

Igniting a passion for science - Umeshchandra Chauhan

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Known for his innovative experiments and his contributions to the development of experimental-based teaching methods, Umeshchandra Chauhan has received many awards, including one from the President of India, for his efforts. He started out as an assistant teacher, participated in the 'Hoshangabad Science Teaching Programme' and went on to develop low-cost models for teaching science.

The 'Hoshangabad Science Teaching Programme' is an innovative experiment in the realm of science education. From 1972 to 2002, around 3000 teachers were trained under the aegis of this programme. All these teachers, in varying degrees, have proved to be excellent teachers of science. Around 200 of these teachers also experimented with new methods in the pedagogy of science. These teachers, through their work, have helped spread the message and benefits of the 'Hoshangabad Science Teaching Programme' not only in Madhya Pradesh, but in the entire country as well.

One teacher who has benefitted from the programme was Umeshchandra Chauhan. In 1971, he completed his higher secondary schooling in mathematics and science. Unfortunately, Umesh couldn't study further because of his family's financial condition. Yet his excellence in academics got him a job as an assistant teacher in a Middle school in 1977. The very next year, he participated in the 'Hoshangabad Science Teaching Programme'.

In the years 1979 and 1980, while he was undergoing training at the Science Teaching Programme Umesh got an opportunity to read the science workbook, 'Balvigyanik'— a book meant for classes 7 – 8. He made the most of this opportunity by first trying out the experiments listed in the workbook himself. In order to further develop the biology experiments given in the workbook, he carried out some research. In 1983, he was appointed the science incharge of the School Complex in Timrani. This school played an important role in the Hoshangabad Science Teaching Programme'. The School Complex became an important venue for several of the Programme's discussions. The monthly meetings of all the schools attached to the Complex involved discussion on innovations in the classroom, examinations, evaluations and a follow-up on the questions asked by the students. Umesh provided able leadership and guidance to this forum.



During this time, he also independently continued his studies. He passed his B.A, then M.A in sociology and B.Ed examinations successfully.

Today, Umesh is known as someone who develops low-cost models for teaching science.



Among the models that he has developed, the water pump, water lens projector, telescope and periscope are very popular. He has displayed his models in approximately 22 districts of Madhya Pradesh and in more than 100 workshops and children's fairs across 12 states. He has also trained his fellow teachers and students in the use of these models and methods. As a master trainer for science educators, he has served as a resource person in more than 20 workshops across the country.

NCERT has made 4 films on Umesh's innovative experiments. These films were aired by Doordarshan under the educational programs section of UGC and Tarang.

Rajya Shiksha Kendra, Madhya Pradesh, produced two CDs under the title of '*Vikalp Se Vignyan*' (Alternatives to Science) in which, '*Prakashiya Upkaran, Indradhanush ke rang, Rochak Prayog Rasayan ke, sheeshee ek kaam anek, Disha Bataaye Chumbak and Wah Vayu Daab*, etc., are prominent.

Besides being a good teacher, Umesh is also a good writer. He has written for many well-known educational magazines such as *Sandarbh, Strot, Chakmak, Shivira and Palash* about his innovative experiments and other contemporary issues.

He has written, edited and illustrated textbooks for the Rajya Shiksha Kendra on the subjects of science and environment for both the primary and secondary level. Umesh has made a special contribution in workshops held by Navodaya Vidyalaya for the development of the experimental-based teaching method. A documentary film on the innovative teaching methods of Umesh and his experimental-based teaching method, is underway. Umesh is a member of several educational committees at the state and national level. He has also been the recipient of several awards from the district to the national level. Among

these, of notable mention are the Governor's award for the Best Teacher in 1993 and the President's Award in 2004.



Umeshchandra Chauhan from Timrani, Harda District in Madhya Pradesh has been teaching for 31 years after completing an M.A in Sociology and a B.Ed. At present, he is a lecturer at the Government Girls' Higher Secondary School located there. He can be reached at +91-9926534301.

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