



The importance of the BOP (Base of Pyramid) which supports Japan's capability of science and technology

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It is still fresh in my memory that I became inspired when watching the press coverage of the award ceremony for the Nobel Prize in chemistry at the end of last year. As a Japanese person I felt very proud when I saw Distinguished Professor Ei-ichi Negishi of Purdue University and Emeritus Professor Akira Suzuki of Hokkaido University who looked delighted at the series of brilliant events that took place before and after the ceremony. I would like to congratulate all the people engaged in chemistry in Japan from the bottom of my heart. 17 Japanese people have been honored with a Nobel Prize, of which seven are Nobel Prize winners in chemistry. Six of them received their prizes from the year 2000 onwards. This makes me realize once again the strength underlying today's chemistry community in Japan.

Around the time when the Nobel Prizes were the focus of public attention, the results for the OECD Programme for International Student Assessment (PISA) 2009 were published. In the "scientific literacy" category, Japan came fifth in the assessments conducted in 2006 and 2009, out of the dozens of countries that participated in the assessments.

Japan continually sends four high school student delegates to the International Chemistry Olympiad (IChO) each year. The Japanese delegates achieved fine results winning two gold medals and two silver medals at the 2010 IChO. The number of participants in the domestic qualifier for the IChO is increasing every year and I understand that the number reached 3,000 recently. I would like to pay my respects to the Chemical Society of Japan and other related people for their steady and dedicated activities.

Last year, "BOP (Base of Pyramid)" became a popular phrase in the business world. Similarly, in the chemistry community, countless researchers and students with potential (BOP) are supporting the development of chemistry in Japan, forming the base of a pyramid with the Nobel Prize-level chemists at the top.

However, considering the fact that Japan can only develop by becoming a country which innovates in science and technology, we should not settle with the above-mentioned optimistic view. It is also a fact that, recently along with the sluggish Japanese economy, the Japanese research community has been steadily losing its dominant position in the world in terms of the research capa-

bility. In order to increase research competitiveness, various measures need to be taken which include the reform of the education system. The first step to be taken should be promoting the expansion of the BOP.

It has been a while since it was first pointed out that Japanese young people are losing interest in natural sciences. It is believed that the experiences and the inspiration people receive when they are in and around the fifth grade of elementary school have a significant impact on their future. Rather than simply forcing students around this age to concentrate on preparations for entrance examinations, it is important to guide them towards learning about the sciences and to let them experience the fascination of the sciences. Wishing to provide opportunities for children to become interested in natural science, our company is supporting science education through lending tabletop microscopes to elementary schools and holding events in some small way. I hope that similar efforts will be made continuously by society as a whole and this will produce many young people who want to become world-class leading researchers one after another in the future.

At the same time, it is extremely important to promote innovation that is triggered by new inventions and discoveries. The creation of new industries based on innovation will enable the continuous development of our country. The urgent tasks are to raise the level of the BOP in Japanese science and technology from a long-term standpoint and to develop mechanisms and systems through which industry, academia and government can promote innovation.

Dr. Kotaro Honda, who invented KS magnetic steel, once wrote a phrase which translates as follows: "Technology can get close to perfection only through a person attaining deep knowledge about fundamental science." It is this thorough knowledge of fundamental science and the resulting technologies that provide the foundation for the creation of new industries.

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