Opening Article

A big step forward

Tadashi WATANABE
Professor at the Institute of Industrial Science, The University of Tokyo

The 7th curriculum guideline, which was announced in 1997 and took effect in 2001, has been a travesty from the viewpoint of science education for the following two reasons. Firstly, it has taken a soft line dubbed "relaxed education" which has only watered down education content. Secondly, it has adopted a subject selection system which lets students with poor judgment have their way. The former makes education a joke and the latter makes it fake. Furthermore, the guideline has virtually no connection with universities. The root of all these evils probably lies in the state control of education.

Driven by a sense of crisis, I discussed this issue with like-minded members in the Chemical Society, the Physical Society, and the Federation of Science and Technology Societies, and we launched a campaign to demand that the Ministry of Education, Science and Technology should reform the education system. And yet, the Ministry kept only half listening to us for some time. Although the curriculum guideline was modestly altered in 2007, our opinion has not yet been reflected at all.

We voiced our objections more loudly, and then, at the end of 2009, the Ministry finally conceded and decided to abolish the screening of high school science textbooks as a starter. This means that we can now take the first step toward a modern education, which is prevalent among most developed countries (or states in the case of the US), although our scope of modernization is still confined to only a part of elementary and secondary education.

After having received the good news, I myself spent six months tentatively producing a prototype science textbook (350 pages) for first-grade high school students, in cooperation with the Ministry of Education, Science and Technology. The prototype textbook will enable users to get a clear view of how individual subjects (such as chemistry, physics, and biology) to be learned in the next stage are positioned in natural science. Currently, seven companies have been working on eight different types of new science textbooks while referring to the above-mentioned prototype. These new textbooks will be completed by the end of October 2010 so that they can be used from next spring onward. The subsequent individual subject textbooks will not be subject to screening by the Ministry, either (but subject only to "accreditation," which won't interfere with the contents).

The above story was occasionally and unexpectedly told by Duckhwan Lee, the Chair of the Steering Committee of the International Chemistry Olympiad (IChO) and Professor at Sogang University, during the IChO. (He is one of the candidates for the next President of the Korean Chemical Society.) On one such occasion, Prof. Ryoji Noyori and Mr. Masaharu Nakagawa, Senior Vice-Minister, the Ministry of Education, Culture, Sports, Science and Technology of Japan were present with us. So I would like to think that the remarkable accomplishment in our neighboring country could be conveyed to the Japanese government. For reference, Prof. Lee had hosted a symposium to speak about the significance of the educational reform in Seoul the day before the opening ceremony of the IChO. Therefore, he arrived in Japan at midnight on that day. This shows us just how enthusiastic he is about the reform.

Readers interested in elementary and secondary education will realize that science education in Korea had a striking resemblance to the current situation in Japan before they embarked on the above-mentioned reform. Science education through senior high school (for university entrance exams) has little connection with both our daily life and university education, and only provides a closed world with little substance. Accordingly, after entering university, Japanese students are forced to forget most of what they have memorized and reset their mind. Such a dismal situation has been caused by a 65-year postwar folly, namely textbook screening, which is not seen in any other developed countries.

"I am not optimistic about our future course. People directly involved in high school education or those related to teacher-training courses are most likely to protest against our reform movement. Nevertheless, we are heading in the right direction," Prof. Lee said passionately in his Cornell University-educated fluent English.

Let's follow suit and renovate elementary and secondary chemistry education in Japan. To begin with, the Chemical Society of Japan should take the initiative and voice its opinion.

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