A Strategy for Educational Policy

The first two-day meeting of the ad hoc IUPAC Education Strategy Development Committee (ESDC) was held 20–21 February 2000 at the Royal Institution in London. Among the members of the committee, only one was unable to attend; in addition, Prof. Joshua Jortner, IUPAC's immediate past president, was present for the first day of the meeting. The ESDC Chairman, Prof. P. W. Atkins (Lincoln College, Oxford, England, OX1 3DR, UK; E-mail: peter.atkins@lincoln.ox.ac.uk), has provided the following letter addressed to IUPAC members and readers of *Chemistry International*. Please pass it along to your colleagues who may have an interest in educational matters.

The IUPAC Committee on Teaching of Chemistry (CTC) has had a long and honorable history under a sequence of inspired and enthusiastic chairmen. It has done notable work in fields springing from its original interests, which lie in the general domain of secondary education, and its work has been extended to include tertiary education. Its notable successes lie in its contribution to the furthering of chemistry education in developing countries, with its provision of access to inexpensive equipment, small-scale procedures, and printed resources.

Readers of *Chemistry International* will have seen (in the March issue) that as part of its general strategic development, the Bureau has decided that the time has come for IUPAC to examine its educational role, and particularly the role of the CTC, in the modern world, to encourage the CTC to broaden its horizons, to engage in a wider range of activities, and to consider its direction anew. To that end, it has set up a committee, the Education Strategy Development Committee (ESDC), under my chairmanship. The members of the committee come from a wide range of countries and represent a variety of interests. The terms of reference of the ESDC can be found on the IUPAC web site and were published in *Chemistry International*. Broadly speaking, they encourage the committee to carry out a root-and-branch analysis of the current structure of the CTC and other contributors to the educational program of IUPAC, and to look for imaginative ways to extend its reach. In particular, the ESDC is asked to consider how to incorporate into IUPAC's activities support for

ESDC Committee in front of the statue of Michael Faraday at the Royal Institution in London. Front row (left to right): N. Craig (USA), K. Powell (New Zealand), B. M. Abegaz (Botswana), F. Meyers (IUPAC Secretariat), N. Tarasova (Russia), P. W. Atkins (Chairman, UK), J. Jortner (IUPAC Past President, Israel). Back row: J. Poe (Canada), D. Balasubramanian (India), J. Bradley (South Africa), J. de Paula (USA/Brazil), L. Sydnes (Norway).

the public understanding of chemistry.

So far, the ESDC has had one meeting (at the Royal Institution in London, arguably the historical origin of public understanding of chemistry). It quickly became clear at the meeting that there was one task we had to do if we were to compile a worthwhile report—we had to discover what the members of IUPAC wanted. There are already numerous educational initiatives underway throughout the world, and the ESDC wanted to avoid replication, inappropriate expenditure of effort, and—to express it directly—the treading on of toes. What is there special about IUPAC that can lead it to make a useful, effective, and welcome contribution to chemical education throughout the world? Which of its current activities are wasteful of volunteers' enthusiasm and effort?

In an attempt to gather our stakeholders' views, I have written to a large number of organizations. However, I know that lurking in the world are numerous good ideas. I am, therefore, using the pages of this news magazine to encourage anyone who has a view to write to me. I am particularly interested in imaginative *global* visions. An idea for developing an inexpensive synchrotron storage ring, reusable litmus paper, or whatever, can wait until the newly constituted CTC (if that is our recommendation) is in place; what the committee seeks are *strategic* ideas. Where should IUPAC's educational effort be directed? Where is its current effort wasted? How can it best reach the people who will benefit from its activities? How can IUPAC's activities mesh helpfully and constructively into the infrastructure of national and individual initiatives? Where should it step aside? Where would it be most welcome? Is there a role for IUPAC in contributing to the public understanding of science? How do we deploy the new media? What new media should we anticipate?

In considering these questions (and others like them), we have in mind two sets of slices through our stakeholders. One set divides our constituency into three horizontal bands: secondary education, tertiary education, and the general public (to cover public understanding of chemistry). The second set divides our domain into the developed world, the developing world, and global issues. We are aware, for instance, that in some developed countries, there is a worrying drift away from science and from chemistry in particular. In developing countries, the principal object of concern is perhaps the expansion of the technological base through education. The most obvious global issues are the protection and reclamation of the environment and the encouragement of sustainable development. Views on any aspect of our task—or entirely different ways of approaching the problem—would be most welcome.

The committee is already working hard on a number of issues that we have identified. It will meet again in July, when we hope to be able to work toward compiling at least an interim report. That report will be infinitely more valuable if it includes ideas that reflect what the world really wants rather than what we think it needs. Please write to me or pass on your comments to other members of the committee (see the web site) by the end of May 2000.

Report on FAO/IAEA/AOAC International/IUPAC International Workshop on Principles and Practices of Method Validation, 4–6 November 1999, Budapest, Hungary

Dr. Ales Fajgelj [Quality Assurance Supervisor, International Atomic Energy Agency (IAEA) Laboratories, A-2444 Seibersdorf, Austria; E-mail: A.Fajgelj@iaea.org], Chairman of the IUPAC Interdivisional Working Party on Harmonization of Quality Assurance Schemes for Analytical Laboratories, and Dr. Árpád Ambrus (FAO/IAEA Training and Reference Centre for Food and Pesticide Control, FAO/IAEA Agriculture and Biotechnology Laboratory, P.O. Box 100, A-1400 Vienna, Austria), Chairman of the Scientific Committee, have submitted the following report:

This workshop resulted from the internationally recognized fact that full method validation carried out through an interlaboratory method performance study is an expensive but also a limited exercise. It is impossible to organize interlaboratory studies for all analytical methods in use for determination of analytes in various analyte/matrix combinations. A formal basis for the organization of the workshop was provided by the following:

- Recommendations of the FAO/IAEA Consultants Meeting on Validation of Analytical Methods for Food Control, IAEA, Vienna, 1997,
- IUPAC Project 5/97/8, "Protocol for In-House Method Validation" (Coordinators: R. Wood, M. Thompson, and A. Fajgelj), and
- IUPAC Project 5/2/99, "Preparation and Harmonization of Internationally Harmonized Guidelines for In-House Method Validation" (Coordinators: A. Fajgelj and A. Ambrus).

In all three cases, in-house method validation (single-laboratory method validation) is scientifically and technically presented as an alternative to current internationally accepted method validation practices, namely interlaboratory method performance studies. In-house method validation is described in the IUPAC, AOAC International, and ISO guidance developed in 1988.[1,2] In this respect, the present workshop might be seen as an important event because it actually discussed and established technical guidelines to be followed within