

U.K. Universities: Jostling for Rank

With the British government now doling out infrastructure funding based on a massive peer-review exercise, universities are learning to play hardball to get their share

LONDON—Britain may have been the birthplace of soccer, but few would have predicted the extent to which the tactics of soccer managers have taken over the world of higher education. Last month, the government announced the results of its research assessment exercise: a league table of departments and institutions resulting from the world's most comprehensive peer-review process. The exercise, which happens every 4 years, is conducted by the funding bodies in England, Scotland, Wales, and Northern Ireland.

This year's results revealed how soccer-style transfers of researchers and other tactics aimed at improving a department's rating are now part of British academic life. For example, a deft move by Oxford, which did not enter all of its faculty members in the assessment, helped it nudge Cambridge from top position in the league table. "Universities are now quite active in management to bolster ratings," says policy researcher Bahram Bekhradnia of the Higher Education Funding Council for England (HEFCE). The results have even prompted speculation that a small number of the top-rated universities might form a "superleague" of research-intensive institutions.

It is no surprise that the universities are jockeying for position, for a lot hangs on where they place in the league table. The \$3.2 million exercise—which reviewed the work of more than 50,000 academic staff in 2700 university and college departments throughout the United Kingdom—rates departments into one of seven levels from 1 (almost no work of national excellence) to 5* (the majority of work is of international excellence). The results will be used to distribute \$1.1 billion in block grants for research infrastructure to university departments this year and fix funding for a further 3 years.

The HEFCE will meet this month to decide exactly how to use the results to devise a formula to distribute research funds, but the councils have already decided that departments gaining grades 1 and 2 will receive no research infrastructure funding at all. An exception will be departments in new universities starting to establish a reputation; this assessment is only the second to include the new universities created from former polytechnics in 1992.

HEFCE chief executive Brian Fender notes that the exercise indicates that good research is surprisingly widespread: 87 insti-

Institution	Weighted Average Score
University of Oxford	6.67
University of Cambridge	6.49
London School of Economics and Political Science	6.27
Imperial College of Science	5.98
University College London	5.82
UMIST	5.60
University of Bath	5.54
University of Warwick	5.51
Lancaster University	5.49
University of York	5.48
University of Essex	5.44
University of Sussex	5.35
University of Edinburgh	5.34
University of Bristol	5.33
University of Wales, Cardiff	5.22
University of St. Andrews	5.22
Cranfield University	5.22
University of Durham	5.21
University of Sheffield	5.20
University of Southampton	5.19

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tutions had at least one department doing research of international excellence. Among the new universities, the number of departments doing some work of national excellence (grades 3a and 3b) more than trebled from 96 in 1992 to 351 now. Sheffield Hallam had the highest rating of the new universities overall, while the new universities of Westminster, Portsmouth, Thames Valley, East London, and Liverpool John Moores received top grades for some work. Scotland also showed a dramatic improvement in research performance with 57% of 5800 research active staff rated 4 or better—up from 39% in 1992.

Universities had some flexibility in the way they were assessed and could choose which academics they put forward to be rated by the 60 subject peer-review panels. Researchers were judged on their four best publications in the past 4 years, so departments could improve their average rating by not entering staff members who concentrate on teaching. Oxford, which included up to 99.9% of its faculty members in previous exercises, significantly improved its ratings this

time around by being more selective—almost one in 10 academics were not included. Several universities that used such tactics were among the better placed in the league table.

But Oxford's maneuver immediately drew fire from the London School of Economics (LSE), which published an alternative league table that placed itself and Cambridge—both with 98% of faculty members entered in the exercise—ahead of Oxford. Neil Gregory of the LSE's research and contract division, who drew up the table, says it reflects "the extent to which research is taken seriously across the institution" by including the vast majority of staff.

But whatever way the mass of figures is interpreted, the assessment exercise has significantly altered universities' attitude to recruitment, with much more emphasis being placed on acquiring scientists with good publication records. "There has been a lot of human resource activity in university departments to improve research outputs," says Bekhradnia. The recruitment of a topflight researcher may make a significant difference in a department's rating. "Not more than 2% of staff appear to have moved to bolster department ratings, but the figure may conceal that these are key or strategic people," he adds.

Indeed, the funding councils are now investigating ways to curtail the effect of the academic-transfer market on future assessments. HEFCE has commissioned a report on academic transfers, which has not yet been published, and Bekhradnia says that in the future, academics' work may be judged where it was performed rather than allowing universities to "buy in" publications with a new signing.

A premier league?

With research funds getting tighter and tighter in Britain over the past few years, the exercise has fueled the debate over whether funding should be concentrated even further in a few research-oriented universities, leaving the rest to concentrate on teaching even though they might have one or two strong departments. But HEFCE's Fender says the aim was for the country to fund the best possible research for the money: "If it turns out that we could fund that better by a more concentrated distribution than is the case at the moment, then why not? But the evidence doesn't point in that direction." Gareth Roberts, chair of the Committee of Vice Chancellors and Principals, agrees: "Much would

be lost if research funding was to be restricted to a limited number of universities."

But shortly after the results were published, the heads of four of Britain's top-rated universities published an article in *The Observer* newspaper calling for a move in that direction: the creation of a "superleague" of universities. The article was accompanied by a photomontage showing the four in the garb of soccer supporters. They argued that a new league of about 12 institutions should be given enough cash to bid for the world's best researchers and to buy top-quality equipment. Vice chancellors Alec Broers of Cambridge, Brian Follet of Warwick, Derek Roberts of University College London, and Stewart Sutherland of Edinburgh rejected the notion that standards were comparable across universities. "To pretend that Oxbridge is no different from our recently created 'new' universities is ludicrous," they wrote. "No one

[in the U.S.] would dream of asking whether the output measures of Massachusetts Institute of Technology and the University of Paducah were the same."

Their proposal is not new. For the past 2 years, the heads of these universities and about 15 others, called the Russell group after the hotel in London in which they meet, have informally discussed the creation of an American-style "Ivy League." But such a fundamental change in British higher education will have to await the results of a government-sponsored inquiry led by Sir Ron Dearing into the future of the whole issue which is due to report later this year.

While the universities jostle to make the best advantage of their new ratings, the funding councils are keen to play down the sparring caused by the league tables. Fender believes the assessment exercise shows that: "The real winner is the United Kingdom,

which is benefiting from a huge range of high-quality work." But researchers are more equivocal. Paul Isherwood, assistant director of the department of mechanical engineering at London's Imperial College, which was rated 5 in 1992 and the top 5* this time, says: "We haven't changed our policies. We get good people; we stretch them and try to fund them adequately. Getting a 5* ranking has a positive effect, but I just wonder if the country is getting better research overall from the flurry of transfers." Peter Ashworth of the learning and teaching research institute at Sheffield Hallam, who helped organize the university's submission, says: "Some people take the view that the exercise is a disastrous imposition and waste of resources. But I think it helps shake things up and can reveal unexpected areas of research strength. It can counter entrenched opinions."

—Nigel Williams

PARTICLE PHYSICS

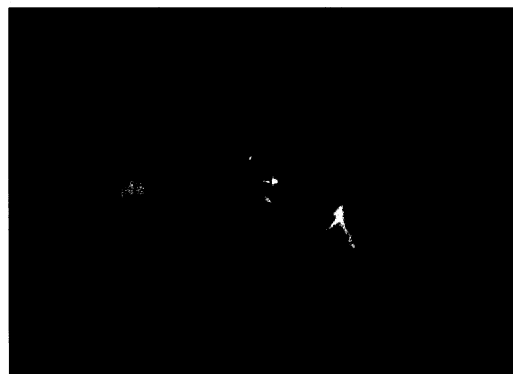
CERN Sets Sights on an Early LHC

CERN, the European particle physics center near Geneva, got a decidedly mixed message from its governing council last month. Delegates from the organization's 19 member countries voted unanimously to put CERN's next grand project, the Large Hadron Collider (LHC), on a "fast track." It should now be completed in a single stage by 2005—3 years ahead of the original schedule. "This is superb news for particle physics," says CERN Director-General Christopher Llewellyn Smith. But the council also agreed to a series of cuts in the rest of CERN's budget that could badly squeeze other experiments.

The LHC, with a price tag of \$2 billion, will be the most powerful accelerator ever built. Scientists hope that its ability to smash together protons with a combined energy of 14 teraelectron volts will finally prove the existence of the elusive Higgs boson and—perhaps—twins of known particles predicted by supersymmetry theory. The council gave the project the go-ahead in 1994 and put it on a two-stage timetable: Low-power operations would begin in 2005 and full power in 2008. But the council said that if non-member countries such as the United States and Japan made significant contributions, the project could be moved onto a fast track, with completion in 2005.

Those contributions have now come through. It was announced at last month's council meeting that Japan will add \$35 million to a contribution it promised in 1995 of about \$45 million. "We really hadn't hoped for this," says council member Jean Perez y Jorba of the University of Paris at Orsay. The council also approved a cooperation agreement with the United States, due to be

signed in April or May. This would provide about \$530 million, both for the LHC and detectors in which U.S. researchers are involved, reports Llewellyn Smith. "We also have agreements with Canada, Russia, India, and Israel. Everyone in the world says this is the next major step we have to take," he says.



Fast track. The Large Electron-Positron collider tunnel, which will house the Large Hadron Collider.

But prospects for the rest of CERN's operations are not so bright. Last July, Germany announced that it wanted to reduce its annual contributions to CERN by almost 10%—a move that could precipitate similar cuts from all members because each country pays a share of CERN's budget based on its relative national income. After months of tense negotiations, Germany said it was prepared to be flexible, says council member Risto Nieminen of the Helsinki University of Technology in Finland. But the outcome will still be painful: The council agreed to reduce all members' contributions by 7.5% in 1997, 8.5% in 1998 to 2000, and 9.3% in

2001 and following years, compared to the 1994 funding level.

Keeping the LHC on track while cutting CERN's core budget will require a balancing act of extraordinary dexterity by CERN managers. "We had already cut our programs to the bone in our long-term proposal put forward 3 years ago," says Llewellyn Smith. "Now we are going to have to go further: We will have to cut some running experiments, and we are going to have to delay maintenance."

The threat to CERN's current research program was a subject of intense debate at the council meeting, reports council member Bernard de Wit of the University of Utrecht in the Netherlands. Especially worrisome is the possibility that CERN's current mainstay, the Large Electron-Positron collider, will not be fully exploited before its planned shutdown at the end of 1999. Llewellyn Smith says he will try to maintain some flexibility. "If there is some major discovery, then we might have to consider changing the timetable of the LHC. ... If the physics case is strong enough, we will have to."

Last month's council meeting was the last one chaired by Hubert Curien, France's former science minister, who is ending a 3-year term as CERN's president. Luciano Maiani, a theoretical physicist from Italy's National Institute of Nuclear Physics in Rome, took over at the beginning of this month. Curien says his fondest memory was "the meeting of December 1994 where we obtained unanimity to construct the LHC. ... This unanimity has been again confirmed this week."

—Alexander Hellemans

Alexander Hellemans is a writer in Paris.