

concrete; with the aesthetic, functional and economic quality of the resulting products; and with the improvement of site procedures. Much time is spent in this department on problems associated with the construction of concrete roads. Results of tests of skidding resistance of this type of road have shown that the most effective and durable skid resistant surface for newly laid concrete on high speed roads is provided by closely spaced transverse grooving of the concrete surface. Work is also being done on ways of producing high skidding resistance on existing concrete roads which are smooth textured.

The Materials Research Department carries out research into the basic nature of concrete—the rheology, physics and chemistry of the bonding process that takes place during hydration of cement, the properties and influence of the various constituents of concrete and so on. Of potential importance are the very high strength materials being made in this department from hardened cement pastes containing no aggregates. All this research is backed up by a technical advisory and information service on the uses of cement and concrete, by publications and educational activities. Although the association works in collaboration with government laboratories like the Road Research Laboratory and the Building Research Station, and grant aided research associations, it receives no public funds. It is financed instead by voluntary levies paid by member cement companies on each ton of cement sold in the United Kingdom.

EDUCATION

Feeling the Squeeze

THE British Government's unilateral and hotly contested decision to raise the university fees charged to overseas students at British universities by a factor of more than three seems to be taking effect. There was a decrease of 4,000 in the number of foreign students at the universities during 1967–68. This is the estimate of the annual report of the British Council, which was published on November 28 (HMSO, 2s 6d). This was the first decline in the numbers of overseas students in Britain since the British Council began keeping records in 1957. The drop of 4,000 represents a decrease of 6 per cent in the total population of overseas students, but a decline of 13 per cent in the number engaged in full time education at the universities and technical colleges. In 1967–68 there were 69,000 overseas students in Britain of whom 30,500 were engaged in full time education. The equivalent figures for the previous year were 73,000 and 35,000 respectively. Another sign of the times is that in 1967–68, for the first time, the number of overseas postgraduate students exceeded the number of undergraduate students. This presumably reflects the world-wide increase in university education.

When the Government first announced its decision, the Committee of Vice-Chancellors and Principals conveyed to the Government the dismay and regret of the academic world. As the committee's recently published report says, "These reactions were represented forcibly to the minister by our committee", but the only response from the Government was an agreement to start discussions with the committee, the UGC and local authorities on the general levels of

university fees for both domestic and overseas students. This still seems to be the position, and the Vice-Chancellors have been obliged to recommend that the universities continue to charge the discriminatory fees as the negotiations drag on with no sign of a conclusion.

Keeping in touch with overseas students in Britain is, of course, only a small part of the British Council's work, the main purpose of which is to show the British cultural flag overseas. In common with the other overseas services, the council's budget was cut during 1967–68, and the Middle East war and the Nigerian civil war disrupted some of the council's activities, but most of its long-term projects have survived uncurtailed. The council is now represented in 75 countries, and during 1967–68 it mounted 122 exhibitions of books in 53 countries, had 42 officers serving in overseas schools and universities teaching English, and as usual promoted music and drama tours. This year, even after devaluation, the council has, with a budget of a little more than £13.2 million, £400,000 more spending power than in 1967–68.

LECTURES

Science for Christmas

CHRISTMAS lectures for schoolchildren were begun at the Royal Institution in 1826 by Michael Faraday, and have since become a permanent fixture. This year the lectures are to be given by a professor from the United States—Professor Philip Morrison from Massachusetts Institute of Technology, who will talk on "Gulliver's Laws, the Physics of Large and Small". Although not very many will be lucky enough to see the lectures live, they will be televised by the BBC—on December 28 and 31 and on January 2, 4, 7 and 9.

When the lectures started, little science was taught in schools and universities, and the lecturer faced a relatively uninformed "juvenile audity". Now things are different; all children learn some science at school, where teaching methods use visual aids to a much greater extent than hitherto. Television, too, might be expected to have taken the edge off the appeal of the Christmas Lectures. Happily this does not seem to be the case—the lectures at the Royal Institution seem to be as popular as ever. The task facing the lecturer is a difficult one, because his audience covers a wide range of ages—officially the children are between ten and eighteen. Professor King of the RI says that the aims of the lectures remain unchanged—to present scientific information in as interesting and amusing a way as possible and to capture the imagination and enthusiasm of the audience.

Other institutions and societies offer lectures too. Some of them, like those organized by the Zoological Society, are only for the children of members. Others, like those at the Natural History Museum and the Science Museum, are open to the public. The museums produce lectures, films and lessons for schools all the year round, but the emphasis in their Christmas lectures is on general themes and a popular appeal. This year, members of the staff of the Natural History Museum are lecturing on subjects ranging from dinosaurs to volcanoes to seashore animals, daily at 3 pm from December 27. The Science Museum is presenting lectures on the Quest for Speed, intended for 12 and 13 year olds.