



# Inspiring the Next Generation of Innovators

## Intel® Education Initiative

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The Intel® Education Initiative is a sustained commitment to prepare all students, everywhere, with the skills required to thrive in the knowledge economy. Through collaboration with educators and governments in more than 50 countries, Intel delivers programs that improve the effective use of technology to enhance 21st century learning, and encourage excellence in mathematics, science and engineering. Intel's education programs are adapted to the needs of individual countries and utilize an approach focused on building local competency for teacher training and technology innovation.

To advance teaching and learning for the 21st century, Intel® Education provides programs and resources in these key areas in Pakistan:

- Effective integration of information and communication technology (ICT) in the classroom to promote 21st century learning
- Advancement of math, science, and engineering education and research

### Integration of ICT to Enhance 21st Century Learning

Because teachers have a profound impact on what students learn, Intel collaborates with local governments and educators to provide professional development programs and resources for elementary and secondary educators. These programs help educators integrate technology into their classrooms to promote 21st century skills.

Sindh 2003, Intel has a MoU with the Ministry of Education – Government of Pakistan to train teachers and hold science Competitions in all provinces across the country, including FATA, FANA and Pakistan administered Kashmir. Within each provincial ministry, contact persons have been assigned by the Secretaries and Ministers to help the Intel team with operational aspects of the program.

### Advocacy

An important aspect of Intel® Education Initiative is joining hands with various stakeholders in the education space in the country. These include the Federal and Provincial Ministries of Education, strategic partners, NGOs and other organizations and institutions that play an important role in the realm of education in Pakistan, such as Aga Khan Network, Rotary Club, USAID projects, UNICEF and UNESCO. Intel also works closely with decision makers to support policy making with respect to ICT in education.

Furthermore, working closely with government schools and developing public-private partnerships in an inherent aspect of the Intel® Education Initiative.

### Professional Development

The Intel® Teach Program is a proven, worldwide professional development program that has been driving systemic change in teaching and learning since 1999. Through a rich suite of offerings, the program trains educators to effectively use technology in the context of local classroom curricula and education standards. With over 6 million teachers trained in 50 countries, Intel® Teach is the most successful educator professional development program of its kind.

The program offerings, which include both face-to face, online instruction, touch the entire school network-from ICT lab teachers, to classroom teachers, to school leaders. Through a "train the trainer" model, these programs focus on building local competency for teacher training.

Intel offers educators a robust set of practical and engaging online tools and resources on the Intel® Education Website. These resources are designed to provide educators with readily available content that can easily integrate into their classroom curricula. Some of these resources include unit plans, assessment strategies, and tools to support higher order thinking skills,

### In-Service Program

Intel® Teach In-Service Program is a free professional development program for K-12 in-service teachers. Participants learn how, when, and where to incorporate technology tools and resources into their curriculum. This program has enabled teachers to make Innovative techniques the core of their teaching practices that have brought about a marked difference in student learning.

### The following suite of offerings are available in Pakistan:

- Intel® Teach Essential Course- Intended for both in-service and pre-service teachers with basic skills in PC applications and project-based learning. The course creates a foundation of skills to fully integrate technology into existing classroom curricula and promote student-centered learning. Teachers can guide student productivity tool usage and utilize online resources to create new strategies for using technology and enhancing learning.
- Intel® Teach Getting Started Course- This course introduces student-centered learning approaches and software productivity tools to teachers with little or no technology experience. This introduction to 21st century skills also includes hands-on learning which includes cycles of creating, sharing, and reflecting in order to prepare teachers for the Essentials course.
- Intel® Teach Elements- A series of high interest, visually compelling short courses that provide deeper exploration of 21st century learning concepts, such as Project-Based Learning, Assessment of 21st Century skills, or Collaboration with Web 2.0 Tools. Intel® Teach Elements – Project Based Approaches course is also available online on [www.intel.com/education/elements](http://www.intel.com/education/elements)
- Other offering includes- Intel® Teach Skills for Success Course, Intel® Teach Thinking with Technology Course and Intel® Teach Essentials Online Course.

## Pre-Service Program

The Intel® Teach Pre Service Program enables Teacher Educators to discover how to use powerful productivity software, multimedia tools, and the Internet to promote inquiry based learning.

Teacher Educators are provided with training and resources for use in their Bachelors courses where the focus is pedagogy, not software. The skills learnt can be applied to teach virtually every subject and grade level. The Student Teachers are guided to use technology to tap into vast reservoirs of information, work in teams, and develop digital Unit Portfolios to meet challenging standards. As a result they enter their first classrooms equipped with the ability to integrate technology resources in any unit they teach and achieve student learning objectives better.

The Pre-service program has been successfully integrated in the following institutions:

- Notre Dame Institute of Education (NDIE), Karachi
- University of Sindh
- University of Education, Punjab
- Government College for Elementary Teachers, Punjab



## Beyond Training

Intel's efforts aimed at professional development do not stop at training teachers. We work closely with the network of trained teachers to ensure implementation in the classrooms of the techniques learnt during the trainings. Principals Forums, Master Trainer / Participant Teacher (MTPT) Forums, Technology Planning workshops and other enhancement workshops and seminars are held regularly to facilitate implementation of technology-aided learning in schools and colleges. Intel® also holds a contest and Intel Education Awards annually.

### MT/PT Forums

Forums of Master Trainers and Participant Teachers of the same subject areas are organized both as refresher trainings, and as an opportunity of share ideas and experiences. The aim of these forums is to carry forward the essence of Intel® Teach and facilitate technology supported project based learning in the school curriculum. These forums act as a catalyst for interaction and help teachers get more confident about implementing Technology Plans in their schools and colleges, Principal support and participation ensures that teachers get more confident and participation ensures that teachers get the administrative support they require from school management.

## Leadership Forums

The Intel® Teach Program focuses on effective integration of technology, particularly ICT, in teaching. It is essential that Principals understand the need and effectiveness of technology in Education as a means of sustainable changes pertaining to technology integration in their institutions. A number of workshops and seminars are offered by Intel® Education in this regard. These include Principal Awareness Seminars and Workshops, Principals Hands-on Workshops, Technology Orientation Workshops, Principals Workshop on Technology and 21st Century Skills and Technology Planning Workshops. The main focus is to educate and facilitate Principals and school leadership in integrating technology effectively in teaching practices and school systems.

### Intel Education Awards

Intel Education Awards are held each year in collaboration with the Ministry of Education, Government of Pakistan. These awards aim to recognize Teachers and Schools who have enhanced student learning by using technology effectively in promoting inquiry based learning. All participating teachers and schools must have been trained under the intel® Teach Program.

## Advancing Math, Science, and Engineering Education and Research

### Science Fairs

Intel has created countless learning opportunities through authentic scientific inquiry and independent research.

Intel® International Science and Engineering Fair (Intel® ISEF) is the world's largest pre-college science competition. Each year, more than 6 million students worldwide, from local and regional science fairs within the Intel® ISEF-affiliated network vie to attend the Intel® ISEF. From this group about 1,500 students are selected as Finalists to share breakthrough scientific research and compete for nearly \$4 million in scholarships and awards. This competition encourages students to solve real world problems and tackle challenging scientific questions through authentic research.

The Intel Science Olympiads are held in collaboration between the Federal Ministry of Education, and Intel® Education across Pakistan. The aim is to promote an interest in science and research based learning among students of grades 9 - 12. We have been holding these fairs since 6 years, and students are expected to generate original ideas, conduct research and then showcase their projects.

In May 2006, a student from Pakistan, Hamza Sheikh of Headstart School Islamabad, won Second Prize in Chemistry worth \$1,500 and a Special Prize by the Society of Environmental Toxicology and Chemistry. Since then every year there have been winners from Pakistan:

- 2007: Kulsum Bilal from Lahore won second prize in Environmental Management (\$1,500) for her project "Feasibility and Recycling of Chicken Feathers into Paper Products".
- 2008: AKHSS (Karachi) students Arif Pyarali, Sara Moiz Ali and Zahra Suleman Tejani won first position cash prize of \$1,000 by the American Intellectual Property Law Association for their groundbreaking project "on the cure of M.R.S.A infections with drugs of silver nano-particles."



### Learn More

To learn more about how Intel helps governments, universities, schools and educators prepare youth for the demands of tomorrow, visit:

[www.intel.com/education/pk](http://www.intel.com/education/pk)

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