

CELEBRATING the mentors

Sa Vidya Ya Vimuktaye (knowledge sets you free), a saying in Sanskrit, clearly captures the essence of learning that has been well-demonstrated by these teachers. All these teachers have brought about transformation in the teaching process through their out-of-the-box thinking to make education enjoyable and enriching. On the occasion of Teacher's Day today, DNA profiles some of the city's most outstanding teachers as a gesture to thank them for their relentless efforts and notable contribution to society. DNA will felicitate them on September 7

Kiran Dahitule

Arvind Gupta, an Indian toy inventor and populariser of science, began his social service by teaching the mess staffers' children, who had no opportunity for formal education.

Gupta, who currently works at the Children's Science Centre of the Inter-University Centre for Astronomy and Astrophysics (IUCAA) at University of Pune, has dedicated almost 30 years of his life to impart knowledge to students with the help of innovative scientific toys made out of waste material.

Gupta, a student of Indian Institute of Technology, Kanpur in the 70s, participated in the Hoshangabad Science Teaching Programme (HSTP) in Madhya Pradesh in 1978. While he was there, he developed his idea of creating simple toys and tried out educational experiments using locally available materials as well as items thrown as trash.

Finding that these simple toys fascinated children, Gupta went on to make them the hallmark of his movement to popularise science. The range of toys at Gupta's lab is fascinating simply because they are made of things like soft drink bottles, old

newspapers, film roll covers, cycle tubes, plastic bottles, pencils, batteries and magnets to name a few. Each toy is based on a scientific concept that makes science endearing.

His first book, *Matchstick Models and other Science Experiments*, was reprinted in 12 languages. Gupta's website holds instructions, including short video clips on YouTube, in a number of languages, for making hundreds of improvised toys, which he makes available freely without copyright restrictions. Gupta draws inspiration from a number of people, including his mother, Gautama Buddha and George Washington Carver.

He has won awards for his lifelong dedication to popularise science and for his contributions in designing science teaching aids for young children. These include the inaugural National Award for Science Popularization amongst Children (1988), the Distinguished Alumnus Award from IIT Kanpur in 2001 and the Indira Gandhi Award for Science Popularization conferred upon him by the Indian National Science Academy (2008).

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ARVIND GUPTA
TOY INVENTOR & POPULARISER OF SCIENCE

EACH TOY DESIGNED BY GUPTA IS BASED ON A SCIENTIFIC CONCEPT THAT MAKES SCIENCE ENDEARING

DEMISTIFYING THE WONDERS OF THE UNIVERSE WITH HIS TOYS



ARVIND GUPTA GIVES A DEMO OF HIS TOYS BASED ON SCIENTIFIC CONCEPTS, DURING A WORKSHOP AT IUCAA ON TUESDAY —SANKET DESHPANDE DNA

ACHIEVEMENTS

- * In 1978, Arvind Gupta developed the idea of creating simple toys and tried out educational experiments using locally available materials as well as items usually thrown as trash
- * Finding that these simple toys fascinated children, Gupta went on to make these the hallmark of his movement to popularise science
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BONDING IS HER NEW TEACHING MANTRA

Snehil Sakhare DNA



SHOBHA BHAGWAT PLAYS WITH CHILDREN AT GARWARE BALBHAVAN

DNA Correspondent

The brainchild of philanthropist Abasaheb Garware, Garware Balbhavan, has been nurtured by its director Shobha Bhagwat, who thinks that instead of hitting, a bond should be developed with the child.

"Garware and the then municipal commissioner PS Palande had reserved a two-acre plot opposite Sarasbaug for children.

At Balbhavan, they are given the freedom of expression and space to develop their personality. "We don't teach or preach. We just let them run on the ground and introduce them to various avenues according to their age groups, which helps them grow," she said.

SHOBHA BHAGWAT
DIRECTOR, GARWARE BALBHAVAN

They had realised that open space was extremely important for the overall development of children," she said.

Pointing out that no political party gives priority to children in their agenda, she said, "No one talks about having open spaces for children, creches or other issues."

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HER LESSONS COME FROM THE BOOK CALLED LIFE

ACHIEVEMENTS

- * Taught rural people at Anand Niketan in Anandwan, Chandrapur district
- * Entered into social work and worked to get roads repaired, getting water connection, etc. by mobilising people



KALPANA GUPTA (RIGHT) DURING A DISCUSSION ON TUESDAY —Aniruddha Rajandekar DNA

KALPANA GUPTA
DEPUTY DIRECTOR, IGNOU

Manasi Saraf Joshi

A good teacher is like a candle, it consumes itself to light the way for others. This is Kalpana Gupte, a cancer survivor and teacher who taught her students the new meaning of life. Presently the deputy director of Indira Gandhi National Open University (IGNOU), Kalpana started her career as a teacher at Abasaheb Garware College. However, she didn't restrict her work only to the educational field, but also devoted herself to social work. Be it forming of mohalla committee or spreading awareness about breast cancer, Kalpana has done it all.

Talking about her experience as a teacher at Anand Niketan in Anandwan, Chandrapur district, Kalpana said, "For the first time I saw rural life so closely. I used to work in the area of adult education, which again was a

new thing for me. Establishing a rapport with them was the most difficult thing, education came much later."

"Working with IGNOU in distance education was another challenge. Making people realise that education is a lifelong thing and there is no age bar to continue studies needed a lot of convincing," she added.

Talking about her recovery from cancer, she said, "When I was detected with cancer, I knew absolutely nothing about the disease. When I started studying about the disease, I came across information regarding Astha, a support group that works to spread awareness about the disease. I joined the group after a few months of being discharge from the hospital. While working in this field, I realised that even rural women are at the risk of developing cancer. Every woman must be aware of it," she said.

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AL DESHMUKH TEACHING FAILED STUDENTS AT VIMALABAI GARWARE COLLEGE ON KARVE ROAD —Sanket Deshpande DNA

TURNING FAILURE INTO SUCCESS

AL DESHMUKH
FOUNDER, HIMMAT SHALA

DNA Correspondent

If there is one sentence that fits AL Deshmukh, the man behind Himmat Shala (Courage School), then it would be: 'A soldier never retires, he only dies.' He may have retired 10 years ago, but is actively involved with teaching those who couldn't learn.

It pained him for years that the SSC results for October were very poor as less than 15% could clear them in the repeat attempt. "They lose their nerve when they fail even in the second attempt. And then they leave studies and join either some political party or start doing odd jobs," said Deshmukh. Thus, began an ambitious

project by Deshmukh that has now turned into an inspiration for many. His school starts in July for those who failed in the March exams.

Deshmukh has a very simple agenda set for his students. "Their concerns are very basic. They don't aim to get 80% and above. I explain to them that they should just aim to get the passing marks. I prepare a crunched syllabus that helps them get the required marks," added Deshmukh.

"We charge a nominal fee. Our teachers don't take money, they are given conveyance charges by Ahmednagar Shahaar Nivasi Sangh and Rotary Club. We have parents who literally cry after their child clears the October exams and then offer 10 times the fee we charge. But we return it humbly," he said. Deshmukh believes that only

three subjects — mathematics, science and language — should be taught till standard IV. "I also believe that education should be imparted in one's mother tongue. Students, not exposed to English at home, spend a lot of time translating what is being taught to them and get tired. That's why concepts remain unclear to them," he said.

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ACHIEVEMENTS

- * AL Deshmukh established Himmat Shala for students who could not clear their SSC exams
- * Classes are run for three hours between Monday and Friday, and on Saturdays students are counselled by those who flunked their board examinations, but went on to make it big in life

HE MAKES LEARNING MATHS & SCIENCE A CHILD'S PLAY

PRADEEP AGASHE
INNOVATOR & TEACHER

DNA Correspondent

With a mission to promote out-of-the-box teaching, Pradeep Agashe not only left his job in 1983, but also innovated a number of techniques to make learning enjoyable, and while doing so he brought drastic transformation in the process of teaching at various levels.

A teacher at heart, Agashe has innovated effective methods to make difficult concepts simple. He has developed tools like puzzles, riddles, *bharuds*, songs, poems and most effective of all, *kirtans*, to teach mathematics, science and other subjects to students.

Born in 1950, Agashe joined Raja Raghunathrao Vidyalaya in Bhor, 50 km from here in 1973, after completing BSc and BED. VV Chiplunkar, the then state education director, who had visited the school during an inspection, was impressed with the way Agashe taught the students. It was Chiplunkar, who asked Agashe not to limit himself to teaching classes and became a visiting faculty in various schools.

After observing that standard IX students found it difficult to understand the concepts of maths and science, Agashe devised some innovative ways to make the fundamentals clear to them. He

started teaching maths through kirtans and it clicked. Being genuinely innovative, he went on to write poetry to explain concepts of science including Newton's laws of motion. Agashe said that instead of mugging up the definition of inertia, which is the first law of motion, poetry not only helps students remember it, but also comprehend and understand it better.

ACHIEVEMENTS

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A multifaceted personality, Agashe has devised various innovative techniques including *kirtan*, *pravachan*, *lavni*, *powda*, *bharud*, magic shows, riddles, puzzles, street plays and one-act plays to effectively cover the curriculum.

He has delivered more than 2,000 kirtans at various schools across the state and has also given lectures with the help of his innovative techniques more than 4,000 times. Interestingly, at 60 Agashe decided to stay away from his own home and opted to live in Wagholi where he works with a Trust called 'Investment in Man'. The organisation looks after 30 destitute children.

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PRADEEP AGASHE TEACHES STUDENTS ALGEBRA WITH THE HELP OF HIS SPECIALLY DEVISED TECHNIQUES —Aniruddha Rajandekar DNA