

Health of disciplines: Research Councils' assessment

Extract from paper to UK Research Base Funders' Forum, October 2004

The information available varies across disciplines and this means that it is not appropriate to construct summary tables in this progress report. Instead this section first provides a summary of the headline results in each of the appendices. These are as follows:

EPSRC: The proportion of permanent academic staff in UK universities who are in engineering and the physical sciences is shrinking. It is argued that the dependence for research capacity on the university sector has impacted negatively on these disciplines. This is because university recruitment of academic staff is student number led. As a result 79 university departments in 6 years have been closed in the fields of physical sciences and engineering. EPSRC have proposed that action is needed urgently a) in the short term to address particular subject areas such as chemical engineering and statistics; b) in the medium term to have a major impact on research capacity across all the disciplines; and c) in the long term to encourage more young people into the physical sciences and engineering.

BBSRC: Within the context of a generally buoyant position in the life sciences BBSRC note that there are issues of sustainability with per annum growth in student numbers outstripping per annum growth in expenditure in university departments. BBSRC also note the need for action on the Roberts' agenda to support research careers – this is particularly true in some specialised areas where there are signs of some skills shortages. These include, for example, whole animal physiology and animal diseases. However BBSRC's main concern is at the interface with other disciplines for they highlight the need for physical scientists, mathematicians and computer scientists.

ESRC: Again, in a number of the social sciences research capacity is good. However there are also a number of systemic problems: it is now extremely difficult to recruit to posts in economics, quantitative areas of sociology and in social statistics. This stems from the lack of quantitative skills at undergraduate and school level and the fact that in some areas, the alternative career options are far more lucrative. A further generic area is the lack of social science researchers with language skills particularly those outside Europe. There are also significant concerns relating to social statistics, demography, social work and empirical research in law, where the community has always been relatively small but where there are relatively few new people coming through. There is also concern about educational studies, where the average age of researchers is 54 and there is a difficulty in recruiting high quality research staff. Finally while there has been a boom in the numbers of staff in business schools this has not been matched by the development of research capacity. ESRC is leading a major programme under SR2000 but this will only contribute to improving the situation, it will not solve it.

MRC: Medical sciences have not suffered the drop in numbers of students at undergraduate level experienced in mathematics and the physical sciences. However, there are particular areas of the academic base which give cause for concern. There has been a significant decline in the numbers of people experienced in and able to teach, whole animal work. For example, only eight UK academic departments provide *in vivo* education at undergraduate level and 30% of academics qualified to teach *in vivo* work will retire within the next five years. There is a shortage of experienced clinical researchers and lack of recruitment of young doctors and dentists into a research career (in particular in certain disciplines, such as pathology, obstetrics and gynaecology, dentistry and public health). A 2003 survey of UK Medical and Dental Schools showed that since 2000 there had been a 30% decline in the number of clinical lecturers in Medicine and Dentistry and a 17% loss in the overall number of clinical researchers. In public health, there is a lack of expertise in statistics, epidemiology, social sciences and health economics and here there is a great need to interface with, in particular ESRC.

AHRB: The most obvious areas in the arts and humanities where the research base runs the risk of long-term decline are languages and area studies. In particular our capacity to study societies and cultures beyond Western Europe and North America. The already small numbers recorded in the RAE of research-active staff in Asian studies fell by 6% between 1992 and 2001, to a total of 129, and in Russian, East European and Slavonic Studies by 34%, to 77. Posts are increasingly dependent on a flow of appointees from outside the UK. This is dangerous both because there is no guarantee that this will continue and also because it is questionable as to whether this is healthy in areas where it is the development of understanding that is available to UK policy makers and civil society that is crucial. The numbers of students accepted onto first degree courses in all modern languages fell by a quarter between 1997 and 2001.

NERC: There are few hard data on the environmental sciences but the NERC submission does point to some evidence of a decline in demand from those trained in physics and chemistry.

CCLRC: CCLRC again points to the need for a trained cadre of engineers and technicians to sustain the facilities.