

Schools Council did, however, consider the Welsh proposals directly relevant to engineering.

#### METRICATION

## Slow Change for Schools

THE most important questions raised at the Royal Society's conference on metrication in schools on September 19 were those of responsibility—who should be responsible for deciding when metric and specifically SI (le Système International) units should be used in schools and in teacher training colleges? When should the examination boards set questions in SI units? Who should advise manufacturers of school equipment what to make and when, and publishers what to publish and how soon? The conference last week was a sequel to that held on March 20 (*Nature*, **217**, 1205; 1968) at which the delegates—chiefly school teachers and members of the examinations boards—recommended that SI units be used exclusively in public examinations in mathematics and science not later than June 1972, and that in primary schools there should be a change of emphasis in favour of the metric system of weights and measures from September 1969.

Some progress has been made since then. The Royal Society has prepared draft pamphlets on metrication in primary and secondary schools which are intended chiefly as guides for teachers. At the conference, the pamphlet for primary teachers was criticized for its unimaginative layout and general dullness. It will have to be revised, but both pamphlets should be ready for publication fairly soon. Meanwhile, the Schools Council has already published *A Teaching Guide for the Introduction of Decimal Currency and the Adoption of Metric Measures* (HMSO, 4s.) which discusses, somewhat coyly, a selection of relevant classroom experiences and gives some useful practical advice to teachers. Mr C. G. Nobbs of the mathematics committee of the Schools Council stressed that the council will act only in an advisory capacity and will not attempt to dictate policy.

The English examinations boards have still not finally committed themselves to the dates when they will be using SI units exclusively, but GCE O and A-level papers will probably be metric by about 1971–72. Most examinations boards will set alternative sets of papers in technical subjects for an interim period between about 1970 and 1974. The Scottish examinations boards are a step ahead. They intend that SI units should be used exclusively from 1972 in ordinary examinations and from 1973 in higher certificate examinations.

For the rest, a great amount of sporadic activity seems under way. Mr R. Jardine of the Ministry of Technology reminded the conference that the Committee on Metrication of which he is secretary has already asked for the setting up of a metrication board to plan for the next step after decimalization of the coinage. Then the Royal Society has prepared a draft report on the use of units and symbols in physics and chemistry, and the Association of Science Education is well ahead with plans to publish a simplified version for teachers. The biggest uncertainty is to know how quickly and fully the schools will be able to adopt these new proposals now that they have been asked to keep any increase in their budgets to within three per cent.

#### MEDICAL EDUCATION

## Students Echo Todd

from our Social Medicine Correspondent

WHILE the medical students in Paris continue to press vigorously for the postponement of examinations and the right to work in hospitals, medical students in Britain are quietly spelling out the changes they would like to see in medical education. The latest publication of the British Medical Students' Association (to which 95 per cent of medical students belong) is a welcome addition to the literature of this subject, for until now it had largely been the teachers and administrators who have decided what direction these changes will take. To be sure, the report sometimes criticizes certain aspects of the current syllabus without suggesting workable alternatives, but it will be welcomed, if only because it reflects a genuine desire of students to infuse and re-kindle an aspect of medicine which has remained virtually static over the past 100 years. Nobody should be put off by the Marcusean reaffirmation of the belief of the International Federation of Medical Student Associations that "the opportunity for medical students to contribute actively in bringing reform and change in medical education is a fundamental right in any democratic system."

What the British students would like to see is a closer link between preclinical subjects and their clinical relevance in patients. They ask for more integration of subjects, less duplication in badly planned curricula and, most of all, an opportunity to feel that they are actively contributing to the care of patients. Planning and conduct of the medical curriculum should be entrusted to a Statutory Curriculum Committee similar to that proposed for the new medical school at Nottingham. This would include senior and junior members of staff from preclinical and clinical departments as well as student representatives. The chief objective of this committee would be the fullest integration of teaching material. The students also ask that more attention should be paid to the general principles of science with the objective of encouraging an understanding of scientific method and technique which can be applied later in medicine. This ideal of an undergraduate course designed to produce "educable" young people able to keep on learning echoes one of the conclusions of the Todd Commission on Medical Education (*Nature*, **218**, 121; 1968).

The students' report says, for example, that the number of hours devoted to anatomy could be reduced. Practical work would be done with greater enthusiasm if it were related to practical medical problems and if less time were spent on repetitive experiments of the "cookery book" type. The emphasis in the report on the importance of research is encouraging. The general feeling seems to be that the second MB in its present form should be abolished and replaced by several examinations placed periodically throughout the course, with continuous assessment of the standard of the students' work between examinations. This problem of assessment is not, of course, peculiar to medical students, and the solution may well come from outside the medical profession.

To ease the load in teaching hospitals and to give clinical students a chance to see some of the more common complaints, it is suggested that students

could be seconded to "non-teaching" hospitals for periods of about two weeks. This is already fairly general practice in obstetrics, but could be applied on a wider scale—in medicine, surgery and many of the specialities. This would also help to break down the barrier between teaching and non-teaching hospitals and would, the report suggests, be a stimulus to the staff in each. Ward rounds, it is emphasized, should be purely teaching rounds, and clinical "business" should not be carried on at the same time unless students are actively involved. Teaching in out-patient departments is also encouraged because it enables the student to see new patients, to take the original history and to observe the physical signs—an advantage not always possible with in-patients.

Concern is expressed about the extent to which pre-registration housemen are used merely as an extra pair of hands, with very little or no time or opportunity for study. The association believes that these posts should be regarded as a part of the basic medical education, and that the welfare of students filling them should be the responsibility of the parent medical school.

#### INFORMATION HANDLING

### Keeping Chemists Informed

For the first time, all the principal societies and professional institutions for chemists in Britain are going to get together in a consortium to discuss the mutual problem of chemical information. The formation of the consortium has recently been announced by its sponsor, the Chemical Society. To begin with, the members will be the larger societies, the Royal Society, the Chemical Society, the Royal Institute of Chemistry and similar bodies, but smaller chemical organizations may join in later on. Aslib will be a member from the start, and the Office for Scientific and Technical Information (OSTI) will be represented by an observer. The objective is to provide a comprehensive information system in pure and applied chemistry and to collaborate with information services in other subjects and other countries. The chief advantage of the consortium may be that it will speak with one voice on information matters for all chemists in Britain—especially important with computerized information services coming into service.

The consortium does not, however, intend to stick to computer-based information services. The new arrangements will also make it possible to coordinate the development of journals and the training of chemists in the use of existing services, for example. Yet there seems very little doubt that the formation of the consortium has been inspired by the operation of the computer-based current awareness service which has been operating at Nottingham University for the past two years with the help of a large grant from the Office for Scientific and Technical Information. Initially that was operated for a selected group of chemists and users of chemical information in Great Britain. The runs were experimental and were provided free of charge. But since July of this year the unit has been running on a cost recovery basis for all comers. Profiles derived from the customer's statement of research interests are matched each fortnight against magnetic tape versions of the Chemical

Abstracts Service publications *Chemical Titles* and *Chemical Biological Activities*. The Nottingham unit has an edge over similar services in the United States, where the practice is for individual firms or other organizations to buy tapes from Chemical Abstracts Services and to operate internal services for their employees. In practice, however, the customers at Nottingham are mostly industrial chemists, presumably getting the service with their job. Academic chemists may find the cost of the service prohibitive—a profile at present costs about £40 a year—and may be left out in the cold if they have to continue to pay for this type of service out of their own pockets.

Dr A. K. Kent, director of the Nottingham unit, is pleased with the response since the service was open to the public. About half the profiles on the books (150) are for new customers, and he hopes that the service will be financially independent in 2–3 years. The service has been evaluated continually, and a report of the study is to be published soon by the Chemical Society. It is also hoped to extend the scope of the service being offered, possibly by including *Biological Abstracts* on the tapes. The unit is also investigating the potentialities of the new service now being produced by Chemical Abstracts Service under the name of *CA Condensates*. The hope is that the average of four indexing terms a citation will increase the accuracy of searching. Nottingham's customers should have a chance to find out when the first runs begin in the new year.

#### POPULAR SCIENCE

### Dainton Defied

*Science in Action*, the first issue of which was launched last week, is intended for children between 14 and 18. Appearing fortnightly during the school term, its aim is to describe the applications of science and to link the school curriculum with the practical world. The magazine has been gestating for several years, but the publishers claim that its birth was hastened by the Dainton Report, which earlier this year announced a growing disenchantment with science among school-children. The percentage of children studying for science A-levels in the first year of sixth form has sagged from 41.5 per cent in 1962 to 31.4 per cent last year, and will reach a perturbing 23.5 per cent in 1971 if the trend is allowed to continue.

The high standard of the first issue encourages the hope that the magazine will do well by doing good. Subjects range from the running of a zoo to the ways of stabilizing ships in storms. Professor Thring hands down the first two laws of Robotics and there is an excellent short biography of Fritz Haber. Special features include a description of school science projects and a section on careers. The magazine also announces the activities of the British Association of Young Scientists (BAYS) with which it shares a common purpose. Like *Science in Action*, the BAYS has been in the offing for some years and was founded by the British Association at its annual meeting this year. It arranges lectures and meetings on science subjects throughout the country and for its current programme has enlisted Dr B. J. Mason to talk on weather forecasting, Sir Peter Medawar on organ grafting and Dr Maurice Burton on the Loch Ness Monster.