

SCHOOL PHYSICS

RESPONSE TO CHANGING EXPECTATIONS

Wiley Physics Teachers' Conclave
December 28 - 29, 2015 . New Delhi

Physics is becoming increasingly inter-disciplinary. Engineers, chemists, biologists and mathematicians work with basic concepts of physics in order to solve wide range of problems confronting the society.

Interaction with a large number of Physics teachers has revealed that there are some common issues faced by them viz. crowded classrooms, inadequate laboratory facilities, lack of fundamental knowledge from lower level, inadequate professional development courses for physics teachers in addition to the present Physics curriculum and mode of examination.



To address these issues, **Quality Education Asia (QEA)** in association with **Indian Association of Physics Teacher- Delhi region (IAPT)** organised a 'PGT Physics Teachers Conclave' on the 28th and 29th of December, 2015, at the **Indian National Science Academy**, New Delhi. It was attended by more than 100 PGT Physics teachers of Delhi and NCR.

The theme of the conclave was '**School Physics - responding to changing expectations**'.

Objectives of the Conclave

- Generate curiosity and interest in students to explore Physics
- Know about the new trends in Physics teaching
- Integrate active learning in the teaching of Physics
- Understand the 5 E cycle
- Insights to Physics Practicals, Investigatory Projects, Demonstration and Activities
- Role of ICT in Physics teaching
- Evaluation, assessment and preparation for prestigious Physics Olympiads

The Conclave was co-ordinated by Dr. Suraj Prakash - Former NPSC chairman, Former Principal, CRPF Public School, Director, BBPS Training Centre, Mrs. Rupam Sah, CEO, Quality Education Asia and Mr. O.P.Sharma, President, IAPT, RC-I.



The following eminent educationists conducted sessions on the various topics:

Prof. Krishan Lal	Former President, Indian National Science Academy	Key Note Address: ' School Physics - response to changing expectations '
Prof. R.P. Tandon	Prof in Delhi University, Convenor, Committee of Courses CBSE	Reshaping the agenda of Physics Curriculum
Mr. Vikas Gupta	Managing Director, Wiley India	Wiley and emerging trends in education
Dr. Pratibha Jolly	Principal, Miranda House	Understanding Physics through computer supported learning
Prof. N.K. Sehgal	Former Professor, Hansraj college, CBSE Subject committee expert	Higher order thinking & problem solving skills
Prof. Ravi Bhattacharjee	Former Professor, Hansraj college, CBSE Subject committee expert	Higher order thinking & problem solving skills
Dr. Suraj Prakash	Former NPSC chairman, Former Principal, CRPF Public School, Director, BBPS Training Centre	Future of Physics - What is happening? What can we do about it?
Dr. Om Prakash Sharma	Prof. IGNOU, President IAPT-RCI	Looking Ahead

Prof. Krishan Lal, Former President, Indian National Science Academy in his key note address talked about integrating technology in education. He also emphasised on making physics relevant to the needs of Indian environment and students. He further stated the role of meaningful experiments and mode of assessments which ensures a joyful learning and makes our children independent of any external assistance for entrance examinations.

Prof. R.P. Tandon, Convenor, Committee of Courses, CBSE, elaborated the philosophy of Physics Syllabi, its significance and importance. He laid stress on proper methodology with project based learning and group discussion. He also stressed upon reading of standard physics books besides NCERT Text books.

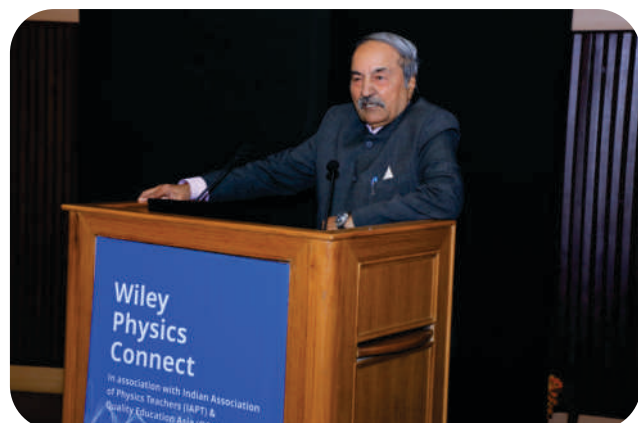
Mr. Vikas Gupta, Managing Director, Wiley highlighted the emerging trends in education and how Wiley is focussed towards making physics interesting and creating a society of physics which connects all the committed educationists at one forum.



Dr. Pratibha Jolly, Principal, Miranda House, explained with apt examples concept formation in physics through simulation and digital technology. She was of the view that our teaching should be upgraded with the emphasis on process rather than on product.

Dr. Ravi Bhattacharjee, Prof in SGTB, Khalsa College, with his background and knowledge of International Physics Olympiad, explained the importance of open ended experiments to develop the skills such as observation, data collection, reporting, analysis and inferences.

Dr. N.K. Sehgal, Former Professor, Hansraj college, CBSE Subject committee expert, discussed the design and blue print of physics paper vis-a-vis Bloom's taxonomy and higher order thinking skills such as analysis, synthesis and evaluation.



All the participants were divided into four groups and under the guidance of Suraj Prakash and Dr. O.P. Sharma the participants deliberated on Issues and concerns related to Physics Syllabi for class XI & XII, how to improve experiments, project work and investigation, ICT in Teaching - Learning of Physics - Process and Practice, Assessment and Evaluation of Theory and Practical.

They felt that syllabi should be evolved from the schools with the help of students, teachers and subject experts. Textual material prepared by academic bodies like IAPT keeping in view the content, context and local needs.

They all agreed that there should be follow up workshops / seminars to get the feedback from all stakeholders and continue the process of reviewing and updating based on the feedback.

All the participants demanded that more such programmes at regular intervals should be organised. All the participants were given the certificates of participation and they thanked the organisers for a wonderful conclave.

About the organisers:

Quality Education Asia is a team of committed professionals whose aim is to facilitate educators and learners in giving and achieving the best in education. It has trained more than 9,000 teachers and 1000 Principals in past one year through its national and international trainers on various topics related to pedagogy and school leadership.

The Indian Association of Physics Teachers (IAPT) established in 1984 with the aim of upgrading the quality of Physics teaching and Physics teachers at all levels. It has now grown into a major organisation with about 6500 life members spread all over about 1500 organisations throughout the country including about 100 members from abroad.

This conclave was sponsored by **Wiley India** which is the Indian subsidiary of John Wiley & Sons, Inc., a leading global publisher. Founded in 1807, John Wiley & Sons, Inc. has been a valued source of information and understanding for more than 200 years, helping people around the world meet their needs and fulfill their aspirations. Wiley has published the works of more than 450 Nobel laureates in all categories: Literature, Economics, Physiology or Medicine, Physics, Chemistry, and Peace. Wiley's global headquarters are located in Hoboken, New Jersey, with operations in the U.S., Europe, Asia, Canada, and Australia.



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