

# Advancing Healthcare Research in the UK: An appraisal of the impact of Research Capability Funding in a post 1992 University

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## **Abstract**

## **Background**

The Research Assessment Exercise (RAE) is the major vehicle for the evaluation of university-based research in the UK. The latest exercise confirms that research quality in the UK has continued to increase and international and world leading research are now widely distributed throughout the expanding sector. A key feature for healthcare professions has been the enhancement of research through the Research Capability Funding (RCF) scheme.

## **Methods**

We have analysed the progress made by a modern UK university in the past four RAEs. Submissions into each RAE were assessed for quantity and quality along with relative patterns of growth in sub-disciplines. The effect of the RCF initiative which Allied Health Professions and Nursing & Midwifery received leading up to RAE 2008 are discussed. The overall positions of these sub-disciplines within their respective Units of Assessment and within the University are evaluated.

## **Results**

In 1992, Kingston University (KU) submitted some 107 staff in eleven units which were rated at national/sub-national levels of research activity. A larger submission of 191.8 staff into seventeen units in 1996 was again characterised by ratings of national/sub-national research activity. In 2001, 154.4 staff were submitted across thirteen units achieving grades that reflected national/sub-national research activity. For RAE 2008, 224 staff were submitted into 18 units with 72% of the research being rated as international. Two thirds of the submissions contained at least 5% world leading research activity. Allied Health Professions has progressed particularly well from a grade 2 in 1996 with 10 staff to over 18 staff being rated as world leading, internationally-excellent or -recognised in 2008. This brings it to eighteenth place out of sixty eight, when ranked by number of staff conducting international research. For Nursing & Midwifery, KU entered a joint submission with SGUL which was comprised of 13.5 FTE and was rated as 4\* (15%), 3\* (30%), 2\*(25), 1\* (25) and UC (20%). This ranking based upon the research activities of staff numbers at 2\*-4\* places the joint submission at number 23 out of 35.

## **Conclusion**

Researchers at KU have made marked progress in the quality and quantity of their research activities. Progress has been particularly strong during the past RAE period and for Research Capability Funded subjects.

## Introduction

The Research Assessment Exercise (RAE) is an evolving complex nationwide process which determines the annual distributions of some £1.5 billion in research funds (Higher Education Council for England, 2008). As such, Higher Education Institutes (HEIs) within the UK engage with it fully with many policy and strategy decisions being informed by the steer provided within the RAE guidelines. From the perspective of the UK Government, the exercise allows it to guide research activities and subsequently further funds towards key areas of importance for the country. On one hand the exercise has been maligned as a time consuming, labour intensive method of demonstrating the obvious. In contrast, it is credited with enhanced management practices within universities over a broad range of their activities. These include, but are not limited to, data gathering, distribution of resources to optimise research impact, implementing research support structures for staff and in particular for new staff, position analyses, distribution of excellent practice and informing strategy (Williams 1998; Elton 2002; Sharp 2004; Banatvala *et al.* 2005; Cecil *et al.* 2006; Chatterji & Seaman 2007; Paul 2008). The RAE is credited with enhancing the research intensity and strengths of UK research in those areas that are assessed. The position and international standing of UK research has been documented and debated elsewhere and the RAE has been attributed, in part, with emphasising the impact of research on end-users (Department for Innovation, Universities and Skills, 2003; Kuruvilla *et al.* 2006). The recent publication of the results of RAE2008 demonstrated that world class and internationally leading research have grown beyond elite UK universities, and are now found in most HEIs (Higher Education Council for England, 2008). This ubiquitous appearance of world class research reflects the success of the RAE in that growth and extensive efforts will be recognised and funded. This aspect is further highlighted as the considerable step change in expected funding affirms the necessity for more frequent or alternative exercises to avoid HEIs having to accommodate major funding step changes in either direction.

Arguably, one of the best examples of Government engagement with the RAE is the enhancement of research in key health professions by the Research Capability Funding scheme. The paucity of research fund streams (especially long term) in Nursing & Midwifery and Allied Health Professions led in part to the introduction of Research Capability Funds in these areas (Higher Education Council for England, 2001a). The scheme was expected to: i) *ensure that HEIs are able to train research-aware professionals*, ii) *facilitate research awareness for practitioners and administrators, to support evidence-based practice and policy*, iii) *understand the research priorities and needs of the health service*, iv) *enable specific interventions or specific approaches*, and v) *phenomena to be evaluated establish the knowledge base and ensure that there is scope to undertake underpinning work informing directly applicable research* (Higher Education Council for England, 2001a). Task Group 3 noted that these fields had the potential to become major RAE fields but without additional support it would be unlikely that they would be economic and self-sustaining. It was noted by the Task Group that these subjects were gaining in research strength but mostly from a very low baseline (Higher Education Council for England, 2001a). They foresaw a much needed increase in the key indicators of:

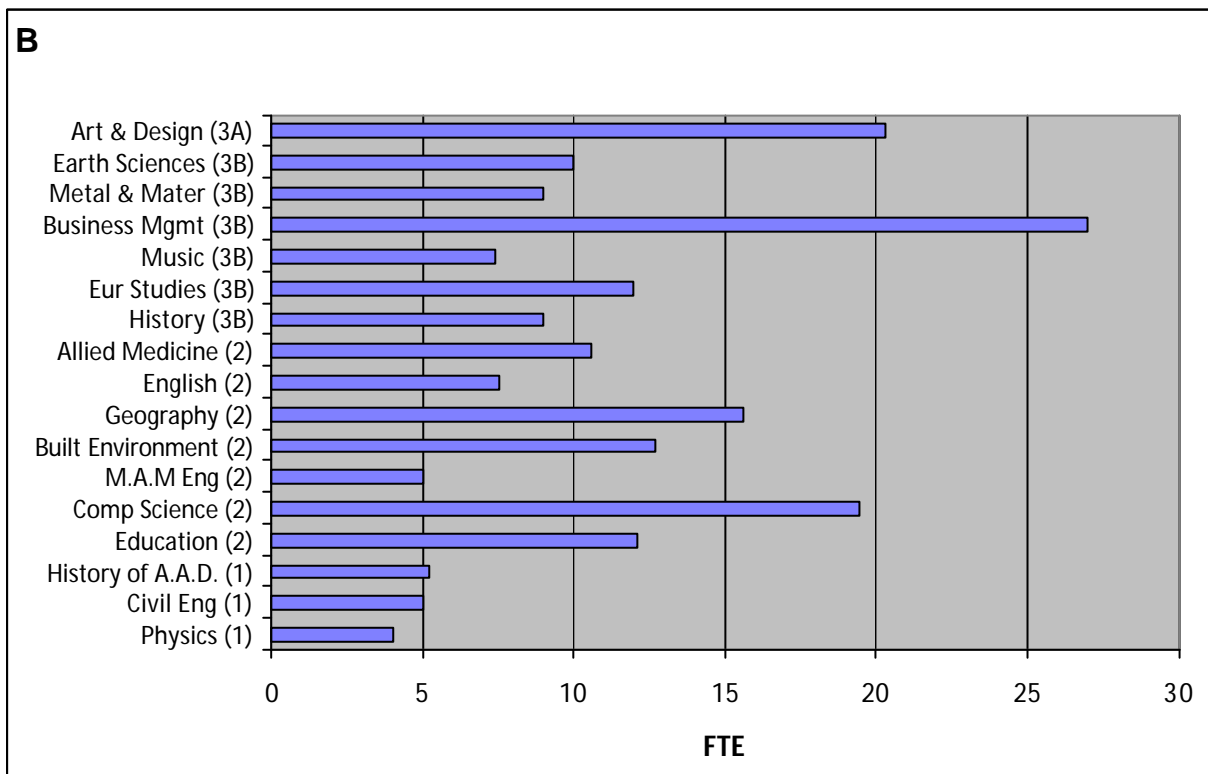
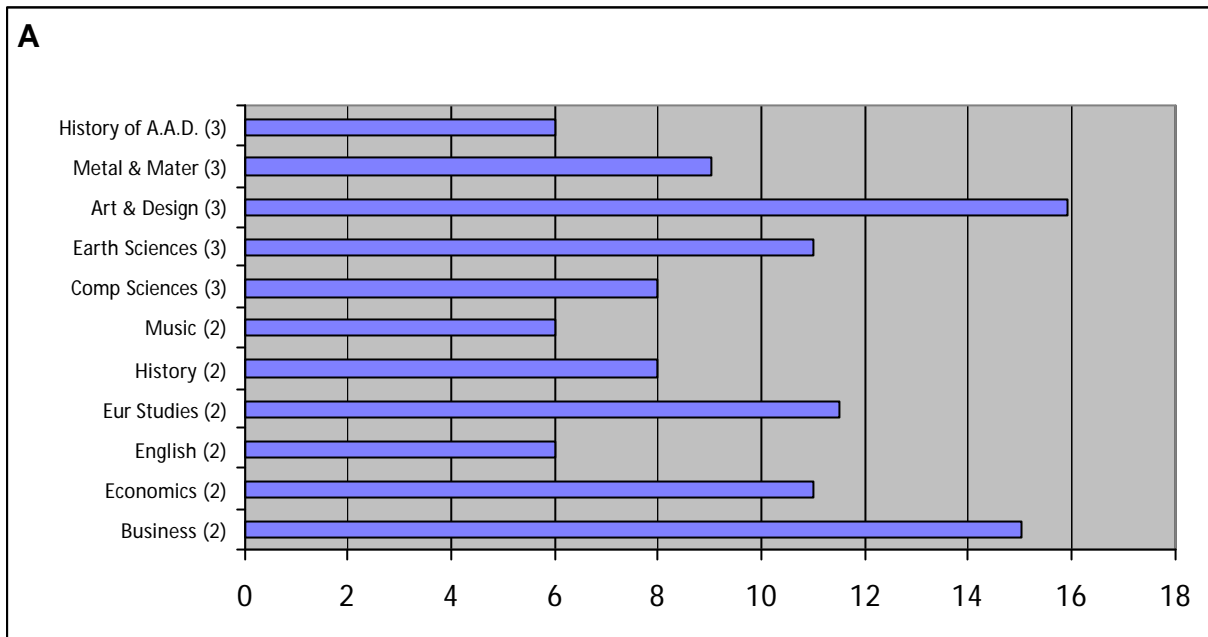
- RAE ratings
- numbers of research-active staff submitted to the RAE
- levels of research income
- postgraduate student numbers
- collaborations with researchers in other disciplines.

Since 2003, some £20 million each year are invested in these subjects, with the current year being the final before leading into the RAE2008 determined funding period. The upcoming adoption of RAE type exercises by other countries to inform the distribution of research funding along with the termination of Research Capability Funding initiative warrants an analysis of the usefulness of this endeavour to enhance healthcare research. The aim of this report is to assess the impact of Research Capability Funding in the fields of Allied Health Professions and Nursing & Midwifery in a modern urban university with strategic links to an independent medical school. The analysis aims to serve as a case study and as such it will incorporate changes within the university along with those within the respective Units of Assessment (UoAs).

## **Results & Discussion**

### **Kingston University: RAE results 1992-2008**

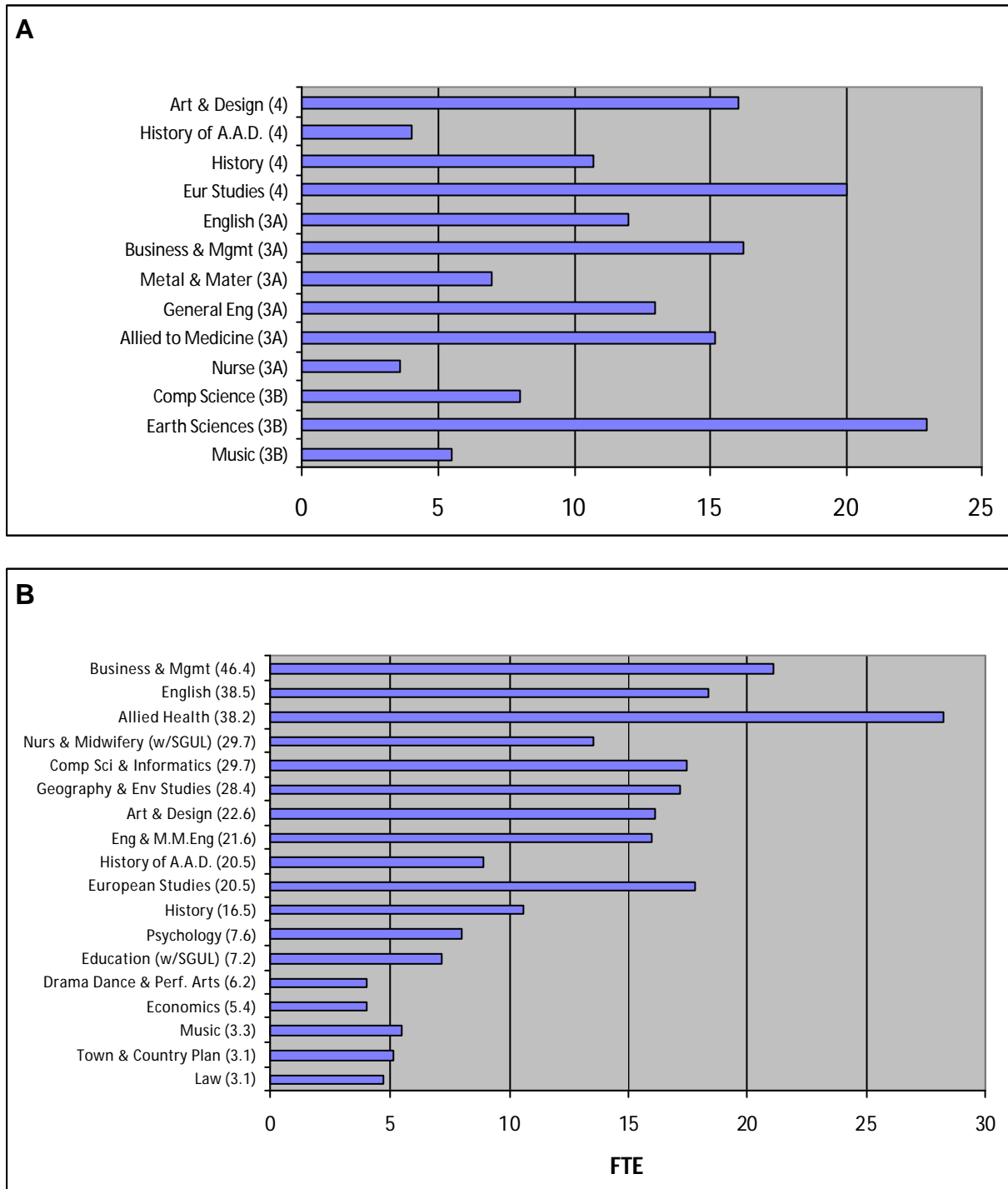
As with most modern universities, Kingston University (KU) has progressed well in the RAE exercises over the seventeen years since its granted university status. The KU RAE1992 submission comprised of 107.4 full-time equivalent (FTE) staff members in eleven UoAs including history of art and design (6 FTEs), earth sciences (11 FTEs) and computer science (8 FTEs) which received a grade of 3 reflecting national excellence in the majority of subject areas with potentially some international activity (Figure 1A) (Higher Education Council for England, 1992). The other six KU submissions all achieved a grade 2 reflecting national excellence in up to half of the research presented. Thus, in 1992 two science subjects were submitted with no coverage of sub-areas relating to Allied Health Professions or Nursing & Midwifery, a picture characteristic of most post-1992 universities.



**Fig. 1:** Outcomes of RAE 1992 (A) and 1996 (B) for KU submissions. Numbers of staff submitted (FTEs) are given (x axis) along with grades achieved (y axis).

An increase in the number of subject areas submitted to RAE1996 included some 191.8 staff across seventeen submissions (Higher Education Council for England, 1996). The grades range from 3A to 1 with the majority of the research activities (equivalent to 157 FTEs) achieving a grade of 2 or 3B. This near three-fold increase in the magnitude of the submission coincides with an improvement in overall ratings along with the inclusion of a number of science subjects for the first time. This growth afforded a more focused submission in 2001 that was

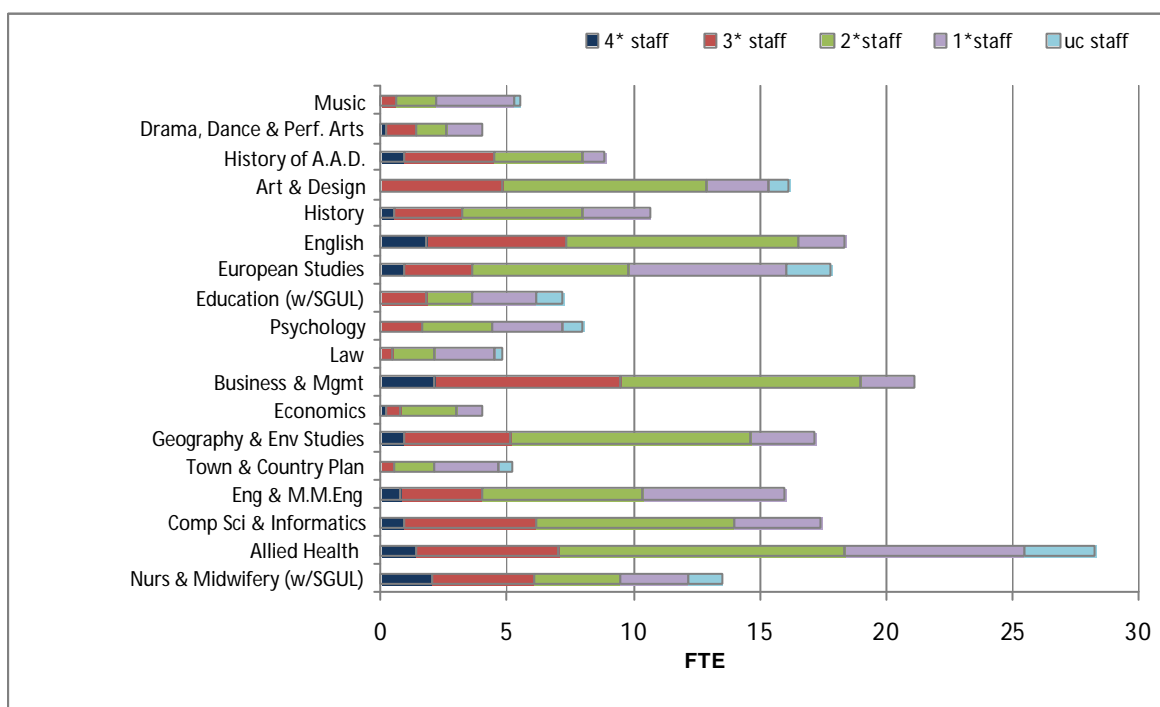
comprised of 154.4 FTE staff members in 13 UoAs. All grades were between 3B and 4 with sections of earth sciences being flagged. It is notable that again the submissions that achieved a grade 4 were all outside of science. However, this did not have serious financial ramifications for science departments as they were not reliant on RAE income owing to past performances. As a result of the 3A grades in Allied Health Professions and Nursing & Midwifery, these departments received Research Capability Funding for the six years leading up to RAE2008.



**Fig. 2:** Outcomes of RAE 2001 (A) and 2008 (B) for KU submissions. Numbers of staff submitted are given (x axis) along with grades achieved (y axis).

Over the longer assessment period leading up to RAE2008, a considerable advance was made in many subject areas as reflected by the majority of research activities achieving international ratings with two thirds of the 18 submissions having world leading research (Higher Education Council for England, 2001b). Of the research activities of the 224 staff submitted on this occasion, 72% were rated international (4\*-2\*). The grades shown in Figure 2B, are power ratings from the HEFCE funding algorithm of activity at 3\* level will be funded at three times the rate for 2\*, and activity at 4\* level at seven times the rate for 2\*. Thus, over the period of 16 years, KU staff numbers submitted to the RAE increased four fold in quantity with a step change in overall quality from sub-national/national to international, including world leading. This enhancement of research activity may be attributed in part to the RAE processes and is characteristic of many modern universities.

When viewed as quantity of research activity being graded as 4\*-2\*, six submissions from KU have research activities of > 10 staff being international along with world leading research (Figure 3). Three of these submissions are in science subjects with Allied Health Professions being well positioned with the research activities equivalent to 18.2 staff being rated as international across 4\*-2\*. This is a major shift in position from previous RAEs for science subjects both in terms of numbers of submitted staff and quality awarded. This growth is in part a reflection of the effect of Research Capability Funding. This, in part, facilitated the largest submission from KU in numbers and in comparison to the average size for each UoA. The KU submission was 136% of the average for UoA 12 with only that in European studies also being above the average at 106% (Table 1). In addition, long term initiatives that assisted research in this area includes a joint faculty of Health and Social Care Sciences with Saint George's University of London (SGUL), a joint research laboratory the King-George Laboratory. More recently the South West London Academic Network with Royal Holloway University of London and SGUL has benefited research collaborations in this area.



**Fig. 3:** Outcomes of RAE 2008 for KU submissions. Numbers of staff submitted are given (x axis) along with star ratings.

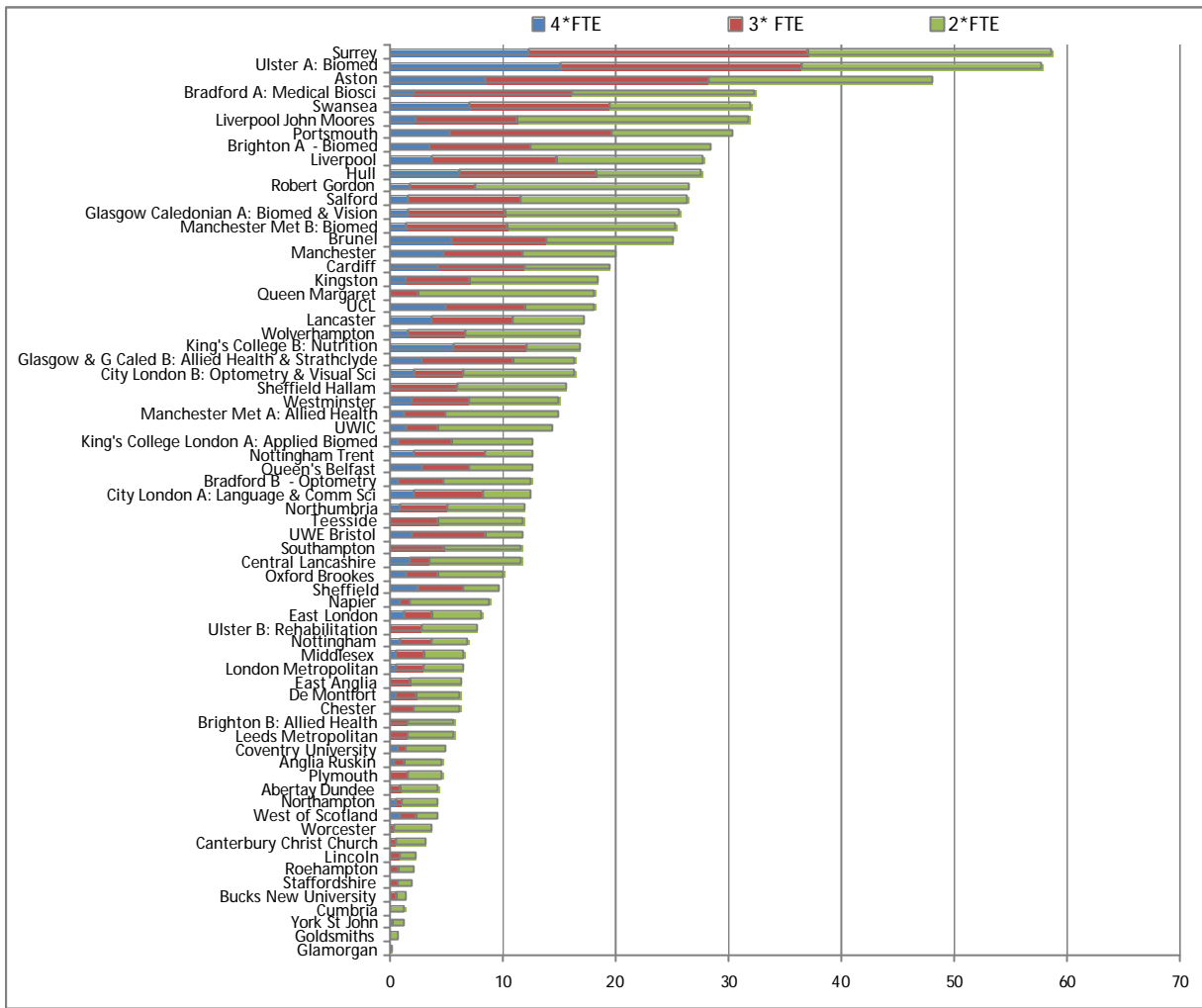
In addition to the weightings placed on research activities at 4\*, 3\* and 2\* as 7x, 3x and 1x respectively, a key aspect in terms of national standing is the contribution to the subject area in terms of volume of research (as FTE) attributable to each UoA submitted from KU. Table 1 illustrates the submissions from KU to RAE2008 in terms of their FTE weighted scores using the HEFCE algorithm along with the relative submission volume as % of average for that UoA. In addition to informing RAE funding outcomes, this volume parameter may have connotations for critical mass and relative growth potential in each subject area. The KU submissions range between 136% and 19% of the average for each UoA with Allied Health and European Studies being above average. This places Allied Health in a good position of stability in terms of critical mass and potential long term funding attracted from this RAE.

## **Allied Health Professions (UoA 12)**

The first submission from KU to the Allied Health Panel in RAE1996 included 10.16 FTEs. This submission achieved a rating of 2 signifying *research quality that equates to attainable levels of national excellence in up to half the sub-areas of activity*. A joint submission was made to RAE2001 which comprised of 21.5 FTEs of which some 15.2 were from KU. This submission achieved a rating of 3A equating to *quality that equates to attainable levels of national excellence in over two-thirds of the research activity submitted, possibly showing evidence of international excellence*.

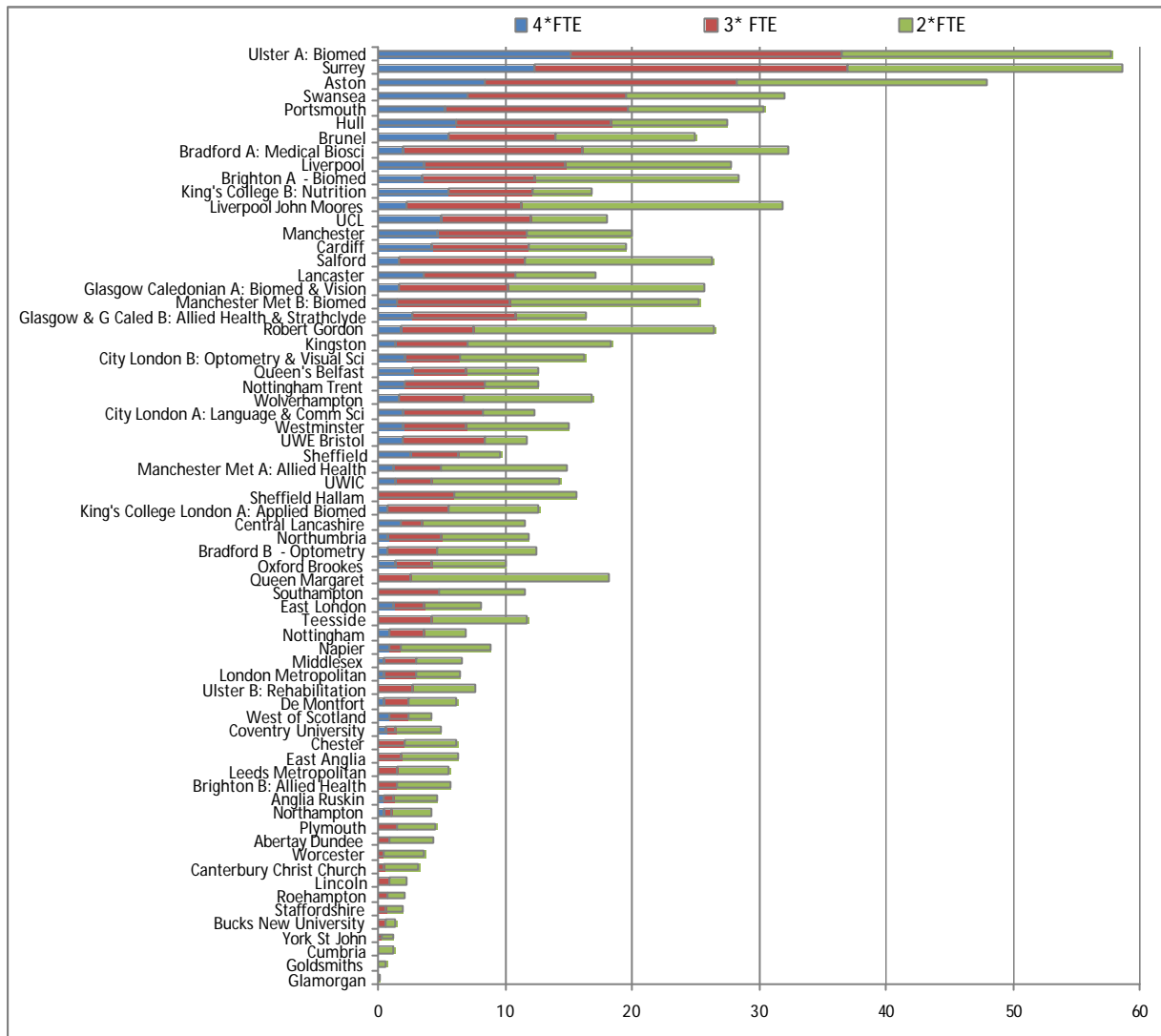
The most recent submission included 31 staff (28.3 FTEs) and was rated as 4\* (5%), 3\* (20%), 2\*(40), 1\* (25) and UC (10%). The overall profile in terms of research activities of FTE staff is 18.2 at international [4\* (1.4), 3\* (5.7), 2\* (11.3)]; and 7 at a national level of research. This submission included 60 research students, an increase of three fold since RAE2001. Advances in this UoA in comparison to the HEI average were reflected when compared to other HEIs within the UoA (Figure 4). The position of KU within the UoA can be assessed using several criteria including a straight count of research activities as FTEs at world leading, internationally excellent and internationally recognised which reflects HEFCE funding. This approach affords KU a rank of 18 out of 68 (74%) in UoA 12 beside the Universities of Manchester and Cardiff along with University College and King's College London.





**Fig. 4:** Outcomes of RAE 2008 for Allied Health Professions when ranked as research activity for staff numbers (y axis) rated as international.

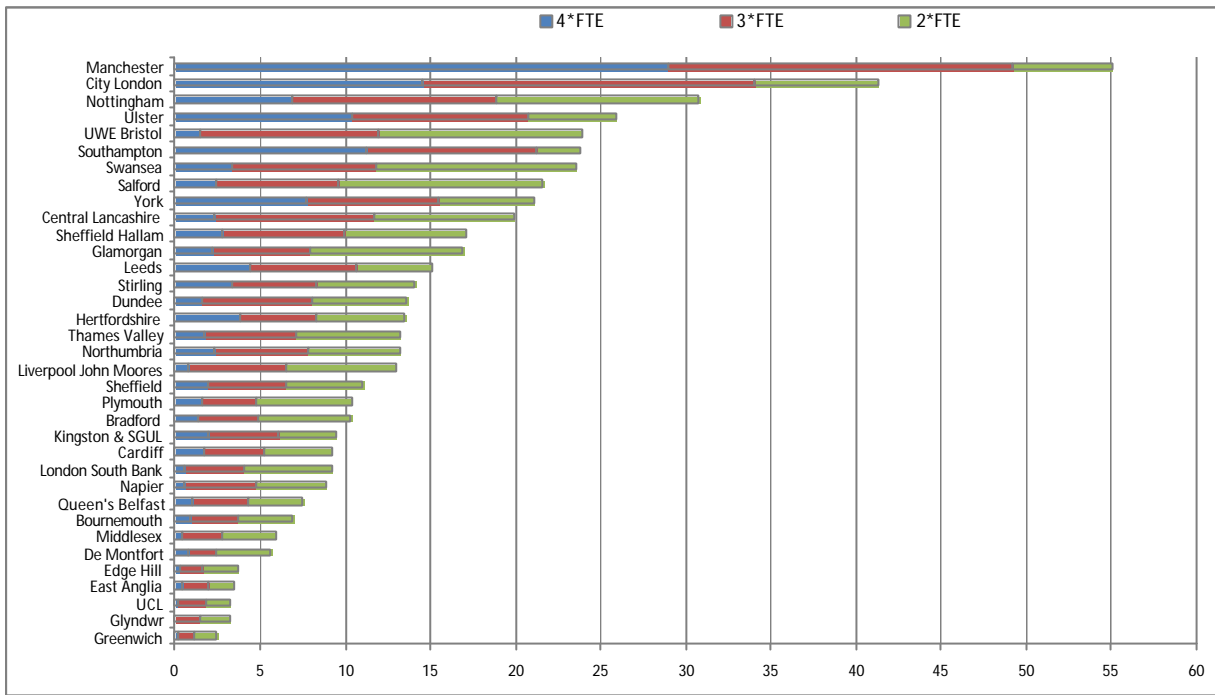
An alternative ranking based on the HEFCE algorithm for funding may be used (Figure 5). Thus, only activity assessed at 2\* or higher level will be taken into account in distributing mainstream QR funding, and activity at 3\* level will be funded at three times the rate for 2\*, and activity at 4\* level at seven times the rate for 2\*. This approach places KU at 21 out of 68.



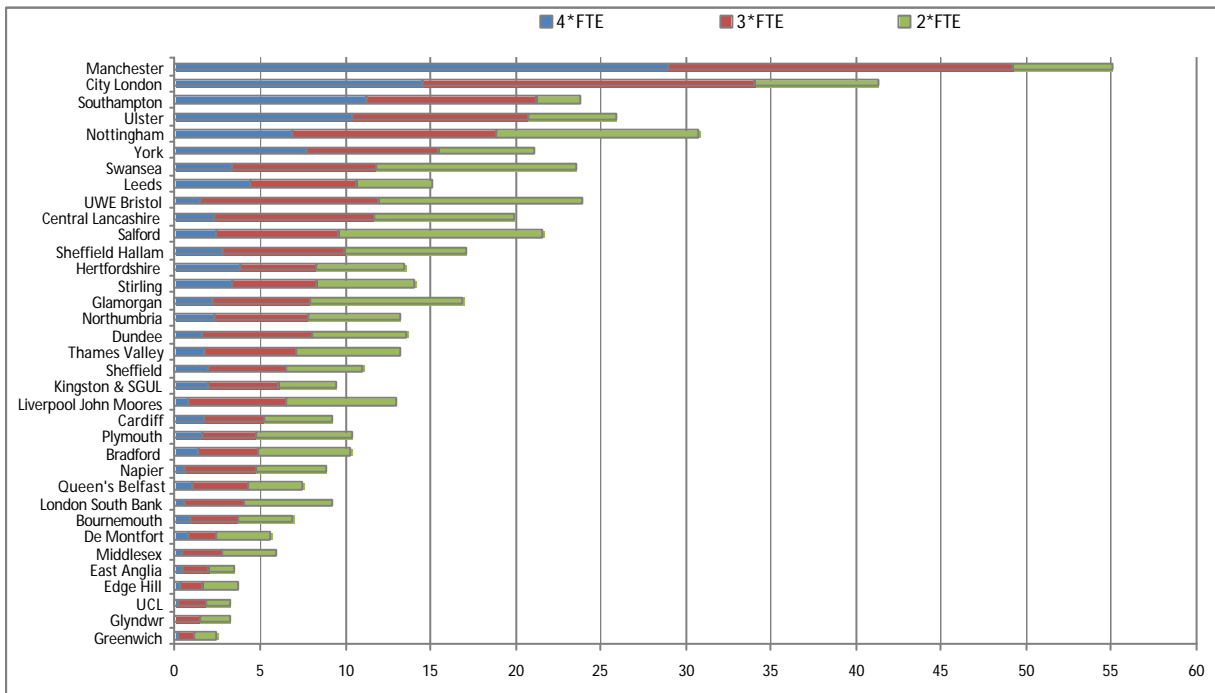
**Fig. 5:** Outcomes of RAE 2008 for Allied Health Professions when ranked as research activity for staff numbers (y axis) rated by the HEFCE-funding algorithm.

### Nursing and Midwifery (UoA11)

KU entered a joint submission with SGUL for Nursing & Midwifery which was comprised of 13.5 FTE and was rated as 4\* (15%), 3\* (30%), 2\*(25), 1\* (20) and UC (10%). For this submission research activity equating to 9.4 staff was graded as international [4\* (2), 3\* (4), 2\* (3.4)]. This ranking based upon staff numbers at 2\*-4\* places the joint submission at number 23 out of 35 between those from the University of Bradford and Cardiff University (Figure 6). However, when sorted using the HEFCE funding algorithm, the joint submission appears at number 20 between the University of Sheffield and Liverpool John Moores University (Figure 7). As shown in Table 1 the Nursing & Midwifery submission achieved a healthy FTE weighted score with a submission that was 76% of the average for that UoA. This profile is a considerable advance from their position in RAE2001.



**Fig. 6:** Outcomes of RAE 2008 for Nursing & Midwifery when ranked as research activity for staff numbers (x axis) rated as international.



**Fig. 7:** Outcomes of RAE 2008 for Nursing & Midwifery when ranked as research activity for staff numbers (x axis) rated by the HEFCE-funding algorithm.

## Conclusion

It is notable that in their Subject Overview Report, RAE Main Panel C stated “the extent to which research quality and methodology had matured in Nursing & Midwifery and Allied Health Professions, particularly in the light of a range of research funders’ investment...in research capacity building” (Higher Education Council for England, 2009).

Researchers at KU have made marked progress in the quality and quantity of their research activity throughout its 17 years as a university. Progress has been particularly strong during the past RAE period and for Research Capability Funded subjects as assessed by a panel of international experts. These results reflect enhancements in research in these areas and are testament to the benefits of government funded initiatives in Health Professions.

## Competing interests

The authors declare that they have no competing interests.

## Authors’ contributions

The authors contributed equally to the analysis and preparation of the manuscript.

## Authors’ information

DPN is the Research Co-ordinator for the Allied Health Professions submission to RAE2008 for KU. AP is a Reader in Public Health.

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**Table 1**

Results for KU in RAE2008

JoA	UoA	FTE Category A staff submitted	Unit Average FTE	%	4*	3*	2*	1*	FTE weighted
1	Nurs & Midwif (w/SGUL)	13.50	17.82	76%	15	30	25	20	29.70
2	Allied Health	28.30	20.80	136%	5	20	40	25	38.21
3	Comp Sci & Informatics	17.45	22.69	77%	5	30	45	20	29.67
5	Eng & M.M.Eng	16.00	27.97	57%	5	20	40	35	21.60
1	Town & Country Planning	5.20	15.52	34%	0	10	30	50	3.12
2	Geography & Env Studies	17.20	22.86	75%	5	25	55	15	28.38
4	Economics	4.00	23.95	17%	5	15	55	25	5.40
6	Business & Mgmt	21.10	37.08	57%	10	35	45	10	46.42
8	Law	4.75	24.93	19%	0	10	35	50	3.09
4	Psychology	8.00	21.84	37%	0	20	35	35	7.60
5	Education (w/SGUL)	7.20	20.68	35%	0	25	25	35	7.20
0	European Studies	17.80	16.89	105%	5	15	35	35	20.47
7	English	18.35	21.28	86%	10	30	50	10	38.54
2	History	10.65	21.22	50%	5	25	45	25	16.51
3	Art & Design	16.15	23.62	68%	0	30	50	15	22.61
4	History of A.A.D.	8.90	11.10	80%	10	40	40	10	20.47
5	Drama Dance & Perf. Arts	4.00	10.30	39%	5	30	30	35	6.20
7	Music	5.50	10.76	51%	0	10	30	55	3.30