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Science and music: A harmonious jugalbandi!

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I studied in the Government Moyan Model Girls High School, Palakkad where I was born in a conservative and traditional family. My parents, professional musicians, were very keen that I should come up very well in academics as well as music. I am their only child and since I was born after eight years of their marriage, they were quite possessive.

My neighbor, a retired teacher popularly known as “Murthy sir”, took a keen interest in guiding and helping me. Initially I used to be very scared to approach him, to the extent that at times I used to avoid coming out of my house, fearing that he might ask me some questions if he saw me. This fear slowly disappeared once I started talking to him. He used to give me small math problems and challenge me to solve them. Though initially I disliked them, slowly I began to enjoy solving the problems. This was of immense help to me in my early school days, which I realised much later.

I did not take studies very seriously till the ninth standard. Somewhere in the middle of that year, I decided that I had

to secure high marks if I wanted to continue my studies in a good college. I thought that there had to be more to life than getting married and looking after my family. I understood that this should not be the one and only aim in life for a girl. In order to do something more or different, I had to study well. This prompted me to concentrate on my studies: till then, I did not have any particular aim!

I used to sing well and I knew I would do reasonably well in music. I used to like science and maths but did not like languages or literature. One has to use thinking skills to do science and maths. Fortunately Murthy sir used to always encourage me to think by giving me math and science problems. Closer to the exams, I realized that I would have been better prepared for the exams, if I had put in more effort. This was my first realisation that there was no remedy for a lack of preparation! I felt really bad and decided that as far as possible I would never make a similar mistake again.

In the tenth standard, I worked sincerely, but the demands were extremely high. I thought I was doing my best, but my friends were putting in many more hours. I was also participating in music competitions at school and I even represented my school in the state level competitions. When I returned with the second prize, I felt good about it. But Murthy sir, from whom at that time I was taking tuition was angry. He was right, as the mock exams were just round the corner. After that, without wasting any time, I made up a schedule for my preparation for the examinations. I followed the timetable strictly and studied or revised the required portions before the exam. I did not allow myself the luxury of deviating the slightest from the schedule, since I knew I had no choice if I wanted to do really well. When the results came, I was the topper!

There was no looking back: I knew I could do it if I wanted to. I joined the Govt. Victoria College, Palakkad, for higher studies. I would not study every day, but made sure that I read the chapters before they were covered in the class. In preparation for the twelfth standard exam, I again prepared a time table for revision. Unfortunately, I was stricken down with chicken-pox and had to stay at home for two weeks at a crucial time. I could not

concentrate because of high fever. I changed the timetable and revised languages during the time when I was sick. By the time I was better I moved on to revising maths and science. I did well in the exams, to the extent that I got the highest marks in maths and science in the college and second rank overall.

Most of my friends, including the topper, joined engineering courses. Nobody liked physics, and most of my friends who could not get admission to engineering enrolled for maths. Again, I wanted to do something different and I took up physics, instead. I really loved it, because it combined maths and science. Our teacher, Mr. Sudarshan Kumar allowed us to spend extra time in the labs under the pretext of testing the equipment. He taught us the right way of doing experiments with precision, encouraging us to record the actual readings or measurements we observed. If these readings did not lead to the expected values or answers, we had to think of possible reasons for the difference rather than record 'expected' values. This was a very basic and important step to think like a real scientist. These two teachers were responsible for inspiring me and introducing me to the exciting world of science.

I went on to do postgraduation in physics in the same college. All along, I was getting trained in Carnatic classical music, including vocal and violin. When I was doing my postgraduation, I started giving violin performances on stage. I got married though I was not keen to get married, I had to fulfill my parent's wishes. Also, all my friends were married by then. I had to re-schedule my life after marriage, to combine my studies with the responsibilities at home. I joined the Indian Institute of Astrophysics (IIA) for the Ph.D. My husband was all for my continuing my academics, but it was up to me to manage the house and my thesis. There were times when I could not complete my work within the available time. I pulled along, at a slower pace. I realised that it would be easy to abandon something, but one could save it by putting in a little additional effort so I decided to carry on with my studies with that additional effort.

In the middle of my doctoral studies, my husband was transferred to Bombay. We discussed the options and finally we decided that only my husband would relocate to Bombay. I moved

into the hostel at my Institute and continued with my studies and research. My in-laws were living in the same city and expected their daughter-in-law to be present at family functions. When it was time to write my thesis, I concentrated on work alone for six months. My thesis supervisor, Prof. Ram Sagar was very supportive and understood my situation. I am extremely thankful to him. He made it clear that it was my responsibility to make progress though I could set my own pace. After my Ph.D., I had a daughter. I took a break for almost one year after she was born, but continued to keep in touch with the scientific developments from home. Subsequently I joined IIA as a post-doctoral fellow although I had offers of postdoctoral fellowships from a few institutions abroad. I decided to continue at IIA in order to be with my family and at present am on the faculty of the Indian Institute of Astrophysics. I supervise many post-graduate students for their summer projects and guide Ph.D. students in their research. I now have two children who are both in junior school. I continue to play the violin in music concerts although I have to try hard to find time to practise. I also continue to learn — one can never be a perfect musician!

In addition to helping them with their homework I teach my children music. I try to encourage their curiosity with small interesting pieces of information almost every day. I enjoy doing all the three, research, music and training, in addition to looking after my family. I think that women have the right temperament for multitasking and enjoying what they are doing. Maybe I will contribute a very tiny bit to science, but I feel enriched by my opting for science. I think this was the turning point in my life.