi, presented a paper on **“Building Quality Education System for CS/IT Education at AIOU”** in a seminar on “ISO 9001 for Higher Education” at Lahore, 13-14 May 2006.
15. N. A. Sangi: **“E-assessment Models and Methods for student evaluation in Asia”**, ASEAN Foundation, 22-24 April, 2006, Jakarta, Indonesia.
16. N. A. Sangi and V.K. Samaranayake: **“Accessibility, Acceptance and Effect of Distance Learning Technology in South Asia”**, IDRC Research Meeting, 21-22 January, 2006, Colombo, Sri Lanka.
17. N. A. Sangi: **“Engineering Quality Education Through ICT: A case of CS/IT Education”**, 19-24 November, 2005, ICDE, New Delhi, India.
18. N. A. Sangi: **“Effective Application of CAD/CAM into Engineering Sector”**, Conference proceedings IMS 2004, Sakarya University, Sakarya, Turkey, September 9-11 2005. Seminar organized by COMSATS on March 18-19, 2004. This paper has been accepted for an special issue of International Journal of Production Management and Technology.
19. N. A. Sangi, Abass Chaudhary and Muhammad Daud Khattak: **“A Study of the Effectiveness of Computer Science/Information Technology Educational Program”**. Paper presented in the IT Seminar organized by COMSATS on 19 March, 2002.
20. N. A. Sangi, Abass Chaudhary and Muhammad Daud Khattak: **“Issues and Options in Planning and Implementing Multimedia Courseware Delivery Network Infrastructure”**. Paper presented in the IT Seminar organized by COMSATS on 18-19 March, 2002.
21. N. A. Sangi: **“Virtual University Model”**, Paper presented in the IT education Seminar organized by AIOU on 16 November, 1999.
22. N. A. Sangi, K. Jamal, G. Mohammad: **“Survey of Internet Based Services for Pakistani Communities”**, Proceedings of IEEE Conference on E-Commerce, Karachi, Pakistan, 05 December, 1998 pp 1-11.

23. N. A. Sangi: “**A Need of a National Strategy on CAD/CAM/CAE in Pakistan**”, 3rd National Computer Conference, Islamabad, Pakistan, 14-10 January, 1991, pp. 1-10.
24. N. A. Sangi: “**Status and Scope of CAD/CAM/CAE in Pakistan**”, UNIDO International Conference ‘CAD/CAM - NEXT STEP’, Lovetch, Bulgaria, 10-11 May, 1990, pp. 1-13.
25. N. A. Sangi and S. Malik: “**Vendor Evaluation in CAD/CAM/CAE Applications**”, First Computers In Engineering Conference, Taxila, Pakistan, 18-20 March, 1990.
26. N. A. Sangi: “**Scope of CAD/CAM/CAE in Pakistan**”, First Computers In Engineering Conf., Taxila Pakistan, 18-20 March, 1990.
27. J. Driscoll and N. A. Sangi: “**An International Survey of Computer Aided Facilities Layout Analysis of Software**”, Recent Advances in Production Research, Elsevier, North Holland, 1987.
28. J. Driscoll and N. A. Sangi: “**An International Survey of Computer Aided Facilities Layout - The Development and Application of Software**”, Recent Advances in Production Research, Elsevier, North Holland, 1987
29. N. A. Sangi and J. Driscoll: “**Applying an Enhanced CAD System in the Layout of Advanced Manufacturing Systems**”, Proceedings ASME 1987- Int. Computer in Engineering Conference, New York, USA, 9-13 Aug. 1987, Vol. 3, pp. 141-147.
30. J. Driscoll and N. A. Sangi: “**Design of Manufacturing Systems using CAD Software**”, VIIIth European Operations Research Conference, Lisbon, Portugal, 16-19 September 1986.
31. J. Driscoll and N. A. Sangi: “**The Development of Computer Aided Facilities Layout (CAFL) Systems - International Survey Report**”, Department of Industrial Studies. The University of Liverpool, UK, (1986), p.p. 1-119.
32. N. A. Sangi: “**Application of CAD/CAM and CATIA to the Problem of Factory Layout**”, GINO Users (U.K) Meeting, Liverpool University, April 1985.

**Served as Editor/Member Editorial Board:** (Events 1 and 2 were also organized)

1. Referred papers for **International Journal of Production, Planning and Control**. Organized Zoological Congress, March 2004 at AIOU, Islamabad.
2. Member Editorial Board: **International Workshop on Recent Advances in Computer Vision**, Proc. of the workshop, SZABIST, Karachi, Jan. 1-2 1998, pp. 1-119
3. Editor in Chief: **Proceedings of First Computers in Engineering Conference**, 18-20 March 1990, Heavy Mechanical Complex, Taxila, Pakistan. pp. 1-187.

## BOOKS PUBLISHED/AUTHORED

1. Contributed a chapter **“The Emergence of Distance Education in South Asia”** in the book titled *“Distance Education Technology in Asia”* (2009). Published by PANDora Network.
2. Contributed a chapter **“Accessibility, Acceptance and Effects of Distance Education in South Asia”** in the book *“Distance Education Technology in Asia”* (2009). Published by PANDora Network.
3. Contributed a chapter **“E-assessment Methods for Student Evaluation in Asia”** in the book *“Distance Education Technology in Asia”* (2009). Published by PANDora Network.
4. Contributed a chapter **“Accessibility, Acceptance and Effect based DE Technologies in South Asia”** in the book *“Distance Education Technologies in Asia: past and Present”* published under PANDora Distance and Open Resource Access, page 11-26, June 2007.
5. Contributed a chapter **“Training and Assessment in Distance Education”** in the book *“Distance Education Technologies in Asia: past and Present”* published under PANDora Distance and Open Resource Access, page 79-84, June 2007.
6. Contributed **03 chapters** in the textbook *“Computer in Education for Teachers”* (2004), published by National Book Foundation, Islamabad, Curriculum Wing, MOE, Islamabad.

### *Electronic Books*

1. Supervised and edited a 14 unit e-book in 2007 “Rabta Ghar”, a Rural Call Centre. This electronic book was developed for Pakistan Telecom Authority, as instructional multimedia and multilingual (Urdu and English) course for Rural PCO, FAX and Internet station owners.
2. Supervised and reviewed development of an 18 unit Text e-book in 2005 titled “Pakistani Adab”. This electronic book was developed for Pakistan Languages Department, as instructional multimedia and multilingual (Urdu, Sindhi, Pashto, Punjabi and Kashmiri languages) course for BA Students of AIOU. The online book is available on AIOU website. (<http://www.aiou.edu.pk/PakistaniLanguages/Index.asp>)
3. Supervised and reviewed about 20 Multimedia e-books from year 2002-2005. These e-books are used in online PGD Diploma program and BS (CS) courses as electronic instructions. The results have been highly improved learning of students (list enclosed).

## SEMINARS, WORKSHOPS AND TRAININGS SESSIONS CONDUCTED

1. Dr. N. A. Sangi, National Training Workshop on **“Protection of Intellectual Property Rights in the use of Information and Communication Technology”** 19-22 December, 2006- Assisted in guidelines.
2. Dr. N. A. Sangi, Resource Person for HEC sponsored Workshop/ Training course, 2006 at Quaid-e-Awan University of Engineering Science and Technology at Nawabshah.
3. Dr. N. A. Sangi, An international Symposium on **“Information and Communication Technology in Social Development”** held in Jakarta organized by ASEAN Foundation, May 21-25, 2006. (A report)
4. Dr. N. A. Sangi, presented a paper on **“Building Quality Education System for CS/ IT Education at AIOU”** in a seminar on “ISO 9001 for Higher Education” at Lahore, 13-14 May, 2006.
5. Dr. N.A. Sangi, **2<sup>nd</sup> Annual Research Synthesis Meeting** supported by IDRC (Canada) at Virtual University, Lahore. April 20-23, 2006.
6. N. A. Sangi, **“E-assessment Model and Methods for Student Evaluation in Asia”**, ASEAN Foundation, April 22-24, 2006, Jakarta, Indonesia.
7. Dr. N.A. Sangi and V.K. Samaranayake, **“Accessibility, Acceptance and Effect of Distance Learning Technology in South Asia”**, IDRC Research Meeting, 21-22 January, 2006, Colombo, Srilanka.
8. N.A. Sangi, **Microsoft Research Academic Days Conference 2005**, 13-14 December, 2005, Qatar.
9. N. A. Sangi, **Distance Learning Technology in South Asia**, ICDE conference, New Delhi, India, 19-24 November, 2005.
10. N. A. Sangi, **Curriculum Development- Potential and challenges**, 26-28 September, 2005, Microsoft Academic Days workshop, Dubai.
11. N. A. Sangi, **Multimedia Content Development**, ICT for development in Asia, IDRC workshop Siems Reap 19-25 September, 2004, Cambodia.
12. N. A. Sangi, **ICT in Higher Education, an AIOU model, Strengthening e-learning workshop policies and programs in ASIA** ADB Headquarters, 9-13 August, 2004, Manila, Philippine.

13. N. A. Sangi, **Online Education as an Emerging Mode of Education**, Workshop held at Multimedia Electronic Courseware Design Center, AIOU, May 31, 2004.
14. N. A. Sangi, **How to Supervise Software Projects**, student seminar, AIOU, Islamabad.
15. N. A. Sangi, **Building a Quality Academic System**, Internal Faculty Seminar, SZABIST Larkana Campus, March 22, 1999.
16. N. A. Sangi, **Management Information Systems, Curriculum and Institutional Roles**, Teachers Training Workshop, University Grants Commission, Karachi, Oct. 09, 1998.
17. N. A. Sangi, **CADAM Geometry Interface - Utilize it for Your CAD Applications**, Computer Laboratory CAD- Graphics Seminar, University of Liverpool, June 18, 1986

## **SOME INDUSTRIAL/ RESEARCH PROJECT REPORTS**

1. N. A. Sangi: **Faculty Training Project for AIOU Working Paper**. AIOU, Islamabad. A PC-1 build on this report has been submitted to UGC/MoST by the University.
2. N. A. Sangi and A. Shah: **Multimedia Electronic Courseware Design Center**, AIOU, Islamabad. A PC-1 build on this report has been approved with a grant of Rs.33.396 millions.
3. N. A. Sangi: **IT Services Networking Project**, sponsored by HEC, Islamabad 2004. Project received grant of Rs. 34.00 millions.
4. N. A. Sangi: **E-assessment Models and Methods for Students Evaluation in Asia**. IDRC, Canada project grant US \$ 62,000.
5. N. A. Sangi: **Strengthening of AIOU Facilities**. JICA project, AIOU received MECDC equipment as grant in aid.
6. N. A. Sangi and A. Shah: **Open Learning Institute of Virtual Education -OLIVE Working paper for online education project at AIOU**, Islamabad. This project has been approved by AIOU. Academic Council and JICA (Japan) has given a partial funding to establish some online education services.
7. N.A. Sangi: **Effective Learning in IT - A Monitoring Survey**. This continuous survey is being carried out to get feed back on IT/CS education of AIOU. Second phase has started in December 2002.
8. N. A. Sangi and A. Uqaily: **Data Communication Link for Distance Learning Facility at Larkana Campus**, Internal Development Report, Faculty of Software Engineering, SZABIST, Karachi Campus, April, 1996.
9. N. A. Sangi: **Need of Drawings Conversion from Paper to CAD**, Design Office, Internal Development Report, Heavy Mechanical Complex , Taxila, January 1991.

10. N. A. Sangi: **CAD REPORT**, Design Office, Internal Development Report, Heavy Mechanical Complex, Taxila, March 1991.
11. N. A. Sangi: **Local Development of Programmed Logic Control System for Asphalt Mixing Plant**, Design Office Internal Development Report, Heavy Mechanical Complex, Taxila, July 1991.
12. N. A. Sangi: **Computerized Design and Drawing For Belt Conveyor Assembly**, Design Office Internal Development Report, Heavy Mechanical Complex, Taxila, Sept. 1991.
13. N. A. Sangi: **Paper Drawing Conversion and Drawing Release Control System Feasibility**, Design Office Internal Development Report, Heavy Mechanical Complex, Taxila, Jan. 1992.
14. N. A. Sangi: **Assimilation of Computer Technology in Design and Fabrication**, Design Office Internal Development Report, Heavy Mechanical Complex, Taxila, March 1992.
15. N. A. Sangi: **Induction of CAD Drafting and CNC Programming at EME College**, Mechanical Engineering Curriculum Development Report, August 1994.
16. N. A. Sangi: **IBM – DATE Project for induction of CAD/CAM**, CAD/CAM Project Feasibility Report, IBM, June 1995.

## **ORGANIZED PROJECT COMPLETED/SUPERVISED**

1. **Computer Application Development at SSGCL:** As Manager Computer Applications Development, inducted computers in various departments of the company. Specified, purchased, installed and monitored training and development, etc. activities.
2. **Induction of Computers for the Design Office at HMC:** As Dy. General Manager, I was involved in the need analysis, specification, purchase evaluation, installation and training of staff, etc. activities. This 3 years experience was a rich management experience.
3. **Start up of SZABIST Larkana Campus:** As academic consultant, I was involved in the start up this low cost, rural Institute. Prospectus, building facilities, library, computer laboratory, faculty hiring and student admission processes were supported.
4. **Web Site, and E-mail Server Project for SSGCL:** As Project Coordinator, specified and monitored the development of this internet based project. All client, developers, administration and other liaison activities were performed for the client and the institution.
5. **Web Site Development for PIC:** I am serving as Project Manager on this project and performing liaison between all project developers, client and the sub contractors, etc.
6. **Organized Multimedia Electronic Courseware Design Center Project at AIOU:** As Project Director, I have organized Multimedia Project with the grant of Rs.33.00 millions from the MoST/HEC. The project has completed successfully.

7. **Organized Open Learning Institute of Virtual Education -OLIVE Project:** Working paper for online education project at AIOU, Islamabad. Work on OLIVE Project is running successfully.
8. **Development of French Language:** I have developed a Foreign Language (French Language) course for the computer science graduates with the consultation of French Embassy. This course is offered to students since last five semesters.

## **SOME SELECTED SOFTWARE PROJECTS SUPERVISED**

1. **Centralized Check Cashing System for NBP:** This project integrates signature verification of various on-line branch accounts of National Bank of Pakistan. Client Server techniques are used to access database records and image files on different platforms.
2. **Utility Bill Payment System using Bar-code:** This research project simulates on-line access of a Bank accounts database and (SSGCL) utility bills database for payment of bills. Bar code technology is being incorporated in this project. A new module of the project called **Utility Bill Payment Production System using Internet**, is currently being developed for SSGCL.
3. **SZABIST Library (Books) Automation using Bar-code:** This modular windows based software consists of book database, member verification and issue return transactions database. Bar-code hardware has been interfaced for book identification and member identification. Back end MS-ACCESS and front end VB has been used.
4. **SZABIST Library (Journal) Automation using Bar-code:** This extension of above software incorporates uses Oracle as back end DBMS engine with Developer 2000 at front end. ODBC technique will allow data access on multiple DBMS.
5. **Multimedia Multilingual Authoring Application:** This project makes use of Multimedia technology, graphics, sounds, animation and hyper text links to create associations between text, sound, animation and images in different languages. Pilot project has been developed using folk stories in three languages.
6. **Internet Based Shopping Mall:** This project simulates electronic superstore operation on Internet. Various categories of clothes have been implemented for selection and credit card based shopping.
7. **ZABPAGE:** This project implemented intranet and web page at SZABIST using Web server on NT 4.0 and main server on NT 3.51. Requests for admission can be submitted online. This project has been later implemented to develop SZABIST Web.
8. **Publication Archival and Retrieval System:** This project helps convert hard copy and soft copy magazine articles into organized electronic database. Which could be searched for various articles and images published in stored magazines. Oracle database is used other scanning/conversion routines and VB front end interfaces application.

9. **Distributed Results Announcing System:** This system uses Oracle 7 database and Developer 2000 tools to develop a multi-user access, multi-level security results posting and announcement system for administration, examinations, faculties heads, teachers and students.
10. **Human Resource Management System:** This system uses Oracle 7 database and Developer 2000 tools to develop a multi-user access, multi-level security human resource development system. The model has been based on NBP, with their distributed organization. Employee data, training courses, training schedules, etc are developed from the system.

## **AWARD WINING PROJECTS SUPERVISED**

Following software projects; developed under the supervision of Dr. Sangi, won prizes at the Dr. A. Q. Khan's All Pakistan Software Competition:

1. **Pakistan Hyper Mall:** This project consists a full Web Site providing catalog of information on various Pakistani Exportable products. Internet based multiple search capabilities have been incorporated and automated online/off line update mechanism are being developed. This project did win 2<sup>nd</sup> prize in 9<sup>th</sup> All Pakistan Software Competition 1998.
2. **A2Z Pakistan:** This first Internet search Engine Software Project won first Prize in 10<sup>th</sup> All Pakistan Software Competition.
3. **Multimedia Content Development Manager:** This Project aimed at creating the tools for teachers to assist them in development of multimedia content. In MS-word like environment, teacher will be able to integrate text, animations, graphics sound, music, more clips, etc.
4. **Multimedia website competition:** This project aimed at development of multimedia, multilingual website on the life, theme and work of Allama Iqbal. The project won 4<sup>th</sup> prize in National competition. April 20-21, 2003, Iqbal Academy Pakistan
5. **Multimedia Courseware:** This project was part of Multimedia Electronic Courseware Design Center and students won Rs. 30,000, 2<sup>nd</sup> prize in IEEE-NUST competition.

## MS/PhD STUDENTS SUPERVISED

### M.Phil Students supervised/ under supervision

S. No.	Student's Name	Thesis title	Year
1.	Ms. Bushra Almas	Computer Assisted Assessment of Subjective Type Questions	2007
2.	Mr. Imran Ahmed Khan	Low Bandwidth Video Content Delivery: A Case of Information and Communication Technology (ICT) Based Education Model	2007
3.	Mr. Shahid Mahmood	Auto-Generation of Questions from the Given Text: A Case of ICT Education Model	2007
4.	Mr. Moazzam Sabir	Enabling Urdu E-Learning Environment by Localization <b>(Thesis finalized)</b>	2007
5.	Mr. Muhammad Adil Malik	Mobile Open Architecture for Learning Instruction Management (MOALIM)	2007
6.	Ms. Ayesha Mehboob	A Comparative Analysis between Traditional Learning Environment and Virtual Learning Environment in Pakistan	2008
7.	Ms. Afsheen Jalil	Quality Education using ICT in Higher Education	2008
8.	Mr. Mudassir Ahmed Saeed	Agility in Design and Development of Courseware.	2009
9.	Mr. Kamran Mir	Formative Mobile- Assessment in Distance Learning	2009

### PhD. Students supervised/ under supervision

S. No.	Student's Name	Thesis Title	Year
1.	Mr. M. Daud Khattak	Development of Multimedia Instruction Objects for Delivery in a localized E-Learning Environment <b>(Thesis being finalized)</b>	2007

## INFORMATION ABOUT SUCCESSFUL INTRODUCTION OF ACADEMIC/MANAGERIAL REFORMS

1. At EME College (NUST University), I introduced CAD/CAM education for the first time in Pakistan. Also organized labs in such a way that each student completed his/her lab work with 1:1 ratio despite 70+ students in a class and 07 labs had 10-15 stations only. A letter of appreciation from Commandant is enclosed.

2. In 2005, at SZABIST Larkana campus, four faculty members from IBA, QAU, Sindh University were hired but could not start any program. I as consultant established labs, classrooms and faculties and linkages (Please see my research publication no.3 “Information and Communication Technology (ICT) Applications in Development of Information Technology (IT) Cottage Industry in Pakistan”) to start education. Under LEAD model for community development , SZABIST Larkana is now well established campus. I was rewarded to become first faculty member at SZABIST Karachi Campus.
3. At SZABIST, Karachi Campus, I designed first Software Engineering MCS program. My hard work, vision and implementation resulted in high quality graduates at SZABIST. They won many competitions nationwide.
4. At AIOU, Computer Science graduates were not called for interview, my policies, curriculum and implementation resulted in 15% AIOU graduates at NetSol, Pakistan’s most recognized Software Company.
5. I also introduced best monitoring practices and curriculum design in e-learning. AIOU e-learning program is highly respectful even LUMS recognizes it and I received two awards for my work in the field of e-learning at AIOU.

## **INFORMATION ABOUT LOCAL AND INTERNATIONAL RESEARCH GRANTS/PROJECTS WON**

1. Implemented **Multimedia Electronic Courseware Design Center Project** at AIOU. As Project Director, organized Multimedia Project with the grant of Rs.33.00 millions from the MoST/HEC (Pakistan). Under this project, Multimedia courseware and web enabled courseware was developed. AIOU faculty was trained in the design and development of new IT based course materials. The project has completed successfully in 2004.
2. Implemented **IT Services Network Project** with the grant of Rs. 34.00 million from HEC (Pakistan). Served as Project Director. Under this project the networking infrastructure was established at the main campus and selective regional campuses of AIOU. These campuses were connected through fiber optic. In addition to this, employees were also trained. This project has completed successfully in 2005.
3. Initiated **Open Learning Institute of Virtual Education -OLIVE Project**. The ICT infrastructure for distance learning has been established at AIOU. This ICT based electronic infrastructure is being used for the transmission of online lectures. Teachers and students can easily interact with each other through web. Multimedia courses are also integrated with OLIVE Learning Management System for online classes. Work on OLIVE Project is running successfully.
4. Developed an ICT project **“Strengthening of Allama Iqbal Open University, Islamabad: Transformation of Distance Learning by use of Satellite based interactive systems for delivery of TV, Content and Internet”** worth Rs. 390 million. The project is aimed at

enhancing ICT infrastructure and HRD for improved quality of distance education and out reach to the remote areas of Pakistan. This project will provide virtual and e-learning education through the use of Satellite based TV channels, internet and video conferencing mode of delivery.

5. Implemented **Enhancement of Educational Facilities at Allama Iqbal Open University (AIOU) Islamabad** Project Funded by JICA (Japan). Under this project Multimedia lab was upgraded, digital lab was established, CD/ DVD duplication Studio was established and Video Conferencing equipment was installed with the help of JICA.
6. **V-OLIVE Project** has been developed. This project will enable controlled voice question and answer session within OLIVE framework. This system will provide easy and user-friendly interface.
7. Developed **U-OLIVE Project**. This project will help to utilize e-learning methodology with Urdu language interface using the existing OLIVE framework. Initial work shows satisfactory results.
8. Successfully managed **“E-assessment Methods for Student Evaluation in Asia”** Project as Project Leader of the project. This was the sub-project of PANdora project sponsored by IDRC, Canada. A Generalized E-assessment Model Software was also developed under this project. During this project, a paper was also published in Learning Media and Technology journal. Two chapters in international books were contributed.
9. Successfully completed **Accessibility, Acceptance and Effects of Distance Learning Technologies in South Asia** project. The project was sponsored by IDRC, Canada. Accessibility of ICT in Schools, Technical Colleges and Higher Education Institutions of Pakistan was conducted and reported. Three chapters in books are published besides project report.
10. Signed MoU for the future collaboration of AIOU and the University of Rostock in the field of Chemistry and for the establishment of a Center of Excellence in Synthetic Chemistry at AIOU.
11. Received Donation of €15000 from a German professor for scholarship of rural students.
12. Received land of Rs. 50 million from government for construction of AIOU Girls Hostel at D.G. Khan.

## **DETAILS OF INTRODUCTION OF LATEST TECHNOLOGY IN EDUCATIONAL/OTHER INSTITUTIONS**

I have been working in e-learning area since last 14 years. Significant progress in developing e-learning system at Allama Iqbal Open University (AIOU) is evident from some of our published work. Coverage of my work is given in some of my selected papers at Annexure-5. Recently, I have

worked on multimedia content development, open source learning management system, localization of e-learning, accessibility of students and teachers to ICT facilities and electronic assessment areas.

I have made remarkable progress in initiating and implementation of e-learning environment at AIOU. Now OLIVE e-learning framework (OLIVE e-learning model was developed in 2000 and has been successfully implemented at pilot scale in AIOU) is being implemented. However, new development in e-learning, use of mobile devices, development of e-learning infrastructure and ubiquitous e-learning, etc. are not properly covered. At the same time, implementation at large scale also poses educational management problems.

The emerging Life Long Learning in distance education and implementation of important tools and techniques to support knowledge, skill and attitudes (dispositions) needs to be looked into with broad perspective in e-learning area.

Extending e-learning in rural and remote areas will help induct ICT applications in those areas. It will help raise the education and literacy levels and more importantly quality of learning in rural areas. In long terms, this will also initiate ICT based economic activity in many walks of rural communities and may reduce digital divide in the country.

## **PREPARED A CORPORATE STRATEGIC PLAN FOR ATTAINMENT OF ORGANIZATIONAL VISION AS PER NATIONAL PRIORITIES**

1. As Member, National ICT Strategy, I contributed in National ICT strategy development for Pakistan.
2. I have been an active member of PakGrid for sharing and disseminating new knowledge and influencing policy matters related to education, ICT and Telecom/e-learning.
3. I was a member of consultative group on e-learning organized by Asian Development Bank comprising of all Asian nations.
4. I have been an active member and Principal Investigator on PAN-Asia Distance Learning Technologies group (Pandora) with 25 researchers from 13 countries.
5. I am an active member for Urdu ICT group URLSDF and Urdu Society for development of ICT tools and technology for localization.

## **DETAILS OF NATIONAL AND INTERNATIONAL LINKAGES DEVELOPED INCLUDING JOINT VENTURE, PROGRAMS AND COLLABORATIONS**

1. I am a member of IDRC PANdora network of 25 researchers from 13 Asian nations. Our aim is to jointly develop practices and policies enhancing the use of distance learning technologies (DLT) in Asia. Under PANdora project we have received funding for two sub-projects “**Accessibility, Acceptance and Effects of Distance Learning Technologies in South Asia**” and “**E-assessment Methods for Student Evaluation in Asia**”. We also developed a *Generalized E-assessment Model Software (GEMS)* during this project. The project was funded by IDRC, Canada.
2. I am founding member of COURAGE, Kent State University. This group comprises of consortium of universities in USA, Pakistan, Malaysia and many more countries for graduate research collaboration. I am presently working on PhD level collaboration work.
3. Signed MoU between AIOU and German University for promotion of Science education and research in Pakistan.
4. Established AIOU collaboration with higher education institutions of advanced countries in technology.

## **SERVED AS MEMBER DELEGATION/INTERNATIONAL NEGOTIATIONS**

1. Member delegation for negotiation with Pakistan Engineering Council for Accreditation of BE Telecom program.
2. Served as member delegation for negotiation with Asian development Bank in e-learning 2004
3. As team member interacted with UNESCO Asia and Pacific Regional Bureau for Education, Bangkok and attended high level planning workshop.
4. Member delegation for negotiations with PANdora, Singapore on Distance Learning Technology 2004-2008
5. Member JICA project negotiation team. AIOU won this project against many odds.

## **RECORD OF COMMUNITY OUT-REACH PROGRAMS INITIATED**

1. Post-Graduate Diploma Online Program with nationwide/international out-reach in Computer Science education.
2. As Dean, Faculty of Science contributed in Open Tech., community health education and Matric, FSc. level course deployment nationwide.

3. Delivered lectures in many seminars in rural/urban cities on quality education including Larkana, Hyderabad, Nawabshah, Bhimber, Gujranwala, Lahore, Karachi, Quetta, Peshawar, etc.

## **INFORMATION ABOUT COMMUNITY SERVICE (OTHER THAN CHARITY)**

1. Provided relief to flood affectees by providing free books to AIOU students and gave cheque of Rs. 4 million as donation to the government's Flood Relief Fund.
2. I served as Vice President, Local Community which established a non-faction Mosque in our local community.
3. I am a member of welfare organizations for support to students in education at various colleges.
4. I supported and contributed to WISE (Women in Science Education, Lahore).
5. I was consultant to TVO (Trust for Voluntary Organization) and developed managerial capacity of more than 12 NGO's working all over Pakistan.
6. I was a member of community organizations at Liverpool University, UK for Children Education Support and Old age Volunteer visitors through community welfare organizations at University.
7. I was member of Islamic Societies and/or Pakistan Societies at Liverpool University, Kent State University and volunteered in various community welfare activities.
8. I have been Chair of many employee welfare committees at AIOU.

## **RECORD/PROOF OF ACHIEVEMENTS AS A LEADER**

- 1981 Best Graduate Award, Mehran University of Engineering and Technology.
- 1981 First Position Award, Mehran University of Engineering and Technology.
- 1983 Merit Scholarship, Ministry of Education, Islamabad.
- 1986 Research Grant, Industrial Studies Department, Liverpool University.
- 1986 Mason Bibby Award, Faculty of Engineering, Liverpool University, UK.
- 1987 Special Research Grant/Conference Support, University of Liverpool.
- 2004 NCR National IT Education Excellence Award, NCR Corporation.
- 2007 Postdoctoral Research Award, Higher Education Commission, Islamabad.
- 2009 Best University Teacher Award 2008.
- 2010 Won IT Excellence Award 2010 for developing and deploying Urdu e-learning Software, NCR Corporation.

## **REFERENCES**

1. Dr. Anwar Hussain Siddiqui, President, International Islamic University, Islamabad, Pakistan.
2. Dr. A.Q.K Rajput, Vice Chancellor, MUET, Jamshoro,
3. Dr. M. Kazim Khan, Professor, Kent State University, Ohio USA.
4. Dr. Naveed Malik, Rector, Virtual University, Pakistan
5. Dr Tian Belawati, Vice Rector, University Terbuka, Indonesia
6. Dr Tokuji Hayashi, Professor, Institute for Teaching and Learning, Ritsumeikan University, Japan.