

Gaulist temperament but also to those who are aware of the practical problems of integrating the physics community. One obvious obstacle is the variation in the character of physical societies from one country to another. Another is the obscurity of many of the organizations which should properly play a part in the development of an integrated society. No doubt it will be several years before the various member societies have enough experience of each other's needs and interests for them to know which parts of their activities can be integrated and which will have to be kept going on a national basis. Until then, however, the organizers of the society see plenty of scope for constructive and common activity, principally in the organization of meetings. It will be interesting to see whether there are funds for financing exchange visits on a significant scale. The problems of journals have not apparently been tackled yet, although there seems to be a view that the ideal solution would be the specialization of existing journals in certain fields of physics. The official headquarters will probably be in Geneva.

New Trend in Teaching Science

Is it possible to teach children engineering? This was the common question asked at the Institute of Electrical Engineers on October 12, when Mr G. B. Harrison, head of the department of creative design at Loughborough College of Education, opened a discussion entitled "The Influences of Changes in School Curricula on the Intake of Engineering Courses".

Mr Harrison, who is also director of the Schools Council engineering project, began by outlining the aims of the council, which helps children to understand what technology has to offer and trains them to meet the needs of growing up in a society dominated by technology. According to Mr Harrison, if technology is indeed accepted in schools, the traditional academic attitude of teachers will have to give way to the preparation of new material, apparatus, films, programmes and books that could be discarded when obsolete. He applauded the introduction of engineering as an A-level subject by five of the eight examining boards in the country, but is afraid that diversity might lead to confusion. A common A-level paper is essential so that universities, technical colleges and industry know what is being done at the schools.

An engineering science paper has been introduced by the Northern Universities Joint Matriculation Board to provide an alternative to physics which would meet university requirements. Although the syllabus is similar to traditional physics, it does include project work and practical exercises which demand design ability and creativity. The Oxford Examination Board also has an engineering course. This is, however, to be taken in addition to maths and physics in order to broaden the candidate's horizon. It includes the philosophy of engineering, design aspects and project work. The Cambridge course is essentially mechanical design but also includes the theory of structures and project work. Marks are awarded for project work and added as a bonus to the A-level physics mark. The value of all these courses will depend on the extent to which university courses are geared to work at school. According to Mr Harrison, the present flow from school to university is a series of acute mis-matches that

can only be remedied by a long term reappraisal of the whole educational system.

In view of the importance of the topic, the discussion was sparsely attended, but there were several interesting points raised. Who, for example, is going to teach engineering in schools? Certainly not the traditionally trained teachers who have passed through training college and who are often accused of being out of touch. Furthermore, as one speaker noted, this is not merely the age of technology, but of change in general: we are no longer living in a static society, and developments should be made in all directions without over-emphasizing any one particular aspect. There was general agreement that a new approach to education is needed and that the attitude of universities and technical colleges towards the acceptance of engineering as an A-level subject should be made clear. Obviously there are many arguments for and against the scheme, but several questions have yet to be answered. For example, have university students benefited by taking engineering at school? What evidence is there that children want technology and engineering in their general syllabus; have headmasters been approached by pupils anxious to study the additional subjects? Perhaps most important of all, has the introduction of engineering in the sixth form been reflected in the numbers reading engineering at establishments of further education? Why not have a census of opinion at all major schools to take into consideration the views of children themselves? All this may be clarified by the working paper, prepared by the Schools Council, which is shortly to be distributed.

Indian Spoken Here

THE proposed change of language in Indian education away from English prompted Mr Chagla, the Foreign Secretary, to resign early in September. The following week the proposal was discussed at the Conference of Vice-Chancellors in New Delhi, and although the resulting statement published afterwards is in agreement, it contains a certain amount of qualification.

The intention is that English should cease to be the centre of the higher education system, but its importance as a tool is not underestimated. School teaching is at present carried out in regional languages and it is hoped to extend this to undergraduate level. It is realized that a link language is essential, and that the need for a foreign language increases year by year, particularly for library study. Postgraduate courses will continue to be based on English, as translation of books and journals at this level would be impossibly expensive. Regional universities could work on this basis, but all-India institutions raise another problem. Hindi is at present spoken by 40 per cent of the Indian population, but there are some states that are actively against it. Any decision to use it as the education medium in national establishments would therefore have to be made with agreement from non-Hindi states. It is also realized that in multi-lingual cities English may have to be retained as the education medium, alongside the regional languages. The speed and nature of the changes are expected to vary from one university to another, according to circumstances, but undergraduate courses should not take more than 10 years to be adapted.