the $90 cost of just a year's supply of kerosene and candles. Kerosene, the

infrastructure or scarcity of resources," claimed Dave in an article for Laureates

UNSW scientist takes nanotechnology to India

A SENIOR lecturer from the University of New South Wales (UNSW) Dr. Srikanta Bandyopadhyay, organised the first ever winter school in nanotechnology at the LDRP Institute of Technology & Research in Gandhinagar, Gujarat. The program ran from January 28- February 01, 2008. It comprised of lectures by experts in the faculty from India and abroad, technical presentations, tutorial discussions and practical demonstration of advanced microscopy technique.

The course was organised by Sarva Vidyalaya Kelavani Mandal (Gandhinagar). Dr. Bandyopadhyay was the expert-in-chief and was responsible for organising the lectures that were presented throughout the week.

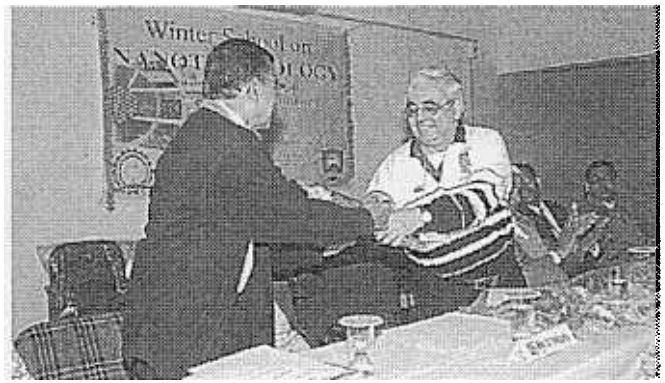
He invited 50 professors from all over India and abroad, who specialised in chemical and electrical engineering, including Banaras Hindu University, Trivandrum National Institute, Vallabh Bai Patel University and University of Florida.

To present practical knowledge from someone who is involved in the field, he even invited Mahesh Patel, CEO of a nanotechnology product material company in Singapore

This program aimed to prepare undergraduate lecturers and experts in the faculty for the teaching of nanotechnology-related subjects in different branches of engineering.

Nanotechnology specializes in the engineering of small technology. It deals with matter at the atomic or molecular level, 100 nanometres or smaller and devices that lie within that range. Explaining the significance of the science, Dr. Bandyopadhyay gives the example of a viral infection. "When you have a virus, the doctor might say there is no treatment. This is because the virus is in nanometre measurements. However if medication is made of the same size then it can fight the virus. The smaller the particle size of medication, the more active the medication will be." The short-term winter school organised by Dr Bandyopadhyaya school was specifically designed for educators of electrical, electronics, material science, chemical, instrumentation and the physics department.

"The 50 professors who attended might teach 200



Dr Srikanta Bandyopadhyay in Gandhinagar

students each. This way, knowledge will be passed on to 1,000 students," Dr. Bandyopadhyay said.

He says this is a more effective method of spreading knowledge, rather than teaching only 200 students.

The initial idea to conduct a winter school came about in 2005 when Dr. Bandyopadhyay was in Gujarat on a National Polymar Convention, where he was the guest of honour. In February 2006 he was a keynote speaker at a nanotechnology seminar at the Gujarat Council of Science and Technology. This event was attended by about 700 people and, according to Dr. Bandyopadhyay, a huge success. The idea for the winter school crystallized during the workshops on this visit.

About sixty lecturers and experts were divided into seven groups where each group focused on a particular aspect of nanotechnology and designed a preliminary syllabus. Faculties followed this syllabus over the next two years and Dr. Bandyopadhyay conducted an evaluation of how things were going.

He felt that a more intensive course for the educators themselves was needed to inject more vigour into the program. The winter school idea seemed perfect, and came to fruition early this year. Lecturers in the faculty now seem better equipped with the necessary knowledge and information to teach undergraduate students.

"The program was so successful that they want me to go back and organise an international conference and invite national and international experts," says Dr. Bandyopadhyay. "It will take me two years to do it."

According to the UNSW website, the UNSW's Faculty of Science will join Indian counterparts for two major research projects in nanotechnology after the Federal Government announced that it will fund it. After receiving funds of $1.55 million, Dr. Bandyopadhyay will lead a team to research new top of the range applications for nanomaterials converted into nanocomposites for clean energy, fuel cells and electronics.

"The Australian-Indian nanotechnology program is becoming intense," notes Dr. Bandyopadhyay positively.

Malavika Santhebennur

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