

A REPORT ON INTERVIEW WITH DR. BALDEV RAJ, DIRECTOR, IGCAR

The Atomic Energy Central Schools imparts training for overall personality development of the students. As part of their co-curricular activities, students bring out student magazine every year. The editorial responsibility is with the student editors with the overall guidance of the teachers. Students of AECS Anupuram had the golden opportunity to interact with Dr. Baldev Raj, Distinguished Scientist and Director, IGCAR. Excerpts from the interview as reported by the students is reproduced below.



Q: Which is more powerful? Print media or electronic media?

A: In my view, the print media is more important. Whatever comes in print media is well thought of while in the TV media issues broadcasted are often spontaneous. Before putting any view for very challenging problems in print, the issues are examined from various aspects and the printed matter emerges as real reflections of the issues and solutions. The print media operates at higher intellectual levels.

The visual media has advantage that it penetrates deeper to masses while the profound message of print media can not reach to those who are poorly literate. Thus both print and visual media are undoubtedly complementary to each other. A person who has not seen when Sachin Tendulkar made 31st century, can not imagine the emotion or excitement associated with the event.

Q: Why do you think the schools need news letters?

A: When you write, your original thought process appears on paper. You should not remain conscious of being appreciated and in the process, pick and paste. In our quest for appreciation, many of us make the mistake of attempting to write some thing that some body else has written, losing our own thought process. It does not pay off in long run. Your own thought process communicated even in 20 or 50 words, with justification of whatever you think is right, can make greater impact on readers and they will understand your inner strength. The originality can help you to reach high destinations, even win a noble prize.

Q: What is your message for younger generation?

A: When we were children, there was little hope for the country. We thought that we were caught up in perpetual poverty. Those who claimed that they will make nuclear reactors or space shuttles were not believed; thinking that they did not understand the intricacies of technology. Time has changed. There is no doubt in our capabilities now. Every problem can be solved by putting efforts, networking, defining problem clearly and involving knowledgeable people. You are fortunate to live in an era when India is on the growth path. Yet compared to people of developed countries, we continue to face greater challenge in eradication of poverty and that itself keeps Indians motivated to work harder. My message to you is to work tirelessly to improve the living standard of our country men.



Q: Innovations are important for progress of any institution. Can small children do innovation?

A: Innovations happen on the basis of two things; the depth of knowledge available to the person and the commitment of the person. If you consider the first aspect, the children are capable of original thinking and thus they are best at doing things innovatively, provided they are committed.

Q: Can you tell about two innovations that impressed you the most when you were a child.

A: The innovation of cooking gas that brought relief to my mother was what I admired the most as a child. My mother could cook in comfort and save time for herself.

The ball point pen did not exist during my childhood. I was fascinated by the invention of a fountain pen in which ink would flow uniformly through a capillary despite of variations in climatic temperature of Jammu. Innovations are impressive because they change your life in so many ways.

Q: Incidents teach you a lesson; can you narrate one incident in your life that motivated you the most?

A: This incident is very personal to me. Our family all of a sudden became very poor when my father died. I was only 10 years old and we were five brothers and one sister. My mother asked my uncle to take me to a bank manager so that I could do some job there but after all the interactions; bank manager said that I would be better off doing something of my own than working for others. From then on, I have never looked back. I am ever grateful to that manager who recognized the spark of talent in me. From then on I have always tried to help people rediscover themselves and recognize in them their hidden talents. This has helped me to win so many friends and manage all types of people around me.

My mother used to tell me that she will give me a kite or a bat if I sat silently under a white sheet till she calls me back. I was a very obedient child and never disobeyed my mother. I would sit for hours under the sheet and think of the world around and dream. Slowly I started enjoying this so much that I would look forward for the opportunity to retreat in my own world under the sheet. During my school and college days I was always a dreamer and used to talk things differently.. This developed capability in me to dream and visualize things



Q: In joint families the grand parents used to teach moral values and ethics. Moving away from home for job and the computer and TV have decreased the interactions among family members and as a result people are lonely and there is lack of mutual understanding between parents and children. What can be done about it?

A: The pressure of work or TV etc. can not create distance among family members. You children have a major role to play in this regards. Moving away from home for career growth is inevitable in present world. Yet you and your parents have a responsibly for finding time to visit grand parents and enjoy the pleasure of togetherness as often as possible. You should enjoy family get together and shouldn't remain glued to TV or Computers.



Q: Why do poetries have greater impact on the minds of people and have been able to motivate the masses from time immemorial?

A: In poem you have limitation of words and rhythm to convey large message unlike prose. Poets like Rabindranath Tagore, Subramania Bharathi, William Wordsworth etc were extra ordinarily gifted and could pack large social, emotional content, patriotic feelings etc in few words. Poet is more focused and precise. I have written only one poem and that I would like to keep it to myself as it relates me to my mother.

Q: Many languages are spoken in India. But then why do we converse in English?

A: Language is the mirror of a country. India is a land of many languages but people speak in English for convenience of conversation with people from all parts of the country. Ultimately what matters is expression. It is easier to express your thoughts better in your own language you should not feel shy in speaking in your own language but at the same time you may not be able to converse with many people.

Speaking in English may not be your requirement today, but as you grow up, you will feel it is necessary. There was time when Russians and Japanese thought that their language will dominate the world, but every body has now realized that English is acceptable world wide and must be promoted. However, the ethos of literature is best understood in one's own language and the best time to learn a language is in childhood

Q: A few centuries back many famous epics were written but presently no such literature is written. Is the society not encouraging it or is there a feeling that there is not much profit in it.



A: Present society is too much focused on short term goals. After industrial revolution, people wanted greater pace and advantage to human life. The problem in the present society is that people do not have patience and they have forgotten the need for long term values and objectives. Great writers however exist even now.

Q: We have got beautiful clean and green township with several species of plants but people do not show much interest in knowing about them and their names.

A: A book on plant species of Kalpakkam was released by IGCAR on 18th December 2008. Two more books are under preparation. These books are on life in oceans near Kalpakkam and the plant species selected to be planted in the colonies. As students, you could also take up campaign to plant trees in colony.

Q: Our school is developing a medicinal, ornamental and kitchen garden. Do you feel that such gardens are essential for science education?

A: I agree that all the schools should have such gardens. The education institutions are meant to do good to society. There are many plants which have great medicinal values and people should learn about their usage as medicine. Neem for an example helps to purify the air. People in the west have also started believing in the values of medicinal plants. At IGCAR too, a medicinal garden has been developed. Allopathic drugs are not the only solution for all the ailments, plants can supplement them.

Q: Who is your role model?

A: My role model is Bharat Ratna Sir Mokshagundam Viswesvariah. He built the water dam in Mysore adjoining famous Brindavan garden. He always carried two pens in his pocket. One had ink that he purchased with his personal money and the other had official ink. For writing his personal letter he used the pen that had ink purchased by him. He was fit even at 100 years. During celebrations of his achievements at his 100th birthday, the best thing told about him was "clean inside and clean outside". He was always well dressed and possessed great ethical values.

Q: Why is it difficult to make an original puzzle? Why are puzzles popular among people?

A: Puzzle provides you a challenge. After successful completion of any challenge, a person feels thrilled and joyous.

Q: What is your opinion about Indian education system and learning without examination?

A: Several committees have debated on this. Yet, a satisfactory answer has not emerged. In my opinion a rigid marking system is not the best method for evaluation of students' capabilities.

Q: Why is humor important in life? Can you tell about two humorous incidents in your life?

A: During my school days, I was able to answer one very difficult question. The teacher was so pleased that, he removed his Gandhi Topi and kept it on my head and told other students that, "from now on this boy is going to be your teacher."

During my college days we had a colleague who always preached alertness and who always criticised our actions. One day we found him sleeping on the first bench during an important lecture. We were amused.

Q: Can you tell about two successful stories in your life and also give some tips to students to become more successful.

A: I believe success is a continuous process and it is not a sort of event based process. It means that tomorrow's success is actually an outcome of intelligence, passion and hard work done much earlier. Actually much before the world knows that you are successful, you can yourself experience it. We should take pride in ourselves and the work which we are carrying out. We should take pride in what we achieve and not compare ourselves with others. But then, remember you would feel sorry in the end if you didn't put in hard work and have not utilized your intelligence. You should try to gain as much knowledge as you can from all resources in the field you like the most. We may become very intelligent in some domains, but normal in

others. But that is sufficient to have success and enjoy everything around us. I have no successful stories but a message for **continued hard work and capability building**.

Q: During the Olympic Games the Indians could bag only one gold medal. Why can't we have a better performance and for this can we have some initiative at school level?

A: Do you think initiative should come from the school or parents? Every initiative has to come at the individual level. One can provide the best facilities and other support system, but if the basic enthusiasm is lacking, one cannot do much. If you read the comments of the guy who got the gold medal, you will know that he did not give credit to anybody. An Olympic medalist mentioned that shooting guns are an expensive venture and his father supported him. He pursued his passion in spite of all the discouraging events around him. We must have very strong targets and deep commitment.

Our country is still facing challenges of poverty and there are several other areas of development which are much more demanding. Once we reach a certain level of economy, we will be able to experiment and parents would also be confident to allow their children in sport fields. The message that a school can give to talented people in sports, is that they should identify their strengths, try to fight for their ways and then people are there to support them.

Q: What sports have you enjoyed during your childhood?

A: I enjoyed kite flying. I was very fond of seeing the kite fly higher and higher. I like watching cricket because of the great message this game gives me. It teaches me that one cannot be complacent in life. Even a very strong team cannot afford to make even the smallest mistakes.

Q: Do computers and the electronic media play an important role in school education?



A: It depends whether the computer is your master or you are master of the computer. The amount of information that is available through the electronic media is enormous and we should have the capacity to analyze it. If the computer becomes our master, which happens in most of the cases, we will spend hours in front of it and at the end of everything we might even forget as to what for we started our work. Even on television there are very good

learning programs. You should know what you are doing, what you are watching. As long as you are the master in front of the electronic devices or computer, every thing will be in your favour.

Q: Do computers have a role to play in the security in your country?

A: There are motion sensors which can detect a pattern during any suspicious activity & vapor sensors to detect explosives. A combination of hardware and software can be the best deterrent. If all this data is collected and put up on the secure national grid which is accessible to personnel who are responsible for national security, then you can imagine how much data it would be to analyse. I feel that corruption in this country must end, for the security of the nation. Children like you should fight for the right cause. You should not feel that you are too young to stand up against terror or corruption. You are the voice of the nation.

Q: How can art work be promoted in school?

A: You should first try to show your hidden talents and of course there should be people who should be able to recognize the seed of this talent. If you plot difficulty on the Y axis and maturity on the X axis, then you would find that difficulty is at the peak at the onset of maturity; as the world around us including our parents, our teachers don't believe us. It is only when the seed become a mango tree, people understand how fruitful was that seed. You should be very selective about the people you choose to associate with. They should be able to recognize your capability and passion in you.

Q: Can we hold fairs, exhibitions of paintings, sculptures & pottery?

A: Art is very enjoyable and educational activity. Wherever you go, you should make an agenda to visit an artist colony. You can visit places like Dakshina Chitra, places where sculptures are made Mahabalipuram, Pondicherry terrakota etc and talk to the artists and see how they are making them. Schools can explore the possibility of holding exhibitions from surrounding as well as far away regions. This is the right age to start enjoying art. Only if you can enjoy art now, you will appreciate and go deeper in learning it in years to come.



Q: What does patriotism mean to you?

A: It is like a mathematical equation of how much I give to my country and how much I gain from my country. If we are able to solve this equation then only we will understand what patriotism is. We should give maximum to our country.

Everybody can contribute to patriotism in their own ways by doing their best in whatever field they are working.

Q: Why do you love India so much?

A: If you were born to a poor mother and Queen Elizabeth wants to adopt you; what would you do? Poor mother is the obvious choice. She would be the mother of successful child and have her pride and dignity.

Q: What do you think is the status of Indian students when comparing students from other nationals?

A: Indian students are considered highly intelligent irrespective of their scores. We are considered to have multi-parametric and multi lingual brain. We belong to challenging society where survival itself is difficult and hence we become smart as we grow. We can analyse things in different ways and our ability about mathematics and basic sciences is high. We have capacity to do a lot of hard work and we do not look forward to weekends/holidays.

Q: Why are very few students opting for basic research in science?

A: It is the responsibility of scientists to interact with science teachers and motivate them. The way science is presently taught in the schools does not motivate the students to take up research.



Dr. Baldev Raj posed following questions to students to ponder:

Q1: What do students feel a community can do to make your school a better place for learning?

Q2: How many of you feel that you have the capacity to become world leaders in whatever you would choose to do? Do you sincerely have the gut feeling at this age that you are being looked upon as a future world leader?

Q3: What is your vision about this news letter?

Former chief student editor answered question No. 3 as follows:

My vision is that more and more people read our school's news letter. We have written original poems and stories which I think are of good quality.