UK faces controversy over plans to reform PhD

London. The British government is confronting a rising chorus of concern from both industrialists and academics over its plans to restructure postgraduate education in a way that would require most graduates to take a one-year MSc course before starting a three-year PhD.

The government included the requirement in its recent white paper (policy document) on science and technology, following a recommendation from the Advisory Board for the Research Councils (ABRC). Its goal is to prepare students more fully for PhD work, and to provide those who decide that one year's postgraduate study is enough with skills that employers might welcome.

The move is part of a planned overhaul of postgraduate research and training which most people agree is needed. More graduates are studying for postgraduate qualifications (see figure), and there is increasing concern that the content of taught courses and research projects does not always meet the best needs of students or employers.

The Office of Science and Technology is now discussing the compulsory MSc scheme with the research councils and hopes to introduce it in late 1995. The Science and Engineering Research Council (SERC) is being split into two new research councils.

Officials are keen to use the scheme to align support for postgraduates more tightly with each council's mission.

The SERC's preliminary view is that the new 40-week courses — possibly leading to a new 'Master of research' (MRes) degree — should be divided in two. One half would involve a research project, the other coursework in three areas: basic management and communication skills, research techniques specific to the discipline being studied and an introduction to advanced knowledge in that field.

Engineering employers, who are often suspicious of those holding purely academic qualifications, have in general welcomed the introduction of the new master's course. Many feel that a qualification similar to that proposed by SERC would bring Britain more in line with other countries, such as Germany and Japan.

But two of Britain's biggest employers of PhDs, the chemical and pharmaceutical industries, have come out strongly against the government's plans and have asked it to think again. The Association of the British Pharmaceutical Industry has written to Sir David Phillips, chairman of the ABRC, saying that it is quite happy with existing arrangements. It warns that moving to four-year PhD training might deter graduates from going into research because student grants are low; the Chemical Industries Association and the Royal Society of Chemistry share its concerns.

Industrialists and academics are also worried that the number of students supported by the research councils might fall by as much as a quarter as they would have to fund four years of study from the same sized pot as is now available for three. Few accept the government's response that the research councils and universities should work this out themselves. And industry has no desire to pick up more of the bill.

Professional bodies representing other academic disciplines fear that four-year PhD training would conflict with their plans for more four-year undergraduate courses. Alun Jones, chief executive of the Institute of Physics, last week wrote to William Waldegrave, the science minister, asking for a public statement "as a matter of some urgency" that those taking four-year degrees would not need to obtain

a master's qualification before beginning a PhD.

Many university scientists point out that providing taught MSc courses would put a heavy additional burden on the resources of departments: the government has said it will not provide extra money to put the new arrangements into effect. Moreover, universities are also concerned about the fate of small academic departments which lack the teaching resources for a MSc course. Students who leave to take such a course in a larger department elsewhere might choose not to return. Even those who remain would be badly placed to work as research assistants on larger projects.

Many other questions remain in the air. Would a three-year PhD still be available for the growing number of students funded from nongovernmental sources (including those from overseas)? If so, would this create a 'two-tier' PhD system? And how broad would exemptions be for those studying four-year undergraduate science courses, enthusiasm for which is growing rapidly among both students and academics?

"The uncertainties are very worrying", says John Dale, professor of biology at the University of Edinburgh. He is one of many university scientists who have written to Waldegrave expressing concern. "If we are not careful, we could soon be experiencing a planning blight over future plans because there is no central guidance yet on what will be acceptable."

So far, government officials have been putting a stoical face on such concerns. They acknowledge that many complex issues will need to be resolved before the new system for postgraduates is put into place, but express confidence that solutions will eventually be found.

Meanwhile, critics of the government such as Lewis Moonie, the Labour Party's science spokesperson, say the plan epitomizes their complaint that the government has not provided adequate funding to back up the proposals in its white paper. And in the light of concerns being expressed, there are growing demands for a full-scale review of postgraduate education before the government's proposals are put into effect.

David Dickson

New entrants to postgraduate courses and research degrees in UK