

# Dr. Muhammad Riaz

## Education Consultant and Teacher Trainer



---

[Linkedin profile](#)  [dr.riaz.writer@gmail.com](mailto:dr.riaz.writer@gmail.com)  [00923365539062](tel:00923365539062)  [Educational YouTube channel](#)

**Address: Fazal Plaza ShahwakShah Road, Quetta**

### Career Profile

Dr. Riaz is an education consultant and teacher trainer with over 32 years of experience. He has extensive experience across various educational roles, including physics teacher, teacher educator, district focal person, senior research officer, and director of a research office. His proven track record in these positions emphasizes his deep expertise and ability to excel in any educational environment. He has led and implemented significant teacher training initiatives and has collaborated with the STEM Project at Teachers College, Columbia University. Dr. Riaz is a sought-after consultant and trainer, and his contributions to the field of education are remarkable.

### Core Skills

- Develop and manage comprehensive project plans.
- Implement project activities with precision and efficiency.
- Monitor and evaluate project progress meticulously.
- Adapt project plans to address challenges and optimize outcomes.
- Identify and engage stakeholders with strategic intent.
- Build and maintain strong relationships with partners.
- Craft workshop objectives and agendas with clarity and purpose.
- Select appropriate workshop facilitators and speakers to ensure expertise.
- Prepare comprehensive workshop materials and resources for optimal learning.
- Design and implement cluster-based training programs for maximum impact.
- Train and mentor cluster members to develop their skills and knowledge.

## EDUCATION AND ACADEMIC TRAINING

### Doctorate

Doctor of Education (Ed.D) Educational Administration (GPA:3.67/4), July 2016, Dowling College, Long Island Greater Area, New York, concentration: Science Education

**Dissertation:** “School Physics Teacher Class Management, Laboratory Practice, Student Engagement, Critical Thinking, Cooperative Learning and use of Simulations Effects on Student Performance” Available at: [Harvard Education](#), [ERIC](#), and [Semantic scholar](#).

**Courses:** Basic Research & Uses of Technology in Science Education; Educational Research Methods; Experimental Research Methods; Quantitative Methods for Administration; Applied Research; Ethnography and Case Study Organizational Theories: Planned Change in Organizations; Theories of Social Organizations; Theories of Social Organizations II; Ethical Issues in Organizations Collaborative Leadership; Community Relations; Conflict Resolution; Collective Negotiations Policy Studies; Politics and Implementation of Policy and multicultural social organizations.

### Masters

**Master of Education** (Teacher Education)- August 2004, Allama Iqbal Open University, Islamabad, Pakistan

**Courses:** Foundation of Education; Educational Research; Curriculum Development & Instructions; Educational Psychology; Elementary Education; Secondary Education; Higher Education; Teacher Education; Term Paper; Educational Measurement; Computer in Education.

**Master of Science (physics)-May 1993**, University of Balochistan, Quetta, Pakistan

**Courses:** Mathematical Methods of Physics and Relativity; Classical Mechanics, Thermal and Statistical Physics; Electronics and LASER Physics; Solid State Physics; Quantum Mechanics; Nuclear Physics; Digital Electronics; Communication Systems

**Master of Arts (English Literature)-October 1995**, University of Balochistan, Quetta, Pakistan

**Courses :** Background of English Literature; Classical Poetry; Drama; Novel; Romantic Poetry; Prose; Criticism; Essay Writing

**Postgraduate Diploma in computer science Education**-November,1994, University of Balochistan, Quetta, Pakistan

**Courses:** Computer organization; Digital Electronics; Switching and Finite Automata Theory; DATA Processing and programming; Operating systems

**Bachelors** Bachelor of Science(B.Sc.)-June, 1988, Punjab University, Lahore  
**Courses** English Language and Literature, Physics and Advanced Mathematics

## **Academic Certificates**

### **Certifications in the USA**

STEM Teachers Training Certifications in **Teacher College, Columbia University, New York, USA**

- Mechanics Modeling Workshop in Teachers' College, Columbia University With STEM Teachers NYC from July 2014 to August 2014
- Teaching and Learning Special Relativity With American Modeling Teachers Association in March 2015
- Leveling Up Your Lab: Injecting Rigor and Engagement into Classroom Experiments STEM teachers NYC in December 2015
- Making in the Maker Space STEM Teachers New York City(NYC)
- Gala "Show & Tell STEM Teachers NYC in May 2015
- Introduction to Electrical Circuits STEM Teachers NYC in November 2015
- Modeling Physics Systems in V-python at Teacher College, Columbia University American Modeling Teachers Association in December 2014
- Black Box Modeling & Balanced Forces via Circus Arts STEM Teachers NYC
- Teaching Computer Programming to Students with Little or No Experience STEM Teachers NYC in September 2015
- Experiment First! (Collecting data and finding relationships) STEM Teachers NYC, October 2015

### **Certifications in Science Education from The University of Montana-Missoula, USA**

Studied at The University of Montana-Missoula from May 2004 to August 2004

- Participated in Educational conferences, Seminars, and Debates in Phyllis J. Washington College of Education
- visited the six elementary and four secondary schools of Montana-Missoula
- Evaluated the curriculum of elementary and secondary Catholic schools with reference to Montana Science Standards and benchMarks
- Observed the teaching techniques in science classrooms of Elementary and Secondary schools
- Interviewed 51 students and assessed their learning levels
- Received the certificate of Science Teacher Training from The University of Montana-Missoula,

## Certifications in Pakistan

### Teacher Training Courses:

- One-month training on “Fundamentals of Electronic Office” organized by Pakistan Computer Bureau at Islamabad
- Sixteen days “Basic Training in Educational Technology Instructional TV TV/VIDEO Video Program Production” TTP Ministry of Education at AIOU, Islamabad
- Six days “Good Governance in Education at Grass-Root Level” at AEPAM Ministry of Education Islamabad
- Two days of training in “Environmental Education “at Balochistan PITE Quetta
- Two days Training “Environmental Education workshops” at Serena Hotel Quetta
- Two days of training on the “National Plan of Action for Human Rights Education in Balochistan “ By UNESCO at PITE Balochistan Quetta
- Twenty-one days’ Training “Module writing “ International Reading Association at PITE Quetta
- Ten days Training “English Languages Courses for Elementary College Teachers “ at Bureau of Curriculum Quetta
- Two days Training “Interactive Radio Instruction Mathematics “Conducted by SMEC International PTY Limited at PITE Balochistan Quetta
- Ten days Training “Reorientation courses for secondary school teachers “at the bureau of curriculum Quetta
- Six days Training “workshop on Training of Trainers (TOT)” at Boy Scout Association, Quetta
- One year “Advanced Action Research Training organized by ESRA-USAID in Pakistan
- Fifteen days Training “Project-Based Learning through Effective use of Technology, “Organized by TPTE in collaboration with Intel at Islamabad
- A six-month action Research program in Agha Khan University with the collaboration of STEP project Funded by the US

## Work History

**Honorary Director:** Offices of Research, Innovation and Commercialization (ORIC), Alhamd Islamic University, Quetta, 2017-present, Key Responsibilities:

- Establishing the Office of Research Innovation and Commercialization (ORIC)
- Supervising the research Projects of Faculty and Master of Philosophy Students
- Organizing Seminar, Workshop, Conference and symposiums for Faculty and M.Phil. Students
- Collaborating National and International Funding Agencies
- Outlining the course of Ph.D. Program in Education of Alhamd Islamic University

**Visiting Assistant Professor of Education (HEC Approved Supervisor) Education Department, Alhamd Islamic University, Quetta, Pakistan 2016-Continued**

**Courses taught:** Quantitative Research Methods in Education; Data Management and Analysis ; Assessment of Student Learning, Educational Administration, and Designing Digital Portfolio of Master of Philosophy coursework

**Visiting Assistant Professor of Education (HEC Approved Supervisor) Education Department, Sardar Bahadur Khan Women University Quetta 2016-Continued**

**Courses taught:** Educational Administration

**Thesis Supervisor for M. Phil.** 2016- Present Sardar Bahadur Khan Women University Quetta

**Thesis Supervisor for M. Phil.** 2016- Present Alhamd Islamic University, Quetta

**Senior Research Officer(SRO)** 2015-202 Bureau of Curriculum, Quetta, Pakistan.

- Reviewed the National curriculum of Science 2006
- Served as a team leader for the development of the National Curriculum Framework (NCF) of Pakistan 2018
- Participated as a team member of the National curriculum of Elementary Science 2018
- Worked as a team leader of the Alternate Learning Paths (ALP) curriculum of Elementary Science
- Developed the elementary science books of Alternate Learning Paths(ALP) 2019
- Developed the curriculum of Non-Formal education 2016
- Developed the Pakistan National Curriculum of Computer Science 2017-2023

**STEM Education Researcher** 2014-2015 [STEMteachersNYC-Teacher](#) Teacher College Columbia University

I joined the American Modeling Teachers Association (AMTA) and STEM Teachers New York at the Teachers College, Columbia University, where I participated in:

- Three-week intensive Modeling Instruction Workshop on Physics (Mechanics),
- Thirteen of 3-hour weekend workshops
- One-week Curriculum Development Workshop

**Doctoral Student** 2012-2014 **Dowling college and Teacher College, New York**

- Completed the coursework of 72 credit-hour programs in DowlinCollege.ge New York
- Applied multiple regression analysis and Structural Equation modeling (SEM) techniques in my doctoral dissertation.

- The participants of my research study were secondary school physics teachers who were members of STEM Teachers New York City (STEMteachersNYC) and American Modeling Teachers Association (AMTA).

**Senior Subject Specialist (Physics) 2003-2012** Provincial Institute for Teacher Education (PITE), Pakistan :

- served as an officiating director of the PITE, Balochistan, and Quetta
- Organized the professional development programs in PITE in which faculty members of PITE present their lectures about their research, subjects, and field visits.
- Planned and organized a number of training workshops for teachers and administrators
- Developed teacher training modules and manuals for the capacity building of the teachers of Balochistan
- Reviewed National Curriculum of Secondary School Physics 2006
- Taught B.Ed and M.Ed. courses of Allama Iqbal Open University as tutor
- Trained 350 Teachers in the cluster workshops program from 2004-2007 as District Focal person in Gwadar under ESRA project
- Observed Classroom activities and teaching skills of trained teachers in clusters centers during the field visit of schools in District Gwadar.
- Taught the Multigrade courses in Child-Friendly schools of Balochistan Education Foundation from 2007 to 2008
- Taught teaching of science in the workshops and Seminar of STEP project programs in Balochistan
- Participated as Visiting Professor in AKU-IED in AD- Link program March 15- April 15, 2010
- Conducted the action Research on the Topic” Positive impacts of digression in the classroom”

**Subject Specialist (Physics) 1997-2003** Provincial Institute for Teacher Education (PITE), Pakistan

- Established a physics laboratory in PITE, Balochistan
- Organized Laboratory Management courses under science Education project in Balochistan
- Trained three hundred science teachers in areas of contents, pedagogy and practical work in physics under science Education project
- Taught Educational technology and Teaching of science in 10+3 Model Diploma program in PITE Balochistan, Quetta
- Prepared lessons and taught physics of higher secondary school level in 10+3 Model Diploma program in PITE Quetta
- Designs and taught contents and pedagogy of physics in the B.Ed (Science) program under the pre-service program of the science project.

## **PROFESSIONAL NETWORKING**

- National Science Teacher Association (NSTA) the United States of America
- American Physical Society (APS)
- All-American Physics Teacher Association (AAPT)
- American Modeling Teacher Association (AMTA)
- American Education Research Association(AERA)
- Science Technology, Engineering and Mathematics Teachers of New York(STEMteachersNY)
- Association for the Advancement of Computing in Education (AACE)
- American Statistical Association (ASA)

### **Language Skills**

English(fluency); Urdu(Fluency); Punjabi(Basic); Saraki (Basic); Balochi (Basic), Sindhi(basic)

### **Workshops Designed and Organized**

- Organized Allama Iqbal Open University (AIOU) workshops for B.Ed and M.Ed programs
- Trained 350 school teachers in district Gwadar through cluster-based approach under ESRA
- Implemented the professional development program for private school teachers of the BEF-BESP
- Planned and organized science project training in PITE and District Headquarters of Balochistan
- Designed the training of middle school head Teachers under the middle school project.
- Developed the Teacher Training project with the collaboration of the Asian Development Bank.
- Designed and organized training on STEM education in Balochistan by providing training to 120 preservice science teachers in a 12-day workshop focused on hands-on activities at four universities led by three local STEM experts. The direct beneficiaries are 120 preservice teachers, and indirect beneficiaries are science students from Balochistan.

## **RESEARCH AND PUBLICATIONS**

### **Research Interest**

Quantitative methods in science education research; Quantitative data management, analysis, and interpretation; Designing instructional models of science training workshops based on scientific approaches (Interactive simulations, problem-solving using clickers, short videos, Socratic method of questioning); Assessment and feedback in science education; Grant Writing in the Sciences; Use of Educational Technology (Tablets, 3D printing, Smartboards, E-books, and

STEAM kits) in science teachers classrooms.

## **Publications**

- Riaz, M., Naureen, S., & Morote, E. S. (2019).** Simulated Physics Class Management: Does It Predict Students' Academic Achievement? *International Journal of Innovation in Teaching and Learning (IJITL)*, 2(1).
- Riaz, M. (2015).** School physics teacher class management, laboratory practice, student engagement, critical thinking, cooperative learning and use of simulations effects on student performance (Doctoral dissertation, Dowling College).
- Riaz, M., & Morote, E. S. (2015).** A physics Class Model that predicts Student Performance. *E- Learn World Conference on E-Learning in Corporate, Government, Healthcare, and Higher Education. 1*, pp. 897-902. Kona Hawaii: Educational & Information Technology Digital Library
- Shah, S. T., Riaz, M., Kelly, M., & Morote, E. S. (2014).** Presenting a Model that Lead School Leaders' Empowerment. *International Journal for Cross-Disciplinary Subjects in Education (IJCDSE), Special Issue, 4(2)*, 2001-2008.
- Riaz, M. (2013).** Team Leadership: High School Principals' Role for Team Building in Schools Using Educational Technology. *One Voice International Conference*, (pp. 213-221). New York.
- Riaz, M. (2013).** The Effectiveness of using Educational Software to develop Critical Thinking Skills and Assignment Performance in Pre-Service Teachers. *8th Annual Practical Research Symposium*. Oakdale, Long Island New York: Dowling College Long Island New York Greater Area.

### **Unpublished Research**

**Riaz, M. (2020).** Reformed Teaching And Learning In Science Teacher Training Workshops: An Instructional Model Based On Scientific Approaches

## **Funded Project Experience**

### **ESRA Cluster-Based Training for School Teachers in District Gwadar**

- Trained over 350 school teachers in District Gwadar on STEM education topics.
- Used a cluster-based approach to reach a large number of teachers in a short period of time.
- Developed training materials that were tailored to the needs of teachers in Gwadar.
- Received positive feedback from participants on the effectiveness of the training.



### **BEF-BESP Professional Development Program for Private School Teachers**

- Implemented a professional development program for over 100 private school teachers in Balochistan.
- The program covered a variety of STEM education topics, including hands-on activities and curriculum development.
- Received positive feedback from participants on the effectiveness of the program.
- STEM Education Training in PITE and District Headquarters of Balochistan

### **Planned and organized science project training for teachers in PITE Balochistan.**

- The training focused on developing teachers' skills in designing and implementing science projects.
- Received positive feedback from participants on the effectiveness of the training.
- Training of Middle School Head Teachers
- Designed and delivered training for over 50 middle school head teachers in Balochistan.
- The training focused on improving head teachers' leadership and management skills.
- Received positive feedback from participants on the effectiveness of the training.

### **Teacher Training Project with Asian Development Bank**

- Developed a teacher training project with the collaboration of the Asian Development Bank.
- The project will provide training to over 1,000 teachers in Balochistan on STEM education topics.
- The project is expected to have a significant impact on the quality of STEM education in Balochistan.

### **STEM Teacher Professional Development Program in USA**

American Modeling Teachers Association (AMTA) and STEM Teachers New York Teacher College, Columbia University

### **Project Goals:**

- Strengthen the participant's ability to teach physics using modeling instruction techniques.
- Introduce the participant to a variety of effective STEM teaching methods.
- Equip the participant with the skills to develop and implement comprehensive STEM curricula.

### **Project Activities:**

Modeling Instruction Workshop: Immersive three-week workshop focused on incorporating modeling into physics lessons.

STEM Teaching Workshops: Thirteen 3-hour workshops covering various STEM teaching topics.

Curriculum Development Workshop: One-week workshop dedicated to curriculum design and development strategies.

### **Project Outcomes:**

Mastery of modeling instruction in physics and its application in STEM education.

Enhanced knowledge of STEM teaching strategies and techniques for effective instruction.

Ability to create and implement high-quality STEM curricula.

### **USAID Pre-STEP Training Workshop in Universities of Balochistan**

Received a \$1,000 grant from USAID

- Organized and delivered a series of training workshops for faculty and M.Phil. research students of universities in Balochistan.
- The workshops focused on improving the research skills of participants.
- Received positive feedback from participants on the effectiveness of the workshops.

## **TRANSFORMING STEM EDUCATION IN BALOCHISTAN: PREPARING STUDENTS THE DIGITAL FUTURE**

Received a \$1,000 grant from USAID to develop and implement a STEM education training program for preservice science teachers in Balochistan.

The program will train over 100 preservice teachers in hands-on STEM activities.

The program is expected to improve the quality of STEM education in Balochistan.

### **Allama Iqbal Open University (AIOU) Workshops for B.Ed and M.Ed Programs**

- Organized and delivered workshops for over 300 B.Ed and M.Ed students on STEM education topics.
- Developed workshop materials that aligned with the AIOU curriculum.
- Received positive feedback from participants on the effectiveness of the workshops.

### **Awards and Honors**

- USA-AID Scholarships for Doctoral Studies, Dowling College, New York, (2012-2015) **\$200000**
- US-AID Scholarships for Teacher Training of Pakistan, University of Montana, Missoula, (2004) **\$15000**