U.K. UNIVERSITIES

Declining Enrollments, Funds Threaten Small Departments

LONDON—The chill wind of competition now blowing through Britain's higher education system—the result of government efforts to improve efficiency—is proving too frosty for some of the smaller university departments of physics and chemistry. Three universities have recently decided to shut down some undergraduate physics and chemistry courses, while whole departments may be closed at two other institutions. "Universities are under enormous financial pressure. It's inevitable that expensive subjects like physics are going to be high on the shopping list for closure," says Philip Diamond, manager for education and research at the Institute of Physics.

The current crisis was brought to a head in part by worries over declining enrollment for science courses, but also by a new formula announced last month by the Higher Education Funding Council for England (HEFCE) for distributing more than $1 billion in funds to university departments for fiscal year 1997–98. The formula is based on the results of a massive research-assessment exercise, announced in December (*Science*, 3 January 1997, p. 18), which involved the world's largest peer-review process. The exercise graded departments on the quality of their research on a scale of 1 (almost no work of national excellence) to 5* (the majority of work is of international excellence).

HEFCE is now using those grades to shift funds toward high-quality departments, widening the gap between them and the low-ranking departments. Those departments which managed only a grade 1 or 2—more than 20% of the total—will receive no funds from HEFCE for infrastructural support. Top-rated departments, on the other hand, will receive four times the funds given to those with a 3b grade. This formula is more heavily weighted toward the top-ranked departments than the one used after the previous assessment exercise in 1992, when only grade 1 departments were shut out of infrastructure funding. "The government asked us to be more selective following this exercise," says HEFCE's head of research policy, Alice Frost.

The troubles facing some lower ranked departments are compounded by the static demand for physics and chemistry courses over the past decade. And there are signs that enrollment will fall in the years ahead, for the number of school students studying these subjects beyond the age of 16 is declining. "Smaller departments are more vulnerable, as there are clearly savings of scale [for larger departments]," says Diamond. Tony Ashmore, head of education at the Royal Society of Chemistry, agrees: "Smaller departments are at greater risk. The society's major concern is that opportunities for students are not reduced."

These compound problems have set alarm bells ringing within the physics community. A statement issued last week by the Institute of Physics notes that although undergraduate physics courses are attracting their target intake nationally, "departments with a falling intake are ... vulnerable." And it warns: "The reduction in the total number of courses in an ad hoc fashion dictated purely by local conditions is of considerable concern, particularly if very good departments with a solid reputation for teaching and research are lost in the process."

This fear is already becoming a reality. In spite of a strong 4 rating for physics, the University of East Anglia has decided to ax its undergraduate course in the subject in September because it could not attract enough good students, but will continue to teach those already enrolled. The number of physics applicants fell from 255 in 1992 to 136 in 1995, with 34 and 18 enrolling in the course each year, respectively. "The physics school has been subsidized substantially by the university for some time," a spokesperson says, adding that the department will now focus on its strengths in research and postgraduate training.

Other universities are following suit:

■ The University of Essex, which scored well in most subjects but only a 2 in chemistry, has decided to ax further intake into its undergraduate course in pure chemistry in September. The course was attracting only about 25 students per year. The decision is not expected to lead to compulsory job cuts, a spokesperson for the university says.

■ Brunel University, near London, which also scored a 2 in chemistry, is reviewing the future of the department. A spokesperson for the university says the result was "very disappointing." As a small department with research staff of only 11, the university is considering a merger with another department and other options, she says.

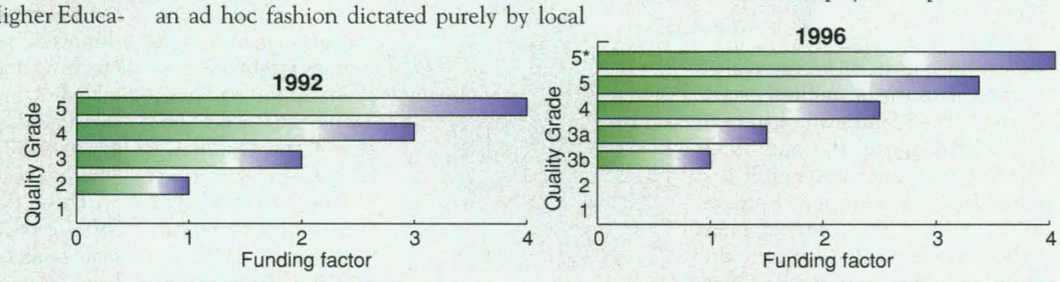
■ Coventry University has decided to close down its undergraduate physics course this year. "We have enormous demand for courses in business studies, psychology, law, and some other fields, but we were finding it increasingly difficult to recruit students for physics," says Vice Chancellor Mike Goldstein. "The decision was not taken lightly, and we are maintaining a commitment to chemistry."

■ At Birkbeck College, part of the University of London, which specializes in part-time teaching, collegewide financial difficulties have led the administration to propose closure of the whole physics department in 3 years' time, when the current students have all graduated. In a statement, the college says that it has had to start considering such measures "with much regret." The plan has drawn fire from staff members and their union, the Association of University Teachers (AUT), which has launched a national campaign to save the department. The union last month wrote to 400 professors of physics urging them to lend support.

The AUT is also worried more widely about the changes prompted by the assessment exercise. "We feel strongly that the method of distributing research funds needed to be carefully watched. Many departments got a 2 rating, and it doesn't necessarily mean they put up a poor show," says an AUT spokesperson.

Many universities are responding to the problems by sharpening up their marketing and becoming more aggressive, says the Institute of Physics's Diamond. "But they're fighting over the same students. What we are trying to do is increase the pool."

–Nigel Williams



Top-heavy. Quality-related infrastructure funding is awarded to university departments according to their research grading. (Those graded 5* in 1996 will get four times the funds given to those graded 3b.) More funding is going to the higher grades following the 1996 assessment than did in 1992.