

HIGHER EDUCATION FUNDING COUNCIL FOR ENGLAND

RESEARCH ASSESSMENT EXERCISE 2001

Metallurgy and Materials Panel (UoA 32)

Panel Overview Report

Submissions

The number of submissions in the 2001 exercise was 30 compared with 37 in the RAE96. Some Materials departments have closed and a number have been amalgamated with other departments that submitted to other UoAs, such as those in engineering. There also was evidence that greater selectivity had been exercised by submitting departments. For example, out of 447 active researchers declared by the departments submitting only one did not submit 4 outputs. In earlier exercises there was a significant number of researchers with less than 4 outputs. In one case a university established a virtual "Materials Research Institute" for UoA32 made up of its active researchers and made "nil" submissions in physics, chemistry and engineering. Although the submissions were generally of a high standard one submission had a large number of unnecessary mistakes in its RA2 that gave the panel significant difficulties.

Panel Membership

The panel consisted of 10 members with 7 from higher education institutions and 3 from user organisations (Alcan, Rolls Royce and DERA). There was also a secretary, an assistant secretary and an EPSRC observer. The membership was constructed from people suggested in the consultative exercise, bearing in mind the need to have a range of expertise in the different fields and a range of institutions. There were no changes in panel membership during the exercise.

Range of Subject Coverage

Metallurgy and Materials involves a very wide range of subject areas and it was not possible to obtain complete coverage through the panel membership. A number of external experts were therefore appointed and consulted for submissions where the panel felt that they did not have the relevant expertise.

Criteria

The setting of the criteria followed closely the experience of RAE96 and guidance from the RAE team. There were no major problems with criteria setting or the way in which the panel had to interpret them. In particular in reaching their decisions the panel gave more credit for output rather than input factors.

Outputs

The reading of outputs was the most time-consuming aspect of the exercise. This was because the panel felt that it was by far the best way of judging the quality of the submissions. More than half of the outputs submitted were read, often by more than one panel member and at least one was read for each researcher, as laid down in the criteria.

A standardisation exercise was held by the panel before the reading of outputs commenced. The chairman selected 10 outputs of different quality in different subject areas from institutions not submitting to UoA32. The outputs were then marked by the panel and the grades compared and normalised at their first assessment meeting. All panel members found this exercise to be useful, particularly ones new to the RAE.

Where more than one member of the panel read the same output, the verdicts of the several readers were closely monitored and logged, and an excellent degree of internal consistency was found between the panel members.

The availability of on-line access to journals by some of the panel members made the sourcing of outputs rather easier than in earlier exercises. This facility, however, was not available to all panel members and many journals, especially the less-common ones that the panel felt were essential to be read, were not available on-line. In addition a number of outputs were not in the form of journal papers. This meant that a large number of outputs still had to be sourced from the RAE team.

Cross-referrals to and from Other Panels

A system of cross-referrals was employed whereby submissions or part of submissions were exchanged for comment between panels. This was done when the original panel did not feel confident to judge the submission or felt that they would benefit from the advice of another panel.

Umbrella Panels

The system of umbrella panels was found to be useful in ensuring consistency and calibration between different UoAs. In particular the provisional research ratings of the panel were confirmed at the meeting of the umbrella panel of science and engineering and found to be consistent with those of cognate UoAs.

International Experts

Five international experts were employed to comment upon the provisional research ratings of the panel. Overall they confirmed the decision of the panel, and the status and vitality of the UK research in the Materials field.

Research Ratings

The distribution of research ratings in Metallurgy and Materials Science was similar to that RAE96, taking into account the lower number of submissions. It appears that the health and vitality of the subject in the UK has been maintained. A total of 6 submission were rate 5* and 4 were rated 5. This time there were also no submissions rated lower than 3b.