The building blocks of education

Children learn science and art concepts by playing

By VALREDA RAKSHIA

Becoming a parent can be a life-changing experience; it certainly was for Yuri Jhaveri, a biomedical engineer. In 2015, following the birth of her daughter, Ms. Jhaveri began to explore the education system. But the experience was frustrating, she says. “As a first-time parent I spent a lot of time exploring things I could do for my child when she grew up, but realised that the learning process continues to be by rote rather than application-based.”

She decided to create a children’s STEM (Science, Technology, Engineering, Math) library where children could pick up concepts through self-learning. “Children lose interest in science because of the way it is taught. It is hard to rote-learn science concepts, which have to be understood through hands-on experiments from a young age.” It is important, she says, to prevent children from losing interest in the early years, because the chances of them exploring it when they are older are low.

In Oct 2017, her four-month-old daughter, she found that the toy building block, Lego, was used extensively in schools abroad to teach concepts. She decided to adapt the technique here. In January 2017, she started The Curiosity Club (TCC) with 20 kids and a three-member team.

Initially, it was a challenge to convince parents that children can actually learn STEM concepts with toy blocks. And then there was the gender divide to contend with: she had trouble getting girls enrolled in the club, as many parents felt this playing with bricks is more appropriate for boys.

Even now, only 15-20% of the students enrolled in the club are girls. Finding teachers who have a desire to stimulate curiosity was also a challenge as was convincing schools to introduce this “relatively” new concept in their curriculum.

Fun and meaning

TCC has designed its programs for early childhood education, where children learn science and engineering concepts, robotics and storytelling. Ms. Jhaveri says, “At TCC we do not teach children how to play, but encourage them to create things.”

Recently, many educators extended STEM to include the arts, creating a new term, STEAM. This integrated approach to learning prepares children for any career in the future. Ashalay Meshram, content developer, says, “It adds design and aesthetic elements, making it a well-rounded learning.”

For children aged four to six, there are storytelling sessions, and for those six and above, there are robotics programs with robotic sets. The fee for 12 sessions of one hour each is Rs 7,500.

TCC has also introduced other toys, such as Cuberto, a wooden robot that helps teach kids the basics of computer programming through play, and Kibo, a robot kit designed for younger children. For robotics sessions (8 years and above), the fee is Rs 10,000 for 12 one-and-a-half hour sessions.

Namita Mehta, a resident of Peddar Road, says that the workshops at TCC provide “profoundly useful technology skills” in a productive way. Her children, Aysam, 7, and Anjali, 5, have been going to the TCC for almost a year and have been able to grasp and understand concepts “in a play-way manner.” Aysam participated in the World Robotics Olympiad’s “Wamba” (introducing robotics) category in Delhi.

TCC has also introduced an “invent the trainer” programme, where teachers are taught to use these play-based teaching tools.

Ms. Jhaveri says, “We also provide a complete curriculum aligned with the programme in the school.”

TCC currently runs a teacher training programme at JBN International School, Parel, Mumbai. Managing Director of the school says, “By incorporating Lego into our classrooms, learning has become multi-dimensional. It has helped the students develop skills like fine motor, collaborative play, problem solving, creativity, imagination and communication. It also helps reinforce Math, Science, Literacy and Social Studies concepts.”

From four or five students in one centre, TCC now has over 100 children and three more centres, with plans to open more in other parts of the city, as well as explore franchise options. TCC hopes to become a full solution provider at the school level, for early childhood education (ages 3 to 10) for STEAM solutions, through workshops for teachers across India, and designing maker-spaces (do-it-yourself spaces with 3D printers, software, electronics, craft and other tools).

“Through our programmes, we want to create a strong base,” Ms. Jhaveri says, “so that children grow up with an ecosystem equipped with creativity and innovation with an analytical aptitude, so essential for tomorrow’s world.”